



PUC Distribution Inc.
765 QUEEN STREET EAST, P.O. Box 9000
SAULT STE. MARIE, ONTARIO, P6A 6P2

September 28, 2012

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

Dear Ms. Walli:

**Re: PUC Distribution Inc. ("PUC")
2011 CDM Annual Report EB-2010-0215**

PUC is scheduled to file a 2011 CDM annual report to the Board on or before September 30, 2012 as per the CDM code dated September 16, 2010.

Sincerely,

Brooke Suurna, P.Eng
Conservation and Demand Management Officer
PUC Distribution Inc.
Sault Ste. Marie Ont.
Email: brooke.suurna@ssmpuc.com
Phone: 705-759-3314

PUC Distribution Inc.

(EB-2010-0215)

Conservation and Demand Management

2011 Annual Report

Submitted to:

The Ontario Energy Board

Submitted on September 28, 2012

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Executive Summary

2011 CDM Results for PUC Distribution Inc.

PUC Distribution Inc. (PUC) is the Local Distribution Company (LDC) based in Sault Ste. Marie, responsible for the distribution of electricity and the operation and maintenance of Sault Ste. Marie's electrical distribution infrastructure. PUC is working hard to be 'Best in Class' and provide superior service to its customers. Conservation and Demand Management (CDM) plays a key role in providing a reliable, sustainable, and affordable energy supply. PUC feels that conservation is an essential part of its core services and can help customers to manage rising energy costs.

The Ontario Energy Board (OEB) has set CDM targets for PUC, as a condition of its license, to achieve 30.83 GWh of energy savings and 5.58 MW of summer peak demand savings, over the period from January 1, 2011 through December 31, 2014. This Annual Report covers PUC's CDM activities and progress towards its targets for the period from January 1, 2011 to December 31, 2011.

PUC is pleased to report substantial progress in 2011 towards achieving its CDM targets. Despite experiencing some start-up challenges, PUC achieved 35.2% of its cumulative 2011-2014 energy target and 11.2% of its 2014 summer peak demand target.

PUC is committed to working with the Ontario Power Authority (OPA) to deliver CDM programs for the remainder of the current CDM 2011-2014 framework.

2011 CDM Program Delivery

PUC offered a full suite of CDM programs available from the OPA for its residential, commercial and select programs available from the OPA for its Industrial customers. In 2011, PUC has secured delivery agents, developed processes and procedures, putting PUC in a position to successfully deliver the OPA's province wide CDM programs in 2012 and beyond.

PUC's role in delivery of the initiatives included promotion, customer service, acting as the local "face" for the initiatives in the community, managing channel partner networks involved with some of the initiatives, reporting to the OPA, reviewing applications for some initiatives, referral of participants to the OPA for some initiatives, and contracting for delivery of some initiatives with third-party service providers.

In all, over 12,000 PUC customers participated in at least one of the CDM programs offered, making it clear that Sault Ste. Marie supports conservation and all of its benefits.

Meeting PUC CDM targets

Based on its experience in 2011, PUC expects that achieving 100% of its CDM targets will remain a significant challenge. 2011 was a "start-up" year for OPA CDM program initiatives across the province. The OPA was not entirely ready for the anticipated January 1, 2011 launch. Additionally, PUC had to review schedules, develop processes, and procure services and resources before it could market the OPA CDM program initiatives to its customers.

Energy savings realized from participation in 2011 initiatives have greater impact on targets than savings realized from initiatives in 2012 and beyond. Making up for lost participation in 2011 will require a greater than one-to-one increase in participation in 2012-2014. To address this fact, PUC is currently re-evaluating its energy savings strategy. It is expected that this re-evaluation will contribute to PUC achieving its targeted savings.

Board-Approved Program Applications

PUC has not filed any applications to the OEB for Board-approved CDM Programs. PUC recognizes that OPA province-wide programs were never designed to meet 100% of the LDCs' CDM targets and sees Board-approved programs as a potential means for extending the savings realized from the province-wide programs.

Board-approved programs could be designed to address barriers specific to PUC, or deliver conservation initiatives to potential participants who may feel constrained by certain design and delivery features of existing OPA programs. Board-approved programs could also contribute greatly to the savings required to reduce the gap between expected and actual CDM results in the PUC service territory.

Because of the difficulties experienced by Toronto Hydro surrounding Board-approved program applications, PUC does not plan on pursuing these programs at this time. PUC will continue to evaluate the need and feasibility of Board-approved CDM programs as it tracks progress from province-wide programs and time-of-use results, as opportunities present themselves, and as the conditions and requirements for approval evolve.

CDM Program Evaluation Results

Independent third-party evaluators evaluated the OPA programs. The results of those evaluations are presented in this report along with their impact on PUC's progress towards its targets. The evaluation results provide calculations to adjust the gross savings to determine the net savings from a given initiative. The net savings are used to track PUC's progress towards its targets.

The commercial programs completed in 2011 contributed the most to the total energy savings (47%) and demand savings (50%) achieved by PUC in 2011. The residential programs contributed 31% of both the energy and demand savings respectively. The remaining savings are due to pre-2011 projects that were completed in 2011.

PUC will continue delivering OPA CDM programs as described in its CDM Strategy. Currently, PUC is in the process of reviewing its marketing and delivery strategies. The review will identify any strategy modifications that will be pursued in 2012 and beyond.

Background

On March 31, 2010, the Minister of Energy and Infrastructure of Ontario, under the guidance of sections 27.1 and 27.2 of the *Ontario Energy Board Act, 1998*, directed the Ontario Energy Board (OEB) to establish Conservation and Demand Management (CDM) targets for electricity distributors. Accordingly, on November 12, 2010, the OEB amended the distribution license of PUC Distribution Inc. (PUC) to require PUC, as a condition of its licence, to achieve 30.83 GWh of energy savings and 5.58 MW of summer peak demand savings, over the period beginning January 1, 2011 through December 31, 2014.

In accordance with the same Minister's directive, the OEB issued the Conservation and Demand Management Code for Electricity Distributors (the Code) on September 16, 2010. The Code sets out the obligations and requirements with which electricity distributors must comply in relation to the CDM targets set out in their licenses. To comply with the Code requirements, PUC submitted its CDM Strategy on November 1, 2010, which provided a high level description of how PUC intended to achieve its CDM targets.

The Code also requires a distributor to file an annual report with the Board. This Annual Report is therefore prepared accordingly and covers the period from January 1, 2011 to December 31, 2011.

1 Board-Approved CDM Programs

1.1 Introduction

In its Decision and Order dated November 12, 2010 (EB-2010-0215 & EB-2010-0216), the OEB ordered that to meet its mandatory CDM targets “Each licensed electricity distributor must, as a condition of its licence, deliver Board-Approved CDM Programs, OPA-Contracted Province-Wide CDM Programs, or a combination of the two”.

At this time, the implementation of Time-of-Use (“TOU”) Pricing is the only Board-Approved Conservation and Demand Management (“CDM”) program that is being offered in PUC’s service area.

1.2 TOU Pricing

1.2.1 BACKGROUND

In its April 26, 2012 CDM Guidelines, the OEB recognized that a portion of the aggregate electricity demand target was intended to be attributable to savings achieved through the implementation of TOU Pricing. The OEB established TOU prices and has made the implementation of this pricing mechanism mandatory for distributors. On this basis, the OEB has determined that distributors will not have to file a Board-Approved CDM program application regarding TOU pricing. The OEB has deemed the implementation of TOU pricing to be a Board-Approved CDM program for the purposes of achieving the CDM targets. The costs associated with the implementation of TOU pricing are recoverable through distribution rates, and not through the Global Adjustment Mechanism (“GAM”).

In accordance with a Directive dated March 31, 2010 by the Minister of Energy and Infrastructure, the OEB is of the view that any evaluations of savings from TOU pricing should be conducted by the OPA for the province, and then allocated to distributors. PUC will report these results upon receipt from the OPA. As of September 30, 2012, the OPA has not released its preliminary results of TOU savings to distributors. Therefore PUC is not able to provide any verified savings related to PUC’s TOU program at this time.

1.2.2 TOU PROGRAM DESCRIPTION

Target Customer Type(s): Residential and small business customers with a monthly demand less than 50 KW.

Initiative Frequency: Year-Round.

Objectives: TOU pricing was designed to incent the shifting of energy usage. Therefore peak demand reductions were expected, and energy conservation benefits may also have been realized.

Description: In August of 2010, the OEB issued a final determination to mandate TOU pricing for Regulated Price Plan (“RPP”) customers by June 2011, in order to support the Government’s expectation for 3.6 million RPP consumers to be on TOU pricing by June 2011, and to ensure that smart meters funded at ratepayer expense are being used for their intended purpose.

The RPP TOU price has been adjusted twice annually by the OEB. A summary of the RPP TOU pricing is provided below:

Table 1: Regulated Price Plan (RPP) Time-of-Use (TOU) pricing for November 1, 2010 to May 1, 2012

RPP TOU	Rates (cents/kWh)		
Effective Date	On Peak	Mid Peak	Off Peak
November 1, 2010	9.9	8.1	5.1
May 1, 2011	10.7	8.9	5.9
November 1, 2011	10.8	9.2	6.2
May 1, 2012	11.7	10.0	6.5

Delivery: OEB set the TOU rates. PUC installed and maintained the meters, and converted customers to TOU billing.

1.2.2.1 Initiative Activities/Progress:

PUC began transitioning its RPP customers to TOU billing on October 17, 2011. By December 31st, 2011, 30,568 customers were on TOU billing.

1.3 PUC's Application with the OEB

When preparing its CDM Strategy, PUC forecasted reaching its targets without the use of Board-approved programs.

PUC does not foresee developing applications for new Board-approved programs at this time, but will continue to evaluate the need and feasibility of these as it tracks progress from province-wide programs, time-of-use results, as opportunities present themselves, and as the conditions and requirements for approval evolve.

2 OPA-Contracted Province-Wide CDM Programs

2.1 Introduction

Effective February 4, 2011, PUC entered into an agreement with the OPA to deliver CDM programs extending from January 1, 2011 to December 31, 2014. The CDM programs with their associated initiatives are listed in the table below. In addition, programs that were started prior to 2011 that were completed in 2011 are included.

Table 2: OPA-contracted province-wide CDM programs in market

Initiative	Schedule	Date schedule was posted	Customer class
Residential Program			
Appliance Retirement	Schedule B-1, Exhibit D	Jan 26, 2011	All residential rate classes
Appliance Exchange	Schedule B-1, Exhibit E	Jan 26, 2011	All residential rate classes
HVAC Incentives	Schedule B-1, Exhibit B	Jan 26, 2011	All residential rate classes
Conservation Instant Coupon Booklet	Schedule B-1, Exhibit A	Jan 26, 2011	All residential rate classes
Bi-Annual Retailer Event	Schedule B-1, Exhibit C	Jan 26, 2011	All residential rate classes
Residential New Construction	Schedule B-2	Jan 26, 2011	All residential rate classes
Residential Demand (“DR”) Response	Schedule B-3	Aug 22, 2011	All residential rate classes
Commercial & Institutional Program			
Efficiency: Equipment Replacement	Schedule C-2	Jan 26, 2011	All general service classes
Direct Install Lighting	Schedule C-3	Jan 26, 2011	General service < 50 kW
Existing Building Commissioning	Schedule C-6	Feb 2011	All general service

Initiative	Schedule	Date schedule was posted	Customer class
Incentive			classes
New Construction and Major Renovation Initiative	Schedule C-4	Feb 2011	All general service classes
Energy Audit	Schedule C-1	Jan 26, 2011	All general service classes
Small Commercial Demand Response	Schedule B-3	Aug 22, 2011	All general service less than 50 KW classes.
Demand Response 3	Schedule D-6	<i>May 31, 2011</i>	<i>General Service 50 kW & above</i>
Industrial Program			
Efficiency: Equipment Replacement Incentive (part of the C&I program schedule)	Schedule C-2	May 31, 2011	General service 50 kW & above
Process & System Upgrades	Schedule D-1	<i>May 31, 2011</i>	<i>General Service 50 kW & above</i>
Energy Manager	Schedule D-3	<i>May 31, 2011</i>	<i>General Service 50 kW & above</i>
Demand Response 3	Schedule D-6	<i>May 31, 2011</i>	<i>General Service 50 kW & above</i>
Low Income Program			
Home Assistance Program	Schedule E-1	May 31, 2011	All residential rate classes
Pre-2011 Programs completed in 2011			
Electricity Retrofit Incentive Program	n/a	n/a	All general service classes
High Performance New Construction	n/a	n/a	All general service classes

Several initiatives that were included in the schedules were not in market in 2011. The OPA has communicated that the initiatives listed in the table below were not in market in 2011 and that they represent a very small percentage of the forecasted energy and demand savings. During the 2011 program year, the OPA placed emphasis on supporting the implementation of initiatives that would offer the greatest ratepayer value and greatest amount of persisting savings.

PUC did not incorporate in its strategy any significant savings from the initiatives below that were not in market in 2011.

Table 3: OPA-contracted province-wide CDM programs not in market in 2011

Initiative not in market in 2011	Objective	Status
Residential Program		
Midstream Electronics	The objective of this initiative was to encourage retailers to promote and sell high-efficiency televisions, and for distributors to distribute high-efficiency set top boxes.	Not launched to market
Midstream Pool Equipment	The objective of this initiative was to encourage pool installers to sell and install efficient pool pump equipment in residential in-ground pools.	Not launched to market
Home Energy Audit Tool	This was to be a provincial online audit tool to engage customers in conservation and help drive customer participation to CDM programs.	Not launched to market
Commercial & Institutional Program		
Direct Service Space Cooling	The objective of this initiative was to offer free servicing of air conditioning systems and refrigeration units for the purpose of achieving energy savings and demand reduction.	Not launched to market.
Demand Response 1	This initiative allowed distribution customers to voluntarily reduce electricity demand during certain periods of the year pursuant to the DR 1 contract. The initiative provided DR payments for the actual electricity reduction provided during a demand	There was no customer uptake for this initiative province-wide.

Initiative not in market in 2011	Objective	Status
	response event.	
Industrial Program		
Demand Response 1	As above	There was no customer uptake for this initiative province-wide.

The Master CDM Program Agreement includes program change management provisions in Article 3. Collaboration between the OPA and LDCs commenced in 2011 and the change management process was implemented to enhance the saveONenergy program suite. The change management process allowed for modifications to the Master Service Agreement and initiative schedules. The program enhancements were intended to give LDCs additional tools and greater flexibility to deliver programs in a way that meets the needs of customers and further drives participation in the initiatives.

2.2 Program Descriptions

2.2.1 RESIDENTIAL PROGRAM

PUC promoted the residential program initiatives in various venues throughout 2011.

In-market initiatives were promoted at a 3-day home show in March 2011. At the show, representatives from PUC provided attendees with brochures on the OPA initiatives, gave general information about the saveONenergy website, distributed coupon booklets for the Conservation Instant Coupon initiative and responded to questions on the initiatives and on conservation in general. The home show was a well-attended event and offered PUC representatives an opportunity to promote its CDM programs to many people over the course of the weekend.

The same information was provided by PUC staff to attendees of the Green Energy Symposium held by the City of Sault Ste. Marie. This event was also well attended and several CDM discussions were had with customers over the course of the symposium.

Residential program initiatives were also promoted in presentations at the SSM Chamber of Commerce and the City Environmental Initiatives Committee.

Staff at PUC was also trained on residential program initiatives in a spring 2011. As part of this training, PUC educated its customer service and call centre staff on the details of the residential program and where to direct customers who requested more information.

All residential initiatives that were in-market in PUC's service territory were also promoted via the PUC conservation microsite and the OPA's province wide marketing campaign. PUC also promoted the saveONenergy initiatives through a display booth in the main lobby of PUC.

2.2.1.1 APPLIANCE RETIREMENT INITIATIVE (Exhibit D)

Target Customer Type(s): Residential customers

Initiative Frequency: Year-round

Objectives: The objective was to achieve energy and demand savings by permanently decommissioning certain older, inefficient refrigeration appliances located in Ontario.

Description: This is an energy efficiency Initiative that offered individuals and businesses free pick-up and decommissioning of old large refrigerators and freezers. Window air conditioners and portable dehumidifiers would also be picked up if a refrigerator or a freezer were being collected.

Targeted End Uses: Large refrigerators, large freezers, window air conditioners and portable dehumidifiers.

Delivery: OPA was centrally contracted for the province-wide marketing, call centre, appliance pick-up and decommissioning processes. PUC provided local marketing and coordination with municipal pick-up.

Additional detail is available at the following websites:

- Schedule B-1, Exhibit D
http://www.powerauthority.on.ca/sites/default/files/new_files/industry_stakeholders/current_electricity_contracts/pdfs/Schedule%20B-1%20Residential%20Program.pdf
- SaveONenergy website <https://saveonenergy.ca/Consumer/Programs/Appliance-Retirement.aspx>

In-Market Date: February 4, 2011

Lessons Learned:

- The Appliance Retirement Initiative (previously The Great Refrigerator Round-Up) has been offered by PUC since 2007. This initiative is approaching market saturation.
- While the OPA and PUC have reviewed this initiative to assess whether to include other products, appliances have a natural life cycle and the initiative cannot be expected to continually deliver the high level of results in perpetuity. These lower expectations have been taken into account when developing conservation portfolios.
- This initiative now faces some competition from independent retailers and municipalities.
- Results are very responsive to province wide advertising.

2.2.1.2 APPLIANCE EXCHANGE INITIATIVE (Exhibit E)

Target Customer Type(s): Residential customers

Initiative Frequency: Spring and fall

Objective: The objective of this initiative was to remove and permanently decommission older, inefficient window air conditioners (AC) and portable dehumidifiers.

Description: This initiative involved appliance exchange events. Exchange events were held at local retail locations and customers were encouraged to bring in their old room air conditioners and dehumidifiers in exchange for coupons/discounts towards the purchase of new energy-efficient equipment.

Targeted End Uses: Window air conditioners and portable dehumidifiers

Delivery: Delivery was OPA contracted and had participating retailers collect eligible units.

Additional detail is available at the following websites:

- Schedule B-1, Exhibit C
http://www.powerauthority.on.ca/sites/default/files/new_files/industry_stakeholders/current_electricity_contracts/pdfs/Schedule%20B-1%20Residential%20Program.pdf and
- SaveONenergy website <https://saveonenergy.ca/Consumer.aspx>

In-Market Date: February 4, 2011

Lessons Learned:

- The spring event had the participation of 2 retailers within PUC's service territory. However, the Fall 2011 event had no retailer participation anywhere in the province, therefore savings anticipated by the PUC did not materialize.
- Evaluation, Measurement, and Verification (EMV) results indicated that the value of savings for retired room air conditioners has dropped.
- The initiative may be achieving market saturation.
- The type of unit turned in is very dependent upon what is promoted by the retailers.

2.2.1.3 HVAC INCENTIVES INITIATIVE (Exhibit B)

Target Customer Type(s): Residential customers

Initiative Frequency: Year-round

Objective: The objectives of this initiative were to encourage the replacement of existing heating systems with high-efficiency furnaces equipped with Electronically Commutated Motors (ECM), and to replace existing central air conditioners with systems and products that qualify under the ENERGY STAR program.

Description: This was an energy-efficiency initiative that provided rebates for the replacement of old heating or cooling systems with high-efficiency furnaces (equipped with ECM) and central air conditioners that qualify under the ENERGY STAR program. Approved contractors who were qualified through the Heating, Refrigeration, and Air Conditioning Institute (HRAI) replaced the equipment.

Targeted End Uses: Central air conditioners and furnaces

Delivery: OPA contracted the delivery of the program centrally. PUC was encouraged by the OPA to convince local contractors to participate in the initiative.

Additional detail is available at the following websites:

- Schedule B-1, Exhibit B
http://www.powerauthority.on.ca/sites/default/files/new_files/industry_stakeholders/current_electricity_contracts/pdfs/Schedule%20B-1%20Residential%20Program.pdf and
- SaveONenergy website <https://saveonenergy.ca/Consumer.aspx>

In-Market Date: February 4, 2011

Lessons Learned:

- Channel engagement is a highly effective method of connecting with customers; however channel partners require that rebates be issued promptly to maintain a positive relationship between consumers, contractors, the OPA, and PUC.
- There appears to be spillover to non-HRAI contractors who are ineligible for this initiative. There are cases where smaller independent contractors are offering their own incentives (by discounting their installations to match the value of the OPA incentive) to make the sale. As this occurs outside of the initiative, the savings from these installations are not being attributed to PUC.

2.2.1.4 CONSERVATION INSTANT COUPON BOOKLET INITIATIVE (Exhibit A)

Target Customer Type(s): Residential customers

Initiative Frequency: Year-round

Objective: The objective of this initiative was to encourage households to purchase energy-efficient products by offering discount coupons.

Description: This Initiative provided customers with year-round coupons. The coupons offered instant rebates towards the purchase of a variety of low-cost, easy-to-install, energy-efficient measures that could be redeemed at participating retailers. Booklets were directly mailed to customers and were also available at point-of-purchase. Downloadable coupons were also available at www.saveoneenergy.ca.

Targeted End Uses: standard compact fluorescent lights (CFLs) that qualify under the ENERGY STAR® program, light fixtures that qualify under the ENERGY STAR® program, lighting control products, weather-stripping, hot water pipe wrap, electric water heater blankets, heavy duty plug-in timers, advanced power bars, clotheslines, baseboard programmable thermostats

Delivery: The delivery was OPA contracted centrally for the distribution of the coupon booklets across Ontario. PUC distributed the coupons at local events. The OPA entered into agreements with retailers to honour the coupons.

Additional detail is available at the following websites:

- Schedule B-1, Exhibit A
http://www.powerauthority.on.ca/sites/default/files/new_files/industry_stakeholders/current_electricity_contracts/pdfs/Schedule%20B-1%20Residential%20Program.pdf and
- SaveONenergy website <https://saveonenergy.ca/Consumer.aspx>

In-Market Date: February 4, 2011

Lessons Learned:

- The downloadable coupons proved to be more successful than the mailed out booklets.
- This Initiative may benefit from an enabler such as a conservation card / loyalty card to increase customer participation.

- The timeframe for retailer submission of redeemed coupons vary from retailer to retailer. This delays the results reporting, which in turn limits the OPA and PUC's abilities to react and respond to initiative performance or changes in consumer behaviour.

2.2.1.5 BI-ANNUAL RETAILER EVENT INITIATIVE (Exhibit C)

Target Customer Type(s): Residential customers

Initiative Frequency: Bi-annual events

Objective: The objective of this initiative was to provide instant point-of-purchase discounts to individuals at participating retailers for a variety of energy-efficient products.

Description: Twice a year (spring and fall), participating retailers hosted month-long rebate events. During the months of April and October, customers were encouraged to visit participating retailers where they could obtain and redeem coupons for instant rebates towards a variety of low-cost, easy-to-install, energy-efficient measures.

Targeted End Uses: The same as those for the conservation instant coupon booklet initiative

Delivery: The OPA entered into arrangements with participating retailers to promote the discounted products, and to post and honour related coupons.

Additional detail is available at the following websites:

- Schedule B-1, Exhibit C
http://www.powerauthority.on.ca/sites/default/files/new_files/industry_stakeholders/current_electricity_contracts/pdfs/Schedule%20B-1%20Residential%20Program.pdf and
- SaveONenergy website <https://saveonenergy.ca/Consumer.aspx>

In-Market Date: February 4, 2011

Lessons Learned:

- The product list has changed very little over the past four years.
- Program evolution, including new products (for example, LED lighting) and reviews of incentive pricing for the coupon initiatives, must be a regular activity to ensure continued consumer interest.
- A review conducted by the LDC/OPA Residential Working Group in Q4 2011 identified three areas of need for initiative evolution: 1) introduction of product focused marketing; 2) enhanced product selection and 3) improved training for retailers.

2.2.1.6 RESIDENTIAL NEW CONSTRUCTION PROGRAM (Schedule B-2)

Target Customer Type(s): Residential customers

Initiative Frequency: Year-round

Objective: The objective of this initiative was to provide incentives to participants for the purpose of promoting the construction of energy-efficient residential homes in the province of Ontario.

Description: This initiative provided incentives to homebuilders for constructing new homes that are efficient, smart, and integrated (applicable to new single family dwellings). Incentives were provided in two key categories:

- a) Incentives for homebuilders who installed electricity-efficiency measures from a prescriptive list or determined by a custom evaluation; and
- b) Incentives for homebuilders who met or exceeded aggressive efficiency standards using the EnerGuide performance rating system.

Targeted End Uses: All-off switch, ECM motors, central air conditioners that qualify under the ENERGY STAR program, lighting control products, lighting fixtures, EnerGuide home rating of 83, EnerGuide home rating of 85

Delivery: The local engagement of builders was the responsibility of PUC. This was supported by the OPA's province-wide promotional efforts aimed at driving builders to PUC for additional information.

Additional detail is available at the following websites:

- Schedule B-1, Exhibit C
http://www.powerauthority.on.ca/sites/default/files/new_files/industry_stakeholders/current_electricity_contracts/pdfs/Schedule%20B-2%20New%20Construction%20Program.pdf and
- SaveONenergy website <https://saveonenergy.ca/Consumer.aspx>

In-Market Date: February 4, 2011 however there was no participation in PUC's service territory.

2.2.1.7 RESIDENTIAL DEMAND RESPONSE PROGRAM (Schedule B-3)

Target Customer Type(s): Residential customers and general Service customers < 50 kW

Initiative Frequency: Year-round

Objective: The objectives of this initiative were to enhance the reliability of the IESO-controlled grid by accessing and aggregating specified residential and small commercial end uses for the purpose of load reduction, increasing consumer awareness of the importance of reducing summer demand, and providing consumers with their current electricity consumption and associated costs.

Description: This initiative, also known as *peaksaver* PLUS™, offered participants the option to receive a free programmable thermostat or switch, including installation. Participants also received access to price and real-time consumption information on an In Home Display (IHD). PUC opted not to offer the previous version of the *peaksaver*® load control program, which offered a programmable thermostat or switch and a \$25 bill credit. The OPA referred to the continuation of the previous *peaksaver*® program into 2011 as the *peaksaver*® extension. After August 2011, the Extension ended and the program (including marketing) ceased until new IHD products became available.

Targeted End Uses: Central air conditioning, water heaters, and pool pumps

Delivery: PUC issued an RFP to procure a service provider to administer the Peaksaver PLUS initiative.

Additional detail is available at the following websites:

- Schedule B-1, Exhibit C
http://www.powerauthority.on.ca/sites/default/files/new_files/industry_stakeholders/current_electricity_contracts/pdfs/SCHED_2011_ResDR_B_3_110727%28MJB%29v15_redacted.pdf and
- SaveONenergy website <https://saveonenergy.ca/Consumer.aspx>

In-Market Date: Not offered in PUC service territory in 2011, PUC decided to wait until Peaksaver PLUS was launched.

2.2.2 COMMERCIAL AND INSTITUTIONAL PROGRAM

Most of 2011 was spent ramping up the C&I program initiatives; marketing efforts did not fully launch until the beginning of 2012. However, PUC did market its C&I program initiatives during a Chamber of Commerce presentation, the 3-day home show in March 2011 and the Green Energy Symposium. Information provided at these events included sell sheets, brochures, and booklets for all programs.

Other C&I program marketing efforts in the PUC service territory were largely completed by third parties.

For the Direct Install initiative, a third party hired by PUC did telemarketing, responded to customer queries, and held face-to-face meetings starting in June 2011.

Starting in August 2011, another third party completed outbound calls and held face-to-face meetings with many of PUC's top 20 customers to promote the ERII initiative.

A third party was also signed on to deliver the Existing Building Commissioning Incentive, the New Construction and Major Renovation Initiative, and the Energy Audit initiative starting November 2011.

The PUC microsite was also launched and updated to include information on the C&I program initiatives.

PUC expects marketing to ramp up in 2012.

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

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

Initiative Frequency: Year-round

Objective: The objective of this initiative was to offer non-residential distribution customers incentives to help them achieve reductions in electricity demand and consumption by upgrading to more energy-efficient equipment for lighting, space cooling, ventilation, and other measures.

Description: ERII offered customers financial incentives to upgrade existing equipment or processes to more energy-efficient equipment or processes. Upgrade projects could be classified into the following program tracks:

- a) Prescriptive projects, where prescribed measures replaced associated required base case equipment;
- b) Engineered projects, where energy and demand savings and incentives were calculated for associated measures; or
- c) Custom projects for energy efficiency upgrades not covered under prescriptive or engineering streams

Targeted End Uses: Lighting, space cooling, ventilation, and other measures

Delivery: The initiative was delivered by PUC.

Additional detail is available at the following websites:

- Schedule C-2
http://www.powerauthority.on.ca/sites/default/files/new_files/industry_stakeholders/current_electricity_contracts/pdfs/Schedule%20C-2%20ERII%20Initiative.pdf and
- SaveONenergy website <https://saveonenergy.ca/Business/Program-Overviews/Retrofit-for-Commercial.aspx>

In-Market Date: August 8, 2011

Lessons Learned:

- ERII (previously Equipment Replacement Incentive Program – ERIP) has been previously offered by PUC. It is a high performing, cost-effective program, and there were a handful of pre-2011 projects completed in 2011 (via ERIP).
- A major challenge for the ERII program in 2011 was payment delays. The centralized electronic processes were not ready as required by the OPA’s Master Agreement. The delayed availability of these automated processes, coupled with a greater than expected volume of pre-2011 projects being completed province-wide in 2011, caused payment delays by the OPA. Based on the lessons learned in the 2011 process, the centralized process review used by the OPA for 2012 project payment has been streamlined.
- In March 2011, the revised iCON system was launched by the OPA. This is the major online application system implemented to aid the 2011-2014 ERII application process. With system applications of this size and functionality, it was expected that there would be various issues identified at the time of the release and in the early stages before the system was “ready for market.” Unfortunately, the resolution of these issues, with the corresponding time lags and workarounds, was seen to be a barrier to some customers’ participation in the 2011 program year. In addition, there were also on-going issues and limitations with the back-end CRM system that affected PUC’s ability to effectively review and approve applications.

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

Target Customer Type(s): Small Commercial, institutional, agricultural facilities and multi-family buildings

Initiative Frequency: Year-round

Objective: The objective of this initiative was to offer the free installation of eligible lighting and water-heating measures valued at up to \$1,000 to eligible owners and tenants of commercial, institutional, and agricultural facilities and multi-family buildings, for the purpose of achieving electricity savings and peak demand savings.

Description: The Direct Install Lighting Initiative targeted customers in the general service <50kW account category. This Initiative offered turnkey installation of energy-efficient lighting and electric hot water heating measures with a value up to \$1,000 at no cost to qualifying small businesses. In addition, standard prescriptive incentives were available for eligible equipment that the customer chose to have installed beyond the initial \$1,000 limit.

Target End Uses:

Delivery: Eligible customers would be contacted by and could enroll with PUC's delivery service provider.

Additional detail is available at the following websites:

- Schedule C-3
<http://www.powerauthority.on.ca/sites/default/files/page/Schedule%20C-3%20Direct%20Install%20Initiative%20-%20redacted.pdf> and
- SaveONenergy website <https://saveonenergy.ca/Business.aspx>

In-Market Date: June 1, 2011

Lessons Learned:

- The Direct Install Lighting and Water Heating Initiative is a continuation of the Power Saving Blitz Initiative offered by PUC in 2010. Successful execution of the previous rendition of this initiative has resulted in diminished potential for the 2011-2014 initiative.
- The inclusion of a standard incentive for additional measures increased project size and drove higher energy and demand savings results.
- The cost of materials has experienced price volatility, reducing the margins for the electrical contractors participating in the program as installers and has led to a reduction in vendor channel participation.
- Due to backlogs in the payment system, participant incentive payment from the OPA to PUC, and therefore to the channel partner vendors, was commonly delayed.
- To address these issues, the LDCs have been working with the OPA in 2012 through its change management process to address:
 - extending the target initiative population to include small agricultural customers;
 - increasing the incentive envelope of \$1,000 to \$1,500 to ensure ongoing marketability of the program; and
 - Reviewing the eligible measure price list to support contractor participation.

2.2.2.3 EXISTING BUILDING COMMISSIONING INCENTIVE INITIATIVE (Schedule C-6)

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

Initiative Frequency: Year-round

Objective: The objective of this Initiative was to offer incentives for optimizing (but not replacing) existing chilled water systems for space cooling in non-residential facilities for the purpose of achieving implementation-phase energy savings, implementation-phase demand savings, or both.

Description: This Initiative offered participants incentives for the following project phases:

- a) Scoping study phase,
- b) Investigation phase,
- c) Implementation phase, and

d) Hand off/completion phase.

Targeted End Uses: Chilled water systems for space cooling

Delivery: PUC delivered.

Additional detail is available at the following websites:

- Schedule C-6
http://www.powerauthority.on.ca/sites/default/files/new_files/industry_stakeholders/current_electricity_contracts/pdfs/Schedule%20C-6%20Commissioning%20Initiative.pdf_and
- SaveONenergy website <https://saveonenergy.ca/Business/Program-Overviews/Existing-Building-Commissioning.aspx>

In-Market Date: November 1, 2011

Lessons Learned:

- There was no customer uptake for this initiative province-wide. It is suspected that the scope of the initiative being limited to space cooling contributed to the lack of participation. Accordingly chilled water systems used for other purposes should be made eligible and considered through the OPA's change management process.
- The customer expectation is that the program be expanded to include broader building improvements for a more holistic approach to building decommissioning.

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

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

Initiative Frequency: Year-round

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

Description: The New Construction Initiative provided incentives for new buildings and major renovations to existing buildings that exceeded existing building codes and standards for energy efficiency. This is a continuation of the High Performance New Construction program previously delivered by Enbridge Gas under contract with the OPA (and subcontracted to Union Gas), which ran until December 2010. The initiative used both a prescriptive and custom approach.

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

Delivery: PUC delivered to customers and design decision makers.

Additional detail is available at the following websites:

- Schedule C-4
<http://www.powerauthority.on.ca/sites/default/files/page/ScheduleC-4NewConstructionInitiativeV2.pdf> and

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

In-Market Date: November 1, 2011

Lessons Learned:

- For 2011, new industry participation was limited due to the delays in redesign of certain aspects of the initiative such as:
 - 2011 prescriptive incentives needed to be aligned with ERII incentives;
 - In the cases of delivering large projects (i.e. custom applications), 2011 participation was limited due to 1) building code changes and 2) level of documentation required.

2.2.2.5 ENERGY AUDIT INITIATIVE (Schedule C-1)

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

Initiative Frequency: Year-round

Objective: The objective of this initiative was to offer incentives to owners and lessees of commercial, institutional, and agricultural facilities and multi-family buildings for the purpose of undertaking assessments to identify all possible opportunities to reduce electricity demand and consumption within their buildings or premises.

Description: This Initiative provided participants incentives for the completion of energy audits of electricity consuming equipment located in their facility. Energy audits included development of energy baselines, use assessments, and performance monitoring and reporting.

Targeted End Uses: Various

Delivery: PUC delivered.

Additional detail is available at the following websites:

- Schedule C-1
http://www.powerauthority.on.ca/sites/default/files/new_files/industry_stakeholders/current_electricity_contracts/pdfs/Schedule%20C-1%20Energy%20Audit%20Initiative.pdf and
- SaveONenergy website <https://saveonenergy.ca/Business/Program-Overviews/Audit-Funding.aspx>

In-Market Date: November 1, 2011

Lessons Learned:

- Customers expect a greater connection with other CDM initiatives as a result of completing the Energy Audit. The initiative should be reviewed under the OPA’s change management process for the means to readily incent participants with audits in hand to implement other electricity savings initiatives.

2.2.2.1 SMALL COMMERCIAL DEMAND RESPONSE (SCHEDULE B-3)

- See 2.2.1.7, the Residential Demand Response initiative also applies to general service customers with a demand under 50 KW.

2.2.2.2 DEMAND RESPONSE 3 (SCHEDULE D-6)

- See 2.2.3.4

2.2.3 INDUSTRIAL PROGRAM

Only a portion of the industrial program was offered by PUC in 2011. Resources were allocated to both Consumer and Commercial and Institutional programs, as this reflects PUC's customer base.

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

- See 2.2.2.1

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

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

Initiative Frequency: Year round

Objectives: The objectives of this Initiative are to:

- Offer distribution customers capital incentives and enabling initiatives to assist with the implementation of large projects and project portfolios;
- Implement system optimization project in systems which are intrinsically complex and capital intensive; and
- Increase the capability of distribution customers to implement energy management and system optimization projects.

Description: PSUI is an energy management Initiative that includes three Initiatives: (preliminary engineering study, detailed engineering study, and project incentive Initiative). The incentives are available to large distribution connected customers with projects or portfolio projects that are expected to generate at least 350 MWh of annualized electricity savings or, in the case of Micro-Projects, 100 MWh of annualized electricity savings. The capital incentive for this Initiative is the lowest of:

- a) \$200/MWh of annualized electricity savings
- b) 70% of projects cost
- c) A one year pay back

Targeted End Uses: Process and systems

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

Additional detail is available:

- Schedule D-1
http://www.powerauthority.on.ca/sites/default/files/new_files/industry_stakeholders/current_electricity_contracts/pdfs/Schedule%20D-1%20Process%20and%20Systems%20Upgrades%20Initiative.pdf
- SaveONenergy website <https://saveonenergy.ca/Business.aspx>

In Market Date: February 4, 2011

Lessons Learned:

- The PSUI program targets large customers that are undertaking large capital projects. There is typically a long sales cycle to sell these projects, and then a long project development cycle. As such, results from PSUI did not appear in 2011. Limited results are expected to appear in 2012. The majority of the results are expected in 2013-2014, with a much reduced benefit to cumulative energy savings targets.
- Steps are being taken in the 2012 change management process to simplify and streamline the micro-project application process and to allow smaller projects to be directed to the ERII stream.
- Given the size of the projects involved, the contract required for PSUI is a lengthy and complicated document. Attempts are being made through change management in 2012 to simplify the document while still protecting the ratepayer.
- With the considerable customer interest in on-site Load Displacement projects, the Initiative should be reviewed to ensure that these projects may be accepted as part of the PSUI Initiative.

2.2.3.3 ENERGY MANAGER INITIATIVE (Schedule D-3)

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

Initiative Frequency: Year round

Objective: The objective of this initiative is to provide customers and LDCs the opportunity to access funding for the engagement of energy managers in order to deliver a minimum annual savings target.

Description: This Initiative provides customers the opportunity to access funding to engage an on-site, full time embedded energy manager, or an off-site roving energy manager who is engaged by the LDC. The role of the energy manager is to take control of the facility's energy use by monitoring performance,

leading awareness programs, and identifying opportunities for energy consumption improvement, and spearheading projects. Participants are funded 80% of the embedded energy manager's salary up to \$100,000 plus 80% of the energy manager's actual reasonable expenses incurred up to \$8,000 per year. Each embedded energy manager has a target of 300 kW/year of energy savings from one or more facilities. LDCs receive funding of up to \$120,000 for a Roving Energy Manager plus \$8,000 for expenses.

Targeted End Uses:

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

Additional detail is available:

- Schedule D-3
http://www.powerauthority.on.ca/sites/default/files/new_files/industry_stakeholders/current_electricity_contracts/pdfs/Schedule%20D-3%20Energy%20Manager%20Initiative%202011-2014.pdf and
- SaveONenergy website <https://saveonenergy.ca/Business.aspx>

Initiative Activities/Progress: PUC does not have any customers which meet the minimum demand to be eligible for the Energy Manager initiative.

In Market Date: Not in-market in PUC's service territory in 2011

Lessons Learned:

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

2.2.3.4 DEMAND RESPONSE 3 (Schedule D-6)

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

Initiative Frequency: Year round

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

Description: Demand Response 3 (DR3) is a demand response Initiative for commercial and industrial customers, of 50 kW or greater to reduce the amount of power being used during certain periods of the

year. The DR3 Initiative is a contractual resource that is an economic alternative to procurement of new generation capacity. DR3 comes with specific contractual obligations requiring participants to reduce their use of electricity relative to a baseline when called upon. This Initiative makes payments for participants to be on standby and energy payments for the actual energy reduction provided during a demand response event. Participants are scheduled to be on standby approximately 1,600 hours per calendar year for possible dispatch of up to 100 hours or 200 hours within that year depending on the contract.

Targeted End Uses:

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

Additional detail is available:

- Schedule D-6
http://www.powerauthority.on.ca/sites/default/files/new_files/industry_stakeholders/current_electricity_contracts/pdfs/Schedule%20D-6%20Demand%20Response%203%202011-2014.pdf
and
- SaveONenergy website <https://saveonenergy.ca/Business.aspx>

In Market Date: Not in-market in PUC's service territory in 2011

Lessons Learned:

- Customer details not provided by the OPA on an individual customer basis due to contractual requirements with the aggregators. This limits LDCs' ability to effectively market to prospective participants. LDCs are now approaching the Aggregators individually and working to develop agreements in order to identify potential customers of this initiative.

2.2.4 LOW INCOME INITIATIVE (HOME ASSISTANCE PROGRAM) (Schedule E)

The low-income program was not in-market in PUC's service territory in 2011 as PUC initiated an RFP process to procure a program delivery agent as PUC did not have sufficient internal resources to administer the program.

Target Customer Type(s): Income Qualified Residential Customers

Initiative Frequency: Year Round

Objective: The objective of this Initiative is to offer free installation of energy efficiency measures to income qualified households for the purpose of achieving electricity and peak demand savings.

Description: This is a turnkey Initiative for income qualified customers. It offers residents the opportunity to take advantage of free installation of energy efficient measures that improve the comfort of their home, increase efficiency, and help them save money. All eligible customers receive a Basic and Extended Measures Audit, while customers with electric heat also receive a Weatherization Audit. The Initiative is designed to coordinate efforts with gas utilities.

Targeted End Uses: End uses based on results of audit

Delivery: Not offered by PUC in 2011.

Additional detail is available:

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

Initiative Activities/Progress: Initiated an RFP process to procure a program delivery agent.

In Market Date: Not in-market in PUC's service territory in 2011

2.2.4.1 Lessons Learned:

- Difficulty identifying eligible customers.
- This Initiative Schedule was finalized later (May 2011) than the rest of the OPA Initiatives and in 2011 only 2 LDCs were in market.
- Centralized payment processes were not developed in 2011, but were in place mid-2012. This resulted in some LDCs delaying their launch to market, or for some pulling out of the market until the payment processes were completed.
- The financial scope, complexity, and customer privacy requirements of this Initiative resulted in a lengthy procurement process. PUC had to procure a service provider to administer the program through an RFP process which prevented the program from being offered in 2011.

2.2.5 PRE-2011 PROGRAMS COMPLETED IN 2011

2.2.5.1 ELECTRICITY RETROFIT INCENTIVE PROGRAM

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

Initiative Frequency: Year-round

Objective: Refer to section 2.2.2.1

Description: Refer to section 2.2.2.1

Targeted End Uses: Refer to section 2.2.2.1

Delivery: Refer to section 2.2.2.1

2.2.5.2 HIGH PERFORMANCE NEW CONSTRUCTION

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

Initiative Frequency: Year-round

Objective: Refer to section 2.2.2.4.

Description: Refer to section 2.2.2.4.

Targeted End Uses: Refer to section 2.2.2.4.

Delivery: Refer to section 2.2.2.4.

2.3 Participation

Table 4: Participation in OPA-contracted province-wide CDM programs

#	Initiative	Activity unit	Uptake/ participation units
Residential Program			
1	Appliance Retirement	Appliances	273
2	Appliance Exchange	Appliances	53
3	HVAC Incentives	Equipment	407
4	Conservation Instant Coupon Booklet	Coupons	4,398
5	Bi-Annual Retailer Event	Coupons	7,561
6	Residential Demand Response	Devices	0
7	Residential New Construction	Houses	0
Commercial & Institutional Program			
8	Efficiency: Equipment Replacement	Projects	11
9	Direct Install Lighting	Projects	182
10	Existing Building Commissioning Incentive	Buildings	0
11	New Construction and Major	Buildings	0

#	Initiative	Activity unit	Uptake/ participation units
	Renovation Incentive		
12	Energy Audit	Audits	0
13	Small Commercial Demand Response (part of the Residential program schedule)	Devices	0
14	Demand Response 3 (part of the Industrial program schedule)	Facilities	0
Industrial Program			
15	Process & System Upgrades*	Projects	0
	a) preliminary study		0
	b) engineering study		0
	c) project incentive		0
16	Energy Manager	Managers	0
17	Efficiency: Equipment Replacement Incentive (part of the C&I program schedule)	Projects	0
18	Demand Response 3	Facilities	0
Low Income Program			
19	Home Assistance Program	Measures	0
Pre 2011 Programs Completed in 2011			
20	Electricity Retrofit Incentive Program	Projects	5
21	High Performance New Construction	Projects	3

2.4 Spending

The following details the funds that PUC used in the one-year period applicable to the Annual Report, on each of the OPA-Contracted Province-Wide CDM Programs offered in its service area.

Table 5: Spending for OPA-contracted province-wide CDM programs

#	Initiative	Program Administration Budget (PAB)	Participant Based Funding (PBF)	Participant Incentives (PI)	Capability Building Funding (CBF)	TOTAL
Residential Program						
1	Appliance Retirement	\$1,934				\$1,934
2	Appliance Exchange	\$1,875				\$1,875
3	HVAC Incentives	\$1,927				\$1,927
4	Conservation Instant Coupon Booklet	\$1,923				\$1,923
5	Bi-Annual Retailer Event	\$1,872				\$1,872
6	Residential Demand Response	\$2,416				\$2,416
7	Residential New Construction	\$2,706				\$2,706
Commercial and Institutional Program						
8	Efficiency: Equipment Replacement	\$32,471		\$16,644		\$49,115
9	Direct Install Lighting	\$14,875	\$45,680	\$177,316		\$237,871

#	Initiative	Program Administration Budget (PAB)	Participant Based Funding (PBF)	Participant Incentives (PI)	Capability Building Funding (CBF)	TOTAL
10	Existing Building Commissioning Incentive	\$6,824				\$6,824
11	New Construction and Major Renovation Initiative	\$6,991				\$6,991
12	Energy Audit	\$7,932				\$7,932
13	Small Commercial Demand Response (part of the Residential program schedule)					
14	Demand Response 3 (part of the Industrial program schedule)					
Industrial Program						
15	Process & System Upgrades					
	a) preliminary study					
	b) engineering study					
	c) program incentive					
16	Energy Manager					
17	Efficiency: Equipment Replacement Incentive (part of the C&I program schedule)	See line 11 under Commercial and Institutional Program				

#	Initiative	Program Administration Budget (PAB)	Participant Based Funding (PBF)	Participant Incentives (PI)	Capability Building Funding (CBF)	TOTAL
18	Demand Response 3					
Low Income Program						
19	Home Assistance Program	\$2,495*				\$2,495
Pre 2011 Programs Completed in 2011						
20	Electricity Retrofit Incentive Program			\$28,887		
21	High Performance New Construction					
	Total province-wide CDM programs	\$86,241	\$45,680	\$222,847	\$0	\$354,768

*Although PUC did not deliver the Residential Demand Response Initiative or the Home Assistance Program in 2011, they used PAB funding in 2011 to prepare for delivery in 2012.

Table 5a: Allocation of PAB funding for Programs Not in Market

#	Initiative	Program Administration Budget (PAB)
Initiatives Not In Market		
22	Midstream Electronics	
23	Midstream Pool Equipment	
24	Demand Service Space Cooling	\$6,546
25	Demand Response 1 (Commercial)	
26	Demand Response 1 (Industrial)	
27	Home Energy Audit Tool	
	TOTAL Province-wide CDM PROGRAMS Not In Market	\$6,546

2.5 Evaluation

2.5.1 EVALUATION FINDINGS

The following details the provincial evaluation findings from the independent third party evaluators of each initiative.

Table 6: Evaluation Findings

#	Initiative	Evaluation findings
Residential Program		
1	Appliance Retirement	<ul style="list-style-type: none"> • Overall participation continues to decline year over year <ul style="list-style-type: none"> ○ 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 <ul style="list-style-type: none"> ○ Measure Breakdown: 66% refrigerators, 30% freezers, 4% Dehumidifiers and window air conditioners • 3% of net resource savings achieved through the Retailer pick-up stream <ul style="list-style-type: none"> ○ Measure Breakdown: 90% refrigerators, 10% freezers • Net-to-Gross ratio for the initiative was 50% <ul style="list-style-type: none"> ○ 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	<ul style="list-style-type: none"> • Overall eligible units exchanged declined by 36% from 2010 (from over 5,700 units in 2010 to over 3,600 units in 2011) <ul style="list-style-type: none"> ○ Measure Breakdown: 75% window air conditioners, 25% dehumidifiers • Dehumidifiers and window air conditioners contributed almost equally to the net energy savings achieved <ul style="list-style-type: none"> ○ 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

#	Initiative	Evaluation findings
		<p>achieved</p> <ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • Total air conditioner and furnace installations increased by 14% (from over 95,800 units in 2010 to over 111,500 units in 2011) <ul style="list-style-type: none"> ○ 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 <ul style="list-style-type: none"> ○ 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 2011) <ul style="list-style-type: none"> ○ 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	<ul style="list-style-type: none"> • Customers redeemed nearly 210,000 coupons, translating to nearly 560,000 products <ul style="list-style-type: none"> ○ 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

#	Initiative	Evaluation findings
		<p>average of 2009 and 2010 evaluation findings</p> <ul style="list-style-type: none"> • Careful attention in the 2012 evaluation will be made for standard CFLs since it is believed that the market has largely been transformed
5	Bi-Annual Retailer Event	<ul style="list-style-type: none"> • Customers redeemed nearly 370,000 coupons, translating to over 870,000 products <ul style="list-style-type: none"> ○ Majority of coupons redeemed were for multi-packs of standard spiral CFLs (49%), followed by multi-packs of specialty CFLs (16%) • Per unit savings estimates and net-to-gross ratios for 2011 are based on a weighted average of 2009 and 2010 evaluation findings <ul style="list-style-type: none"> ○ 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	Residential Demand Response	<ul style="list-style-type: none"> • Approximately 20,000 new devices were installed in 2011 <ul style="list-style-type: none"> ○ 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 across the province <ul style="list-style-type: none"> ○ 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
7	Residential New Construction Initiative	<ul style="list-style-type: none"> • Initiative was not evaluated in 2011 due to limited uptake

#	Initiative	Evaluation findings
		<ul style="list-style-type: none"> Business case assumptions were used to calculate savings
Commercial & Institutional Program		
8	Efficiency: Equipment Replacement	<ul style="list-style-type: none"> Gross verified energy savings were boosted by lighting projects in the prescriptive and custom measure tracks Lighting projects overall were determined to have a realization rate of 112%; 116% when including interactive energy changes <ul style="list-style-type: none"> 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% <ul style="list-style-type: none"> 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 2010 ERIP program where net-to-gross ratios were in the low 60's and low 50's, respectively. Strict eligibility requirements and improvements in the pre-approval process contributed to the improvement in net-to-gross ratios
9	Direct Install Lighting	<ul style="list-style-type: none"> Though overall performance is above expectations, participation continues to

#	Initiative	Evaluation findings
		<p>decline year over year as the initiative reaches maturity</p> <ul style="list-style-type: none"> • 70% of province-wide resource savings persist to 2014 <ul style="list-style-type: none"> ○ 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 <ul style="list-style-type: none"> ○ 2011 evaluation recorded the highest energy realization rate to date at 89.5% ○ 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
10	Existing Building Commissioning Incentive	<ul style="list-style-type: none"> • Initiative was not evaluated in 2011, no completed projects in 2011
11	New Construction and Major Renovation Initiative	<ul style="list-style-type: none"> • 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)
12	Energy Audit	<ul style="list-style-type: none"> • The evaluation is ongoing. The sample size for 2011 was too small to draw reliable conclusions.
13	Small Commercial Demand Response (part of the Residential program schedule)	<ul style="list-style-type: none"> • See residential demand response (#6)

#	Initiative	Evaluation findings
14	Demand Response 3 (part of the Industrial program schedule)	<ul style="list-style-type: none"> • See Demand Response 3 (#18)
Industrial Program		
15	Process & System Upgrades	<ul style="list-style-type: none"> • Initiative was not evaluated in 2011, no completed projects in 2011
16	Energy Manager	<ul style="list-style-type: none"> • Initiative was not evaluated in 2011, no completed projects in 2011
17	Efficiency: Equipment Replacement Incentive (part of the C&I program schedule)	<ul style="list-style-type: none"> • See Efficiency: Equipment Replacement (#8)
18	Demand Response 3	<ul style="list-style-type: none"> • Program performance for Tier 1 customers increased with DR-3 participants providing 75% of contracted MW for both sectors <ul style="list-style-type: none"> ○ Industrial customers outperformed commercial customers by providing 84% and 76% of contracted MW, respectively • Program continues to diversify but still remains heavily concentrated with less than 5% of the contributors accounting for the majority (~60%) of the load reductions. • 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
Low Income Program		
19	Home Assistance Program	<ul style="list-style-type: none"> • Initiative was not evaluated in 2011 due to low uptake • Business Case assumptions were used to calculate savings

#	Initiative	Evaluation findings
Pre-2011 Programs completed in 2011		
20	Electricity Retrofit Incentive Program	<ul style="list-style-type: none"> 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)
21	High Performance New Construction	<ul style="list-style-type: none"> 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%)

2.5.2 EVALUATION RESULTS

The following details the final energy and demand savings verified through the independent third party evaluations of each of these initiatives.

Table 7: Evaluation Results

#	Initiative	Gross Savings			Net Savings		Contribution to Targets	
		NTG	Incremental Peak Demand Savings (kW)	Incremental Energy Savings (kWh)	Incremental Peak Demand Savings (kW)	Incremental Energy Savings (kWh)	Program-to-Date: Net Annual Demand Savings (kW) in 2014	Program-to-Date: 2011-2014 Net Cumulative Energy Savings (kWh)
Consumer Program								
1	Appliance Retirement	50%	35	224,471	17	115,083	17	459,825
2	Appliance Exchange	52%	12	17,621	6	9,081	4	34,360

#	Initiative	NTG	Gross Savings		Net Savings		Contribution to Targets	
			Incremental Peak Demand Savings (kW)	Incremental Energy Savings (kWh)	Incremental Peak Demand Savings (kW)	Incremental Energy Savings (kWh)	Program-to-Date: Annual Demand Savings (kW) in 2014	Net Peak Savings
3	HVAC Incentives	59%	249	508,931	148	302,460	148	1,209,842
4	Conservation Instant Coupon Booklet	114%	9	150,411	10	166,010	10	664,038
5	Bi-Annual Retailer Event	113%	13	233,687	15	255,303	15	1,021,212
6	Residential Demand Response	-						
7	Residential New Construction	-						
Commercial & Institutional Program								
8	Efficiency: Equipment Replacement	75%	171	949,087	128	724,440	128	2,897,760
9	Direct Install Lighting	93%	212	621,297	227	576,898	189	2,190,934
10	Existing Building Commissioning Incentive	-						
11	New Construction and Major Renovation Incentive	-						
12	Energy Audit	-						
13	Commercial Demand Response (part of the Residential program schedule)	-						

#	Initiative	NTG	Gross Savings		Net Savings		Contribution to Targets	
			Incremental Peak Demand Savings (kW)	Incremental Energy Savings (kWh)	Incremental Peak Demand Savings (kW)	Incremental Energy Savings (kWh)	Program-to-Date: Annual Demand Savings (kW) in 2014	Net Peak Savings
14	Demand Response 3 (part of the Industrial program schedule)	-						
Industrial Program								
15	Process & System Upgrades	-						
16	Energy Manager	-						
17	Efficiency: Equipment Replacement Incentive (part of the C&I program schedule)	-						
18	Demand Response 3	-						
Low Income Program								
19	Home Assistance Program	-						
Pre-2011 programs completed in 2011								
20	Electricity Retrofit Incentive Program	52%	30	175,126	16	91,066	16	364,262
21	High Performance New Construction	50%	196	1,007,645	98	503,823	98	2,015,291

Table 8: Summarized program results

Program	Gross Savings		Net Savings		Contribution to Targets	
	Incremental Peak Demand Savings (kW)	Incremental Energy Savings (kWh)	Incremental Peak Demand Savings (kW)	Incremental Energy Savings (kWh)	Program-to-Date: Net Annual Peak Demand Savings (kW) in 2014	Program-to-Date: 2011-2014 Net Cumulative Energy Savings (kWh)
Residential Program Total	318	1,135,121	196	847,937	194	3,389,277
Commercial & Institutional Program Total	383	1,570,383	355	1,301,338	317	5,088,694
Industrial Program	-					
Pre-2011 Programs completed in 2011 Total	226	1,182,772	114	594,888	114	2,379,553
Total OPA contracted province-wide CDM programs	927	3,888,276	665	2,744,164	624	10,857,524

2.6 Additional Comments

PUC is pleased to report substantial progress in 2011 towards the achievement of its CDM targets.

2011 was a “start-up” year for OPA CDM program initiatives across the province. The OPA was not ready for the anticipated January 2011 launch, and PUC had to finalize schedules, develop processes and procure resources before it began marketing the programs in March 2011. Challenges associated with the online application system also hindered participation in programs, and some participants were disappointed that PUC could no longer do applications manually for them. Glitches and delays in the functionality of the online system created additional difficulties.

Despite start-up challenges and the fact that PUC mainly focused on the delivery of Residential along with Commercial and Institutional programs which led to many Industrial program initiatives not being launched in 2011. PUC achieved 35.2% of its cumulative 2011-2014 energy target and 11.2% of its 2014 summer peak demand target. These achievements show the efforts and dedication of the PUC team in supporting all aspects of CDM across its service territory. PUC decided to concentrate its efforts on the Residential and Commercial and Institutional programs as this reflects the customer base in PUC’s service territory.

PUC’s achievements could not have been met without the strong participation and involvement of Sault Ste. Marie residents, contractors, local businesses and service delivery agents. With over 12,000 CDM program participants in the PUC service territory, it is clear that Sault Ste. Marie supports conservation and all of its benefits.

PUC’s achievements also exemplify its dedication to delivering conservation to all residential, commercial, institutional and industrial customers. PUC feels that conservation is an essential part of its core services and can help customers to manage rising energy costs.

PUC is committed to working with the Ontario Power Authority to deliver CDM programs for the remainder of the current CDM 2011-2014 framework and beyond.

3 Combined CDM Reporting Elements

3.1 Progress Towards CDM Targets

The following tables compare actual results in PUC's service territory to the results it had forecasted for 2011 programs in the PUC 2011 CDM Strategy filed November 1 2010. A discussion of the variance between the numbers follows the tables.

Table 9: Net peak demand savings at the end user level (MW)

Implementation Period	Annual (MW)			
	2011	2012	2013	2014
2011 - Verified	0.66	0.66	0.66	0.62
2012				
2013				
2014				
Verified Net Annual Peak Demand Savings in 2014:				0.62
PUC 2014 Annual CDM Capacity Target:				5.58
Verified Portion of Peak Demand Savings Target Achieved (%):				11.19%
PUC Strategy, Milestone submitted for 2011				26%
Variance (MW)	-0.79	-0.79	-0.79	-0.83

Table 10: Net energy savings at the end-user level (GWh)

Implementation Period	Annual (GWh)				Cumulative (GWh)
	2011	2012	2013	2014	2011-2014
2011 - Verified	2.74	2.74	2.74	2.63	10.86
2012					
2013					

Implementation Period	Annual (GWh)				Cumulative (GWh)
	2011	2012	2013	2014	2011-2014
2014					
Verified Net Cumulative Energy Savings 2011-2014:					10.86
PUC 2011-2014 Cumulative CDM Energy Target:					30.83
Verified Portion of Cumulative Energy Target Achieved (%):					35.22%
PUC Strategy, Milestone submitted for 2011					37%
Variance (GWh)	-0.124	-0.124	-0.124	-0.234	-0.596

3.2 CDM Strategy Modifications

The variance between forecasted CDM Strategy numbers and the savings realized by PUC's 2011 CDM programs are due largely to the fact that 2011 was a "start-up" year for OPA CDM Program initiatives across the province. Participation was less than expected by both the province and PUC. Due to the late release of program schedules, programs were not up and running in PUC's service territory until February (or later) and service providers were not able to be selected until well into 2011. The fact that the Industrial program initiatives were not in market in 2011 was also a contributor to the variance between forecasted and actual 2011 results.

The OPA has reported that it expects the OPA CDM programs to hit an average of 91% of the provincial energy target and 78% of the provincial demand target. Even with delays in the delivery of programs in 2011, PUC plans to meet the province's energy savings target. The introduction of outstanding CDM programs in 2012 is expected to address PUCs lower than anticipated demand results.

PUC will continue delivering OPA CDM programs as described in its CDM Strategy. Currently, PUC is in the process of reviewing its delivery strategies and identifying any strategy modifications that it will pursue in 2012 and beyond. These modifications will be based on:

- Lessons learned in delivering programs in 2011
- Findings of the third party program evaluations
- Identifying programs that have had greatest impact in its service territory
- Identifying programs that have had the greatest impact across the province
- Understanding which programs respond best to PUC marketing efforts
- Understanding which programs are best suited to meet the specific needs of its customer base
- Optimizing PAB expenditures to further increase participation in OPA CDM programs

The OPA did not design its CDM programs to hit 100% of energy and demand targets province-wide. However, PUC will remain optimistic that the CDM Strategy modifications that it will pursue will allow PUC to progress towards, achieving its targets.