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**PowerStream Inc.**

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**Conservation and Demand Management**

**2011 Annual Report**

**Submitted to:**

**Ontario Energy Board**

**September 28, 2012**

*Amended October 12, 2012 to add 2011 spend at the Program Initiative level  
(Table 13)*

## 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 October 29, 2010 Strategy.

PowerStream did not apply for any Board-Approved CDM Programs during 2011; 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; thus, for the 2011 timeframe, PowerStream does not have demand or energy savings to present in this regard.

As for OPA-Contracted Province-wide CDM Programs, PowerStream accepted the OPA's Master Agreement in late February 2011, with all Programs rolled-out by the OPA in June 2011. As stated in PowerStream's 2010 Strategy, PowerStream delivered/prepared for delivery all available OPA Programs (Consumer, Commercial & Institutional (C&I), Industrial, and Low Income) during the 2011 year.

2011 Program activities were centered on building a foundation for full program execution over the next three years of the program term, including staffing, procurement, and program delivery. Participation in the Consumer and C&I Programs was successful; however, the Industrial and Low Income Programs saw fewer uptakes than originally forecasted. As a result, spend level was below the original estimate in the October 2010 Strategy, at 15% of the estimate. The dollar shortfall will be carried forward to 2012-2014 for program execution and incentive payments.

The OPA conducted Evaluation, Measurement, and Verification (EM&V) for the 2011 OPA-Contracted Province-wide Programs. A detailed description of the Provincial findings was provided to LDCs. Results varied from the 2010 Program design assumptions; however, they did not have a significant impact to PowerStream's milestones. 2011 verified savings of 14.49 MW of demand, of which 8.78 MW is guaranteed to persist to 2014 and count towards PowerStream's demand target, and 37.27 GWh of energy savings, which cumulates to 146.56 GWh at the end of 2014, represents 9.19% and 35.98% of PowerStream's demand and energy savings targets, respectively.

Table 1 shows the variance of the 2011 results to the 2011 milestones.

**Table 1: 2011 Verified Results vs Milestones**

	2011 Milestone as per 2010 Strategy		2011 Verified Annual Results		Variance to 2011 Milestone	
	MW/MWh	(% to Target)	MW/MWh	(% to Target)	MW/MWh	(% to Target)
Demand Savings	23.40	24%	14.49	15%	(8.91)	-9%
Energy Savings	42,052	10%	37,270	9%	(4,782)	-1%

Through PowerStream's Strategy modifications, these variances will be offset in the remainder of the program term and will not have an impact on PowerStream's overall success over the 2011 to 2014 Program term. PowerStream revised its original Strategy, incorporating lessons learned over the first 18 months of delivering OPA-Contracted Province-wide Programs, developing a new forecast using a bottom up approach based on inputs from CDM staff, program performance to date, key findings from the OPA's 2011 EM&V process, current market analysis, and insights of upcoming program changes. As a result,

PowerStream is still forecasting achieving 100% of its demand and energy target; however, the forecast now includes 21.6MW (approximately 23%) of TOU savings in the demand projection.

As with any forecasting exercise, there are known risks to achieving the CDM targets. PowerStream has little to no control over many of the risks associated with the 2011-2014 program term, such as EM&V and TOU savings results, program availability, changes to program designs and eligibility, and customers reaction/uptake in the programs. As a result, PowerStream is planning to investigate and assess the feasibility of potential Board-Approved CDM Programs, in late 2012, by conducting a market scan of North America to gain understanding of best practices in other jurisdictions, working with the OPA, customers and, potentially, other LDCs.

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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 (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 (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 was essentially to achieve 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. Table 2 shows PowerStream's annual net demand and energy savings forecast included as Annual Milestones in the Strategy.

**Table 2:** Annual Milestones (October 2010 Strategy)

	2011	2012	2013	2014	Total
Net demand savings, MW	23.4	24.2	24.7	23.5	95.8
Net energy savings, MWh	42,052	42,693	42,430	41,494	
Cumulative energy savings, MWh	42,052	124,195	248,768	414,835	414,835

The Code also requires LDCs to file an Annual Report with the OEB. PowerStream has prepared this document to meet such requirement, and to demonstrate its progress and modifications to its Strategy. This report covers the period of January 1, 2011 to December 31, 2011.

## 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 2011. Although, in its April 26, 2012 CDM Guidelines<sup>1</sup>, the OEB has deemed the implementation of Time-Of-Use (TOU) pricing to be a 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.

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<sup>1</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)

## 1.2 Program Description

**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 3.

**Table 3: 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

**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 312,755 PowerStream customers enrolled in TOU billing as of December 31, 2011 which represent 98.37% of PowerStream's mandated customer base.

## 1.3 Participation

There are 312,755 PowerStream customers enrolled in TOU billing as of December 31, 2011, representing 98.37% of PowerStream's mandated customer base. Of those, 288,587 are residential customers and 24,832 are non-residential customers.

## 1.4 Spending

PowerStream does not have any spend to report for the period of January 1, 2011 to December 31, 2011 in relation to TOU billing as a Board-Approved CDM Program. Costs associated with the implementation of TOU pricing are recoverable through distribution rates, and not through the Global Adjustment Mechanism (GAM).

## 1.5 Evaluation

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, 2012, the OPA has not released its preliminary results of TOU savings to distributors; therefore, 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, 2011 to December 31, 2011 and therefore did not create a CDM Variance Account to address TOU costs.

## 1.7 Additional Comments

PowerStream anticipates savings resulting from TOU to count towards its CDM targets. Estimated TOU savings will be determined when the OPA releases its TOU evaluation plan and allocation methodology to LDCs. At this time, PowerStream has estimated 21.6MW towards its demand target.

## 2 OPA-Contracted Province-Wide CDM Programs

### 2.1 Introduction

Effective February 25, 2011, PowerStream entered into an agreement<sup>2</sup> (Master Agreement) with the OPA to deliver OPA-Contracted Province-Wide CDM Programs from January 1, 2011 to December 31, 2014. Table 4 summarizes the OPA-Contracted Province-Wide Programs that were in market and delivering results in 2011 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 4:** 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
Retailer Co-op	Appendix A - F	All residential rate classes
Residential Demand Response	Appendix A - G	All residential rate classes
New Construction Program	Appendix A - H	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
Small Commercial Demand Response	Appendix B - F	General Service < 50 kW
Demand Response 3	Appendix C - D	General Service 50 kW & above
<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
Equipment Replacement Incentive Initiative	Appendix B - A	General Service 50 kW & above

<sup>2</sup> <http://powerauthority.on.ca/ldc-province-wide-program-documents>



Demand Response 3	Appendix C - D	General Service 50 kW & above
<b>Low Income Program</b>		
Low Income Program	Appendix D	All residential rate classes
<b>Pre-2011 Programs implemented in 2011 and contributing to 2011 CDM results</b>		
Electricity Retrofit Incentive Program	Appendix B - A	All general service classes
High Performance New Construction	Appendix B - D	All general service classes
Multifamily Energy Efficiency Rebates	Table 11	All general service classes
Data Centre Incentive Program	Table 11	All general service classes

The initiatives that were not in market and/or not delivering savings in 2011, as communicated by the OPA, are listed in Table 5.

**Table 5: OPA-Contracted Province-Wide Program Initiatives not In-market in 2011**

<b>Initiatives Not in Market in 2011</b>	<b>Status</b>
<b>Consumer Program</b>	
Midstream Electronics	Not launched to market
Midstream Pool Equipment	Not launched to market
First Nations Program	Not launched to market
Home Energy Audit Tool	Not launched to market
<b>Commercial &amp; Institutional Program</b>	
Direct Service Space Cooling	Not launched to market in 2011. The OPA has no plans to launch this initiative in 2012
Demand Response 1	No customer uptake for this initiative
<b>Industrial Program</b>	
Demand Response 1	No customer uptake for this initiative

## 2.2 Program Descriptions

Full OPA-Contracted Province-Wide CDM Program descriptions are available on the OPA's website at <http://www.powerauthority.on.ca/lcd-province-wide-program-documents> 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>3</sup>

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

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<sup>3</sup> <https://saveonenergy.ca/Consumer.aspx>

**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 6.

**Table 6:** Activities – Consumer Program

Activities
<p>PowerStream’s main strategy in marketing the Consumer Program Initiatives was through cross-cutting promotion and events.</p> <ul style="list-style-type: none"><li>• Participated in 78 retailer and community events, which resulted in approximately 13,500 customer engagements. Over 1,000 customers completed surveys at these events and over 1,200 leads were generated for the <i>peaksaver</i> extension</li><li>• Conducted several employee events promoting the initiatives to about 500 employees, including six Staff Knowledge Exchange sessions</li><li>• Conducted five “Learn to Conserve” Workshops attended by 150 customers. Participants were presented with energy savings tips and details of the Residential Program Initiatives</li><li>• Sponsored a local television show where the Consumer Program was featured and was aired for 12 weeks</li><li>• Had commercials aired for 26 weeks on a local television station</li><li>• Newspaper ads were purchased in several community newspapers promoting <i>peaksaver</i> extension and the Heating and Cooling Incentive</li><li>• A radio ad campaign was conducted promoting the <i>peaksaver</i> extension</li><li>• Direct communication to our customers via bill inserts and newsletters were used to promote the Residential Program</li></ul>

The targeted customer types, objectives, descriptions, and activities of each Consumer Program Initiative are detailed in Appendix A.

## 2.2.2 COMMERCIAL AND INSTITUTIONAL 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>4</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.

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<sup>4</sup> <https://saveonenergy.ca/Business/Programs-By-Sector.aspx>

**Activities:** PowerStream’s activities specific to the Commercial and Institutional (C&I) Program are summarized in Table 7.

**Table 7: Activities – C&I Program Level**

Activities
<p>PowerStream’s main strategy in 2011 was to finalize and close all pre-2011 applications. Aside from this, there were also a number of sales and marketing tactics executed in 2011.</p> <ul style="list-style-type: none"> <li>• PowerStream participated in 15 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>• Joint business advertisement with Hydro One in the October issue of Canadian Facility Management and Design magazine</li> <li>• Full page article in the October issue of Vaughan Chamber Business Magazine</li> <li>• Direct mailers were developed and sent out in 2011 to cross-promote other C&amp;I Program initiatives:</li> <li>• Developed sell sheets for C&amp;I initiatives and a Business Program Guide which provides a high-level summary of all C&amp;I Initiatives</li> </ul>

The targeted customer types, objectives, descriptions, and the activities of each C&I Program Initiative are detailed in Appendix B.

### 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>5</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 8. Most of the C&I activities listed in Table 7 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.

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<sup>5</sup> <https://saveonenergy.ca/Business/Programs-By-Sector.aspx>

**Table 8: Activities – Industrial Program Level**

Activities
PowerStream’s main focus in 2011 was in planning and resourcing in preparation for full execution of the Industrial Program in 2012. Although, there were also significant activities relating to marketing and sales, as follows: <ul style="list-style-type: none"><li>• Began discussions with large industrial customers to introduce Industrial and/or C&amp;I Programs</li><li>• Held one-on-one meeting with 21 large industrial customers</li><li>• Applied for and received approval from the OPA to hire a “partial” Key Account Manager</li><li>• Performed training sessions for all facilities of a large industrial customer (25MW in PowerStream)</li><li>• Met with all five approved Demand Response (DR) aggregators to start working relationships and look for opportunities for joint marketing</li><li>• Developed a strategy on how to approach the market with DR3 Program</li></ul>

The targeted customers, objectives, descriptions, and activities of each Industrial Program Initiative are detailed in Appendix C.

### 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 9.

**Table 9: Activities – Low Income Program**

Activities
Activities that PowerStream executed in 2011 specific to the Low Income Program: <ul style="list-style-type: none"><li>• Developed and released a Request for Proposal for third party service provider to implement the program</li><li>• Evaluated proposals received from proponents</li><li>• Planned for full execution of the program in 2012</li></ul>

PowerStream’s activities that are common to all programs are summarized in Table 10 below.

**Table 10: Activities – Common to all Programs**

Category	Activities
Planning	Developed 2011-2014 Strategic Plan and 4 Program Delivery Plans, which includes budget, procurement, human resources and monitoring plans and annual demand and energy milestones
Procurement	Issued five Request for Proposals (“RFPs”) to procure qualified third party service providers for Residential Demand Response, Direct Install Lighting, New Construction, Home Assistance Program and Technical Reviewers
Staff Resourcing	Finalized and began implementation of CDM Human Resource Plan

### 2.2.5 PRE-2011 PROGRAMS COMPLETED IN 2011

As mentioned, this report also includes activities and results from pre-2011 programs that were extended into and realized savings in 2011. Table 11 summarizes the activities that PowerStream executed in relation to the pre-2011 programs.

**Table 11: Pre-2011 Program Activities**

Program	Description	Activities
Electricity Retrofit Incentive Program (ERIP)	Please refer to Appendix B - A	Processed and paid 195 projects Conducted QA/QC site visits to participants
High Performance New Construction (HPNC)	Please refer to Appendix B -D	n/a
Multi-Family Energy Efficiency Rebates (MEER)	MEER applies to multifamily buildings of six units or more, including rental buildings, condominiums, and assisted social housing. The OPA contracted with GreenSaver to deliver the MEER.  Similar to ERIP and ERIP, MEER provides financial incentives for prescriptive and custom measures, but also funds resident education. Unlike ERIP, where incentives are paid by the LDC, all incentives through MEER are paid through GreenSaver.	n/a
Data Centre Incentive Program (DCIP)	DCIP is a Custom Program offered by PowerStream prior to 2011. Similar to ERIP and ERIP, DCIP provide incentives for efficient measures specific to Data Centres and Information Technologies. All applications are submitted directly to PowerStream. Incentives are paid through PowerStream.	DCIP was supposed to end in December 31, 2010 but similar to ERIP, there were some applications that were pre-approved in 2010 but were completed in 2011. PowerStream processed five DCIP applications in 2011.

## 2.3 Participation

Table 12 includes the number of participants in each initiative that was offered by PowerStream in 2011. These results were quality controlled and verified by the OPA.

**Table 12:** Participation

#	Initiative	Activity Unit	Uptake/ Participation Units
<b>Consumer Program</b>			
1	Appliance Retirement	Appliances	2,986
2	Appliance Exchange	Appliances	152
3	HVAC Incentives	Equipment	10,174
4	Conservation Instant Coupon Booklet	Products	34,625
5	Bi-Annual Retailer Event	Products	57,776
6	Retailer Co-op	Products	134
7	Residential Demand Response	Devices	2,234
8	Residential New Construction	Houses	0
<b>Commercial &amp; Institutional Program</b>			
9	Equipment Replacement Incentive Initiative	Projects	148
10	Direct Install Lighting	Projects	1,943
11	Existing Building Commissioning Incentive	Buildings	0
12	New Construction and Major Renovation Incentive	Buildings	2
13	Energy Audit	Audits	6
14	Small Commercial Demand Response (part of the Residential program schedule)	Devices	0
15	Demand Response 3 (part of the Industrial program schedule)	Facilities	12
<b>Industrial Program</b>			
16	Process & System Upgrades	Projects	0
17	Monitoring & Targeting	Projects	0
18	Energy Manager	Managers	0
19	Equipment Replacement Incentive (part of the C&I program schedule)	Projects	34
20	Demand Response 3	Facilities	11
<b>Low Income Program</b>			
21	Low Income Program	Homes	0
<b>Pre 2011 Programs Completed in 2011</b>			
22	Electricity Retrofit Incentive Program	Projects	195
23	High Performance New Construction	Projects	8
25	Multifamily Energy Efficiency Rebates	Projects	1
26	Data Centre Incentive Program	Projects	5

## 2.4 Spending

Table 13 itemizes PowerStream's expenses, by funding category, for each Program Initiative that was offered in 2011. Program Administration Budget (PAB) expenses are further detailed by expense category (as stipulated in the CDM Code, Appendix A) and are shown in Table 14. Participant Based Funding (PBF) and Participant Incentive Payments (PIP) are based on actual number of participation in applicable initiatives. PowerStream did not have any Capability Building Funding (CBF) expenses in 2011. In addition, Pre-2011 Programs were not funded by the 2011-2014 Program terms, they were funded as per their respective program agreements (as stipulated in table 4).

**Table 13: 2011 Spending Initiative (\$)**

#	Initiative	Program Administration Budget (PAB)	Participant Based Funding (PBF)	Participant Incentives (PIP)	Capability Building Funding (CBF)	TOTAL
<b>Consumer Program</b>						<b>987,887</b>
1	Appliance Retirement	188,368	-	-	-	188,368
2	Appliance Exchange	168,709	-	-	-	168,709
3	HVAC Incentives	181,575	-	-	-	181,575
4	Conservation Instant Coupon Booklet	171,771	-	-	-	171,771
5	Bi-Annual Retailer Event	2,069	-	-	-	2,069
6	Retailer Co-op	9,178	-	-	-	9,178
7	Residential Demand Response	252,191	-	-	-	252,191
8	New Construction Program	14,026	-	-	-	14,026
<b>Commercial and Institutional Program</b>						<b>2,922,465</b>
9	Equipment Replacement Incentive Initiative (ERII)	554,684	-	117,562	-	672,246
10	Direct Installed Lighting	108,047	429,975	1,561,617	-	2,099,639
11	Existing Building Commissioning Incentive	781	-	-	-	781
12	New Construction and Major Renovation Initiative	72,770	-	5,324	-	78,094
13	Energy Audit	65,205	-	6,500	-	71,705
14	Small Commercial Demand Response	Included in Residential Demand Response				
15	Demand Response 3	Included in Industrial Demand Response 3				
<b>Industrial Program</b>						<b>77,714</b>
16	Process & System Upgrades					
	a) preliminary study	7,636	-	-	-	7,636
	b) engineering study	7,636	-	-	-	7,636
	c) program incentive	30,542	-	-	-	30,542
17	Monitoring & Targeting	1,909	-	-	-	1,909
18	Energy Manager	10,814	-	-	-	10,814
19	Equipment Replacement Incentive Initiative	Included in Commercial and Institutional ERII				
20	Demand Response 3	7,715	-	-	-	7,715
<b>28</b>	<b>Key Account Manager</b>	<b>11,463</b>				<b>11,463</b>
<b>Low Income Program</b>						<b>37,396</b>
21	Low Income Program	37,396	-	-	-	37,396
<b>Pre 2011 Programs Completed in 2011</b>						<b>4,023,562</b>
22	Electricity Retrofit Incentive Program	-	-	3,003,110	-	3,003,110
23	High Performance New Construction	-	-	-	-	-
25	Multifamily Energy Efficiency Rebates	-	-	-	-	-
26	Data Centre Incentive Program	-	-	83,260	-	83,260
<b>29</b>	<b>PeakSaver Extension</b>	<b>145,460</b>	<b>742,957</b>	<b>48,775</b>		<b>937,192</b>
<b>TOTAL Province-wide CDM PROGRAMS</b>		<b>2,049,944</b>	<b>1,172,932</b>	<b>4,826,148</b>		<b>8,049,024</b>

**Table 14: 2011 PAB by expense category (\$)**

	Labour Costs	Customer Care, Advertising, Marketing	IT	Other Service Providers	Other	Total
Consumer Program	455,018	394,538	26,790	56,292	55,249	987,887
Commercial & Institutional Program	526,355	73,871	31,381	73,382	96,497	801,487
Industrial Program	58,514	92	4,751	3,567	10,790	77,714
Low Income Program	22,576	239		2,154	12,427	37,396
<b>TOTAL</b>	<b>1,062,462</b>	<b>468,741</b>	<b>62,922</b>	<b>135,394</b>	<b>174,963</b>	<b>1,904,483</b>

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## 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 are summarized in Table 15 below. The program initiatives impact (free ridership, net-to-gross ratio, realization rates, etc) are summarized in Table 16.

**Table 15: Evaluation Findings**

#	Initiative	Evaluation Findings – Provincial Level (Source: 2011 PowerStream Final Report provided by the OPA)
<b>Consumer Program</b>		
1	Appliance Retirement	<ul style="list-style-type: none"> <li>• Overall participation continues to decline year over year               <ul style="list-style-type: none"> <li>○ Participation declined 17% from 2010 (from over 67,000 units in 2010 to over 56,000 units in 2011)</li> </ul> </li> <li>• 97% of net resource savings achieved through the home pick-up stream               <ul style="list-style-type: none"> <li>○ Measure Breakdown: 66% refrigerators, 30% freezers, 4% Dehumidifiers and window air conditioners</li> </ul> </li> <li>• 3% of net resource savings achieved through the Retailer pick-up stream               <ul style="list-style-type: none"> <li>○ Measure Breakdown: 90% refrigerators, 10% freezers</li> </ul> </li> <li>• Net-to-Gross ratio for the initiative was 50%               <ul style="list-style-type: none"> <li>○ Measure-level free ridership ranges from 82% for the retailer pick-up stream to 49% for the home pick-up stream</li> <li>○ Measure-level spill over ranges from 3.7% for the retailer pick-up stream to 1.7% for the home pick-up stream</li> </ul> </li> </ul>
2	Appliance Exchange	<ul style="list-style-type: none"> <li>• Overall eligible units exchanged declined by 36% from 2010 (from over 5,700 units in 2010 to over 3,600 units in 2011)               <ul style="list-style-type: none"> <li>○ Measure Breakdown: 75% window air conditioners, 25% dehumidifiers</li> </ul> </li> <li>• Dehumidifiers and window air conditioners contributed almost equally to the net energy savings achieved               <ul style="list-style-type: none"> <li>○ Dehumidifiers provide more than three times the energy savings per unit than window air conditioners</li> </ul> </li> <li>• Window air conditioners contributed to 64% of the net peak demand savings achieved</li> <li>• Approximately 96% of consumers reported having replaced their exchanged units (as opposed to retiring the unit)</li> <li>• Net-to-Gross ratio for the initiative is consistent with previous evaluations (51.5%)</li> </ul>
3	HVAC Incentives	<ul style="list-style-type: none"> <li>• Total air conditioner and furnace installations increased by 14% (from over 95,800 units in 2010 to over 111,500 units in 2011)               <ul style="list-style-type: none"> <li>○ Measure Breakdown: 64% furnaces, 10% tier 1 air conditioners (SEER 14.5) and 26% tier 2 air conditioners (SEER 15)</li> <li>○ Measure breakdown did not change from 2010 to 2011</li> </ul> </li> <li>• The HVAC Incentives initiative continues to deliver the majority of both the energy (45%) and demand (83%) savings in the consumer program               <ul style="list-style-type: none"> <li>○ Furnaces accounted for over 91% of energy savings achieved for this initiative</li> </ul> </li> <li>• Net-to-Gross ratio for the initiative was 17% higher than 2010 (from 43% in 2010 to 60% in 2011)               <ul style="list-style-type: none"> <li>○ Increase due in part to the removal of programmable thermostats from the program, and an increase in the net-to-gross ratio for both Furnaces and Tier 2 air conditioners (SEER 15)</li> </ul> </li> </ul>
4	Conservation Instant Coupon	<ul style="list-style-type: none"> <li>• Customers redeemed nearly 210,000 coupons, translating to nearly 560,000 products               <ul style="list-style-type: none"> <li>○ Majority of coupons redeemed were downloadable (~40%) or LDC-</li> </ul> </li> </ul>



	Booklet	<ul style="list-style-type: none"> <li>○ branded (~35%) <ul style="list-style-type: none"> <li>○ Majority of coupons redeemed were for multi-packs of standard spiral CFLs (37%), followed by multi-packs of specialty CFLs (17%)</li> </ul> </li> <li>● Per unit savings estimates and net-to-gross ratios for 2011 are based on a weighted average of 2009 and 2010 evaluation findings</li> <li>● Careful attention in the 2012 evaluation will be made for standard CFLs since it is believed that the market has largely been transformed</li> </ul>
5	Bi-Annual Retailer Event	<ul style="list-style-type: none"> <li>● Customers redeemed nearly 370,000 coupons, translating to over 870,000 products <ul style="list-style-type: none"> <li>○ Majority of coupons redeemed were for multi-packs of standard spiral CFLs (49%), followed by multi-packs of specialty CFLs (16%)</li> </ul> </li> <li>● Per unit savings estimates and net-to-gross ratios for 2011 are based on a weighted average of 2009 and 2010 evaluation findings <ul style="list-style-type: none"> <li>○ Standard CFLs and heavy duty outdoor timers were reintroduced to the initiative in 2011 and contributed more than 64% of the initiative's 2011 net annual energy savings</li> <li>○ While the volume of coupons redeemed for heavy duty outdoor timers was relatively small (less than 1%), the measure accounted for 10% of net annual savings due to high per unit savings</li> </ul> </li> <li>● Careful attention in the 2012 evaluation will be made for standard CFLs since it is believed that the market has largely been transformed.</li> </ul>
6	Retailer Co-op	<ul style="list-style-type: none"> <li>● Initiative was not evaluated in 2011 due to low uptake. Verified Bi-Annual Retailer Event per unit assumptions and free-ridership rates were used to calculate net resource savings</li> </ul>
7	Residential Demand Response	<ul style="list-style-type: none"> <li>● Approximately 20,000 new devices were installed in 2011 <ul style="list-style-type: none"> <li>○ 99% of the new devices enrolled controlled residential central AC (CAC)</li> </ul> </li> <li>● 2011 only saw 1 atypical event (in both weather and timing) that had limited participation across the province <ul style="list-style-type: none"> <li>○ The ex ante impact developed through the 2009/2010 evaluations was maintained for 2011; residential CAC: 0.56 kW/device, commercial CAC: 0.64 kW/device, and Electric Water Heaters: 0.30 kW/device</li> </ul> </li> </ul>
8	New Construction Initiative	<ul style="list-style-type: none"> <li>● Initiative was not evaluated in 2011 due to limited uptake</li> <li>● Business case assumptions were used to calculate savings</li> </ul>
<b>Commercial &amp; Institutional Program</b>		
9	Equipment Replacement Incentive Initiative	<ul style="list-style-type: none"> <li>● Gross verified energy savings were boosted by lighting projects in the prescriptive and custom measure tracks</li> <li>● Lighting projects overall were determined to have a realization rate of 112%; 116% when including interactive energy changes <ul style="list-style-type: none"> <li>○ On average, the evaluation found high realization rates as a result of both longer operating hours and larger wattage reductions than initial assumptions</li> <li>○ Low realization rates for engineered lighting projects due to overstated operating hour assumptions</li> </ul> </li> <li>● Custom non-lighting projects suffered from process issues such as: the absence of required M&amp;V plans, the use of inappropriate assumptions, and the lack of adherence to the M&amp;V plan</li> <li>● The final realization rate for summer peak demand was 94% <ul style="list-style-type: none"> <li>○ 84% was a result of different methodologies used to calculate peak demand savings</li> <li>○ 10% due to the benefits from reduced air conditioning load in lighting retrofits</li> </ul> </li> <li>● Overall net-to-gross ratios in the low 70's represent an improvement over the 2009 and 2010 ERIIP program where net-to-gross ratios were in the low 60's and</li> </ul>

		<ul style="list-style-type: none"> <li>low 50's, respectively.</li> <li>Strict eligibility requirements and improvements in the pre-approval process contributed to the improvement in net-to-gross ratios</li> </ul>
10	Direct Installed Lighting	<ul style="list-style-type: none"> <li>Though overall performance is above expectations, participation continues to decline year over year as the initiative reaches maturity</li> <li>70% of province-wide resource savings persist to 2014 <ul style="list-style-type: none"> <li>Over 35% of the projects for 2011 included at least one CFL measure</li> <li>Resource savings from CFLs in the commercial sector only persist for the industry standard of 3 years</li> </ul> </li> <li>Since 2009 the overall realization rate for this program has improved <ul style="list-style-type: none"> <li>2011 evaluation recorded the highest energy realization rate to date at 89.5%</li> <li>The hours of use values were held constant from the 2010 evaluation and continue to be the main driver of energy realization rate</li> <li>Lights installed in "as needed" areas (e.g., bathrooms, storage areas) were determined to have very low realization rates due to the difference in actual energy saved vs. reported savings</li> </ul> </li> </ul>
11	Existing Building Commissioning Incentive	<ul style="list-style-type: none"> <li>Initiative was not evaluated in 2011, no completed projects in 2011</li> </ul>
12	New Construction and Major Renovation Initiative	<ul style="list-style-type: none"> <li>Initiative was not evaluated in 2011 due to low uptake</li> <li>Assumptions used are consistent with preliminary reporting based on the 2010 Evaluation findings and consultation with the C&amp;I Work Group (100% realization rate and 50% net-to-gross ratio)</li> </ul>
13	Energy Audit	<ul style="list-style-type: none"> <li>The evaluation is ongoing. The sample size for 2011 was too small to draw reliable conclusions.</li> </ul>
14	Commercial Demand Response	<ul style="list-style-type: none"> <li>See residential demand response (#7)</li> </ul>
15	Demand Response 3	<ul style="list-style-type: none"> <li>See Demand Response 3 (#20)</li> </ul>
<b>Industrial Program</b>		
16	Process & System Upgrades	<ul style="list-style-type: none"> <li>Initiative was not evaluated in 2011, no completed projects in 2011</li> </ul>
17	Monitoring & Targeting	<ul style="list-style-type: none"> <li>Initiative was not evaluated in 2011, no completed projects in 2011</li> </ul>
18	Energy Manager	<ul style="list-style-type: none"> <li>Initiative was not evaluated in 2011, no completed projects in 2011</li> </ul>
19	Equipment Replacement Incentive Initiative	<ul style="list-style-type: none"> <li>See Equipment Replacement Incentive Initiative (#9)</li> </ul>
20	Demand Response 3	<ul style="list-style-type: none"> <li>Program performance for Tier 1 customers increased with DR-3 participants providing 75% of contracted MW for both sectors <ul style="list-style-type: none"> <li>Industrial customers outperform commercial customers by provide 84% and 76% of contracted MW, respectively</li> </ul> </li> <li>Program continues to diversify but still remains heavily concentrated with less than 5% of the contributors accounting for the majority (~60%) of the load reductions.</li> <li>By increasing the number of contributors in each settlement account and implementation of the new baseline methodology the performance of the program is expected to increase</li> </ul>

<b>Low Income Program</b>		
21	Low Income Program	<ul style="list-style-type: none"> <li>• Initiative was not evaluated in 2011 due to low uptake</li> <li>• Business Case assumptions were used to calculate savings</li> </ul>
<b>Pre-2011 Programs completed in 2011</b>		
22	Electricity Retrofit Incentive Program	<ul style="list-style-type: none"> <li>• Initiative was not evaluated</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>
23	High Performance New Construction	<ul style="list-style-type: none"> <li>• Initiative was not evaluated</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>
25	Multifamily Energy Efficiency Rebates	<ul style="list-style-type: none"> <li>• Initiative was not evaluated</li> <li>• Net-to-Gross ratios used are consistent with the 2010 evaluation findings</li> </ul>
26	Data Centre Incentive Program	<ul style="list-style-type: none"> <li>• Initiative was not evaluated</li> </ul>

**Table 16:** Evaluation Results (Source: 2011 PowerStream Final Report provided by the OPA)

#	Initiative	Gross Savings		Rate		Ratio		Net Savings	
		Incremental Peak Demand Savings (kW)	Incremental Energy Savings (kWh)	Peak Demand Savings	Energy Savings	Peak Demand Savings	Energy Savings	Incremental Peak Demand Savings (kW)	Incremental Energy Savings (kWh)
<b>Consumer Program</b>									
1	Appliance Retirement	339	2,465,802	100%	100%	50%	50%	159	1,160,946
2	Appliance Exchange	30	36,794	100%	100%	52%	52%	15	18,962
3	HVAC Incentives	4,700	8,684,756	100%	100%	60%	60%	2,829	5,192,089
4	Conservation Instant Coupon Booklet	70	1,174,884	100%	100%	114%	111%	80	1,295,153
5	Bi-Annual Retailer Event	100	1,785,664	100%	100%	113%	110%	112	1,950,839
6	Retailer Co-op	-	3,450	100%	100%	68%	68%	-	2,335
7	Residential Demand Response	1,251	3,239	0%	0%	-	-	1,251	3,239
8	Residential New Construction	-	-	-	-	-	-	-	-
<b>Commercial &amp; Institutional Program</b>									
9	Equipment Replacement Incentive Initiative	1,673	9,981,644	93%	123%	73%	75%	1,225	7,512,897
10	Direct Install Lighting	1,967	5,703,882	108%	90%	93%	93%	2,106	5,296,278
11	Existing Building Commissioning Incentive	-	-	-	-	-	-	-	-
12	New Construction and Major Renovation Incentive	33	139,736	-	-	50%	50%	16	69,868
13	Energy Audit	-	-	-	-	-	-	-	-
14	Commercial Demand Response	-	-	-	-	-	-	-	-
15	Demand Response 3	1,639	48,536	76%	100%	n/a	n/a	1,239	48,536
<b>Industrial Program</b>									
16	Process & System Upgrades	-	-	-	-	-	-	-	-
17	Monitoring & Targeting	-	-	-	-	-	-	-	-
18	Energy Manager	-	-	-	-	-	-	-	-
19	Equipment Replacement Incentive Initiative	684	4,169,768	92%	116%	73%	77%	502	3,213,757
20	Demand Response 3	3,125	154,591	84%	100%	n/a	n/a	2,634	154,591
<b>Low Income Program</b>									
21	Low Income Program	-	-	-	-	-	-	-	-
<b>Pre-2011 Programs completed in 2011</b>									
22	Electricity Retrofit Incentive Program	3,752	18,243,264	77%	78%	52%	52%	1,958	9,540,024
23	High Performance New Construction	422	2,165,793	100%	100%	50%	50%	211	1,082,896
25	Multifamily Energy Efficiency Rebates	110	286,080	96%	96%	68%	68%	75	194,534
26	Data Centre Incentive Program	81	533,038	100%	100%	100%	100%	81	533,038

## 2.6 Additional Comments

### Challenges in 2011:

When PowerStream signed the Master Agreement in February 2011, a number of OPA Initiative Schedules were not available (three C&I initiative, Industrial Program and Low Income Program). Although the Residential and three C&I Program Initiatives were released at that time, they were not readily available for PowerStream customers due to a number of challenges:

- OPA's application and payment processes were not established
- Application forms and worksheets were not available from OPA
- The iCon system (both customer and LDC sites) was not launched until March 2011 and there are still various issues identified to date
- There were flaws in some program design that were recognized after the release of the Schedules which affected the actual roll out in the market (i.e. Residential New Construction)

Even with these challenges, PowerStream's delivery of the 2011-2014 CDM Portfolio over the first 12 months of the contract term has been successful. The 2011 performance results were sufficient to build on for the next three years of the program term. PowerStream believes that the results could have been better if there were fewer challenges and if all program initiatives were in market in 2011.

### Recommendations:

Many of the obstacles encountered in delivering Province Wide Programs in 2011 were out of PowerStream's control. However, PowerStream acknowledges that working closely with all the parties involved (the OPA, the OEB, channel partners, and the customers) to identify solutions to these problems will contribute to the success of the programs moving forward. PowerStream's recommendations are:

- **Electricity customers in Ontario should have access to good and effective energy management advice, solutions, and programs as part of their regular electricity service delivery which should be provided on an ongoing and consistent basis** - Customers of all types should be able to rely on program offerings that match their budget and budgeting cycles. Therefore, future commitment from stakeholders is recommended in a timely manner so that the momentum, mindset, and culture of conservation can continue.
- **Allow LDCs to have more flexibility implementing OPA-Contracted Province-wide Programs** – LDCs know their customers and their needs more than any other entity. LDCs should be allowed to customize the delivery of the programs to their customers. An example is to establish a simplified/customized application process for most C&I and Industrial initiatives.
- **Make it simple/straightforward for LDCs to apply for Board-Approved CDM Programs** – Board-Approved CDM Programs may be necessary to ensure that many LDCs achieve their targets. In addition, it is ideal to have the approval process relatively quick, if possible, given the short amount of time left to design and launch a new program that would have a measureable impact on LDC's targets.
- **OPA-Contracted Province-Wide Program rules and eligibility requirements should be revised to influence more participation** – Overly complex, lengthy, and onerous application processes are one of the main barriers to the success of some program initiatives.
- **Programs should be launched with all initiatives available for immediate implementation** – LDCs forecast their potential results based on available OPA-Contracted Province-Wide Programs and initiatives to be successful in achieving targets. If some programs/initiatives are recognised prior to

launch date as unavailable (e.g. 6-12 months delay), then LDCs are able to respond, earlier in the cycle, by adjusting their forecast or by developing and applying for Board-Approved CDM Programs.

- **Programs should be launched with all the tools in place** (customer application process, evaluation plan, reporting and payment process, and other administrative processes) – In 2011, it was necessary for LDCs to establish interim alternative processes because most of these tools were not adequately in place. This was costly and time consuming for LDCs. Moreover, this is critical for future program consideration and success.
- **In order for LDCs to adjust tactics in the marketplace in a timely manner, reporting performance results and evaluation results to LDCs should be timely, more frequent, and transparent** – Monitoring progress towards targets earlier will provide insight to LDCs which they can use in adjusting their strategies and focusing their efforts on initiatives that will provide greater benefits to their customers and rate payers.
- **There should be a faster process to implement program changes and modifications** – After agreement on technical issues, at the working group level, the current Change Management process is taking an additional six to twelve months before making it available to LDCs for implementation. In the current four year program term this delay was a significant barrier from a service delivery perspective. LDCs cannot afford this kind of delay if they are to meet their targets.
- **Alignment of roles and responsibilities of all governing parties involved in CDM would aid in avoiding redundant efforts** – In the current CDM term, LDCs are answering to two different bodies for target achievement and budgeting effort. It is recommended that all stakeholders involved collaborate and coordinate to reduce duplicate efforts and effectively administer CDM in Ontario.

### 3 Combined CDM Reporting Elements

#### 3.2 Progress Towards CDM Targets

PowerStream has achieved an incremental demand savings of 14.49 MW in 2011 of which 8.78 MW is guaranteed to persist to 2014 and count towards PowerStream’s demand target. An incremental energy savings of 37.27 GWh was achieved in 2011 which cumulates to 146.56 GWh at the end of 2014. These represent 9.19% and 35.98% of PowerStream’s demand and energy savings targets, respectively. Table 17 illustrates the net peak demand and energy savings with their contribution towards the 2014 target.

**Table 17:** Summarized Program Results

Program	Net Savings		Contribution to Targets	
	Incremental Peak Demand Savings (MW)	Incremental Energy Savings (MWh)	Program-to-Date: Net Annual Peak Demand Savings (MW) in 2014	Program-to-Date: 2011-2014 Net Cumulative Energy Savings (MWh)
Consumer Program Total	4.45	9,624	3.18	38,474
Business Program Total	4.59	12,928	2.77	49,667
Industrial Program Total	3.14	3,368	0.50	13,008
Home Assistance Program Total	-	-	-	-
Pre-2011 Programs completed in 2011 Total	2.33	11,350	2.33	45,402
<b>Total OPA Contracted Province-Wide CDM Programs</b>	<b>14.49</b>	<b>37,270</b>	<b>8.78</b>	<b>146,551</b>

Comparing the 2011 results to the 2011 milestone presented in the original Strategy resulted in variances of -9% in demand and -1% in energy savings as detailed in Table 18. PowerStream plans to offset the variances over the remainder of the program term as detailed in Section 3.3 of this document; therefore, is not expecting the variances to have an impact on the overall achievement of targets.

**Table 18: 2011 Results vs Forecast**

	2011 Milestone as per 2010 Strategy		2011 Verified Annual Results		Variance to 2011 Milestone	
	MW/MWh	(% to Target)	MW/MWh	(% to Target)	MW/MWh	(% to Target)
Demand Savings	23.40	24%	14.49	15%	(8.91)	-9%
Energy Savings	42,052	10%	37,270	9%	(4,782)	-1%

There are a number of reasons justifying the variances but the main factor, with the biggest contribution, is the fact that the input assumptions, models, and estimates used in the October 2010 program designs were no longer applicable in 2011. The assumptions that were proven not true when PowerStream started delivering the OPA-Contracted Province-Wide Programs are detailed in Table 19 and comparison of participation levels which generated the forecast versus verified 2011 results are detailed in Table 20.

**Table 19: Rationale for 2011 Variances**

	Assumptions used in the Strategy (Oct 2010)	Status in 2011
Program start dates	<ul style="list-style-type: none"> <li>Register with OPA for all programs by end of 2010</li> <li>All programs and initiatives in market Jan 1, 2011</li> </ul>	<ul style="list-style-type: none"> <li>Registered to OPA Programs in Feb – Jun 2011</li> <li>A number of initiatives were not launched in 2011 and/or did not have any uptake provincially (refer to Table 5)</li> <li>A number of key initiatives were launched late (Q4 2011 – Q2 2012)</li> </ul>
Model and input assumptions	Consultant’s model based on the following: <ul style="list-style-type: none"> <li>Free rider estimated provided by the OPA to PowerStream in a series of reports</li> <li>Program results from prior years as reported to the OPA/OEB</li> <li>The “LDC Resource Planning Tool”</li> <li>PowerStream-specific household equipment estimates provided by the</li> </ul>	<ul style="list-style-type: none"> <li>OPA’s model</li> <li>As a result of the 2011 EM&amp;V process, different values for free-ridership, realization rate, and other factors were applied to calculate net savings – in some cases the values are higher and in some cases the values are lower than the assumptions used in 2010 (refer to Table 15 and 16)</li> </ul>
Program designs	<ul style="list-style-type: none"> <li>Draft program design information provided by OPA in Summer/early Fall 2010</li> </ul>	<ul style="list-style-type: none"> <li>Final program design, which includes changes to the draft program design such as changes in actual measures included in some initiatives, changes in initiative frequency, and processes that did not meet the program requirements (refer to Appendix A, Appendix B, Appendix C, and Appendix D)</li> </ul>
Program participation levels	<ul style="list-style-type: none"> <li>Projected participation levels developed by external consultant and internal staff</li> <li>Based on historical results and best available market data and program design information available</li> </ul>	<ul style="list-style-type: none"> <li>Actual participation levels in 2011</li> </ul> Some initiatives performed as forecasted, some over performed but most initiatives underperformed than forecasted (refer to Table 20)

**Table 20: 2010 Forecast vs 2011 Uptake, by Initiative**

#	Initiative	Activity Unit	Forecasted in 2010	Uptake in 2011
<b>Consumer Program</b>				
1	Appliance Retirement	Appliances	5,126	2,986
2	Appliance Exchange	Appliances	0	152
3	HVAC Incentives	Equipment	3,473	10,174
4	Conservation Instant Coupon Booklet	Products	88,421	34,625
5	Bi-Annual Retailer Event	Products		57,776
6	Retailer Co-op	Products	0	134
7	Residential Demand Response	Devices	5,945	2,234
8	Residential New Construction	Houses	139	0
<b>Commercial &amp; Institutional Program</b>				
9	Equipment Replacement Incentive Initiative	Projects	342	148
10	Direct Install Lighting	Projects	2,379	1,943
11	Existing Building Commissioning Incentive	Buildings	0	0
12	New Construction and Major Renovation Incentive	Buildings	45	2
13	Energy Audit	Audits	0	6
14	Commercial Demand Response	Devices	0	0
15	Demand Response 3	Facilities	14	12
<b>Industrial Program</b>				
16	Process & System Upgrades	Projects	0	0
17	Monitoring & Targeting	Projects	0	0
18	Energy Manager	Managers	0	0
19	Equipment Replacement Incentive Initiative	Projects	35	34
20	Demand Response 3	Facilities	23	11
<b>Low Income Program</b>				
21	Low Income Program	Homes	695	0
<b>Pre 2011 Programs Completed in 2011</b>				
22	Electricity Retrofit Incentive Program	Projects	0	195
23	High Performance New Construction	Projects	0	8
25	Multifamily Energy Efficiency Rebates	Projects	0	1
26	Data Centre Incentive Program	Projects	0	5

### 3.3 CDM Strategy Modifications

As mentioned, PowerStream used draft OPA-Contracted Province-Wide Program design information and the best available model and input assumptions to develop annual demand and energy forecasts. These assumptions were proven not true and are no longer applicable. As a solution, PowerStream developed a 2011 -2014 Strategic Plan that builds upon the Strategy and a number of lessons learned over the first 18 months of delivering OPA-Contracted Province-Wide Programs. The Strategic Plan serves as PowerStream's modification to the original Strategy submitted to the OEB in 2010. It includes updated 2011-2014 demand and energy forecasts.



The updated forecasts were developed in a 'bottom up manner' based on inputs from CDM staff, program performance to date, key findings on OPA's 2011 EM&V process, current market analysis, and insights on upcoming changes to the programs. As a result of this exercise, PowerStream's forecast from its October 2010 Strategy remains that 100% of both demand and energy target will be achieved from the delivery of OPA-Contracted Province-Wide Programs. Note that this includes TOU estimated demand savings. Table 21 and 22 provide more detailed illustrations of the forecasts; showing the amount of demand savings persisting from one year to the next and the amount of energy that cumulates to 2014.

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

Implementation Period	Net Annual Demand Savings, MW			
	2011	2012	2013	2014
2011 - Verified	14.49	9.37	9.28	8.78
2012 - Forecasted		22.91	10.67	9.69
2013 - Forecasted			33.31	13.13
2014 - Forecasted				63.96
Net Annual Peak Demand Savings Persisting in 2014:				95.57
PowerStream Inc. 2014 Annual CDM Capacity Target:				95.57
Portion of Peak Demand Savings Target Achieved in 2014(%):				100%

The demand savings forecast includes an estimate of 21.6MW (or 23%) savings from TOU pricing implementation while 100% of the energy savings are expected from OPA-Contracted Province-Wide Programs.

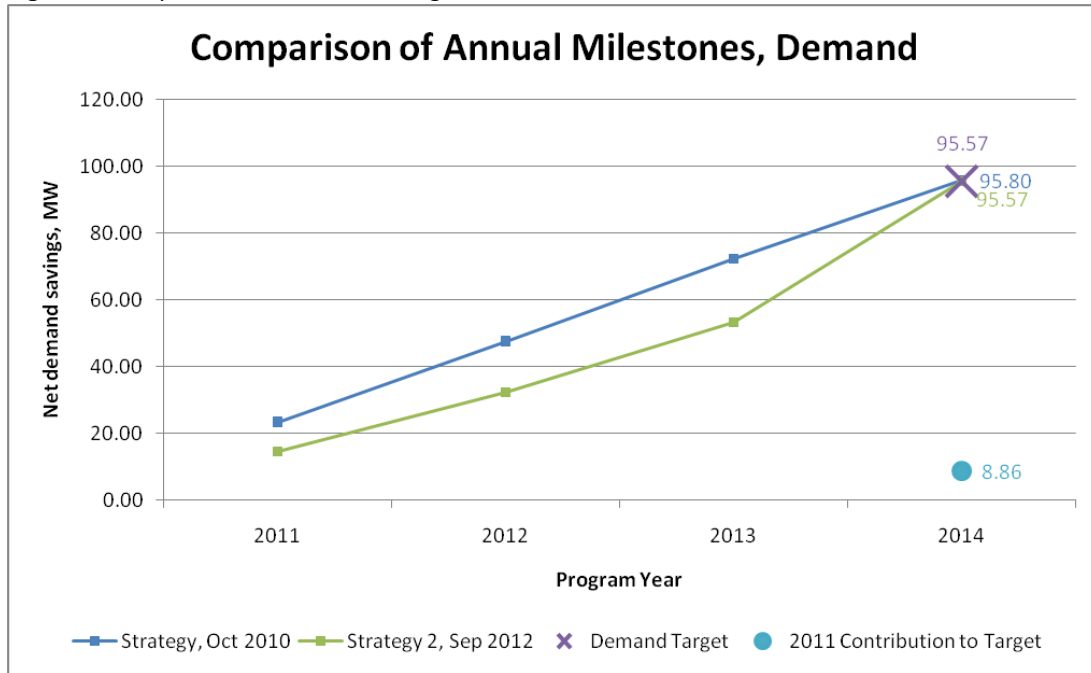
**Table 22:** Revised 2011-2014 Milestones, Energy

Implementation Period	Net Annual Energy Savings, GWh				Cumulative 2011-2014
	2011	2012	2013	2014	
2011 - Verified	37.27	37.06	36.82	35.41	146.55
2012 - Forecasted		50.74	50.70	48.21	149.65
2013 - Forecasted			66.82	66.77	133.59
2014 - Forecasted				59.22	59.22
Net Cumulative Energy Savings 2011-2014:					489.01
PowerStream Inc. 2011-2014 Cumulative CDM Energy Target:					407.3
Portion of Cumulative Energy Target Achieved (%):					120%

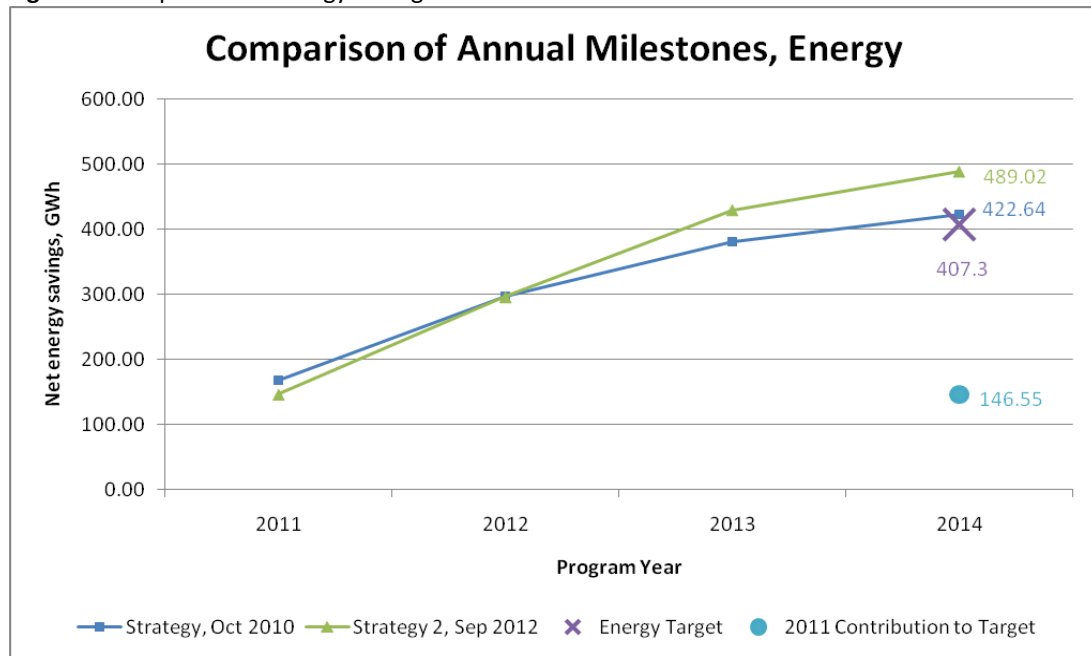
As with any forecasting exercise, there are known risks to achieving the CDM targets. PowerStream has little to no control over many of the risks associated with the 2011-2014 program term, such as EM&V and TOU savings results, program availability, changes to program designs and eligibility, and customers reaction/uptake in the programs. As a result, PowerStream developed a timeline for investigating and assessing the feasibility of potential Board-Approved CDM Programs in quarter four of 2012 by conducting a market scan of North America to gain understanding of best practices in other jurisdictions while working with the OPA, customers and, potentially, other LDCs.

To summarize the modifications to the Strategy, Figure 1 and Figure 2 were provided to illustrate the comparison of demand and energy savings forecast from the original Strategy to the modified Strategy.

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



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



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 due to factoring 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 forecasts for 2012 to 2014.

**Table 23:** Revised 2011-2014 Budget

		Residential	C&I	Industrial	Low Income	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	1,641,561	1,807,169	319,495	222,051	3,990,276
	PBF/PIP	1,438,080	5,606,912	72,300	472,150	7,589,442
	CBF	-	-	343,424	-	343,424
	2012 total	3,079,641	7,414,081	735,218	694,201	\$ 11,923,142
2013	PAB	1,968,193	2,406,985	347,032	217,272	4,939,482
	PBF/PIP	2,495,600	7,406,738	-	1,534,532	11,436,870
	CBF	-	-	788,828	-	788,828
	2013 total	4,463,793	9,813,723	1,135,860	1,751,804	\$ 17,165,180
2014	PAB	1,902,470	2,208,782	350,987	227,265	4,689,504
	PBF/PIP	2,697,500	4,709,393	1,229,761	1,767,131	10,403,785
	CBF	-	-	797,258	-	797,258
	2014 total	4,599,970	6,918,175	2,378,005	1,994,396	\$ 15,890,547
<b>Total, by Program</b>		<b>\$ 13,131,292</b>	<b>\$27,068,444</b>	<b>\$ 4,326,798</b>	<b>\$4,477,797</b>	<b>\$ 49,004,331</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:

- Schedule B-1, Exhibit D  
[http://www.powerauthority.on.ca/sites/default/files/new\\_files/industry\\_stakeholders/current\\_electricity\\_contracts/pdfs/Schedule%20B-1%20Residential%20Program.pdf](http://www.powerauthority.on.ca/sites/default/files/new_files/industry_stakeholders/current_electricity_contracts/pdfs/Schedule%20B-1%20Residential%20Program.pdf)
- 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:** In addition to the activities mentioned in Table, below are a number of activities that PowerStream executed in 2011 that are specific to Appliance Retirement Initiative:

- Commercial on a local television show for a total of **eight weeks**; played over **300 times** (Mar and Dec)
- Online advertisement on a local television station website for **four weeks** (March)
- Advertisement in **two issues** of York Region newsletter (Mar and Apr)

**Lessons Learned:**

- The Appliance Retirement Initiative has been offered by PowerStream since 2007. This initiative is approaching market saturation.
- While the OPA and distributors have reviewed this initiative to assess whether to include other products, appliances have a natural life cycle and the initiative cannot be expected to continually deliver the high level of results in perpetuity. These lower expectations have been taken into account when developing conservation portfolios.
- This initiative now faces some competition from independent retailers and municipalities.

## 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:

- Schedule B-1, Exhibit C

[http://www.powerauthority.on.ca/sites/default/files/new\\_files/industry\\_stakeholders/current\\_electricity\\_contracts/pdfs/Schedule%20B-1%20Residential%20Program.pdf](http://www.powerauthority.on.ca/sites/default/files/new_files/industry_stakeholders/current_electricity_contracts/pdfs/Schedule%20B-1%20Residential%20Program.pdf)

- 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:** In addition to the activities mentioned in Table, below are activities that PowerStream executed in 2011 specific to Appliance Exchange Initiative:

- Support participating local retailers in PowerStream service territory by participating in the events, having a booth and representatives to promote use of energy efficient AC and dehumidifiers, and to cross-promote other Residential Program initiatives.

### **Lessons Learned:**

- The Spring Event had the participation of three retailers with 300 – 400 locations across the province. However, the Fall 2011 Event had no retailer participation, therefore savings forecasted by PowerStream did not materialize.
- Historical Evaluation, Measurement, and Verification (EMV) results indicated that the value of savings for retired room AC has dropped.
- The initiative may be achieving market saturation.
- The type of unit turned in is dependent upon what is promoted by the retailers.

## 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:

- Schedule B-1, Exhibit B  
[http://www.powerauthority.on.ca/sites/default/files/new\\_files/industry\\_stakeholders/current\\_electricity\\_contracts/pdfs/Schedule%20B-1%20Residential%20Program.pdf](http://www.powerauthority.on.ca/sites/default/files/new_files/industry_stakeholders/current_electricity_contracts/pdfs/Schedule%20B-1%20Residential%20Program.pdf)
- 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:** In addition to the activities mentioned in Table, below are a number of activities that PowerStream executed in 2011 specific to HVAC:

- Newspaper advertisements in **six municipalities** in PowerStream's service territory for **four weeks** (October)
- Distribution of bill inserts to **321,000** residential customers (Sep to Nov)
- **Three magazine advertisements** over two municipalities in PowerStream's service territory (Oct to Dec)
- An article featuring HVAC Incentives in PowerStream's bi-annual newsletter (Apr and Nov)
- Commercial on a local television station played over **800 times** in two months (Oct to Nov)
- Online advertisement on a local television station website for **four weeks** (March)
- Advertisement in **two issues** of York Region newsletter (Mar and Apr)

### **Lessons Learned:**

- Channel engagement is a highly effective method of connecting with customers; however channel partners require timeliness of the rebate process to maintain a positive relationship between consumers, contractors, the OPA, and the participating LDCs.
- There appears to be spill over from non-HRAI contractors who are ineligible for this initiative. There are cases where smaller independent contractors are offering their own incentives (by discounting their installations to match value of the OPA incentive) to make the sale.

#### 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:

- Schedule B-1, Exhibit A  
[http://www.powerauthority.on.ca/sites/default/files/new\\_files/industry\\_stakeholders/current\\_electricity\\_contracts/pdfs/Schedule%20B-1%20Residential%20Program.pdf](http://www.powerauthority.on.ca/sites/default/files/new_files/industry_stakeholders/current_electricity_contracts/pdfs/Schedule%20B-1%20Residential%20Program.pdf)
- 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:** In addition to the activities mentioned in Table, below are a number of activities that PowerStream executed in 2011 specific to the Coupon Initiative:

- Distribution of **30,000 coupon booklets** via newspaper insert (October)
- Distribution of coupon booklets to all the attendees of **11 Learn to Conserve Workshops** (Apr to Jun and Aug to Sep)
- Distribution of coupon booklets to about **500 PowerStream employees** via their paystubs
- Featured in a local television show sponsored by PowerStream; aired **19 times** (December)
- Advertisement in **two issues** of York Region newsletter (Mar and Apr)
- A link to the saveONenergy website, where a customer can download the coupons, were added to PowerStream website

#### **Lessons Learned:**

- The downloadable coupons proved to be more successful than the mailed out booklets.
- This initiative may benefit from an enabler such as a Conservation Card / Loyalty Card to increase customer participation.
- The timeframe for retailer submission of redeemed coupons vary from retailer to retailer. This delays the results reporting, which in turn limits the OPA and PowerStream abilities to react and respond to initiative performance or changes in consumer behaviour.

## 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:

- Schedule B-1, Exhibit C  
[http://www.powerauthority.on.ca/sites/default/files/new\\_files/industry\\_stakeholders/current\\_electricity\\_contracts/pdfs/Schedule%20B-1%20Residential%20Program.pdf](http://www.powerauthority.on.ca/sites/default/files/new_files/industry_stakeholders/current_electricity_contracts/pdfs/Schedule%20B-1%20Residential%20Program.pdf)
- 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:** In addition to the activities mentioned in Table, below are activities that PowerStream executed in 2011 specific to Retailer Events:

- Support participating local retailers in PowerStream's service territory by participating in the events, having a booth and representatives to promote use of energy efficient products, and to cross-promote other Residential Program initiatives.

### **Lessons Learned:**

- The product list has changed very little over the past four years.
- Program evolution, including new products (i.e. LED lighting) and review of incentive pricing for the coupon initiatives, must be a regular activity to ensure continued consumer interest.
- A review conducted by the Residential Working Group in quarter four 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.



## F. RETAILER CO-OP (Sears Home Energy Tune-Up)

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

**Initiative Frequency:** Year-round

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

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

**Targeted End Uses:** Compact fluorescent light (CFL) bulbs and power bars with auto shut-off

**Delivery:** PowerStream partnered with Sears Canada and the OPA in delivering the Retailer Co-op Initiative, otherwise known as Sears Home Energy Tune Up, in PowerStream service area. The initiative was piloted in two high-rise condominium buildings in Markham. Tenants who registered received an energy audit and free energy efficient items such as CFLs and power bars. The 30 to 45 minute audit included:

- Installation of energy efficient items to immediately begin saving energy (approximate retail value of \$70 and can save up to about \$58 in electricity costs each year)
- Complete a home energy efficiency checklist to identify and prioritize larger home upgrades
- Summarize recommendations and develop an energy savings plan along with the potential to sign up for OPA and PowerStream programs, receive coupons for energy efficient products, and receive no obligation quotes from Sears

PowerStream was responsible for the marketing and promotion while Sears was responsible for the audit and installation of the energy efficient items. The initiative was funded by the OPA, Sears, and PowerStream's CDM PAB.

**In Market Date:** May 2011 – Although the intent was to offer the initiative for full year, PowerStream had it available to eligible customers from May to September as a pilot program.

**Initiative Activities/Progress:** Below are a number of activities that PowerStream executed in 2011 specific to the Retailer Co-op Initiative:

- Worked with Smart Condo Living (SCL); leveraged SCL relationship with the management of the buildings to encourage participation. Promote the pilot on SCL's official website.
- Appointed an Energy Champion on site to lead the activities of the pilot program.
- Promoted the pilot by placing posters in the lobby of the buildings.
- Held four events on site, including a barbeque event in August, to promote the pilot and cross-promote other Residential Program initiatives.

## G. 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:

- Schedule B-1, Exhibit C  
[http://www.powerauthority.on.ca/sites/default/files/new\\_files/industry\\_stakeholders/current\\_electricity\\_contracts/pdfs/Schedule%20B-2%20New%20Construction%20Program.pdf](http://www.powerauthority.on.ca/sites/default/files/new_files/industry_stakeholders/current_electricity_contracts/pdfs/Schedule%20B-2%20New%20Construction%20Program.pdf)
- 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:** Below are a number of activities that PowerStream executed in 2011 specific to the Residential New Construction Initiative:

- Hired a Residential Program Manager and Program Coordinators to manage the initiative.
- Procured a qualified third party service provider to implement the initiative.
- Worked with the OPA to enhance program design and application process via participating in the Residential Working Group.

### **Lessons Learned:**

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

## H. 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:

- Schedule B-1, Exhibit C

[http://www.powerauthority.on.ca/sites/default/files/new\\_files/industry\\_stakeholders/current\\_electricity\\_contracts/pdfs/SCHED\\_2011\\_ResDR\\_B\\_3\\_110727%28MJB%29v15\\_redacted.pdf](http://www.powerauthority.on.ca/sites/default/files/new_files/industry_stakeholders/current_electricity_contracts/pdfs/SCHED_2011_ResDR_B_3_110727%28MJB%29v15_redacted.pdf)

- 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:** In addition to the activities mentioned in Table, below are a number of activities that PowerStream executed in 2011 specific to the Residential Demand Response Initiative:

- Conducted a “Last Chance Campaign” for *peaksaver* extension via:
  - Radio advertisement for **eight weeks in four radio stations** (July to Aug)
  - Newspaper advertisement for **12 weeks in 13 local newspapers** (June to Aug)
  - Commercial on **two television stations**, Rogers TV and A Channel, for **eight weeks** (July to Aug)
  - Online banners on PowerStream’s shareholder’s websites for **eight weeks** (July to Aug)
- Released a Request for Proposal for a *peaksaver*PLUS™ third party service provider to supply the technologies required and installation services

- Evaluated the proposals received from proponents. (Contract was not awarded until 2012)
- Conducted a Focus Group session with customers aiming to determine their level of understanding of the initiative, their interest in the IHD, the pros and cons of the different IHD technologies, and motivations and barriers for customer participation

**Lessons Learned:**

- The schedule for *peaksaver*PLUS™ was posted in August 2011, but this did not provide adequate time for product procurement for 2011, and part of 2012. The product procurement process uncovered that the IHD 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.
- Introduction of new technology requires incentives for the development of such technology. Appropriate lead times for LDC analysis and assessment, product procurement, testing and integration into the Smart Meter environment are also required. Making seemingly minor changes to provincial technical specifications can create significant issues when all LDCs attempt to implement the solution in their individual environments.
- Where a provincial solution is not available to all participants, attention to addressing specific LDC concerns is needed.

## 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:

- Schedule C-2

[http://www.powerauthority.on.ca/sites/default/files/new\\_files/industry\\_stakeholders/current\\_electricity\\_contracts/pdfs/Schedule%20C-2%20ERII%20Initiative.pdf](http://www.powerauthority.on.ca/sites/default/files/new_files/industry_stakeholders/current_electricity_contracts/pdfs/Schedule%20C-2%20ERII%20Initiative.pdf)

- 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:** In addition to the activities mentioned in Table 7, below are a number of activities that PowerStream executed in 2011 specific to the ERII Initiative:

- Closed approximately 150 ERIP applications and processed and pre-approved approximately 410 ERII applications
- Developed and issued a Request for Proposal for Technical Services Providers (contracts were awarded in quarter one 2012)
- Managed contractors that were hired to conduct project site visits
- Attended training and workshops to learn more on OPA's online tools (iCon/CRM)
- Developed relationships with channel partners and applicant representatives

**Lessons Learned:**

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

## 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:

- Schedule C-3

<http://www.powerauthority.on.ca/sites/default/files/page/Schedule%20C-3%20Direct%20Install%20Initiative%20-%20redacted.pdf>

- 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:** Below are a number of activities that PowerStream executed in 2011 specific to the DIL Initiative:

- Established an interim third party service provider
- Developed and issued a Request for Proposal for third party service provider(contract was awarded towards end of 2011)
- Developed a marketing strategy for the proceeding years
- Advertised in the October issue of the Vaughan Chamber Business Magazine
- Established a process to meet Quality Control/Quality Assurance (QA/QC) requirements

**Lessons Learned:**

- The DIL Initiative is a continuation of the Power Saving Blitz Initiative offered by LDCs from 2008-2010. Successful execution of the previous rendition of this Initiative has resulted in diminished potential for the 2011-2014 Initiative in some LDC territories.
- The inclusion of a standard incentive for additional measures increased project size and drove higher energy and demand savings results.
- The cost of materials has experienced price volatility, reducing the margins of the electrical contractors and has led to a reduction in vendor channel participation in some regions.
- Due to backlogs in the payment system, participant incentive payment from the OPA to the LDC, and therefore to the customer, was commonly delayed.
- To address these issues, the LDCs have been working with the OPA through Change Management to address:
  - extending the target initiative population to include small agricultural customers;
  - increasing the incentive envelope of \$1,000 to \$1,500 to ensure ongoing marketability of the program; and
  - reviewing the eligible measure price list to support contractor participation.



## 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:

- Schedule C-6

[http://www.powerauthority.on.ca/sites/default/files/new\\_files/industry\\_stakeholders/current\\_electricity\\_contracts/pdfs/Schedule%20C-6%20Commissioning%20Initiative.pdf](http://www.powerauthority.on.ca/sites/default/files/new_files/industry_stakeholders/current_electricity_contracts/pdfs/Schedule%20C-6%20Commissioning%20Initiative.pdf)

- 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:**

Even though it was in market in March, 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. For details see Table 7.

### **Lessons Learned:**

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

## 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:

- Schedule C-4  
<http://www.powerauthority.on.ca/sites/default/files/page/ScheduleC-4NewConstructionInitiativeV2.pdf>
- 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:** The activities executed in relation to this initiative are listed in Table 7. In addition, PowerStream developed and issued a Request for Proposal for third party service provider to implement the initiative on PowerStream's behalf. The contract was awarded in quarter one 2012. Even though New Construction was in market in March, 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.

**Lessons Learned:**

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

## 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:

- Schedule C-1

[http://www.powerauthority.on.ca/sites/default/files/new\\_files/industry\\_stakeholders/current\\_electricity\\_contracts/pdfs/Schedule%20C-1%20Energy%20Audit%20Initiative.pdf](http://www.powerauthority.on.ca/sites/default/files/new_files/industry_stakeholders/current_electricity_contracts/pdfs/Schedule%20C-1%20Energy%20Audit%20Initiative.pdf)

- 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:** The activities executed in relation to this initiative are listed in Table 7. Even though Energy Audit was in market in March, 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.

**Lessons Learned:**

- Customer uptake in the beginning of 2011 was slow, and increased later in the year. Hence, little if any savings were realized in 2011, but projects are expected for 2012.
- Customers expect a greater connection with other CDM Initiatives as a result of completing the Energy Audit. The initiative should be reviewed under Change Management for the means to readily incent Participants with Audits in hand to implement other electricity savings initiatives.

## 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:

- Schedule D-1  
[http://www.powerauthority.on.ca/sites/default/files/new\\_files/industry\\_stakeholders/current\\_electricity\\_contracts/pdfs/Schedule%20D-1%20Process%20and%20Systems%20Upgrades%20Initiative.pdf](http://www.powerauthority.on.ca/sites/default/files/new_files/industry_stakeholders/current_electricity_contracts/pdfs/Schedule%20D-1%20Process%20and%20Systems%20Upgrades%20Initiative.pdf)
- 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. In 2011, 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:** The activities executed in relation to this initiative are listed in Table 8.

In addition,

- PowerStream began spreading the awareness of PSUI in late 2011. Industrial customers showed some interest in Detailed Engineering Studies with applications being formalized in early 2012

- PowerStream lead the Industrial Working Group's advocacy to change the eligibility in ERII to allow participation of industrial customers in Large Custom Project track

**Lessons Learned:**

- PSUI was designed for customers with Average Demand of greater than 5MW. PowerStream has only one large industrial account and only six customers with Peak Demand over 5MW. PSUI is therefore not applicable for most of PowerStream's customer base.
- PowerStream learned, through customers' direct feedback, that customers are not willing to agree to the terms of the PSUI Project incentive agreement, specifically the contract term and associated M&V requirements.
- The PSUI program targets large customers that are undertaking large capital projects. There is typically a long sales cycle to sell these projects, and then a long project development cycle. As such, results from PSUI did not materialise in 2011. Limited results are expected to generate in 2012. The majority of the results are expected in 2013-2014, with a much reduced benefit to cumulative energy savings targets.
- Steps are being taken in the 2012 change management process to simplify and streamline the micro-project application process and to allow smaller projects to be directed to the ERII stream. (Effective August 27, 2012)
- Given the size of the projects involved, the contract required for PSUI is a lengthy and complicated document. Attempts are being made through change management in 2012 to simplify the document while still protecting the ratepayer.
- With the considerable customer interest in on-site Load Displacement projects, the Initiative should be reviewed to ensure that these projects may be accepted as part of the PSUI Initiative.

## 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:

- Schedule D-2  
[http://www.powerauthority.on.ca/sites/default/files/new\\_files/industry\\_stakeholders/current\\_electricity\\_contracts/pdfs/Schedule%20D-2%20Monitoring%20and%20Targeting%20Initiative.pdf](http://www.powerauthority.on.ca/sites/default/files/new_files/industry_stakeholders/current_electricity_contracts/pdfs/Schedule%20D-2%20Monitoring%20and%20Targeting%20Initiative.pdf)
- 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. In 2011, 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:** The activities executed in relation to this initiative are listed in Table 8 of this document. In addition,

- PowerStream worked with one customer who showed interest in this initiative. However, once the opportunity was further reviewed, the project did not push through
- There were no applications received for this initiative

### **Lessons Learned:**

- The M&T initiative was originally targeted at larger customers with the capacity to review the M&T data. This review requires the customer facility to employ an Energy Manager, or a person with equivalent qualifications, which has been a barrier for some customers. Through the change management process in 2012, changes are being made to both the M&T schedule and ERII to allow smaller facilities to employ M&T systems.
- Due to the eligibility criteria of this initiative, few PowerStream customers are eligible. Changes to the Schedule in 2012 will allow small facilities to be eligible for M&T initiative.

## 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. Additional detail is available:

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

**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. In 2011, 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:** The activities executed in relation to this initiative are listed in Table 8 of this document. In addition,

- Several discussions with customers on the Energy Manager initiatives started in 2011, although applications were not completed until 2012
- PowerStream began working with customers in developing energy assessment reports and obtaining customer support letters, required to complete an Energy Manager applications, in 2011

### **Lessons Learned:**

- The energy managers have proven to be a popular resource.
- At the beginning, it took longer than expected to set up the energy manager application process.
- Some LDCs are reporting difficulties in hiring capable Roving Energy Managers (REM).
- LDCs that are too small to qualify for their own REM are teaming up with other utilities to hire an REM.

#### 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. Additional detail is available:

- ScheduleD-4

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

**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. In 2011, 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:** The activities executed in relation to this initiative are listed in Table 8 of this document. In addition,

- PowerStream is only eligible for Part Time KAM because it does not have the number of customers required to be eligible for a full time KAM. In 2011, PowerStream completed and submitted the KAM application to the OPA. The approval was received and PowerStream began the hiring process for KAM in October 2011.

#### **Lessons Learned:**

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



## 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:

- Schedule D-6  
[http://www.powerauthority.on.ca/sites/default/files/new\\_files/industry\\_stakeholders/current\\_electricity\\_contracts/pdfs/Schedule%20D-6%20Demand%20Response%203%202011-2014.pdf](http://www.powerauthority.on.ca/sites/default/files/new_files/industry_stakeholders/current_electricity_contracts/pdfs/Schedule%20D-6%20Demand%20Response%203%202011-2014.pdf)
- 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:** The activities executed in relation to this initiative are listed in Table 8. In addition,

- PowerStream developed a DR3 strategy to co-promote DR3 with all approved aggregators.
- PowerStream did its own initiative to ‘know’ our DR3 customers (PowerStream did not receive any information from the OPA or the aggregators)
- The Industrial Team worked closely with PowerStream’s metering department to identify the existing DR3 participants

### **Lessons Learned:**

- Customer details are not provided by the OPA on an individual customer basis due to contractual requirements with the aggregators. This limits LDCs’ ability to effectively market to prospective participants. The LDCs have been presented with several reporting methodologies, but, unfortunately, without participant information LDCs are unable to verify reported values.

- There have been inconsistencies on how to report contributions from pre-2011 DR3 participants renewing their contracts during the program term. It should be finalized as soon as possible because this will have a big impact to LDCs' demand savings forecasting and LDCs' strategies.
- Unlike a one-time incentive payment for an energy efficiency project, DR3's value proposition is based on revenue. With the window of contract term closing in, the value for participants and aggregators is quickly vanishing, where the cost of participation may no longer be recoverable.
- DR3 availability rates are scheduled to decrease by 33% beginning 2013. This may discourage new enrolments and cannibalize current participants (who will see a 47% decrease from pre-2011 rates) with the 'two years or less' rate.
- The Province's Long Term Energy Plan lists DR3 as a means to meet the short and long term conservation targets. PowerStream therefore recommends that aggregators be awarded with longer term contracts and ability to commit DR3 revenue to participants beyond 2014.
- To increase diverse participation and increase commercial, institutional, and small industrial participation in DR3, PowerStream recommend simplifying the metering and settlement criteria for customers with lower contributions.
- LDCs have been advised that the baseline methodology will change for DR3 midway through the program (in-day adjusted 10/10 to replace the highest 15/20). There is a risk that this change could be detrimental to participation because this will affect payment to participants. PowerStream recommends an analysis of the proposed new baseline methodology to measure the impact to customer payments and participation before the change is implemented.
- The 2010 DR3 Impact Evaluation Report states "Considering the sustained growth in the DR3 program, OPA has begun to consider implementing a cap on the contracted load reductions in the near future." With the province wide results being 8% of the demand target, PowerStream recommends encouraging growth in the DR3 program rather than capping the program to help meet the provincial target.

## 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. Additional detail is available:

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

**In Market Date:** 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. 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:** Below are a number of activities that PowerStream executed in 2011 that are specific to Low Income:

- Developed and released a Request for Proposal for third party service provider to implement the program
- Evaluated proposals received from proponents
- Planned for full execution of the program in 2012

**Lessons Learned:**

- Difficulty identifying eligible customers.
- This Schedule was finalized later (May 2011) than the rest of the OPA Initiatives and in 2011 only two LDCs were in market.
- The financial scope, complexity, and customer privacy requirements of this program resulted in a lengthy procurement process. Some LDCs must adhere to very transparent procurement processes which meant that delivery of the program did not start in 2011.