May 22, 2013

Ms. Kirsten Walli
Board Secretary
Ontario Energy Board
2300 Yonge Street
26th Floor, Box 2319
Toronto, ON M4P 1E4

Dear Ms. Walli

Re: Application for Board-Approved CDM Program - Direct Install Refrigeration Program (DIR), Board File No. EB-2013-0070
Interrogatory Responses

On April 24, 2013, the Board issued Procedural Order No.1 and Cost Eligibility Decision in the above captioned proceeding. Procedural Order No.1 sets out a timetable for interrogatories. Accordingly, PowerStream is submitting responses to the interrogatories that were received from:

- Board Staff
- Building Owners and Managers Association Toronto ("BOMA")
- Vulnerable Energy Consumers Coalition ("VECC")

These interrogatory responses have been filed on Board's Regulatory Electronic Submission System (RESS), and two paper copies have been forwarded to the Board Secretary.

We trust this is satisfactory, but if there any outstanding matters, please contact the undersigned.

Yours truly,

Original signed by

Colin Macdonald
Vice President, Rates and Regulatory Affairs

cc. Raegan Bond, VP, Conservation and Demand Management

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RESPONSES TO
BOARD STAFF
INTERROGATORIES

BOARD STAFF INTERROGATORY #1:

Reference(s): *Executive Summary*

Please explain what analysis PowerStream has done to project a participation rate of 1,200 customers by the end of 2014.

RESPONSE:

PowerStream estimated that there are 3,000 restaurants and 1,000 grocers in its service area, based on a review of available customer information. PowerStream then estimated an 18-month participation uptake of 30% based on its experience delivering the OPA-funded small commercial direct installation lighting program.

BOARD STAFF INTERROGATORY #2:

Reference(s): *Executive Summary*

Please explain if the projected 1,200 customers could potentially come from all of PowerStream's service areas (Barrie, Markham, Richmond Hill, Vaughan etc.), or will certain service areas be targeted.

RESPONSE:

Yes**,** the projected 1,200 customers could potentially come from across all of PowerStream's service area.

BOARD STAFF INTERROGATORY #3:

Reference(s): *Executive Summary*

PowerStream will be providing participating customers "up to $2,500 of eligible refrigeration measures and services and installed at no charge". Please explain why PowerStream thinks providing up to $2,500 of eligible refrigeration measures is an appropriate amount.

RESPONSE:

PowerStream thinks that the amount is appropriate as it will provide sufficient incentive to stimulate program participation based on feedback from customer focus groups and based on the fact that the program design passes both the Total Resource Cost Test and the Program Administrator Cost Test.

BOARD STAFF INTERROGATORY #4:

Reference(s): *Section 8.3 Budget*

Table 8 indicates that all salaries and labour costs including benefits is $674,000. The cost driver for this amount is "estimated number of days per year for existing CDM staff". Please explain if the $674,000 is in addition to what has been previously recovered through distribution rates.

RESPONSE:

The $674,000 includes $445,000 Marginal Costs and $229,000 Allocable Costs. The cost driver referred to above is related only to the $229,000 in Allocable Costs shown in the table.

None of these costs have been previously recovered through distribution rates.

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RESPONSES TO
BUILDING OWNERS AND MANAGERS ASSOCIATION, GREATER TORONTO (BOMA) INTERROGATORIES

BOMA INTERROGATORY #1:

Reference(s): *Page 1: In its 2011 Annual CDM Report, filed with the OEB on September 28, 2012, PowerStream forecasted achieving 77% of its demand target and 100% of its energy target through the delivery of the Provincial Programs. The remainder of the demand savings was projected to come from TOU pricing implementation…PowerStream is currently projecting to achieve 56% of its demand target and 89% of its energy target through the delivery of the Provincial Programs.*

Please provide PowerStream assessment of the reason for the larger than expected gap between demand and energy savings forecasted to result from the delivery of Provincial Programs.

RESPONSE:

PowerStream updates demand and energy savings forecasts twice a year *(September – when we receive final results from the OPA, and December – when we conduct an internal year-end estimate).* Forecasts are developed using the best available information at the time. Table BOMA-1 below provides a breakdown of the September forecast and the December update, by program, including the key drivers of variance.

Table BOMA-1: September Forecast & December Update with Key Drivers of the Variance

	2014 Net demand savings, MW		2011-2014 Net energy savings, GWh		Key drivers of the change
	September 2012 Forecast	December 2012 Update	September 2012 Forecast	December 2012 Update	
Consumer	25.7	21.2	78.6	77.3	Temporarily stopped ***peaksaver*** PLUS installations pending the firmware upgrades to the in-home display sensors – completely out of market for around 6 weeks until the upgraded sensors arrived
Commercial & Institutional	33.4	21.6	333.4	228.7	Average actual size of Retrofit and Small Business Lighting projects lower than forecasted in September; Demand Response 3 projections from aggregators reduced from September forecasts
Industrial	14.3	9.1	59.1	51.9	Average actual project size of Retrofit projects lower than forecasted; Demand Response 3 projections from aggregators reduced from September forecasts; Delay in hiring Embedded Energy Managers
Low Income	0.5	1.8	17.9	4.0	Average size of project due to the actual mix of measures installed caused higher demand and lower energy savings
Total	73.9	53.7	489.4	361.9	
% of OEB Target	77%	56%	120%	89%	

BOMA INTERROGATORY #2:

Reference(s): *Page 2: There are several issues with the current Provincial Programs which are impeding their performance and presenting risks to PowerStream in achieving its CDM targets. These issues are primarily related to program delivery (e.g. Participant Agreements and the online application system that are overly onerous/complicated), but there are also some program design concerns (e.g. equipment pricing caps in the Small Business Lighting Initiative). These barriers and opportunities have been well identified by the program working groups and solutions have been proposed in nearly all cases. To date, three rounds of changes to the Master Agreement and Schedules have been issued through the EDA and OPA collaborative change management process, and there are several additional rounds of changes currently in the process. These modifications have been positive, however, the overall change management process has been extremely slow and PowerStream believes this has resulted in lost opportunities and lower than forecasted results.*

Has PowerStream assessed the expected impact of the three rounds of changes to the Master Agreement and Scheduled that have been issued? Please provide the results of that assessment. Has PowerStream assessed the potential impact of the several additional rounds of changes current in the process? Please provide the results of that assessment. Please provide an assessment of any remaining shortfall to PowerStream' s assigned target after the combined changes to the Provincial Programs plus the anticipated results of the DIR program are included.

RESPONSE:

PowerStream has not undertaken a specific assessment of the expected impact of previous or potential changes to the Master Agreement and Schedules. PowerStream updates demand and energy savings forecasts twice a year *(September – when we receive final results from the OPA, and December – when we conduct an internal year-end estimate).* Forecasts are developed using the best available information at the time, including consideration of changes to the programs which have been made or are pending.

BOMA INTERROGATORY #3:

Reference(s): *Page 2: There are several issues with the current Provincial Programs which are impeding their performance and presenting risks to PowerStream in achieving its CDM targets. These issues are primarily related to program delivery (e.g. Participant Agreements and the online application system that are overly onerous/complicated), but there are also some program design concerns (e.g. equipment pricing caps in the Small Business Lighting Initiative). These barriers and opportunities have been well identified by the program working groups and solutions have been proposed in nearly all cases. To date, three rounds of changes to the Master Agreement and Schedules have been issued through the EDA and OPA collaborative change management process, and there are several additional rounds of changes currently in the process. These modifications have been positive, however, the overall change management process has been extremely slow and PowerStream believes this has resulted in lost opportunities and lower than forecasted results.*

Is PowerStream aware of any efforts to improve the change management process? Has PowerStream made any documented suggestions to improve the change management process? If so, please file the document(s).

RESPONSE:

Yes, PowerStream is aware of several efforts to improve the change management process. These efforts have included the development of tools, such as templates, to help administer the existing process as well as modifications to the actual process itself. On November 12, 2012 a "major change" was made to the change management process in the CDM Master Agreement through the introduction of an "expedited change management" process. As an active member on the EDA CDM Caucus and its OPA-LDC Program Working Groups, PowerStream was involved in the development and review of these improvements. PowerStream has not made any independent documented suggestions to improve the change management process.

BOMA INTERROGATORY #4:

Reference(s): *Page 3: Beginning in early October 2012, PowerStream identified approximately ten program concepts for possible development. This list was narrowed down to four for further consideration, based on a qualitative assessment of:*

- *Potential energy and demand savings*
- *Potential program delivery cost*
- *Potential level of duplication with Provincial Programs*
- *Potential speed and ease of implementation*

Please list the ten (10) program concepts. Please provide the criteria for narrowing the list down to four (4) and indicate which of the ten (10) passed that screen. Does PowerStream intend to submit additional programs for Board Approval?

RESPONSE:

The program concepts are listed below. The criteria used to narrow the list down are listed in the question above. The four program concepts which passed the qualitative screen were numbers 3, 4, 6 and 7, as listed below. At this time, PowerStream is not planning to submit additional programs for OEB Approval.

1. **Hotel Program** –installation of motion sensors in suites and common areas to reduce HVAC equipment operation during unoccupied times.
2. **Restaurant Exhaust Program** –maintenance and retrofit of exhaust hoods through measures such as variable speed drivers and motor resizing.
3. **Green Restaurant Direct Install Refrigeration Program** –maintenance and retrofits of existing refrigeration equipment including motor upgrades, anti-sweater heater controls and coil cleaning.
4. **Green Grocer Direct Installation Refrigeration Program –** maintenance and retrofits of existing refrigeration equipment including motor upgrades, anti-sweater heater controls and coil cleaning.
5. **Residential Zone Control Program** – retrofitting existing homes with controls to allow two temperature zones to exist in one home.

6. **Commercial HVAC Load control Program** – using swarm technology to cycle discretionary loads such as lighting and rooftop A/C units to 80% of their output when a pre-set threshold of the facilities demand has been exceeded. Targeted primarily at bulk metered malls and strip plazas that contain packaged rooftop units with a minimum 8 ton capacity.
7. **Data Centre/IT Program** – building upon a previous PowerStream program that provided incentives to a facility for enhancements that improved the efficiency of their data centres, measured by Power Usage Effectiveness (PUE) reduction.
8. **High Energy Intensity Program** – provide incentives to energy 'intense' facilities (or parts of facilities) with high electricity use per square metre (e.g. hospitals, laboratories, data centres). Capital required for these projects are usually higher and require alternative and longer term incentive models to capture their budget planning cycles.
9. **Commercial Pool Pump Program** – incentives to go directly to a third party to incent the incremental difference between a standard efficiency motor to a high efficiency motor for pool pumps in commercial buildings.
10. **Load Shedding Ballast (Demand Response) Program -** install required equipment on facility lighting systems to allow the Provincial demand response program the ability to activate up to 20% of their lighting loads.
11. **On-Bill Financing Program** – a program that allows the customer to finance their energy retrofit project (gas and electric) through PowerStream. The payments would be made back to the utility via their current bill payment.

BOMA INTERROGATORY #5:

Reference(s): *Page 11: The societal cost for the program will be $3.9 million, representing a net benefit of $6.6 million.*

The term "societal cost" generally includes externalities. Please confirm if externalities were included. If so, why?

RESPONSE:

No, externalities were not included in accordance with the OPA's *Conservation and Demand Management Cost Effectiveness Guide, October 2010.*

BOMA INTERROGATORY #6:

Reference(s): *Page 11: 6.3 Benefits to PowerStream - The primary benefit of this program for PowerStream will be the achievement of 3.3 MW and19.6 GWh in savings toward its 2011-2014 CDM Targets. Specifically, this program addresses approximately 43% of PowerStream's current projected shortfall against its energy target.*

Does the program address any of the shortfalls against the demand target?

RESPONSE:

Yes, the program addresses approximately 16% of PowerStream's current projected shortfall against its demand target.

BOMA INTERROGATORY #7:

Reference(s): *Page 11: 6.3 Benefits to PowerStream - The primary benefit of this program for PowerStream will be the achievement of 3.3 MW and19.6 GWh in savings toward its 2011-2014 CDM Targets. Specifically, this program addresses approximately 43% of PowerStream's current projected shortfall against its energy target.*

Please indicate the total cost of market research, program development, evaluation planning and preparation of the application for this program. A breakdown of the total costs according to PowerStream accounting would be appreciated.

RESPONSE:

As indicated in Table 9 Page 20 of the Application, the total amount spent on Program Development is $104,000. Below is the breakdown:

Market research	$ 30,000
Program design analysis	$ 33,000
Evaluation planning	$ 15,000
Labour	$ 26,000
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TOTAL	$104,000

BOMA INTERROGATORY #8:

Reference(s): *Appendix E, page 8: The evaluations also include recommendations for improvement that have been incorporated into the design of PowerStream's Direct Install Refrigeration (DIR) program. These include:*

- *Metering before and after project implementation to improve the accuracy of energy savings estimates;*
- *Ensuring that energy and demand savings calculations are made according to the formulas provided in the Ontario Power Authority's 2011 Quasi-Prescriptive Measures and Assumptions document;*

How will any discrepancy between actual measurements from metering and the data already included in the Ontario Power Authorities Prescriptive Measures and Assumptions document be resolved?

RESPONSE:

The Measures and Assumptions Lists are planning documents maintained by the Ontario Power Authority. PowerStream will follow the OPA's EM&V Protocol in evaluating the DIR program, as required by Section 6 of the CDM Code. If requested, PowerStream will provide the OPA with the DIR Program evaluation results for their consideration when updating their Measures and Assumptions List.

BOMA INTERROGATORY #9:

Reference(s): *Appendix E, page 23: Study outputs - The cost-effectiveness evaluation will include the following cost effectiveness tests for the complete PowerStream Direct Install Refrigeration Program:*

- *TRC ratio*
- *PAC ratio*
- *Levelized delivery costs ($/MW-a and $/MWh)*

It will also include the methodology used to calculate each metric and the breakdown of costs and benefits within each metric.

While not required by the CDM Code, will PowerStream consent to also including the Participant Cost Test in its evaluation? If not, how does PowerStream assure itself that its participating customers are benefiting?

RESPONSE:

Yes, PowerStream will consent to include the Participant Cost Test, in accordance with the OPA's *Conservation and Demand Management Cost Effectiveness Guid*e, in its evaluation.

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RESPONSES TO
VULNERABLE ENERGY CONSUMERS
COALITION (VECC) INTERROGATORIES

VECC INTERROGATORY #1:

Reference(s): *Executive Summary*

Preamble:

a) Please provide a table that shows PowerStream's original projected net peak demand and net energy savings by program (consumer/low income, commercial & institutional, industrial) for the period 2011 to 2014 through the delivery of Provincial Programs and % achievement of its targets (MW & GWh) compared to its current projections .

b) Please confirm PowerStream's current shortfall in demand (MW) and energy savings (GWh) through the delivery of Provincial Programs.

RESPONSE:

a) Table VECC-1 below shows PowerStream's historical projected net peak demand and net energy savings by program from the original Strategy document submitted to OEB on November 2010 to its current projections dated December 2012.

Table VECC-1: Comparison of original forecast and December 2012 forecast, by Program

	2014 Net demand savings, MW					
	Consumer	C&I	Industrial	Low Income	Total	% of OEB Target
Strategy Document (Nov 2010)	31.6	47.0	17.2	-	95.8	100.2%
December 2012 Forecast	21.2	21.6	9.1	1.8	53.7	56%
	2011-2014 Net energy savings, GWh					
Strategy Document (Nov 2010)	110.0	242.0	57.0	-	409.0	101.8%
December 2012 Forecast	77.3	228.7	51.9	4.0	361.9	89%

b) Through the delivery of Provincial Programs only, PowerStream's current projected shortfall against its mandated demand and energy savings targets (95.57MW and 407.3 GWh) is approximately 42 MW and 45 GWh, respectively.

VECC INTERROGATORY #2:

Reference(s): *Executive Summary*

Preamble: PowerStream indicates its strategy for addressing this projected shortfall is two-fold: improve the design and delivery of the provincial Programs and seek approval for a Board-Approved Program.

a) Please discuss the specific improvements needed to improve the design and delivery of the provincial Programs.

b) Please quantify the corresponding contribution to the projected shortfall (MW, & GWh) as a result of achieving the improvements detailed in part (a).

RESPONSE:

a) In its 2011 CDM Annual Report to the OEB (Page 16), PowerStream made several high level recommendations for improving the design and delivery of the provincial CDM programs:

- Allow LDCs to have more flexibility implementing OPA-Contracted Province-wide Programs
- OPA-Contracted Province-Wide Program rules and eligibility requirements should be revised to influence more participation
- Programs should be launched with all initiatives available for immediate implementation
- Programs should be launched with all the tools in place
- 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
- There should be a faster process to implement program changes and modifications
- Alignment of roles and responsibilities of all governing parties involved in CDM would aid in avoiding redundant efforts

Specific needs and opportunities for program improvements are identified and developed by the LDC-OPA Program Working Groups (Residential, Commercial/Institutional & Industrial). As an active member of the EDA CDM Caucus and all three Working Groups, PowerStream has worked collaboratively with OPA staff and other LDCs since 2011 to identify and implement improvements to the provincial programs.

b) Please refer to response to BOMA Interrogatory #2.

VECC INTERROGATORY #3:

Reference(s): *Executive Summary*

Preamble: PowerStream indicates less than 1% of its GS<50 kW customers have participated in ERII. Of all ERII participants, only 2% have included refrigeration measures.

a) Please provide more details on PowerStream's approach and delivery experience related to the uptake of the ERII initiative.

b) Please provide PowerStream's original demand and energy savings targets for ERII for the years 2011 to 2014 compared to actual and updated forecasts.

RESPONSE:

a) PowerStream's approach to delivering the Commercial & Institutional Program, which includes the ERII Initiative, consists of three primary strategies:

- **Increasing customer awareness** of the available CDM program and its benefits.
- **Enhancing and leveraging relationships with channel partners** (e.g. contractors, manufacturers and distributors) who promote the CDM programs and providing application support to customers.
- **Developing an internal team of energy specialists** to drive program awareness and sales and to provide direct customer support in the opportunities assessment and program application processes.

Table VECC-3.1 below provides a high level summary of PowerStream's activities in these areas since 2011. The results of the ERII initiative to date are summarized in response to VECC Interrogatory #4(c).

Table VECC-3.1: Summary of PowerStream's ERII Activities since 2011

Customer Awareness and Support	Channel Partner Relationships	PowerStream's Energy Specialists
• Marketing campaigns (print, radio, direct mail) • Outreach to more than 4,500 customers • On-going tracking study of customer awareness, satisfaction and attitudes • Assigned PowerStream account specialist to customers with Peak Demand >500kW	• Outreach to more than 500 channel partners • More than 25 events, workshops and seminars • Launched contractor recognition program and online directory • Contractor focus groups	• Hired 2 Roving Energy Managers and funded the hiring of 6 Embedded Energy Managers working within specific customers • Hired 5 Account Specialists • More than 1,500 accounts directly contacted to date

b) PowerStream's original demand and energy savings forecasts for ERII for the years 2011 to 2014 compared to actual and updated forecasts are shown in Table VECC-3.2 below.

Table VECC-3.2: Original and Updated ERII Forecasts

	2014 Net Demand Savings, MW	2011-2014 Net Energy Savings, GWh
CDM Strategy Document filed with OEB (Nov 2010)	31.6	203.9
Updated forecast (December 2012)	14.5	219.6

VECC INTERROGATORY #4:

Reference(s): *Background*

a) Page 1 - Please provide a copy of PowerStream's 2011 verified results from the OPA.

b) Please confirm the date of the OPA's latest Measures and Assumptions List and confirm this list was used unless otherwise specified.

c) Page 1 - Please provide the calculation of PowerStream's internal estimates for 2012 preliminary results and updated 2013 and 2014 outlook, and include all assumptions.

d) Page 2 - Please identify/discuss the several additional rounds of changes currently in the process.

e) Please provide the calculation of PowerStream's estimate of its lower than forecasted results by program area resulting from the issues related to current Provincial Programs and the overall change management process.

f) If all of the needed modifications to the current Provincial Programs were implemented by June 1, 2013, please quantify the impact on PowerStream's forecasts for 2012, 2013 and 2014.

RESPONSE:

a) Attached as Appendix A is a copy of PowerStream's 2011 verified results from the OPA.

b) PowerStream used the most recent OPA Quasi-Prescriptive Measures and Assumptions List posted on the OPA website at the time of preparing this Application. The list is identified as "Release Version 1" and is dated December 2010. PowerStream also used a variety of other sources for several measure-level and program-level assumptions as detailed in Section 8.2 (Pages 18-19) and Appendix A (Pages 30-32) of the Application.

c) With most initiatives, PowerStream used the following formula to estimate 2012 preliminary results and updated 2013 and 2014 outlook:

*Net demand savings = activity * per unit net kW savings*
*Net energy savings = activity * per unit net kWh savings*

With some initiatives, as described below, these formulas are not applicable and other forecasting methodologies were applied:

- Energy Managers – Each manager has a 300 kW and 2GWh annual target. PowerStream estimated that 2 out of 7 managers will achieve their targets (70% of it coming from incented projects and 30% coming from non-incented projects).
- Demand Response 3 – PowerStream relied on Demand Response aggregators' annual projection

All of these estimates were developed in December 2012.

Table VECC-4.1 and Table VECC-4.2 below provide the assumptions used in estimating 2012 preliminary results and updated 2013 and 2014 outlook while Table VECC-4.3 below summarizes the 2011-2014 Net Annual Savings, by Initiative.

Table VECC-4.1: Assumptions used in estimating demand savings

		2011 verified result, MW	2012 estimated result, MW					2013 forecasted savings, MW					2014 forecasted savings, MW				
	Activity Units		activity	X	per unit demand savings, MW	=	**total demand savings, MW**	activity	X	per unit demand savings, MW	=	**total demand savings, MW**	activity	X	per unit demand savings, MW	=	**total demand savings, MW**
Appliance Retirement	Appliances	**0.2**	1893	X	0.0001	=	**0.1**	1263	X	0.0001	=	**0.1**	1263	X	0.0001	=	**0.1**
Appliance Exchange	Appliances	**0.0**	21	X	0.0001	=	**0.0**	20	X	0.0001	=	**0.0**	20	X	0.0001	=	**0.0**
HVAC Incentives	Equipment	**2.8**	6874	X	0.0002	=	**1.6**	3730	X	0.0002	=	**0.7**	3730	X	0.0002	=	**0.7**
Coupon	Products	**0.2**	13431	X	0.0000	=	**0.1**	2900	X	0.0000	=	**0.0**	2900	X	0.0000	=	**0.0**
peaksaver PLUS	Thermostat/IHD	**1.3**	6171	X	0.0007	=	**4.0**	15671	X	0.0006	=	**9.2**	22171	X	0.0006	=	**12.5**
Residential New Construction	Homes	-	9	X	0.0000	=	**0.0**	207	X	0.0000	=	**0.0**	415	X	0.0000	=	**0.0**
Retrofit	Applications	**3.8**	398	X	0.0085	=	**3.4**	382	X	0.0089	=	**3.4**	430	X	0.0090	=	**3.9**
Small Business Lighting	Participants	**2.1**	1722	X	0.0011	=	**1.9**	1100	X	0.0011	=	**1.2**	750	X	0.0011	=	**0.8**
High Performance New Construction	Projects	**0.2**	2	X	0.0150	=	**0.0**	9	X	0.0556	=	**0.5**	6	X	0.0617	=	**0.4**
Demand Response 3	Participants	**3.9**	26	X	0.1873	=	**4.9**	32	X	0.1741	=	**5.6**	50	X	0.1724	=	**8.6**
Energy Managers	Managers	-	2	X	0.0250	=	**0.1**	2	X	0.3000	=	**0.6**	2	X	0.3000	=	**0.6**
Home Assistance	Homes	-	354	X	0.0004	=	**0.1**	983	X	0.0008	=	**0.8**	1132	X	0.0008	=	**0.9**

Table VECC-4.2: Assumptions used in estimating energy savings

		2011 verified result, GWh	2012 estimated result, GWh					2013 forecasted savings, GWh					2014 forecasted savings, GWh				
	Activity Units		activity	X	per unit energy savings, GWh	=	**total energy savings, GWh**	activity	X	per unit energy savings, GWh	=	**total energy savings, GWh**	activity	X	per unit energy savings, GWh	=	**total energy savings, GWh**
Appliance Retirement	Appliances	**1.2**	1893	X	0.0005	=	**1.0**	1263	X	0.0005	=	**0.7**	1263	X	0.0005	=	**0.7**
Appliance Exchange	Appliances	**0.0**	21	X	0.0002	=	**0.0**	20	X	0.0002	=	**0.0**	20	X	0.0002	=	**0.0**
HVAC Incentives	Equipment	**5.2**	6874	X	0.0004	=	**2.4**	3730	X	0.0003	=	**1.2**	3730	X	0.0003	=	**1.2**
Coupon	Products	**3.3**	13431	X	0.0002	=	**2.1**	2900	X	0.0003	=	**1.0**	2900	X	0.0003	=	**1.0**
peaksaver PLUS	Thermostat/IHD	**0.0**	6171	X	0.0003	=	**1.8**	9500	X	0.0003	=	**2.9**	6500	X	0.0003	=	**2.1**
Residential New Construction	Homes	-	9	X	0.0001	=	**0.0**	207	X	0.0005	=	**0.1**	415	X	0.0005	=	**0.2**
Retrofit	Applications	**21.2**	398	X	0.0549	=	**21.9**	382	X	0.0596	=	**22.8**	430	X	0.0568	=	**24.4**
Small Business Lighting	Participants	**5.3**	1722	X	0.0042	=	**7.2**	1100	X	0.0027	=	**3.0**	750	X	0.0027	=	**2.1**
High Performance New Construction	Projects	**1.2**	2	X	0.0700	=	**0.1**	9	X	0.1200	=	**1.1**	6	X	0.1667	=	**1.0**
Demand Response 3	Participants	**0.2**	26	X	0.0004	=	**0.0**	32	X	0.0006	=	**0.0**	50	X	0.0006	=	**0.0**
Energy Managers	Managers	-	2	X	0.0630	=	**0.1**	2	X	0.6000	=	**1.2**	2	X	0.6000	=	**1.2**
Home Assistance	Homes	-	354	X	0.0005	=	**0.2**	983	X	0.0011	=	**1.1**	1132	X	0.0011	=	**1.3**

Table VECC-4.3: 2011-2014 Net Annual Savings, by Initiative

Program	Initiatives	Implementation Year	Status	Net Annual Savings								
				Demand, MW				Energy, GWh				
				2011	2012	2013	2014	2011	2012	2013	2014	Cumulative2014
Consumer	Appliance Retirement	2011	Verified	0.2	0.2	0.2	0.2	1.2	1.2	1.2	1.2	4.6
		2012	Estimated Result		0.1	0.1	0.1		1.0	1.0	1.0	2.9
		2013	Forecast			0.1	0.1			0.7	0.7	1.4
		2014	Forecast				0.1				0.7	0.7
		Subtotal		0.2	0.3	0.4	0.5	1.2	2.1	2.8	3.5	9.6
	Appliance Exchange	2011	Verified	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
		2012	Estimated Result		0.0	0.0	0.0		0.0	0.0	0.0	0.0
		2013	Forecast			0.0	0.0			0.0	0.0	0.0
		2014	Forecast				0.0				0.0	0.0
		Subtotal		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
	HVAC Incentives	2011	Verified	2.8	2.8	2.8	2.8	5.2	5.2	5.2	5.2	20.8
		2012	Estimated Result		1.6	1.6	1.6		2.4	2.4	2.4	7.2
		2013	Forecast			0.8	0.8			1.2	1.2	2.3
		2014	Forecast				0.8				1.2	1.2
		Subtotal		2.8	4.4	5.2	6.0	5.2	7.6	8.8	9.9	31.5
	Coupon	2011	Verified	0.2	0.2	0.2	0.2	3.2	3.2	3.2	3.2	13.0
		2012	Estimated Result		0.2	0.2	0.2		2.1	2.1	2.1	6.4
		2013	Forecast			0.0	0.0			1.0	1.0	2.0
		2014	Forecast				0.0				1.0	1.0
		Subtotal		0.2	0.3	0.4	0.4	3.2	5.4	6.4	7.3	22.3
	peaksaver Plus	2011	Verified	1.3				0.0	0.0	0.0	0.0	0.0
		2012	Estimated Result		4.0	0.7	0.7		1.8	1.8	1.8	5.5
		2013	Forecast			9.2	1.1			2.9	2.9	5.8
		2014	Forecast				12.5				2.1	2.1
		Subtotal		1.3	4.0	9.9	14.3	0.0	1.8	4.7	6.8	13.4
	Residential New Construction	2011	Verified	-	-	-	-	-	-	-	-	-
		2012	Estimated Result		-	-	-		0.0	0.0	0.0	0.0
		2013	Forecast			0.0	0.0			0.1	0.1	0.2
		2014	Forecast				0.0				0.2	0.2
		Subtotal		-	-	0.0	0.0	-	0.0	0.1	0.3	0.4
Commercial and Institutional and Industrial	Retrofit	2011	Verified	3.8	3.8	3.8	3.8	21.0	21.0	21.0	21.0	84.0
		2012	Estimated Result		3.4	3.4	3.4		21.9	21.9	21.9	65.7
		2013	Forecast			3.4	3.4			22.8	22.8	45.6
		2014	Forecast				3.9				24.4	24.4
		Subtotal		3.8	7.2	10.6	14.5	17.6	34.3	51.4	68.5	210.3
	Small Business Lighting	2011	Verified	2.1	2.1	2.0	1.5	5.3	5.3	5.1	3.6	19.3
		2012	Estimated Result		1.8	1.8	1.7		7.2	7.2	6.8	21.2
		2013	Forecast			1.2	1.2			3.0	3.0	6.0
		2014	Forecast				0.8				2.0	2.0
		Subtotal		2.1	3.9	5.0	5.3	5.3	12.5	15.3	15.5	48.6
	High Performance New Construction	2011	Verified	0.2	0.2	0.2	0.2	1.2	1.2	1.2	1.2	4.6
		2012	Estimated Result		0.0	0.0	0.0		0.1	0.1	0.1	0.4
		2013	Forecast			0.5	0.5			1.1	1.1	2.2
		2014	Forecast				0.4				1.0	1.0
		Subtotal		0.2	0.3	0.8	1.1	1.2	1.3	2.4	3.4	8.2
	Demand Response 3	2011	Verified	3.9				0.2				0.2
		2012	Estimated Result		4.9				0.0			0.0
		2013	Forecast			5.6				0.0		0.0
		2014	Forecast				8.6				0.0	0.0
		Subtotal		3.9	4.9	5.6	8.6	0.2	0.0	0.0	0.0	0.3
	Energy Managers	2011	Verified	-	-	-	-	-	-	-	-	-
		2012	Estimated Result		0.1	0.1	0.1		0.1	0.1	0.1	0.3
		2013	Forecast			0.6	0.6			1.2	1.2	2.4
		2014	Forecast				0.6				1.2	1.2
		Subtotal		-	0.1	0.7	1.3	-	0.4	4.4	8.4	13.3
Low Income	Home Assistance Program	2011	Verified	-	-	-	-	-	-	-	-	-
		2012	Estimated Result		0.1	0.1	0.1		0.2	0.2	0.2	0.6
		2013	Forecast			0.8	0.8			1.1	1.1	2.2
		2014	Forecast				0.9				1.3	1.3
		Subtotal		-	0.1	0.9	1.8	-	0.2	1.3	2.5	4.0
All Provincial Programs	Annual Totals	2011	Verified	14.5	9.4	9.3	8.8	37.3	37.1	36.8	35.4	146.6
		2012	Estimated Result		16.2	8.0	8.0		36.9	36.9	36.5	110.2
		2013	Forecast			22.1	8.5			35.0	35.0	70.1
		2014	Forecast				28.6				35.1	35.1
		Total		14.5	25.6	39.5	**53.8**	37.3	73.9	108.8	142.0	**361.9**

d) In response to VECC Interrogatory #2, committees where PowerStream participates in the change management process were identified. PowerStream only participates in this process and is not in the position to provide the status of the changes.

e) Please refer to response to VECC Interrogatory #4(c). This response takes into account the issues related to current Provincial Programs and the overall change management process.

f) Changes made to the programs in 2013 would have no impact on 2012 results. Directionally, implementation of these modifications would likely increase program forecasts for 2013 and 2014, however PowerStream is not in a position to quantify the impact at this time.

VECC INTERROGATORY #5:

Reference(s): *2 Program Development Process*

a) Please provide a list of the ten program concepts identified for possible development.

b) The evidence indicates the list was narrowed down to four for further consideration and the DIR Program was identified as the preferred candidate.

Please provide a description of the three program concepts not selected and include the high level assessment (market and technology) and program design developed for each of the three.

c) Please discuss the reasons why the three program concepts in part (c) were not selected.

d) Please discuss if the three program concepts not selected were part of the stakeholder consultation process. If not, why not.

RESPONSE:

a) Please refer to response to BOMA Interrogatory #4.

b) and c) Two program concepts were not selected for further development - Commercial HVAC Load Control and IT/Data Centre Program. Descriptions of these concepts are provided in response to BOMA Interrogatory #4. The other two program concepts, Green Grocer Program and Green Restaurant Program, were combined into a single DIR program, the subject of this Application.

d) While PowerStream's assessment was that the HVAC Load Control and IT/Data Centre Programs both have good potential for energy savings from a market and technology perspective, both programs were eliminated from further development at this time primarily due to their higher potential for duplication with existing Provincial Programs and the fact that they would be slower to implement than the direct install initiatives.

VECC INTERROGATORY #6:

Reference(s): *3.2 PowerStream Market Potential*

Preamble: PowerStream estimates the market potential for these refrigeration measures in its service territory is approximately 18 MW and 666 GWh of lifetime energy savings.

a) Please provide this calculation.

b) Please provide a breakdown of the number of other smaller commercial businesses with product refrigeration in PowerStream's service territory (florists, medical laboratories, school cafeterias, convenience stores, etc.)

RESPONSE:

a) PowerStream estimated the market potential for the DIR program using the formula below:

Market Potential = total # of eligible facilities in service territory * $\sum_{measure=1}^{9}$ *(average # of eligible measures per facility * demand/energy savings per measure * effective useful life) * net-to-gross ratio*

As stipulated in Section 3.2 of the Application, the total number of eligible facilities was estimated at 4,000. The demand and energy savings per measure and their Effective Useful Lives are provided in the tables on Pages 30-32 of the Application. As stipulated on Page 19 (Section 8.2) of the Application, a net to gross ratio of 0.9 was assumed. Table VECC-6.1 and Table VECC-6.2 below provide these assumptions and the estimated average number of eligible measures used in estimating the market potential of approximately 18 MW and 666 GWh.

Table VECC-6.1: Assumptions Used in Estimating Demand Savings Market Potential

														Net Annual Peak Demand Savings, MW														
Year	Measures	Eligible # of facilities	X	Eligible # of measures per facility	=	Total # of measures	X	Gross per unit peak demand savings (kW)	X	NTG	=	Net peak demand saving (kW)	Effective useful life	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
2013	Anti-sweat heater control - cooler	1200	X	4	=	4800	X	0.510	X	0.9	=	2,203.20	5	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	-	-	-	-
2013	Anti-sweat heater control - Freezer	1200	X	2	=	2400	X	0.510	X	0.9	=	1,101.60	5	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	-	-	-	-
2013	Strip curtains - Walk-in Cooler	1200	X	1	=	1200	X	0.434	X	0.9	=	468.72	5	0.5	0.5	0.5	0.5	0.5	-	-	-	-	-	-	-	-	-	-	-
2013	Strip curtains - Walk-in Freeezer	1200	X	1	=	1200	X	0.573	X	0.9	=	618.84	5	0.6	0.6	0.6	0.6	0.6	-	-	-	-	-	-	-	-	-	-	-
2013	Night curtains on cases	1200	X	1	=	1200	X	-	X	0.9	=	-	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2013	Clean condensor coils - Cooler	1200	X	4	=	4800	X	0.050	X	0.9	=	216.00	10	0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2013	Clean condensor coils - Freezer	1200	X	2	=	2400	X	0.180	X	0.9	=	388.80	10	0.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2013	ECM Fan Motor Upgrade	1200	X	2	=	2400	X	0.091	X	0.9	=	196.56	15	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	-
2013	LED Case lighting	1200	X	8	=	9600	X	0.038	X	0.9	=	324.00	15	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	-
2014	Anti-sweat heater control - cooler	2800	X	4	=	11200	X	0.510	X	0.9	=	5,140.80	5	-	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1	-	-	-
2014	Anti-sweat heater control - Freezer	2800	X	2	=	5600	X	0.510	X	0.9	=	2,570.40	5	-	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	-	-	-
2014	Strip curtains - Walk-in Cooler	2800	X	1	=	2800	X	0.434	X	0.9	=	1,093.68	5	-	1.1	1.1	1.1	1.1	1.1	-	-	-	-	-	-	-	-	-	-
2014	Strip curtains - Walk-in Freeezer	2800	X	1	=	2800	X	0.573	X	0.9	=	1,443.96	5	-	1.4	1.4	1.4	1.4	1.4	-	-	-	-	-	-	-	-	-	-
2014	Night curtains on cases	2800	X	1	=	2800	X	-	X	0.9	=	-	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2014	Clean condensor coils - Cooler	2800	X	4	=	11200	X	0.050	X	0.9	=	504.00	10	-	0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2014	Clean condensor coils - Freezer	2800	X	2	=	5600	X	0.180	X	0.9	=	907.20	10	-	0.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2014	ECM Fan Motor Upgrade	2800	X	2	=	5600	X	0.091	X	0.9	=	458.64	15	-	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
2014	LED Case lighting	2800	X	8	=	22400	X	0.038	X	0.9	=	756.00	15	-	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8
PROGRAM TOTAL:														5.5	**17.8**	16.4	16.4	16.4	15.3	12.8	12.8	12.8	12.8	12.8	12.8	9.4	1.7	1.7	1.2

Table VECC-6.2: Assumptions Used in Estimating Lifetime Energy Savings Market Potential

													Net Annual Energy Savings, GWh															
Year	Measures	Eligible # of facilities	X	Eligible # of measures per facility	=	Total # of measures	X	Gross per unit energy savings (kWh)	X	NTG	=	Net energy saving (kWh)	Effective useful life	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	TOTAL
2013	Anti-sweat heater control - cooler	1200	X	4	=	4800	X	1,250	X	0.9	=	5,400,000	5	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4	-	-	-	-	64.8
2013	Anti-sweat heater control - Freezer	1200	X	2	=	2400	X	1,250	X	0.9	=	2,700,000	5	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	-	-	-	-	32.4
2013	Strip curtains - Walk-in Cooler	1200	X	1	=	1200	X	486	X	0.9	=	524,880	5	0.5	0.5	0.5	0.5	0.5	-	-	-	-	-	-	-	-	-	-	-	2.6
2013	Strip curtains - Walk-in Freeezer	1200	X	1	=	1200	X	642	X	0.9	=	693,360	5	0.7	0.7	0.7	0.7	0.7	-	-	-	-	-	-	-	-	-	-	-	3.5
2013	Night curtains on cases	1200	X	1	=	1200	X	888	X	0.9	=	959,040	10	1.0	1.0	1.0	1.0	1.0	-	-	-	-	-	-	-	-	-	-	-	4.8
2013	Clean condensor coils - Cooler	1200	X	4	=	4800	X	438	X	0.9	=	1,892,160	10	1.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.9
2013	Clean condensor coils - Freezer	1200	X	2	=	2400	X	1,577	X	0.9	=	3,405,888	10	3.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.4
2013	ECM Fan Motor Upgrade	1200	X	2	=	2400	X	1,202	X	0.9	=	2,596,320	15	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6	-	38.9
2013	LED Case lighting	1200	X	8	=	9600	X	367	X	0.9	=	3,170,880	15	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	-	47.6
2014	Anti-sweat heater control - cooler	2800	X	4	=	11200	X	1,250	X	0.9	=	12,600,000	5	-	12.6	12.6	12.6	12.6	12.6	12.6	12.6	12.6	12.6	12.6	12.6	12.6	-	-	-	151.2
2014	Anti-sweat heater control - Freezer	2800	X	2	=	5600	X	1,250	X	0.9	=	6,300,000	5	-	6.3	6.3	6.3	6.3	6.3	6.3	6.3	6.3	6.3	6.3	6.3	6.3	-	-	-	75.6
2014	Strip curtains - Walk-in Cooler	2800	X	1	=	2800	X	486	X	0.9	=	1,224,720	5	-	1.2	1.2	1.2	1.2	1.2	-	-	-	-	-	-	-	-	-	-	6.1
2014	Strip curtains - Walk-in Freeezer	2800	X	1	=	2800	X	642	X	0.9	=	1,617,840	5	-	1.6	1.6	1.6	1.6	1.6	-	-	-	-	-	-	-	-	-	-	8.1
2014	Night curtains on cases	2800	X	1	=	2800	X	888	X	0.9	=	2,237,760	10	-	2.2	2.2	2.2	2.2	2.2	-	-	-	-	-	-	-	-	-	-	11.2
2014	Clean condensor coils - Cooler	2800	X	4	=	11200	X	438	X	0.9	=	4,415,040	10	-	4.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4.4
2014	Clean condensor coils - Freezer	2800	X	2	=	5600	X	1,577	X	0.9	=	7,947,072	10	-	7.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7.9
2014	ECM Fan Motor Upgrade	2800	X	2	=	5600	X	1,202	X	0.9	=	6,058,080	15	-	6.1	6.1	6.1	6.1	6.1	6.1	6.1	6.1	6.1	6.1	6.1	6.1	6.1	6.1	6.1	90.9
2014	LED Case lighting	2800	X	8	=	22400	X	367	X	0.9	=	7,398,720	15	-	7.4	7.4	7.4	7.4	7.4	7.4	7.4	7.4	7.4	7.4	7.4	7.4	7.4	7.4	7.4	111.0
PROGRAM TOTAL:														21.3	65.8	53.5	53.5	53.5	51.3	46.2	46.2	46.2	46.2	46.2	46.2	38.1	19.2	19.2	13.5	**666.3**

b) PowerStream does not have a breakdown of other smaller commercial businesses with product refrigeration.

VECC INTERROGATORY #7:

Reference(s): *3.3 Current Program Participation and Barriers*

Preamble: PowerStream indicates of all of its ERII participants, only 2% have included refrigeration measures. PowerStream identifies typical barriers that include lack of knowledge, time and capital resources.

a) Please discuss PowerStream's view as to how the current ERII initiative within the Provincial C&I Program could be modified to better address these barriers.

RESPONSE:

While modifications to the current ERII initiative, such as simplifying the application process or increasing incentive levels, could potentially better address these barriers, it is PowerStream's view that the best way to address these barriers and reach the small commercial market is through a direct install approach.

VECC INTERROGATORY #8:

Reference(s): *4 Program Design, 4.2 Participant Eligibility*

a) Participants must have an annual demand of less than 250 kW. Please confirm the basis for this threshold.

b) Please discuss PowerStream's knowledge of the number of facilities eligible for participation in the program that are leased.

RESPONSE:

a) The threshold is based on PowerStream's experience in delivering CDM programs since 2006, which has shown that customers under this threshold face the biggest barriers (in terms of time, expertise and capital) to pursue the current energy conservation programs and require the most assistance. PowerStream has observed that customers greater than 250 kW of demand usually have the staff and time needed to pursue customer-led rebate based CDM programs such as ERII.

b) PowerStream has not undertaken an assessment of the number of eligible facilities that are leased.

VECC INTERROGATORY #9:

Reference(s): *4 Program Design, 4.3 Offer to Customer*

a) Please provide a calculation& breakdown of total costs based on the following activities: direct marketing, free electricity audit, customized report, action plan and work order, scheduling and measure installation (including materials) of the refrigeration measures, quality assurance visit and customer survey.

b) Please discuss if PowerStream considered other design options for the DIR Program that covered less than 100% of the refrigeration measure and installation costs. Provide any analyses.

RESPONSE:

a) Table VECC-9 below shows the breakdown of the total costs.

Table VECC-9: Breakdown of DIR Total Costs

Activities (as per the list in question 9.a above)	Cost ($ '000s)
Direct marketing	200
Program Administration, which includes free electricity audit, action plan and work order, quality assurance visit, and customer survey	736
Scheduling and measure installation (including materials)	2,918
Others not included in the list above: program development and EM&V	262
Total	**4,117**

b) No. PowerStream did not consider other design options for the DIR program.

VECC INTERROGATORY #10:

Reference(s): *6 Value Proposition, 6.3 Benefits to PowerStream*

Preamble: The evidence indicates this program addresses approximately 43% of PowerStream's current projected shortfall against its energy target.

a) Please provide this calculation.

RESPONSE:

a) PowerStream's current projected shortfall against its energy target of 407.3 GWh is approximately 45 GWh. The estimated energy savings from the proposed DIR program is 19.6 GWh. To calculate the %:

$$(19.6 \div 45) * 100 = 43\%$$

VECC INTERROGATORY #11:

Reference(s): *7.1 Consultation with OPA*

Preamble: PowerStream indicates the only concern raised by OPA staff was the uncertainty regarding the persistence of energy savings from coil-cleaning.

Please discuss how these concerns have been addressed and incorporated into the design and forecasted results of the Program.

RESPONSE:

PowerStream addressed the OPA's concerns in three ways:

1. PowerStream used the Effective Useful Life assumption for coil-cleaning from the OPA's most recent Measures and Assumptions list in developing program projections.
2. PowerStream has developed a robust EM&V plan for the program.
3. As detailed in section 8.5 of the Application, PowerStream undertook a battery of analyses on the baseline projections for the program. One of these scenarios, which is not shown in the Application, was the exclusion of any energy savings from coil cleaning. Under this scenario the program remains cost effective.

VECC INTERROGATORY #12:

Reference(s): *7.1 Consultation with OPA*

Preamble: With respect to program delivery, OPA staff raised questions about what the optimal delivery approach might be in terms of contractual arrangements with the refrigeration channel.

a) Please provide further details on the questions raised, the preferred optimal delivery approach and the impact on the Program design, if any.

RESPONSE:

a) Delivery related topics raised in the discussion with the OPA included:
- The specific roles and responsibilities of PowerStream staff versus third party services providers
- Whether a standard delivery approach would be used across all of PowerStream's service territory, or whether different approaches would be tried in different regions
- How the refrigeration measures installers would be contracted (e.g. single vendor versus multiple vendors? Contracted directly by PowerStream or by a third party?)

The OPA did not raise any specific concerns or provide any opinions on these topics. They were seeking to understand PowerStream's views and plans with regards to the delivery model. The questions raised did not impact the program design.

VECC INTERROGATORY #13:

Reference(s): *8.3 Budget*

a) Please provide a description of fixed program costs compared to variable program costs.

b) Please confirm the number of incremental CDM staff need to carry out the Program by year based on headcount and FTEs.

c) Please provide the total cost of the incremental staff based on salaries and benefits.

d) Has PowerStream considered the use of a variance account to record the difference between the funding awarded for Board-Approved CDM Programs and the actual spending incurred to carry out these programs?

e) Is PowerStream aware of other utilities in Ontario that are deploying this same program within the same timeframe? If so, please indicate how many and which LDCs?

f) Table 8 – Please provide a further breakdown to show the derivation of the program costs in parts (a), (b), (e) and (f).

RESPONSE:

a) Fixed program costs are costs that are independent of the program participation level. It includes program administration, legal, marketing, and evaluation costs. Variable program costs are cost that are dependent on the program participation level such as equipment and installation costs.

b) There will be three incremental CDM staff hired in 2013. On an FTE basis, this represents 1.5 FTE in 2013 and 3 FTE in 2014.

c) Total cost has been estimated at $445,500 based on our experience in hiring similarly skilled staff for short term engagements.

d) Yes. PowerStream will be using a variance account as stipulated in Section 5.5 of the CDM Code.

e) No. PowerStream is not aware of any other utilities in Ontario deploying the same program in the same timeframe.

f) Table VECC-13 below provides a further breakdown of Table 8 of the Application. (numbers may not add due to rounding)

Table VECC-13: Breakdown of Table 8 of the Application

Cost type (from CDM Code Appendix A section 2.3)	Marginal or Allocable	Cost $ `000s	Cost driver
(a) Salaries	Allocable	26	Program development - estimated number of days per year for existing CDM staff
(a) Salaries	Allocable	203	Program administration - estimated number of days per year for existing CDM staff
(a) Salaries	Marginal	445	3 incremental CDM staff
Subtotal - Salaries		**674**	
(b) Contractors	Marginal	79	Program development
(b) Contractors	Marginal	50	Legal
(b) Contractors	Marginal	120	Measure installers
(b) Contractors	Marginal	158	EM&V
(b) Contractors	Marginal	200	Marketing
Subtotal - Contractors		**607**	
(e) administration and general expenses	Marginal	5	Estimated cost for general expenses (training, mileage, meals etc.)
(e) administration and general expenses	Allocable	6	Hours spent by support service departments
(e) administration and general expenses	Allocable	9	Per capita facilities/equipment cost
Subtotal – Administration and general expenses		**20**	
(f) IT costs	Allocable	18	Hours spent and maintenance cost of software. Shared service cost is $4000 per employee per year
TOTAL		**1,318**	

VECC INTERROGATORY #14:

Reference(s): *Appendix B, OPA Assessment and Support Letter, Page 2*

a) Please explain why the Province's Audit Funding initiative fails to address the knowledge and opportunities barrier regarding limited awareness of energy use and opportunities and costs of refrigeration equipment.

RESPONSE:

While an audit undertaken through the Provincial Audit Funding Initiative has the potential to address awareness barriers, the Initiative does not address the other two major barriers – lack of time and capital resources - facing the customer segment targeted by the DIR Program. In the Audit Funding Initiative, customers must invest significantly more time (to select and hire their own auditor, and to prepare and submit funding application to LDC) and only receive up to 50% of the cost of the audit. It is PowerStream's view that these present significant barriers to the Audit Funding Initiative successfully serving the smaller commercial market.

VECC INTERROGATORY #15:

Reference(s): *Appendix E, Evaluation Plan, Page 6, Table 3 Estimated participation, Page 6*

a) Please provide a breakdown of the projected number of partial and full participants between restaurants and grocers.

b) Please provide the cost for the years 2013 and 2014 related to the projected number of partial participants only.

c) Please provide the cost for the years 2013 and 2014 related to the projected number of full participants only.

RESPONSE:

a) Table VECC-15 below provides the estimated breakdown of the projected partial and full participants between grocers and restaurants.

Table VECC-15: Estimated Breakdown of the Projected Partial and Full Participants

	Grocers		Restaurants	
	2013	2014	2013	2014
Partial	75	175	105	245
Full	150	350	210	490

b) and c) PowerStream does not have separate program cost estimates for partial and full participants.

Message from the Vice President:

The OPA is pleased to provide you with the enclosed Final 2011 Results Report.

Despite some of the inertial challenges in 2011 with program start up, on average, year one province-wide forecasts were met and the year finished out with strong momentum which continues to build 2012. There are still challenges for LDCs of all sizes and we are committed to ensuring LDCs are successful in meeting their objectives. We look forward to further dialogue to discover opportunities to improve the current program suite with local program opportunities, best practices and successes to better reach our customers in the years to come.

This report was developed in collaboration with the OPA-LDC Reporting and Evaluation Working Group and is designed to help populate LDC annual report templates that will be submitted to the OEB in late September. Between the draft and final reports several improvements were made to improve clarity and transparency based on feedback provided by LDCs, such as: the addition of a glossary tab, total adjustments to savings are now broken out into both the realization rate and net-to-gross ratio for both peak demand and energy savings and modifications were made to the methodology tab. We invite you to continue to provide your feedback.

All results are now considered final for 2011. Any additional 2011 program activity not captured will be reported in the Final 2012 Results Report. Please continue to monitor saveONenergy E-blasts for any further updates and should you have any other questions or comments please contact LDC.Support@powerauthority.on.ca.

We appreciate your collaboration and cooperation throughout the reporting and evaluation process. We look forward to another successful year in 2012.

Sincerely,
Andrew Pride

Table of Contents

OPA-Contracted Province-Wide CDM Programs FINAL 2011 Results

LDC: PowerStream Inc.

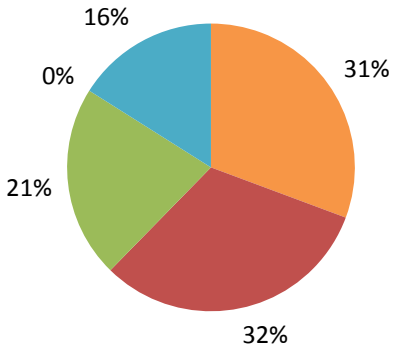
FINAL 2011 Progress to Targets	Incremental 2011	Scenario 1: % of Target Achieved	Scenario 2: % of Target Achieved
Net Annual Peak Demand Savings (MW)	14.5	**9.2%**	**15.2%**
Net Cumulative Energy Savings (GWh)	37.3	**36.0%**	**36.1%**

Scenario 1 = Assumes that demand resource resources have a persistence of 1 year

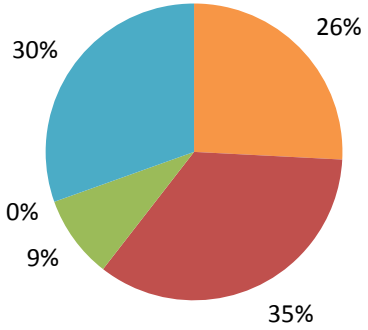
Scenario 2 = Assumes that demand response resources remain in your territory until 2014

Achievement by Sector

2011 Incremental Peak Demand Savings (MW)



2011 Incremental Energy Savings (GWh)

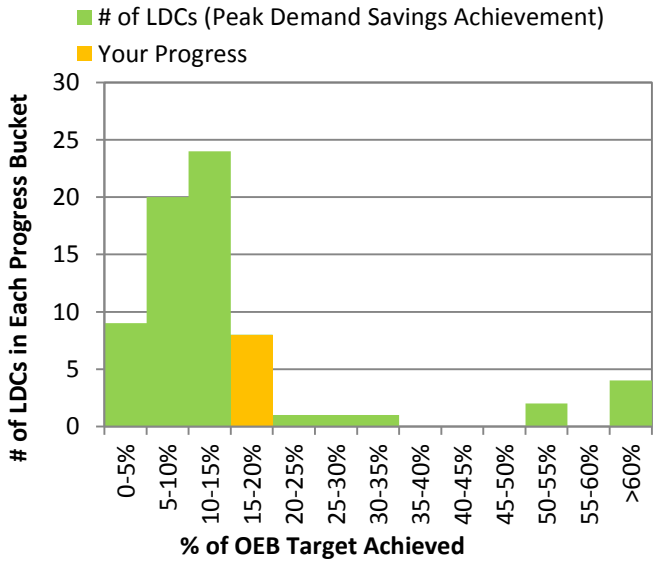


Consumer Program Total
Business Program Total
Industrial Program Total
Home Assistance Program Total
Pre-2011 Programs completed in 2011 Total

Comparison: Your Achievement vs. LDC Community Achievement

The following graphs assume that demand response resources remain in your territory until 2014 (aligns with Scenario 2)

% of OEB Peak Demand Savings Target Achieved



% of OEB Energy Savings Target Achieved

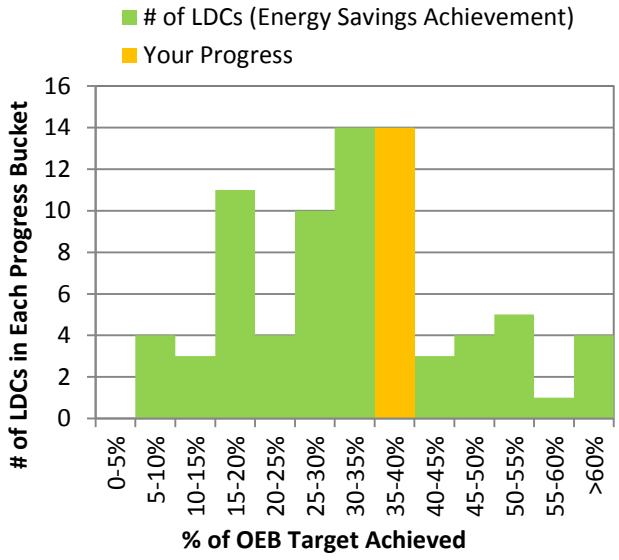


Table 1: Participation[1]

#	Initiative	Unit	Uptake/ Participation Units
Consumer Program			
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
Business Program			
9	Efficiency: Equipment Replacement	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	Commercial Demand Response (part of the Residential program schedule)	Devices	0
15	Demand Response 3 (part of the Industrial program schedule)	Facilities	12
Industrial Program			
16	Process & System Upgrades	Projects[2]	0
17	Monitoring & Targeting	Projects[3]	0
18	Energy Manager	Managers[2 3]	0
19	Efficiency: Equipment Replacement Incentive (part of the C&I program schedule)	Projects	34
20	Demand Response 3	Facilities	11
Home Assistance Program			
21	Home Assistance Program	Homes	0
Pre 2011 Programs Completed in 2011			
22	Electricity Retrofit Incentive Program	Projects	195
23	High Performance New Construction	Projects	8
24	Toronto Comprehensive	Projects	0
25	Multifamily Energy Efficiency Rebates	Projects	1
26	Data Centre Incentive Program	Projects	5
27	EnWin Green Suites	Projects	0

[1] *Please see "Methodology" tab for more information regarding attributing savings to LDCs*

[2] *Results are based on completed incentive projects (see "Methodology" tab for more information)*

[3] *Includes: Roving Energy Managers, Key Account Managers and Embedded Energy Managers if projects are completed in 2011*

Table 3: OPA Province-Wide Evaluation Findings

#	Initiative	OPA Province-Wide Key Evaluation Findings
Consumer Program		
1	Appliance Retirement	* Overall participation continues to decline year over year * Participation declined 17% from 2010 (from over 67,000 units in 2010 to over 56,000 units in 2011) * 97% of net resource savings achieved through the home pick-up stream * Measure Breakdown: 66% refrigerators, 30% freezers, 4% Dehumidifiers and window air conditioners * 3% of net resource savings achieved through the Retailer pick-up stream * Measure Breakdown: 90% refrigerators, 10% freezers * Net-to-Gross ratio for the initiative was 50% * Measure-level free ridership ranges from 82% for the retailer pick-up stream to 49% for the home pick-up stream * Measure-level spillover ranges from 3.7% for the retailer pick-up stream to 1.7% for the home pick-up stream
2	Appliance Exchange	* Overall eligible units exchanged declined by 36% from 2010 (from over 5,700 units in 2010 to * Measure Breakdown: 75% window air conditioners, 25% dehumidifiers * Dehumidifiers and window air conditioners contributed almost equally to the net energy * Dehumidifiers provide more than three times the energy savings per unit than window air conditioners * Window air conditioners contributed to 64% of the net peak demand savings achieved * Approximately 96% of consumers reported having replaced their exchanged units (as opposed to retiring the unit) * Net-to-Gross ratio for the initiative is consistent with previous evaluations (51.5%)
3	HVAC Incentives	* Total air conditioner and furnace installations increased by 14% (from over 95,800 units in 2010 to over 111,500 units in 2011) * Measure Breakdown: 64% furnaces, 10% tier 1 air conditioners (SEER 14.5) and 26% tier 2 air conditioners (SEER 15) * Measure breakdown did not change from 2010 to 2011 * The HVAC Incentives initiative continues to deliver the majority of both the energy (45%) and demand (83%) savings in the consumer program * Furnaces accounted for over 91% of energy savings achieved for this initiative * Net-to-Gross ratio for the initiative was 17% higher than 2010 (from 43% in 2010 to 60% in * 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)
4	Conservation Instant Coupon Booklet	* Customers redeemed nearly 210,000 coupons, translating to nearly 560,000 products * Majority of coupons redeemed were downloadable (~40%) or LDC-branded (~35%) * Majority of coupons redeemed were for multi-packs of standard spiral CFLs (37%), followed by multi-packs of specialty CFLs (17%) * Per unit savings estimates and net-to-gross ratios for 2011 are based on a weighted average of 2009 and 2010 evaluation findings * Careful attention in the 2012 evaluation will be made for standard CFLs since it is believed that the market has largely been transformed
		* Customers redeemed nearly 370,000 coupons, translating to over 870,000 products * Majority of coupons redeemed were for multi-packs of standard spiral CFLs (49%), followed by multi-packs of specialty CFLs (16%)

#	Initiative	OPA Province-Wide Key Evaluation Findings
5	Bi-Annual Retailer Event	* Per unit savings estimates and net-to-gross ratios for 2011 are based on a weighted average of 2009 and 2010 evaluation findings * 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 * 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 * Careful attention in the 2012 evaluation will be made for standard CFLs since it is believed that the market has largely been transformed.
6	Retailer Co-op	* 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
7	Residential Demand Response	* Approximately 20,000 new devices were installed in 2011 * 99% of the new devices enrolled controlled residential central AC (CAC) * 2011 only saw 1 atypical event (in both weather and timing) that had limited participation * 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
8	Residential New Construction	* Initiative was not evaluated in 2011 due to limited uptake * Business case assumptions were used to calculate savings
Business Program		
9	Efficiency: Equipment Replacement	* Gross verified energy savings were boosted by lighting projects in the prescriptive and * Lighting projects overall were determined to have a realization rate of 112%; 116% when including interactive energy changes * On average, the evaluation found high realization rates as a result of both longer operating hours and larger wattage reductions than initial assumptions * Low realization rates for engineered lighting projects due to overstated operating hour assumptions * Custom non-lighting projects suffered from process issues such as: the absence of required M&V plans, the use of inappropriate assumptions , and the lack of adherence to the M&V plan * The final realization rate for summer peak demand was 94% * 84% was a result of different methodologies used to calculate peak demand savings * 10% due to the benefits from reduced air conditioning load in lighting retrofits * Overall net-to-gross ratios in the low 70's represent an improvement over the 2009 and Strict eligibility requirements and improvements in the pre-approval process contributed to the improvement in net-to-gross ratios
10	Direct Install Lighting	* Though overall performance is above expectations, participation continues to decline year over year as the initiative reaches maturity * 70% of province-wide resource savings persist to 2014 * Over 35% of the projects for 2011 included at least one CFL measure * Resource savings from CFLs in the commercial sector only persist for the industry standard of 3 years * Since 2009 the overall realization rate for this program has improved * 2011 evaluation recorded the highest energy realization rate to date at 89.5%

#	Initiative	OPA Province-Wide Key Evaluation Findings
		* The hours of use values were held constant from the 2010 evaluation and continue to be the main driver of energy realization rate * 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
11	Existing Building Commissioning Incentive	* Initiative was not evaluated in 2011, no completed projects in 2011
12	New Construction and Major Renovation Incentive	* Initiative was not evaluated in 2011 due to low uptake * Assumptions used are consistent with preliminary reporting based on the 2010 Evaluation findings and consultation with the C&I Work Group (100% realization rate and 50% net-to-gross ratio)
13	Energy Audit	* The evaluation is ongoing. The sample size for 2011 was too small to draw reliable conclusions.
14	Commercial Demand Response (part of the Residential program schedule)	* See residential demand response (#7)
15	Demand Response 3 (part of the Industrial program schedule)	* See Demand Response 3 (#20)
Industrial Program		
16	Process & System Upgrades	* Initiative was not evaluated in 2011, no completed projects in 2011
17	Monitoring & Targeting	* Initiative was not evaluated in 2011, no completed projects in 2011
18	Energy Manager	* Initiative was not evaluated in 2011, no completed projects in 2011
19	Efficiency: Equipment Replacement Incentive (part of the C&I program schedule)	* See Efficiency: Equipment Replacement (#9)
20	Demand Response 3	* Program performance for Tier 1 customers increased with DR-3 participants providing 75% * Industrial customers outperform commercial customers by provide 84% and 76% of contracted MW, respectively * Program continues to diversify but still remains heavily concentrated with less than 5% of * 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
Home Assistance Program		
21	Home Assistance Program	* Initiative was not evaluated in 2011 due to low uptake * Business Case assumptions were used to calculate savings
Pre-2011 Programs completed in 2011		

#	Initiative	OPA Province-Wide Key Evaluation Findings
22	Electricity Retrofit Incentive Program	* Initiative was not evaluated * 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&I buildings 77% realization rate and 52% net-to-gross ratio)
23	High Performance New Construction	* Initiative was not evaluated * Net-to-Gross ratios used are consistent with the 2010 evaluation findings (realization rate of 100% and net-to-gross ratio of 50%)
24	Toronto Comprehensive	* Initiative was not evaluated * Net-to-Gross ratios used are consistent with the 2010 evaluation findings
25	Multifamily Energy Efficiency Rebates	* Initiative was not evaluated * Net-to-Gross ratios used are consistent with the 2010 evaluation findings
26	Data Centre Incentive Program	* Initiative was not evaluated
27	EnWin Green Suites	* Initiative was not evaluated

Table 5: Summarized Program Results

Program	Gross Savings			Net Savings	
	Incremental Peak Demand Savings (kW)	Incremental Energy Savings (kWh)		Incremental Peak Demand Savings (kW)	Incremental Energy Savings (kWh)
Consumer Program Total	6,490	14,154,589		4,445	9,623,565
Business Program Total	5,312	15,873,798		4,586	12,927,578
Industrial Program Total	3,809	4,324,359		3,135	3,368,348
Home Assistance Program Total	0	0		0	0
Pre-2011 Programs completed in 2011 Total	4,366	21,228,175		2,325	11,350,493
Total OPA Contracted Province-Wide CDM Programs	**19,977**	**55,580,920**		**14,492**	**37,269,983**

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

Assumes demand response resources have a persistence of 1 year

Program	Contribution to Targets	
	Program-to-Date: Net Annual Peak Demand Savings (kW) in 2014	Program-to-Date: 2011-2014 Net Cumulative Energy Savings (kWh)
Consumer Program Total	3,183	38,474,150
Business Program Total	2,771	49,667,192
Industrial Program Total	501	13,007,518
Home Assistance Program Total	0	0
Pre-2011 Programs completed in 2011 Total	2,325	45,401,970
Total OPA Contracted Province-Wide CDM Programs	**8,781**	**146,550,830**

#	Initiative	Contribution to Targets	
		Program-to-Date: Net Annual Peak Demand Savings (kW) in 2014	Program-to-Date: 2011-2014 Net Cumulative Energy Savings (kWh)
Consumer Program			
1	Appliance Retirement	157	4,641,956
2	Appliance Exchange	6	67,288
3	HVAC Incentives	2,829	20,768,356
4	Conservation Instant Coupon Booklet	80	5,180,613
5	Bi-Annual Retailer Event	112	7,803,358
6	Retailer Co-op	0	9,339
7	Residential Demand Response	0	3,239
8	Residential New Construction	0	0
Business Program			
9	Efficiency: Equipment Replacement	1,223	30,042,498
10	Direct Install Lighting	1,531	19,296,686
11	Existing Building Commissioning Incentive	0	0
12	New Construction and Major Renovation Incentive	16	279,472
13	Energy Audit	0	0
14	Commercial Demand Response (part of the Residential program schedule)	0	0
15	Demand Response 3 (part of the Industrial program schedule)	0	48,536
Industrial Program			
16	Process & System Upgrades	0	0
17	Monitoring & Targeting	0	0
18	Energy Manager	0	0
19	Efficiency: Equipment Replacement Incentive (part of the C&I program schedule)	501	12,852,927
20	Demand Response 3	0	154,591
Home Assistance Program			
21	Home Assistance Program	0	0
Pre-2011 Programs completed in 2011			
22	Electricity Retrofit Incentive Program	1,958	38,160,095
23	High Performance New Construction	211	4,331,586
24	Toronto Comprehensive	0	0
25	Multifamily Energy Efficiency Rebates	75	778,138
26	Data Centre Incentive Program	81	2,132,152
27	EnWin Green Suites	0	0

Assumes demand response resources have a persistence of 1 year

Progress Towards CDM Targets

Results are attributed to target using current OPA reporting policies. Energy efficiency resources persist for the duration of the effective useful life. Any upcoming code changes are taken into account. Demand response resources persist for 1 year. Please see methodology tab for more detailed information.

Yellow cells are intended for the LDC to input information to complete their OEB Reporting Template.

Table 6: Net Peak Demand Savings at the End User Level (MW)

Implementation Period	Annual			
	2011	2012	2013	2014
2011 - Verified	14.49	9.37	9.28	8.78
2012				
2013				
2014				0.00
Verified Net Annual Peak Demand Savings Persisting in 2014:				8.78
PowerStream Inc. 2014 Annual CDM Capacity Target:				95.57
Verified Portion of Peak Demand Savings Target Achieved in 2014(%):				9.19%
LDC Milestone submitted for 2011				-%
Variance				

Table 7: Net Energy Savings at the End User Level (GWh)

Implementation Period	Annual				Cumulative
	2011	2012	2013	2014	2011-2014
2011 - Verified	37.27	37.06	36.82	35.41	146.55
2012					
2013					
2014					
Verified Net Cumulative Energy Savings 2011-2014:					146.55
PowerStream Inc. 2011-2014 Cumulative CDM Energy Target:					407.34
Verified Portion of Cumulative Energy Target Achieved (%):					35.98%
LDC Milestone submitted for 2011					-%
Variance					

Table P1: Province-Wide Participation

#	Initiative	Activity Unit	Uptake/ Participation Units
Consumer Program			
1	Appliance Retirement	Appliances	56,110
2	Appliance Exchange	Appliances	3,688
3	HVAC Incentives	Equipment	111,587
4	Conservation Instant Coupon Booklet	Products[4]	559,462
5	Bi-Annual Retailer Event	Products[5]	870,332
6	Retailer Co-op	Products	152
7	Residential Demand Response	Devices	19,577
8	Residential New Construction	Houses	7
Business Program			
9	Efficiency: Equipment Replacement	Projects	2,516
10	Direct Installed Lighting	Projects	20,297
11	Existing Building Commissioning Incentive	Buildings	-
12	New Construction and Major Renovation Incentive	Buildings	10
13	Energy Audit	Audits	103
14	Commercial Demand Response (part of the Residential program schedule)	Devices	264
15	Demand Response 3 (part of the Industrial program schedule)	Facilities	148
Industrial Program			
16	Process & System Upgrades[2]	Projects	-
17	Monitoring & Targeting[2]	Projects	-
18	Energy Manager[2 3]	Managers	-
19	Efficiency: Equipment Replacement Incentive (part of the C&I program schedule)[1]	Projects	433
20	Demand Response 3	Facilities	134
Home Assistance Program			
21	Home Assistance Program	Homes	46
Pre 2011 Programs Completed in 2011			
22	Electricity Retrofit Incentive Program	Projects	2,023
23	High Performance New Construction	Projects	145
24	Toronto Comprehensive	Projects	553
25	Multifamily Energy Efficiency Rebates	Projects	110
26	Data Centre Incentive Program	Projects	5
27	EnWin Green Suites	Projects	3

[2] *Results are based on completed incentive projects (see "Methodology" tab for more information)*

[3] *Includes: Roving Energy Managers, Key Account Managers and Embedded Energy Managers with completed projects*

[4] *209,693 valid coupons redeemed*

[5] *369,446 valid coupons redeemed*

Table P2: Province-Wide Results

Program	Gross Savings			Net Savings	
	Incremental Peak Demand Savings (kW)	Incremental Energy Savings (kWh)		Incremental Peak Demand Savings (kW)	Incremental Energy Savings (kWh)
Consumer Program Total	73,757	192,379,633		49,123	133,519,668
Business Program Total	78,048	251,304,448		64,594	198,124,227
Industrial Program Total	68,648	41,493,145		57,099	31,947,577
Home Assistance Program Total	4	56,119		2	39,283
Pre-2011 Programs completed in 2011 Total	87,169	460,822,079		44,833	241,853,020
Total OPA Contracted Province-Wide CDM Programs	**307,626**	**946,055,425**		**215,651**	**605,483,775**

#	Initiative	Realization Rate		Gross Savings		Net-to-Gross Ratio		Net Savings	
		Peak Demand Savings	Energy Savings	Incremental Peak Demand Savings (kW)	Incremental Energy Savings (kWh)	Peak Demand Savings	Energy Savings	Incremental Peak Demand Savings (kW)	Incremental Energy Savings (kWh)
Consumer Program									
1	Appliance Retirement	100%	100%	6,750	45,971,627	51%	51%	3,299	23,005,812
2	Appliance Exchange	100%	100%	719	873,531	51%	51%	371	450,187
3	HVAC Incentives	100%	100%	53,209	99,413,430	60%	60%	32,037	59,437,670
4	Conservation Instant Coupon Booklet	100%	100%	1,184	19,192,453	114%	111%	1,344	21,211,537
5	Bi-Annual Retailer Event	100%	100%	1,504	26,899,265	112%	110%	1,681	29,387,468
6	Retailer Co-op	100%	100%	0	3,917	68%	68%	0	2,652
7	Residential Demand Response	n/a	n/a	10,390	23,597	n/a	n/a	10,390	23,597
8	Residential New Construction	100%	100%	0	1,813	41%	41%	0	743
Business Program									
9	Efficiency: Equipment Replacement	106%	91%	34,201	184,070,265	72%	74%	24,467	136,002,258
10	Direct Installed Lighting	108%	93%	22,155	65,777,197	108%	93%	23,724	61,076,701
11	Existing Building Commissioning Incentive	-	-	-	-	-	-	-	-
12	New Construction and Major Renovation Incentive	50%	50%	247	823,434	50%	50%	123	411,717
13	Energy Audit	-	-	-	-	-	-	-	-
14	Commercial Demand Response (part of the Residential program schedule)	n/a	n/a	55	131	n/a	n/a	55	131
15	Demand Response 3 (part of the Industrial program schedule)	76%	n/a	21,390	633,421	n/a	n/a	16,224	633,421
Industrial Program									
16	Process & System Upgrades	-	-	-	-	-	-	-	-
17	Monitoring & Targeting	-	-	-	-	-	-	-	-
18	Energy Manager	-	-	-	-	-	-	-	-
19	Efficiency: Equipment Replacement Incentive (part of the C&I program schedule)	111%	91%	6,372	38,412,408	72%	75%	4,615	28,866,840
20	Demand Response 3	84%	n/a	62,276	3,080,737	n/a	n/a	52,484	3,080,737
Home Assistance Program									
21	Home Assistance Program	100%	100%	4	56,119	70%	70%	2	39,283
Pre-2011 Programs completed in 2011									
22	Electricity Retrofit Incentive Program	80%	80%	40,418	223,956,390	54%	54%	21,550	120,492,549
23	High Performance New Construction	100%	100%	10,197	52,371,183	49%	49%	5,098	26,185,591
24	Toronto Comprehensive	113%	113%	33,467	174,070,574	50%	52%	15,805	86,964,886
25	Multifamily Energy Efficiency Rebates	93%	93%	2,553	9,774,792	78%	78%	1,981	7,595,683
26	Data Centre Incentive Program	100%	100%	81	533,038	100%	100%	81	533,038
27	EnWin Green Suites	100%	100%	453	116,102	70%	70%	317	81,272

Assumes demand response resources have a persistence of 1 year

Program	Contribution to Targets	
	Program-to-Date: Net Annual Peak Demand Savings (kW) in 2014	Program-to-Date: 2011-2014 Net Cumulative Energy Savings (kWh)
Consumer Program Total	38,405	534,017,835
Business Program Total	41,048	767,657,790
Industrial Program Total	4,613	118,543,019
Home Assistance Program Total	2	157,134
Pre-2011 Programs completed in 2011 Total	44,833	967,412,079
Total OPA Contracted Province-Wide CDM Programs	**128,901**	**2,387,787,856**

#	Initiative	Contribution to Targets	
		Program-to-Date: Net Annual Peak Demand Savings (kW) in 2014	Program-to-Date: 2011-2014 Net Cumulative Energy Savings (kWh)
Consumer Program			
1	Appliance Retirement	3,160	91,903,303
2	Appliance Exchange	181	1,930,651
3	HVAC Incentives	32,037	237,750,681
4	Conservation Instant Coupon Booklet	1,344	84,846,148
5	Bi-Annual Retailer Event	1,681	117,549,874
6	Retailer Co-op	0	10,607
7	Residential Demand Response	0	23,597
8	Residential New Construction	0	2,973
Business Program			
9	Efficiency: Equipment Replacement	24,438	543,856,392
10	Direct Installed Lighting	16,486	221,520,977
11	Existing Building Commissioning Incentive	-	-
12	New Construction and Major Renovation Incentive	123	1,646,869
13	Energy Audit	-	-
14	Commercial Demand Response (part of the Residential program schedule)	0	131
15	Demand Response 3 (part of the Industrial program schedule)	0	633,421
Industrial Program			
16	Process & System Upgrades	-	-
17	Monitoring & Targeting	-	-
18	Energy Manager	-	-
19	Efficiency: Equipment Replacement Incentive (part of the C&I program schedule)	4,613	115,462,282
20	Demand Response 3	0	3,080,737
Home Assistance Program			
21	Home Assistance Program	2	157,134
Pre-2011 Programs completed in 2011			
22	Electricity Retrofit Incentive Program	21,550	481,970,197
23	High Performance New Construction	5,098	104,742,366
24	Toronto Comprehensive	15,805	347,859,545
25	Multifamily Energy Efficiency Rebates	1,981	30,382,733
26	Data Centre Incentive Program	81	2,132,152
27	EnWin Green Suites	317	325,086

Assumes demand response resources have a persistence of 1 year

Summary - Provincial Progress

Table P3: Province-Wide Net Peak Demand Savings at the End User Level (MW)

Implementation Period	Annual			
	2011	2012	2013	2014
2011	215.7	136.4	135.7	128.9
2012				
2013				
2014				
Verified Net Annual Peak Demand Savings in 2014:				128.9
2014 Annual CDM Capacity Target				1,330
Verified Peak Demand Savings Target Achieved - 2011 (%):				9.69%

Table P4: Province-Wide Net Energy Savings at the End-User Level (GWh)

Implementation Period	Annual				Cumulative
	2011	2012	2013	2014	2011-2014
2011	605.5	601.6	599.6	580.9	2,388
2012					0
2013					0
2014					0
Verified Net Cumulative Energy Savings 2011-2014:					2,388
2011-2014 Cumulative CDM Energy Target:					6,000
Verified Portion of Energy Target Achieved - 2011 (%):					39.79%

METHODOLOGY

All results are at the end-user level (not including transmission and distribution losses)

EQUATIONS:

PRESCRIPTIVE MEASURES/PROJECTS:

Gross Savings = Activity * Per Unit Assumption

Net Savings = Gross Savings * Net-to-Gross Ratio

All savings are annualized (i.e. the savings are the same regardless of time of year a project was completed or measure installed)

ENGINEERED/CUSTOM PROJECTS:

Gross Savings = Reported Savings * Realization Rate

Net Savings = Gross Savings * Net-to-Gross Ratio

All savings are annualized (i.e. the savings are the same regardless of time of year a project was completed or measure installed)

DEMAND RESPONSE:

Peak Demand: Gross Savings = Net Savings = contracted MW at contributor level * Provincial contracted to ex ante ratio

Energy: Gross Savings = Net Savings = provincial ex post energy savings * LDC proportion of total provincial contracted MW

All savings are annualized (i.e. the savings are the same regardless of the time of year a participant began offering DR)

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

#	Initiative	Attributing Savings to LDCs	Savings 'start' Date	Calculating Resource Savings
4	Conservation Instant Coupon Booklet	LDC-coded coupons directly attributed to LDC; Otherwise results are allocated based on average of 2008 & 2009 residential throughput	Savings are considered to begin in the year in which the coupon was redeemed.	**Peak demand and energy savings** are determined using the verified measure level per unit assumption multiplied by the uptake in the market (gross) taking into account net-to-gross factors such as free-ridership and spillover (net) at the measure level. Initiative was not evaluated in 2011, reported results are presented with verified per unit assumptions and net-to-gross ratio from Bi-Annual Retailer Event and Conservation Instant Coupon Booklet initiatives.
5	Bi-Annual Retailer Event	Results are allocated based on average of 2008 & 2009 residential throughput	Savings are considered to begin in the year in which the event occurs.	
6	Retailer Co-op	When postal code information is provided by the customer, results are directly attributed. If postal code information is not available, results are allocated based on average of 2008 & 2009 residential throughput.	Savings are considered to begin in the year of the home visit and installation date.	**Peak demand and energy savings** are determined using the verified measure level per unit assumption multiplied by the uptake in the market (gross) taking into account net-to-gross factors such as free-ridership and spillover (net) at the measure level. Initiative was not evaluated in 2011, reported results are presented with verified per unit assumptions and net-to-gross ratio from Bi-Annual Retailer Event and Conservation Instant Coupon Booklet initiatives.

#	Initiative	Attributing Savings to LDCs	Savings 'start' Date	Calculating Resource Savings
7	Residential Demand Response	Results are directly attributed to LDC based on data provided to OPA through project completion reports and continuing participant lists	Savings are considered to begin in the year the device was installed and/or when a customer signed a ***peaksaver*** PLUS™ participant agreement.	**Peak demand savings** are based on an ex ante estimate assuming a 1 in 10 weather year and represents the "insurance value" of the initiative. **Energy savings** are based on an ex post estimate which reflects the savings that occurred as a result of activations in the year and accounts for any “snapback” in energy consumption experienced after the event. Savings are assumed to **persist** for only 1 year, reflecting that savings will only occur if the resource is activated.
8	Residential New Construction	Results are directly attributed to LDC based on LDC identified in application in the saveONenergy CRM system; Initiative was not evaluated in 2011, reported results are presented with forecast assumptions as per the business case.	Savings are considered to begin in the year of the project completion date.	**Peak demand and energy savings** are determined using a measure level per unit assumption multiplied by the uptake in the market (gross) taking into account net-to-gross factors such as free-ridership and spillover (net) at the measure level.
Business Program				

#	Initiative	Attributing Savings to LDCs	Savings 'start' Date	Calculating Resource Savings
9	Efficiency: Equipment Replacement	Results are directly attributed to LDC based on LDC identified at the facility level in the saveONenergy CRM; Projects in the Application Status: "Post-Stage Submission" are included (excluding "Payment denied by LDC"); Please see "Reference Tables" tab for Building type to Sector mapping	Savings are considered to begin in the year of the actual project completion date on the iCON CRM system.	**Peak demand and energy savings** are determined by the total savings for a given project as reported in the iCON CRM system (reported). A realization rate is applied to the reported savings to ensure that these savings align with EM&V protocols and reflect the savings that were actually realized (i.e. how many light bulbs were actually installed vs. what was reported) (gross). Net savings takes into account net-to-gross factors such as free-ridership and spillover (net). Both realization rate and net-to-gross ratios can differ for energy and demand savings and depend on the mix of projects within an LDC territory (i.e. lighting or non-lighting project, engineered/custom/prescriptive track).
		Additional Note: project counts were derived by filtering out "Application Status" = "Post-Project Submission - Payment denied by LDC" and only including projects with an "Actual Project Completion Date" in 2011 and pulling both the "Application Name" field followed by the "Building Address 1" field from the Post Stage Retrofit Report and finally performing a count of the Building Addresses.		
10	Direct Installed Lighting	Results are directly attributed to LDC based on the LDC specified on the work order	Savings are considered to begin in the year of the actual project completion date.	**Peak demand and energy savings** are determined using the verified measure level per unit assumptions multiplied by the uptake of each measure accounting for the realization rate for both peak demand and energy to reflect the savings that were actually realized (i.e. how many light bulbs were actually installed vs. what was reported) (gross). Net savings take into account net-to-gross factors such as free-ridership and spillover for both peak demand and energy savings at the program level (net).

#	Initiative	Attributing Savings to LDCs	Savings 'start' Date	Calculating Resource Savings
11	Existing Building Commissioning Incentive	Results are directly attributed to LDC based on LDC identified in the application; Initiative was not evaluated, no completed projects in 2011.	Savings are considered to begin in the year of the actual project completion date.	**Peak demand and energy savings** are determined by the total savings for a given project as reported (reported). A realization rate is applied to the reported savings to ensure that these savings align with EM&V protocols and reflect the savings that were actually realized (i.e. how many light bulbs were actually installed vs. what was reported) (gross). Net savings takes into account net-to-gross factors such as free-ridership and spillover (net).
12	New Construction and Major Renovation Incentive	Results are directly attributed to LDC based on LDC identified in the application; Initiative was not evaluated, reported results are presented with reported assumptions (as per evaluated results in 2010 and consultation with OPA-LDC Work Groups)	Savings are considered to begin in the year of the actual project completion date.	
13	Energy Audit	No resource savings results determined in 2011; Projects are directly attributed to LDC based on LDC identified in the application	Savings are considered to begin in the year of the audit date.	**Peak demand and energy savings** are determined by the total savings resulting from an audit as reported (reported). A realization rate is applied to the reported savings to ensure that these savings align with EM&V protocols and reflect the savings that were actually realized (i.e. how many light bulbs were actually installed vs. what was reported) (gross). Net savings takes into account net-to-gross factors such as free-ridership and spillover (net).
14	Commercial Demand Response (part of the Residential program schedule)	Results are directly attributed to LDC based on data provided to OPA through project completion reports and continuing participant lists	Savings are considered to begin in the year the device was installed and/or when a customer signed a ***peaksaver*** PLUS™ participant agreement.	**Peak demand savings** are based on an ex ante estimate assuming a 1 in 10 weather year and represents the "insurance value" of the initiative. **Energy savings** are based on an ex post estimate which reflects the savings that occurred as a result of activations in the year. Savings are assumed to **persist** for only 1 year, reflecting that savings will only occur if the resource is activated.

#	Initiative	Attributing Savings to LDCs	Savings 'start' Date	Calculating Resource Savings
15	Demand Response 3 (part of the Industrial program schedule)	Results are attributed to LDCs based on the total contracted megawatts at the contributor level as of December 31st, applying the provincial ex ante to contracted ratio (ex ante estimate/contracted megawatts); Ex post energy savings are attributed to the LDC based on their proportion of the total contracted megawatts at the contributor level.	Savings are considered to begin in the year in which the contributor signed up to participate in demand response.	**Peak demand savings** are ex ante estimates based on the load reduction capability that can be expected for the purposes of planning. The ex ante estimates factor in both scheduled non-performances (i.e. maintenance) and historical performance. **Energy savings** are based on an ex post estimate which reflects the savings that actually occurred as a results of activations in the year. Savings are assumed to persist for 1 year, reflecting that savings will not occur if the resource is not activated and additional costs are incurred to activate the resource.
Industrial Program				
16	Process & System Upgrades	Results are directly attributed to LDC based on LDC identified in application in the saveONenergy CRM system; Initiative was not evaluated, no completed projects in 2011.	Savings are considered to begin in the year in which the incentive project was completed.	**Peak demand and energy savings** are determined by the total savings from a given project as reported (reported). A realization rate is applied to the reported savings to ensure that these savings align with EM&V protocols and reflect the savings that were actually realized (i.e. how many light bulbs were actually installed vs. what was reported) (gross). Net savings takes into account net-to-gross factors such as free-ridership and spillover (net).

#	Initiative	Attributing Savings to LDCs	Savings 'start' Date	Calculating Resource Savings
17	Monitoring & Targeting	Results are directly attributed to LDC based on LDC identified in the application; Initiative was not evaluated, no completed projects in 2011.	Savings are considered to begin in the year in which the incentive project was completed.	**Peak demand and energy savings** are determined by the total savings from a given project as reported (reported). A realization rate is applied to the reported savings to ensure that these savings align with EM&V protocols and reflect the savings that were actually realized (i.e. how many light bulbs were actually installed vs. what was reported) (gross). Net savings takes into account net-to-gross factors such as free-ridership and spillover (net).
18	Energy Manager	Results are directly attributed to LDC based on LDC identified in the application; Initiative was not evaluated, no completed projects in 2011.	Savings are considered to begin in the year in which the project was completed by the energy manager. If no date is specified the savings will begin the year of the Quarterly Report submitted by the energy manager.	**Peak demand and energy savings** are determined by the total savings from a given project as reported (reported). A realization rate is applied to the reported savings to ensure that these savings align with EM&V protocols and reflect the savings that were actually realized (i.e. how many light bulbs were actually installed vs. what was reported) (gross). Net savings takes into account net-to-gross factors such as free-ridership and spillover (net).

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

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

#	Initiative	Attributing Savings to LDCs	Savings 'start' Date	Calculating Resource Savings
25	Multifamily Energy Efficiency Rebates	Results are directly attributed to LDC based on LDC identified in the application; Initiative was not evaluated in 2011, assumptions as per 2010 evaluation	Savings are considered to begin in the year in which a project was completed.	**Peak demand and energy savings** are determined by the total savings from a given project as reported (reported). A realization rate is applied to the reported savings to ensure that these savings align with EM&V protocols and reflect the savings that were actually realized (i.e. how many light bulbs were actually installed vs. what was reported) (gross). Net savings takes into account net-to-gross factors such as free-ridership and spillover (net). **If energy savings are not available,** an estimate is made based on the kWh to kW ratio in the provincial results from the 2010 evaluated results (http://www.powerauthority.on.ca/evaluation-measurement-and-verification/evaluation-reports).
26	Data Centre Incentive Program	Program run exclusively in PowerStream Inc. service territory; Initiative was not evaluated in 2011, assumptions as per 2009 evaluation		
27	EnWin Green Suites	Program run exclusively in ENWIN Utilities Ltd. service territory; Initiative was not evaluated in 2011, assumptions as per 2010 evaluation		

ERII Sector (C&I vs. Industrial Mapping)	
Building Type	**Sector**
Agribusiness - Cattle Farm	C&I
Agribusiness - Dairy Farm	C&I
Agribusiness - Greenhouse	C&I
Agribusiness - Other	C&I
Agribusiness - Other,Mixed-Use - Office/Retail	C&I
Agribusiness - Other,Office,Retail,Warehouse	C&I
Agribusiness - Other,Office,Warehouse	C&I
Agribusiness - Poultry	C&I
Agribusiness - Poultry,Hospitality - Motel	C&I
Agribusiness - Swine	C&I
Convenience Store	C&I
Education - College / Trade School	C&I
Education - College / Trade School,Multi-Residential - Condominium	C&I
Education - College / Trade School,Multi-Residential - Rental Apartment	C&I
Education - College / Trade School,Retail	C&I
Education - Primary School	C&I
Education - Primary School,Education - Secondary School	C&I
Education - Primary School,Multi-Residential - Rental Apartment	C&I
Education - Primary School,Not-for-Profit	C&I
Education - Secondary School	C&I
Education - University	C&I
Education - University,Office	C&I
Hospital/Healthcare - Clinic	C&I
Hospital/Healthcare - Clinic,Hospital/Healthcare - Long-term Care,Hospital/Healthcare - Medical Building	C&I
Hospital/Healthcare - Clinic,Industrial	C&I
Hospital/Healthcare - Clinic,Retail	C&I
Hospital/Healthcare - Long-term Care	C&I
Hospital/Healthcare - Long-term Care,Hospital/Healthcare - Medical Building	C&I
Hospital/Healthcare - Medical Building	C&I
Hospital/Healthcare - Medical Building,Mixed-Use - Office/Retail	C&I
Hospital/Healthcare - Medical Building,Mixed-Use - Office/Retail,Office	C&I
Hospitality - Hotel	C&I
Hospitality - Hotel,Restaurant - Dining	C&I
Hospitality - Motel	C&I
Industrial	Industrial
Mixed-Use - Office/Retail	C&I
Mixed-Use - Office/Retail,Industrial	Industrial
Mixed-Use - Office/Retail,Mixed-Use - Other	C&I
Mixed-Use - Office/Retail,Mixed-Use - Other,Not-for-Profit,Warehouse	C&I
Mixed-Use - Office/Retail,Mixed-Use - Residential/Retail	C&I
Mixed-Use - Office/Retail,Office,Restaurant - Dining,Restaurant - Quick Serve,Retail,Warehouse	C&I

Mixed-Use - Office/Retail,Office,Warehouse	C&I
Mixed-Use - Office/Retail,Retail	C&I
Mixed-Use - Office/Retail,Warehouse	C&I
Mixed-Use - Office/Retail,Warehouse,Industrial	Industrial
Mixed-Use - Other	C&I
Mixed-Use - Other,Industrial	Industrial
Mixed-Use - Other,Not-for-Profit,Office	C&I
Mixed-Use - Other,Office	C&I
Mixed-Use - Other,Other: Please specify	C&I
Mixed-Use - Other,Retail,Warehouse	C&I
Mixed-Use - Other,Warehouse	C&I
Mixed-Use - Residential/Retail	C&I
Mixed-Use - Residential/Retail,Multi-Residential - Condominium	C&I
Mixed-Use - Residential/Retail,Multi-Residential - Rental Apartment	C&I
Mixed-Use - Residential/Retail,Retail	C&I
Multi-Residential - Condominium	C&I
Multi-Residential - Condominium,Multi-Residential - Rental Apartment	C&I
Multi-Residential - Condominium,Other: Please specify	C&I
Multi-Residential - Rental Apartment	C&I
Multi-Residential - Rental Apartment,Multi-Residential - Social Housing Provider,Not-for-Profit	C&I
Multi-Residential - Rental Apartment,Not-for-Profit	C&I
Multi-Residential - Rental Apartment,Warehouse	C&I
Multi-Residential - Social Housing Provider	C&I
Multi-Residential - Social Housing Provider,Industrial	C&I
Multi-Residential - Social Housing Provider,Not-for-Profit	C&I
Not-for-Profit	C&I
Not-for-Profit,Office	C&I
Not-for-Profit,Other: Please specify	C&I
Not-for-Profit,Warehouse	C&I
Office	C&I
Office,Industrial	Industrial
Office,Other: Please specify	C&I
Office,Other: Please specify,Warehouse	C&I
Office,Restaurant - Dining	C&I
Office,Restaurant - Dining,Industrial	Industrial
Office,Retail	C&I
Office,Retail,Industrial	C&I
Office,Retail,Warehouse	C&I
Office,Warehouse	C&I
Office,Warehouse,Industrial	Industrial
Other: Please specify	C&I
Other: Please specify,Industrial	Industrial
Other: Please specify,Retail	C&I
Other: Please specify,Warehouse	C&I
Restaurant - Dining	C&I
Restaurant - Dining,Retail	C&I

Restaurant - Quick Serve	C&I
Restaurant - Quick Serve,Retail	C&I
Retail	C&I
Retail,Industrial	Industrial
Retail,Warehouse	C&I
Warehouse	C&I
Warehouse,Industrial	Industrial

Consumer Program Allocation Methodology

Results can be allocated based on average of 2008 & 2009 residential throughput for each LDC (below) when additional information is not available. Source: OEB Yearbook Data 2008 & 2009

Local Distribution Company	Allocation
Algoma Power Inc.	0.2%
Atikokan Hydro Inc.	0.0%
Attawapiskat Power Corporation	0.0%
Bluewater Power Distribution Corporation	0.6%
Brant County Power Inc.	0.2%
Brantford Power Inc.	0.7%
Burlington Hydro Inc.	1.4%
Cambridge and North Dumfries Hydro Inc.	1.0%
Canadian Niagara Power Inc.	0.5%
Centre Wellington Hydro Ltd.	0.1%
Chapleau Public Utilities Corporation	0.0%
COLLUS Power Corporation	0.3%
Cooperative Hydro Embrun Inc.	0.0%
E.L.K. Energy Inc.	0.2%
Enersource Hydro Mississauga Inc.	3.9%
ENTEGRUS	0.6%
ENWIN Utilities Ltd.	1.6%
Erie Thames Powerlines Corporation	0.4%
Espanola Regional Hydro Distribution Corporation	0.1%
Essex Powerlines Corporation	0.7%
Festival Hydro Inc.	0.3%
Fort Albany Power Corporation	0.0%
Fort Frances Power Corporation	0.1%
Greater Sudbury Hydro Inc.	1.0%
Grimsby Power Inc.	0.2%
Guelph Hydro Electric Systems Inc.	0.9%
Haldimand County Hydro Inc.	0.4%
Halton Hills Hydro Inc.	0.5%
Hearst Power Distribution Company Limited	0.1%
Horizon Utilities Corporation	4.0%
Hydro 2000 Inc.	0.0%
Hydro Hawkesbury Inc.	0.1%
Hydro One Brampton Networks Inc.	2.8%
Hydro One Networks Inc.	30.0%

Hydro Ottawa Limited	5.6%
Innisfil Hydro Distribution Systems Limited	0.4%
Kashechewan Power Corporation	0.0%
Kenora Hydro Electric Corporation Ltd.	0.1%
Kingston Hydro Corporation	0.5%
Kitchener-Wilmot Hydro Inc.	1.6%
Lakefront Utilities Inc.	0.2%
Lakeland Power Distribution Ltd.	0.2%
London Hydro Inc.	2.7%
Middlesex Power Distribution Corporation	0.1%
Midland Power Utility Corporation	0.1%
Milton Hydro Distribution Inc.	0.6%
Newmarket - Tay Power Distribution Ltd.	0.7%
Niagara Peninsula Energy Inc.	1.0%
Niagara-on-the-Lake Hydro Inc.	0.2%
Norfolk Power Distribution Inc.	0.3%
North Bay Hydro Distribution Limited	0.5%
Northern Ontario Wires Inc.	0.1%
Oakville Hydro Electricity Distribution Inc.	1.5%
Orangeville Hydro Limited	0.2%
Orillia Power Distribution Corporation	0.3%
Oshawa PUC Networks Inc.	1.2%
Ottawa River Power Corporation	0.2%
Parry Sound Power Corporation	0.1%
Peterborough Distribution Incorporated	0.7%
PowerStream Inc.	6.6%
PUC Distribution Inc.	0.9%
Renfrew Hydro Inc.	0.1%
Rideau St. Lawrence Distribution Inc.	0.1%
Sioux Lookout Hydro Inc.	0.1%
St. Thomas Energy Inc.	0.3%
Thunder Bay Hydro Electricity Distribution Inc.	0.9%
Tillsonburg Hydro Inc.	0.1%
Toronto Hydro-Electric System Limited	12.8%
Veridian Connections Inc.	2.4%
Wasaga Distribution Inc.	0.2%
Waterloo North Hydro Inc.	1.0%
Welland Hydro-Electric System Corp.	0.4%
Wellington North Power Inc.	0.1%
West Coast Huron Energy Inc.	0.1%
Westario Power Inc.	0.5%
Whitby Hydro Electric Corporation	0.9%
Woodstock Hydro Services Inc.	0.3%

Reporting Glossary

Annual: the peak demand or energy savings that occur in a given year (includes resource savings from new program activity in a given year and resource savings persisting from previous years).

Cumulative Energy Savings: represents the sum of the annual energy savings that accrue over a defined period (in the context of this report the defined period is 2011 - 2014). This concept does not apply to peak demand savings.

End-User Level: resource savings in this report are measured at the customer level as opposed to the generator level (the difference being line losses).

Free-ridership: the percentage of participants who would have implemented the program measure or practice in the absence of the program.

Incremental: the new resource savings attributable to activity procured in a particular reporting period based on when the savings are considered to 'start' (please see table 5).

Initiative: a Conservation & Demand Management offering focusing on a particular opportunity or customer end-use (i.e. Retrofit, Fridge & Freezer Pickup).

Net-to-Gross Ratio: The ratio of net savings to gross savings, which takes into account factors such as free-ridership and spillover

Net Energy Savings (MWh): energy savings attributable to conservation and demand management activities net of free-riders, etc.

Net Peak Demand Savings (MW): peak demand savings attributable to conservation and demand management activities net of free-riders, etc.

Program: a group of initiatives that target a particular market sector (i.e. Consumer, Industrial).

Realization Rate: A comparison of observed or measured (evaluated) information to original reported savings which is used to adjust the gross savings estimates.

Settlement Account: the grouping of demand response facilities (contributors) into one contractual agreement

Spillover: Reductions in energy consumption and/or demand caused by the presence of the energy efficiency program, beyond the program-related gross savings of the participants. There can be participant and/or non-participant spillover.

Unit: for a specific initiative the relevant type of activity acquired in the market place (i.e. appliances picked up, projects completed, coupons redeemed).