



Your Partner in Energy Conservation

PETERBOROUGH DISTRIBUTION INC.

Conservation and Demand Management

2011 Annual Report

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Peterborough Distribution Inc. 2011 CDM Annual Report

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Executive Summary

Savings results for 2011 are considerably less than projected in the CDM strategy for Peterborough Distribution Inc. (PDI). It should be noted that our strategy was based on assumptions that stated programs in the Master Agreement would be market ready as anticipated in Q1 of 2011. Understandably OPA was under time constraints and resources were therefore directed to programs where LDC's would potentially gain the largest reduction and target results. The OPA made best efforts to move an initial phase of programs to market, even though major elements had not yet been solidified, and LDC's made best efforts to bring these programs to consumers. Other programs requiring more extensive OPA resources to analyze deeper complexities, required further review and in some areas, significant change in order to bring them to market. The resulting time restrictions, absence or delayed release of schedules and unclear dissemination of detail, as well as complexities of programs or knowledge of what programs would be in market and the timing of their release, challenged PDI along with many other LDC's to compile a holistic and realistic strategy.

PDI had planned to submit a Tier 2 proposal to the Ontario Energy Board (OEB) however, when information was released that a larger utility with resources available to complete an EM&V and TRC for their entire proposal was rejected, it seemed unlikely that any proposal from PDI would be approved.

2011 was a transitional year as many of the programs were still in need of refinement prior to being widely deployed. Some programs, such as New Home Construction, were brought to market and then pulled back due to significant barriers in administrative functionality for the homebuilders. Programs such as Direct Service Space Cooling, which we had planned to use as a springboard to attract new Small Business customers, never did come to market in 2011, and has just recently been shelved to plan for a 2013 Pilot. In addition, the re-branding of previously existing programs proved confusing to some customers and therefore momentum was lost in transition from the 2007-2010 programs. In short, much of the year was spent managing transitional issues.

With the delayed approval of the Master Agreement and subsequent schedules and initiatives, many of the programs were late to market or never materialized in 2011 as anticipated. Even the opportunity to participate in the extension of the previous *peaksaver*® program, was impeded as PDI and seven other LDC's were mired in damage control due the failure of Comverge Thermostats used in the previous program.

Where some LDC's in the province had not participated in the voluntary 2007-2010 conservation programs, PDI participated in all available programs and surpassed OPA targets in most areas. These results were attained in spite of the challenge of stopping and restarting between each program year. PDI feels it is a clear implication that those customers who were early adopters of the conservation initiatives have already fulfilled their conservation needs or requirements from past programs. It proves to be challenging for LDC's who have succeeded in past programs as they are now tasked to reach out to less enthusiastic participants who may not be incented to participate in existing conservation programs.

Due to the success of PDI in past conservation programs, customers have realized energy reduction and cost savings from their kW and kWh reduction, however, it has been detrimental to PDI achieving their targets as planned for 2011. Much more creativity and ingenuity is required by PDI, as a result of past performance, to come up with ways to engage consumers for further energy reductions.

Even with these "Challenges" PDI's 2011 reduction results for peak demand and energy savings place us in the mid range of LDC's for targets achieved in Ontario. In comparison to some LDC's who had not participated in previous conservation programs, we feel our results and standings are neither unsubstantiated nor unexpected. PDI is confident that after making great strides through the initial transitional hurdles, even with additional change management issues still pending, the viable programs now in market and available to consumers will prove to make 2012 a successful year.

In the absence of an internal Key Accounts Manager or dedicated internal resources required to effectively manage and deploy all conservation programs, we have been required to procure and rely on the expertise of channel partners to secure program participants, provide monitoring, evaluate measures, validate applications and track results.

Once the programs were released and delivery commenced, we realized that a single source channel partner may not be the most effective way of ensuring all programs were managed to their greatest potential. PDI engaged in discussions with other program delivery experts specific to programs that were more complex or had a refined focus or participant base. Examples of these programs are High Performance New Construction, Demand Response 3, Embedded Energy Manager and Home Assistance Program. In further investigating shortfalls in these areas of opportunity, PDI found subject matter experts who were already delivering these programs or were capable of delivering these programs and to include cost sharing models with gas utilities and NGO's. We continue to work with original and additional channel partners to best utilize areas of expertise.

It should be noted that due to the infancy of programs in market at the time our initial strategy was developed, the concepts of bridging talent and resources with other utilities or LDC's was not a concept that was fully understood, nor was the framework available on how cost sharing models would actually function. In launching our Home Assistance Program, we were the first LDC to secure a partner also providing a parallel program through Enbridge. The OPA looked to us to coordinate this model for other utilities to benefit from and is something we will work towards in 2013 after launching locally in late 2012.

Also challenging is the time, logistical and physical resource requirement to fulfill the plethora of tasks and information needed to bring a large project from its planning stage to completion phase. PDI may have underestimated the magnitude of bringing Industrial and DR3 participants through required program process. Even with the assistance of the provincial aggregator as our channel partner and PDI's past experience in DR3, the ability to secure participants is limited to the availability of customers with dispatchable load within our distribution area. The success and benefit from both DR3 and Industrial programs, is contingent on large industry availability within our distribution area. With limited capacity of only two customers in the 'Large Use' rate classification, and several other large industrial customers having already completed conservation plans through prior program success, we remain industrious and hopeful in maximizing this potential.

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 to be met by electricity distributors. Accordingly, on November 12, 2010, the OEB amended the distribution license of Peterborough Distribution Inc. (PDI) to require PDI, as a condition of its license, to achieve 38.45 GWh of energy savings and 8.72 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, Peterborough Distribution Inc. submitted its CDM Strategy on November 1, 2010 which provided a high level of description of how PDI intended to achieve its CDM targets. As directed, an addendum to our CDM Strategy was submitted on June 10, 2011.

The Code also requires a distributor to file 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 license, 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 PDI’s service area.

1.2 TOU Pricing

1.2.1 BACKGROUND

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

In accordance with 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. PDI 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 PDI is not able to provide any verified savings related to PDI’s TOU program at this time.

1.2.2 TOU PROGRAM DESCRIPTION

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

Initiative Frequency: Year-Round

Objectives: TOU pricing is designed to incent the shifting of energy usage. Therefore peak demand reductions are expected, and energy conservation benefits may also be realized.

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

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

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

Delivery: OEB set rates; LDC installation and maintenance of the meter; LDC converts customers to TOU billing.

Initiative Activities/Progress:

PDI began transitioning its RPP customers to TOU billing as of May 1, 2012 when we started sending smart meter data to the provincial MDMR. As of December 31st, 2011, 184 RPP customers were on TOU billing. These initial 184 customers participated in a Time of Use/Smart Meter Pilot project we conducted in 2006, to today, through the OEB’s Third Tranche funding. The pilot provided PDI with valuable knowledge on AMI system functionality and the effects of load shifting on TOU consumption.

1.3 PDI's Application with the OEB

At the time of drafting our custom project proposal strategy, details of the OPA province wide initiatives were not yet fully available. As additional information of the Tier One schedules became available, along with clarification of OEB rules, process and requirements for Tier Two applications, we realized that the custom programs we had planned for would be denied under the broad definition of duplication or redundancy to current OPA programs.

As a result of delays in the roll out of OPA's Tier One program schedules, the diversity of programs offered by the OPA and our limited resources; it is unlikely that any of the custom programs in our strategy will be realized. That being said, we look to the OPA to examine the feasibility of expansions to existing programs to incorporate load shifting for further benefit to TOU customers. For example, PDI strongly recommends that the OPA examine the underutilized *peaksaver* system. Already in place, the infrastructure could be used to a much greater extent to benefit load shifting for consumers on a more frequent basis. Rather than limiting control to the currently rare, critical peak events, daily load shifting for Electric Water Heaters and Pool pumps could be greatly beneficial. This would help customers offset their peak demand as well as saving the potential system peak prior to its occurrence.

It should be noted that PDI has the largest concentration of dispatchable load enabled water heaters in Ontario. We therefore have gained much experience in this area, because of our historical practice of Load control prior to OPA sponsored DR program. Customers are well versed on the practice of daily control and have previously reaped the benefits of load shifting. There is a growing expectation that system will be fully utilized in order to assist them in shedding water heater load in to Off Peak times.

Another option for further investigation would be the Thermal Storage Heating (TSH) program outlined in our strategy. In the same area of shifting load, this would allow peak electric heat load to shift to off peak thermal storage heating. This program has proven to be of great benefit to electric heat consumers specifically customer in social housing or low income consumers previously on baseboard electric heat. Unfortunately, this program does not meet the requirements for summer peaking load reduction or benefit PDI towards our demand target goals. PDI is apprehensive with the requirements for applying to bring custom programs to market due to the time, scrutiny and resource requirement with no certainty for benefit. In addition, the resulting EM&V, may make the project TRC negative even though the program could have great load shifting and social merit.

Additionally, a specific program suggested in our strategy (street lighting retrofit), is now included under the existing OPA 'Efficiency: Equipment Replacement Incentive Initiative' (ERII). Now that vast majority of programs are in market, PDI will have a better idea of how to revisit opportunities for custom programs or if they are a necessary or beneficial addition to our business plan.

2 OPA-Contracted Province-Wide CDM Programs

2.1 Introduction

Effective February 3, 2011, PDI entered into an agreement with the OPA to deliver CDM programs extending from January 1, 2011 to December 31, 2014 as listed below. In addition, results will be reported from projects started pre 2011 which were completed in 2011:

Initiative	Schedule	Date schedule 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
Retailer Co-op		Jan 26, 2011	All residential rate classes
Residential Demand Response	Schedule B-3	Aug 22, 2011	All general service

			<i>classes</i>
New Construction Program	Schedule B-2	<i>Jan 26, 2011</i>	<i>All residential rate classes</i>
Commercial & Institutional Program			
Efficiency: Equipment Replacement	Schedule C-2	<i>Jan 26, 2011</i>	<i>All general service classes</i>
Direct Install Lighting	Schedule C-3	<i>Jan 26, 2011</i>	<i>General Service < 50 kW</i>
Existing Building Commissioning Incentive	Schedule C-6	<i>Feb, 2011</i>	<i>All general service classes</i>
New Construction and Major Renovation Initiative	Schedule C-4	<i>Feb, 2011</i>	<i>All general service classes</i>
Energy Audit	Schedule C-1	<i>Jan 26, 2011</i>	<i>All general service classes</i>
Commercial Demand Response (part of the Residential program schedule)	Schedule B-3	<i>Jan 26, 2011</i>	<i>All general service classes</i>
Demand Response 3 (part of the Industrial program schedule)	Schedule D-6	<i>May 31, 2011</i>	<i>General Service 50 kW & above</i>
Industrial Program			

Process & System Upgrades	Schedule D-1	May 31, 2011	General Service 50 kW & above
Monitoring & Targeting	Schedule D-2	May 31, 2011	General Service 50 kW & above
Energy Manager	Schedule D-3	May 31, 2011	General Service 50 kW & above
Efficiency: Equipment Replacement Incentive (part of the C&I program schedule)	Schedule C-2	May 31, 2011	General Service 50 kW & above
Demand Response 3	Schedule D-6	May 31, 2011	General Service 50 kW & above
Home Assistance Program			
Home Assistance Program	Schedule E-1	May 9, 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.

Initiative Not in Market in 2011	Objective	Status
Residential Program		
Midstream Electronics	The objective of this initiative is 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 is to encourage pool installers to sell and install efficient pool pump equipment in residential in-ground pools.	Not launched to market
First Nations Program	First Nations programs are delivered by OPA and results are attributed to LDCs for reporting.	Not launched to market
Home Energy Audit Tool	This is 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 is to offer free servicing of air conditioning systems and refrigeration units for the purpose of achieving energy savings and	Not launched to market in 2011. The OPA has no plans to launch this initiative 2012

	demand reduction.	
Demand Response 1	This initiative allows distribution customers to voluntarily reduce electricity demand during certain periods of the year pursuant to the DR 1 contract. The initiative provides DR payment for service for the actual electricity reduction provided during a demand response event.	No customer uptake for this initiative
Industrial Program		
Demand Response 1	As above	No customer uptake for this initiative

The Master CDM Program Agreement includes a program change management provisions in Article 3. Collaboration between the OPA and the Local Distribution Companies (LDCs) commenced in 2011 as the change management process was implemented to enhance the saveONenergy program suite. The change management process allows for modifications to the Master Service Agreement and initiative Schedules. The program enhancements 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

2.2.1.1 APPLIANCE RETIREMENT INITIATIVE (Exhibit D)

Target Customer Type(s): Residential Customers

Initiative Frequency: Year round

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

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

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

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

Additional detail is available:

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

Initiative Activities/Progress: 270 appliances were collected and decommissioned in 2011 resulting in net incremental peak demand savings of 15 kW and energy savings of 106,597 kWh

In Market Date: June 2011

Lessons Learned:

- The Appliance Retirement Initiative (previously The Great Refrigerator Round-Up) has been offered by LDCs since 2007. This initiative is approaching market saturation. In addition, our area suffered 2 catastrophic floods in the years prior to the launch of the original Refrigerator Round. Each of these floods resulted in several hundred older basement freezers and second fridges being disposed of. We were astounded by the resulting uptake post flood, but fear older appliances available for participation are close to nonexistent.
- While the OPA and the LDCs 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 although we continue to co-promote with bill inserts, customer newsletters and our website.

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 is to remove and permanently decommission older, inefficient window air conditioners and portable dehumidifiers that are in Ontario.

Description: This Initiative involves appliance exchange events. Exchange events are held at local retail locations and customers are encouraged to bring in their old room air conditioners (AC) and dehumidifiers in exchange for coupons/discounts towards the purchase of new energy efficient equipment.

Targeted End Uses: Window air conditioners and portable dehumidifiers

Delivery: OPA contracts with participating retailers for collection of eligible units.

Additional detail is available:

- Schedule B-1, Exhibit
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>

Initiative Activities/Progress: 39 appliances were collected and decommissioned resulting in Net incremental peak demand savings of 4 kW and energy savings of 4,184 kWh.

In Market Date: June 2011

Lessons Learned:

- The spring event had the participation of 3 retailers with 300 – 400 locations across the province. However, the Fall 2011 event had no retailer participation, therefore savings budgeted by the LDCs did not materialize.
- As with the Appliance Retirement, our history with floods may also affect the results of this initiative.
- Evaluation, Measurement, and Verification (EMV) results indicated that the value of savings for retired room AC has dropped.
- The initiative may be achieving market saturation.
- The type of unit turned in is 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 objective of this Initiative is to encourage the replacement of existing heating systems with high efficiency furnaces equipped with Electronically Commutated Motors (ECM), and to replace existing central air conditioners with ENERGY STAR qualified systems and products.

Description: This is an energy efficiency Initiative that provides rebates for the replacement of old heating or cooling systems with high efficiency furnaces (equipped with ECM) and Energy Star qualified central air conditioners by approved Heating, Refrigeration, and Air Conditioning Institute (HRAI) qualified contractors.

Targeted End Uses: Central air conditioners and furnaces

Delivery: OPA contracts centrally for delivery of the program and LDCs are encouraged to convince local contractors to participate in the Initiative.

Additional detail is available:

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

Initiative Activities/Progress: 627 furnaces or central air conditioners were replaced with energy efficient models resulting in net incremental peak demand savings of 192 kW and energy savings of 368,523 kWh

In Market Date: June 2011

Lessons Learned:

- Channel engagement is a highly effective method of connecting with customers; however channel partners require timeliness of the Rebate process to maintain a positive relationship between consumers, contractors, the OPA, and the participating LDC.
- We were pleasantly surprised by the participation of this initiative. We will expand on the potential of this program with increased fervor.
- There appears to be spillover from non-HRAI contractors who are ineligible for this initiative. There are cases where smaller independent contractors are offering their own incentives (by discounting their installations to match value of the OPA incentive) to make the sale. As this occurs outside of the initiative, these installations not being attributed to any LDC.

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 is to encourage households to purchase energy efficient products by offering discounts.

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

Targeted End Uses: ENERGY STAR® qualified Standard Compact Fluorescent Lights (CFLs), ENERGY STAR® qualified Light Fixtures lighting control products, weather-stripping, hot water pipe wrap, electric water heater blanket, heavy duty plug-in Timers, Advanced power bars, clothesline, baseboard programmable thermostats

Delivery: OPA contracts centrally for the distribution of the coupon booklets across Ontario. LDC distributes coupons at local events. The OPA enters into agreements with retailers to honor the coupons.

Additional detail is available:

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

Initiative Activities/Progress: 3,544 energy efficient products were purchased and coupons redeemed resulting in net incremental peak demand savings of 8 kW and energy savings of 132,571 kWh.

Date: June 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 LDC abilities to react and respond to initiative performance or changes in consumer behavior.

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 is to provide instant point of purchase discounts to individuals at participating retailers for a variety of energy efficient products.

Description: Twice a year (Spring and Fall), participating retailers host month-long rebate events. During the months of April and October, customers are encouraged to visit participating retailers where they can find coupons redeemable for instant rebates towards a variety of low cost, easy to install energy efficient measures.

Targeted End Uses: Same as the conservation instant coupon booklet initiative

Delivery: The OPA enters into arrangements with participating retailers to promote the discounted products, and to post and honor related coupons. LDCs also refer retailers to the OPA.

Additional detail is available:

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

Initiative Activities/Progress: Contribution in our Distribution area accounted for 6,208 participants and net incremental energy savings of 209,601 kWh and 12 kW of peak demand savings

In Market Date: Not in Market in 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 review of incentive pricing for the coupon initiatives, must be a regular activity to ensure continued consumer interest.

- A review conducted by the Residential Working Group in 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.
- Timelines were not conducive to participation in the past and communication to local franchisee retailers was lacking. This has been improved and we anticipate increased involvement and return for future events.

2.2.1.6 RETAILER CO-OP

Target Customer Type(s): Residential Customers

Initiative Frequency: Year Round

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

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

Targeted End Uses:

Delivery: Retailers apply to the OPA for co-op funding to run special promotions that promote energy efficiency to customers in their stores. LDCs can refer retailers to the OPA. The OPA provides each LDC with a list of retailers who have qualified for Co-Op Funding as well as details of the proposed special events.

Initiative Activities/Progress: We did not participate in 2011 nor are we aware of any retailers who applied or qualified from the OPA

Lessons Learned:

- The availability of retailer and/or LDC staff with product knowledge and the ability to conduct demonstration in store during the events would be an asset. This could be a valuable role for LDCs.

2.2.1.7 NEW CONSTRUCTION PROGRAM (Schedule B-2)

Target Customer Type(s): Residential Customers

Initiative Frequency: Year round

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

Description: This is an energy efficiency Initiative that provides incentives to homebuilders for constructing new homes that are efficient, smart, and integrated (applicable to new single family dwellings). Incentives are provided in two key categories as follows:

- Incentives for homebuilders who install electricity efficiency measures as determined by a prescriptive list or via a custom option.
- Incentives for homebuilders who meet or exceed aggressive efficiency standards using the EnerGuide performance rating system.

Targeted End Uses: all off switch, ECM motors, ENERGY STAR qualified central a/c, lighting control products, lighting fixtures, EnerGuide 83 whole home, and EnerGuide 85 whole homes

Delivery: Local engagement of builders will be the responsibility of the LDC and will be supported by OPA air coverage driving builders to their LDC for additional information.

Additional detail is available:

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

Initiative Activities/Progress: We had no participation in 2011. Although communication and marketing was attempted, uptake was nonexistent due to contractor administration barriers. We will attempt to re-launch in 2013 after change management improvements are completed.

In Market Date: September 2011 – it should be noted that the in market date by OPA is when schedule was released – however it soon became evident that original released schedule was unworkable with much detail missing and need of refinement. In reality, it was only feasible to attempt to enter into market until fall of 2012.

Lessons Learned:

- There were limited (7) participants in the program. Because the online application system is a one to one relationship, this program was only practical for custom builders who were building one home at a time. Tract builders who might build 250 homes in a single phase would have to submit 250 applications to qualify for incentives. This administrative challenge has deterred all tract builders from participating in the program to date.
- Administrative requirements must align with perceived stakeholder payback. Changes are being processed through change management for 2012.

2.2.1.8 RESIDENTIAL DEMAND RESPONSE PROGRAM (Schedule B-3)

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

Initiative Frequency: Year round

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

Description: In *peaksaver* PLUS™ participants are eligible to receive a free programmable thermostat or switch, including installation. Participants also receive access to price and real-time consumption information on an In Home Display (IHD). LDCs were given the choice to continue to offer the standard load control program (programmable thermostat or switch with a \$25 bill credit) for the first 8 months of 2011 (referred to as *peaksaver*® Extension). After August 2011, the Extension ended and the program (including marketing) ceased until new IHD product were available.

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

Delivery: LDC's and Channel Partners to recruit customers, procure technology and marketing

Additional detail is available:

- Schedule B-1, Exhibit C
http://www.powerauthority.on.ca/sites/default/files/new_files/industry_stakeholders/current_electricity_contracts/pdfs/SCHED_2_011_ResDR_B_3_110727%28MJB%29v15_redacted.pdf and
- SaveONenergy website <https://saveonenergy.ca/Consumer.aspx>

Initiative Activities/Progress:

In the fall of 2010 PDI was made aware of the recall of White Rodgers/Comverge thermostats. Reports resulting from installations in the United States confirmed a potential fire hazard caused by battery leaks within thermostats. This prompted Health Canada to issue a safety bulletin recommending the backup batteries be removed to eliminate any potential hazard. The affected LDC's were advised by the manufacturer that the device would continue to function normally without batteries, the only effect would be that participants would have to manually reset thermostat programming in the event of a power interruption. PDI notified all of the almost 1,000 affected customers and instructed them to remove the batteries, as recommended by Health Canada, until a permanent resolution could be found. Contrary to information provided by the manufacturer, the White Rodgers/Comverge thermostats began to fail after the batteries were removed. PDI spent the balance of 2010 and Q1 of 2011 managing this crisis as customers found themselves with no heat in the middle of winter. In

absence of an available solution, and to resolve the potential risk of damage to customers' homes while protecting the **peaksaver** brand, we replaced the faulty thermostats at our own cost.

PDI did not participate in the **peaksaver** Extension as the optics were not favorable in continuing to offer a **peaksaver** program to new customers, with no financially or logistically viable solution available for replacing the existing Comverge devices. Entering into the **peaksaver** Extension would further inflame an already volatile situation.

As a technology to replace Comverge thermostats and to continue **peaksaver** had not been secured, the vast part of 2011 was spent in damage control with Comverge customers due to failing stats, and replacements with non **peaksaver** devices. During this time, we were actively investigating and pursuing new technology options for **peaksaver** PLUS. A large part of this process was in negotiating with the OPA to find a resolution for Comverge thermostat replacements. PDI remained out of market until a resolution to the Comverge issue was agreed upon, and the OPA solidified details and requirements for the **peaksaver** PLUS program.

PDI's plan and focus was to follow the recommendations and vision of the Residential Demand Response Working Group by deploying a full two-way demand response technology, thereby future proofing systems deployed through **peaksaver** PLUS. Energate technologies were piloted by the OPA and PDI in our distribution area the summer of 2010. The pilot program, which included the deployment of Energy Displays, was successful and well received by participants. It should be noted that current Energate technologies replicate the direct model proposed by the residential Demand Response (DR) working group that was so well received by consumers, proving, and the concept that a 2-Way DR model is feasible.

PDI is the first LDC to launch a full 2-way DR system utilizing broadband thus enabling a true Home Area Network (HAN). The remainder of 2011 was spent in negotiation with the OPA to secure the services and technologies of Energate Inc. This did occur on December 23, 2011. We continue to expand on this concept with the mass deployment of energy displays to our 9000+ Hot Water **peaksaver** Plus™ customers.

We are pleased to advise that even with the negative experience consumers faced with the Comverge recall, the vast majority of these prior **peaksaver** participants will have re-enrolled to continue participation in 2012 and into the future. In a separate issue, PDI also engaged the OPA to negotiate the reaffirmation of **peaksaver** contracts for 9,000 + participants previously enrolled through our Water Heater load control program. Another lengthy process, however once again we are pleased to report that the vast majority of these customers have re-enrolled for 2012. The resulting demand reduction from our 2011 efforts will be recognized in 2012.

We anticipated the Direct Service Space Cooling program to be advantageous for enrolling small business to **peaksaver** PLUS as the two programs could be co-promoted. This program is unfortunately not in market and will not be in the foreseeable future.

In Market Date: 2012

Lessons Learned:

- The schedule for peaksaver Plus was posted in August 2011, but this did not provide adequate time for product procurement for 2011, and part of 2012. Additionally PDI and Energate were still negotiating pricing and delivery methods for the Energate product. PDI chose not to deploy a secondary technology (i.e. Honeywell), to avoid customer confusion.
- Introduction of new technology requires incentives for the development of such technology. Appropriate lead times for LDC analysis and assessment, product procurement, and testing and integration into the Smart Meter environment are also required. Making seemingly minor changes to provincial technical specifications can create significant issues when all LDCs attempt to implement the solution in their individual environments.
- Where a provincial solution is not available to all participants, attention to addressing specific LDC concerns is needed.

2.2.2 COMMERCIAL AND INSTITUTIONAL PROGRAM

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 is to offer incentives to non-residential distribution customers to achieve reductions in electricity demand and consumption by upgrading to more energy efficient equipment for lighting, space cooling, ventilation and other measures.

Description: The Equipment Replacement Incentive Initiative (ERII) offers financial incentives to customers for the upgrade of existing equipment to energy efficient equipment. Upgrade projects can be classified into either: 1) prescriptive projects where prescribed measures replace associated required base case equipment; 2) engineered projects where energy and demand savings and incentives are calculated for associated measures; or 3) custom projects for other energy efficiency upgrades.

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

Delivery: LDC delivered with assistance from Channel Partners

Additional detail is available:

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

Initiative Activities/Progress: 17 projects were completed for energy efficient retrofits resulting in net incremental peak demand savings of 198 kW and energy savings of 1,237,447 kWh.

In Market Date: June 2011

Although we entered the market in a timely manner with ERII, the loss of momentum resulting from gap between end of 2010 and start of 2011 program resulted in slow customer uptake during summer months. It wasn't until fall of 2011, when customers had time to plan after new marketing campaigns, that momentum started to take hold. Customers held off while awaiting new program information and by the time it was released and the waiting period to communicate and educate consumers, 2011 was almost over. PDI's numbers will be increased for 2012 as momentum and market information released to public has been on the steady incline. The fact that customers have a few years to plan and complete their projects is very helpful.

Lessons Learned:

- ERII (previously Equipment Replacement Incentive Program – ERIP) has been offered by LDCs for many years. It is a high performing, cost-effective program, and there were many pre-2011 projects 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 Master Agreement. The lack of having these automated processes, exasperated by a greater than expected volume of pre-2011 projects completing in 2011, caused considerable payment delays. Based on the lessons learned in the 2011 process, the centralized process review used for 2012 project payment has been streamlined.
- In March 2011, the revised iCON system was launched by the OPA. This is the major online application system implemented to aid the 2011-2014 ERII application process. With system applications of this size and functionality, it was expected that there would be various issues identified at the time of the release, and on-going, to prove that the system was "ready for market." Unfortunately, the resolution of these issues, with the corresponding time lags and workarounds, was seen to be a barrier to some customer participation in the 2011 program year. In addition, there were also on-going issues and limitations with the back-end CRM system that affected LDCs ability to effectively review and approve applications. Some LDCs (and their third party service providers) have developed parallel systems to monitor their applications.

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 is to offer a free installation of eligible lighting and water heating measures of up to \$1,000 to eligible owners and tenants of commercial, institutional and agricultural facilities and multi-family buildings, for the purpose of achieving electricity savings and peak demand savings.

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

Target End Uses: Lighting and water heating measures

Delivery: Participants can enroll directly with the LDC, or would be contacted by the LDC/LDC-designated representative.

Additional detail is available:

- Schedule C-3
<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>

Initiative Activities/Progress: 41 projects were completed for energy efficient lighting retrofits resulting in net incremental peak demand savings of 41 kW and energy savings of 91,318 kWh in 2011.

In Market Date: June 2011

We had participated successfully in the previous Power Savings Blitz for 2008, 2009 and 2010 having accounted for approximately 20% of our small businesses customer base. It is suggested that saturation levels are 40% but PDI will find creative methods to attract the remaining 20%. Due to negative environment with door to door energy and water heater marketers, many customers are leery of the program as they believe there must be a “Catch”. The proposed increase from \$1,000 to \$1,500 may assist in securing additional participation.

Lessons Learned:

- The Direct Installed Lighting Initiative is a continuation of the Power Saving Blitz Initiative offered by LDCs from 2008-2010. Successful execution of the previous rendition of this Initiative has resulted in diminished potential for the 2011-2014 Initiative in some LDC territories.
- The inclusion of a standard incentive for additional measures increased project size and drove higher energy and demand savings results.
- The cost of materials has experienced price volatility, reducing the margins of the electrical contractors and has led to a reduction in vendor channel participation in some regions.
- Due to backlogs in the payment system, participant incentive payment from the OPA to the LDC, and therefore to the customer, was commonly delayed.
- To address these issues, the LDCs have been working with the OPA through Change Management to address:
 - extending the target initiative population to include small agricultural customers;
 - increasing the incentive envelope of \$1,000 to \$1,500 to ensure ongoing marketability of the program; and
 - reviewing the eligible measure price list to support contractor participation.
- We wonder of the change in name had some bearing on the loss of momentum when offering the program to consumers in 2011. Customers had become familiar with the previous ‘Power Savings Blitz’ and word in the business community was getting around with realization that the program had validity and dispelled the ‘too good to be true’ perception.

- We then went to market under new name 'Direct Install' causing customer confusion and wariness.

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

Description: This Initiative offers Participants incentives for the following:

- scoping study phase
- investigation phase
- implementation phase
- hand off/completion phase

Targeted End Uses: Chilled water systems for space cooling

Delivery: LDC delivered – with Channel Partnership

Additional detail is available:

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

Initiative Activities/Progress: There was no customer uptake for this initiative although PDI did attempt a direct market campaign to our Industrial customers.

In Market Date: June 2011

Lessons Learned:

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

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

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

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

Delivery: LDC delivers to customers and design decision makers with Channel Partner assistance. Channel Partner arrangement has been realigned for 2012

Additional detail is available:

- 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>

Initiative Activities/Progress: We had no participation in this initiative for 2011 although PDI did attempt a direct market campaign to our Industrial customers.

In Market Date: 2012

PDI has contracted with Enbridge as of April of 2012 to manage this program for us. We anticipate benefiting from their experience, resources and already established lead and process strategy and standards.

Lessons Learned:

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

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

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

Targeted End Uses: Various

Delivery: LDC delivered

Additional detail is available:

- Schedule C-1
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>

Initiative Activities/Progress: We had no participation in this initiative for 2011 although PDI did attempt a direct market campaign to our Industrial customers.

Lessons Learned:

- Customer uptake in the beginning of 2011 was slow, and increased later in the year. It takes time for some of these complex concepts to gain traction with this consumer base. Hence, no savings were realized in 2011, but projects are expected for 2012.

- Customers expect a greater connection with other CDM Initiatives as a result of completing the Energy Audit. The Initiative should be reviewed under Change Management for the means to readily incent Participants with Audits in hand to implement other electricity savings Initiatives.

2.2.3 INDUSTRIAL PROGRAM

2.2.3.1 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 costs
- c) A one year payback

Targeted End Uses: Process and systems

Delivery: LDC delivered

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 and
- SaveONEnergy website <https://saveonenergy.ca/Business.aspx>

Initiative Activities/Progress: We had no participation in this initiative for 2011 although PDI did attempt a direct market campaign to our large Industrial customers but have limited available customers within our distribution area that would meet the criteria for this initiative.

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.

2.2.3.2 MONITORING & TARGETING INITIATIVE (Schedule D-2)

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

Initiative Frequency: Year round

Objective: This Initiative offers access to funding for the installation of Monitoring and Targeting (M&T) systems in order to deliver a minimum savings target at the end of 24 months and sustain for the term of the M&T Agreement.

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

Targeted End Uses: Monitoring existing consumption to set realistic and accurate targets.

Delivery: LDC delivered

Additional detail is available:

- Schedule D-2
http://www.powerauthority.on.ca/sites/default/files/new_files/industry_stakeholders/current_electricity_contracts/pdfs/Schedule%20D-2%20Monitoring%20and%20Targeting%20Initiative.pdf and
- SaveONenergy website <https://saveonenergy.ca/Business.aspx>

Initiative Activities/Progress: We had no participation in this initiative for 2011 although PDI did attempt a direct market campaign to our Industrial customers. This program will be better utilized in 2012 with the assistance of an Embedded Energy Manager.

Lessons Learned:

- The M&T initiative was originally targeted at larger customers with the capacity to review the M&T data. This review requires the customer facility to employ an Energy Manager, or a person with equivalent qualifications, which has been a barrier for some

customers. Through the change management process in 2012, changes are being made to both the M&T schedule and ERII to allow smaller facilities to employ M&T systems.

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: Specialized and focused energy management

Delivery: LDC delivered. Support of a shared LDC resource is planned for 2012

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: PDI did not have a plant with potential reduction targets needed to meet the qualification for funding. We found the timelines provided by the OPA to submit applications were not sufficient to allow for the process involved in coordinating a shared resource. We will share resources with Cambridge North Dumfries Hydro to secure an EEM in 2012.

In Market Date: 2012

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 KEY ACCOUNT MANAGER (KAM) (Schedule D-4)

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

Initiative Frequency: Year round

Objective: This initiative offers LDCs the opportunity to access funding for the employment of a KAM in order to support them in fulfilling their obligations related to the PSUI. The KAM is considered to be a key element in assisting the consumer in overcoming traditional barriers related to energy management and help them achieve savings since the KAM can build relationships and become a significant resource of knowledge to the customer.

Description: This Initiative provides the LDC the opportunity to access funding to engage an on-site, full time or part time Key Account Manager. This funding requires a minimum of five Distribution Consumers each having at least 5 MW of Annual Peak Demand.

Targeted End Uses: Overall Energy Management

Delivery: PDI does not qualify for participation in this initiative

Additional detail is available:

- Scheduled-4
http://www.powerauthority.on.ca/sites/default/files/new_files/industry_stakeholders/projects_programs/pdfs/PSUI%20Initiative%20Schedule%20D-4.Key%20Account%20Manager.20110322.pdf

Initiative Activities/Progress: PDI did not have the required number of 5 MW Consumers to meet the qualification for funding even a shared resource.

In Market Date: Not in Market

Lessons Learned:

- Customers appreciate dealing with a single contact to interface with an LDC, a resource that has both the technical and business background who can communicate easily with the customer and the LDC will be a benefit for LDC's who have enough large consumers to qualify for this initiative.

2.2.3.5 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: Load Control for Demand Reduction

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>

Initiative Activities/Progress: We secured the services of Rodan, the provincial aggregator, to find potential DR3 participants and to benefit from their expertise. Procurement of participants for this initiative is a lengthy and complex. Additionally, there are limited customers that qualify for DR3 due to limited dispatchable load or the flexibility to alter production times. Initial contact was made with participants in 2011 however finalization of DR3 contracts will not be completed until 2012.

In Market Date: June 2011

Lessons Learned:

- Customer detail 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.
- The qualification requirement for a minimum 50 kW is not a feasible starting point of dispatchable load to allow financial incentive to potential participants. The infrastructure required for metering to measure and monitoring load reductions, is not a viable financial model for smaller customers. Additional, the OPA's requirement that dispatchable load from generators must be fueled by natural gas is an impediment as the majority of these installations are diesel fueled.

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

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: Based on results of audit.

Delivery: LDC delivered with assistance from Channel Partner

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: This initiative was not market ready in 2011. PDI was one of the first LDC's to bring this program to market and the only to combine resources with the existing low income gas program.

In Market Date: 2012

Lessons Learned:

- Difficulty identifying eligible customers.
- This Initiative Schedule was finalized later (May 2011) than the rest of the OPA Initiatives and in 2011 we were one of only 2 LDCs ready for market and commenced accumulation of eligible participants while awaiting finalization of program detail.
- 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.

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: The objective of this extension is to allow adequate time to complete and submit projects that started in 2010 under the ERIP program. The Goal is to achieve reductions in electricity demand and consumption by upgrading to more energy efficient equipment for lighting, space cooling, ventilation and other measures.

Description: A predecessor of the Equipment Replacement Incentive Initiative (ERII), financial incentives are offered to customers for the upgrade of existing equipment to energy efficient equipment.

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

Delivery: LDC delivered with Channel Partner assistance

Initiative Activities/Progress: We completed 11 projects in 2011 to wrap up the previous program. This resulted in additional net incremental peak demand savings of 67 kW and energy savings of 321,610 kWh

2.2.5.2 HIGH PERFORMANCE NEW CONSTRUCTION

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

Initiative Frequency: Year round

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

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

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

Delivery: LDC in participation with Channel Partner

Initiative Activities/Progress: As a result of our partnership with Enbridge, we were able to benefit from one completed project in 2011 resulting in net incremental peak demand savings of 21 kW and 105,956 kWh in energy savings

2.3 Participation

Due to the limited time, resources and understanding of the 2011-2014 CDM Program schedules and market potential, we used the OPA provincial model to extrapolate estimates for each initiative forecast. Much time and many specialized resources were used to come up with an accurate estimate at the provincial level and we felt this would provide the most accurate methodology to forecast our own results. We maintain this allocation methodology in our plans for 2012-2014.

The following resulting participation is not necessarily in line with our predictions, however as discussed throughout this report, our 2012 results will provide a much better indication of the true success towards our target goals.

Table 1: Participation

#	Initiative	Activity Unit	Uptake/ Participation Units
Consumer Program			
1	Appliance Retirement	Appliances	270
2	Appliance Exchange	Appliances	39
3	HVAC Incentives	Equipment	627
4	Conservation Instant Coupon Booklet	Coupons	3,544
5	Bi-Annual Retailer Event	Coupons	6,208
6	Retailer Co-op	Items	0

7	Residential Demand Response	Devices	14
8	New Construction Program	Houses	0
Business Program			
9	Efficiency: Equipment Replacement	Projects	15
10	Direct Installed Lighting	Projects	41
11	Existing Building Commissioning Incentive	Buildings	0
12	New Construction and Major Renovation Incentive	Buildings	0
13	Energy Audit	Audits	0
14	Commercial Demand Response (part of the Residential program schedule)	Devices	0
15	Demand Response 3 (part of the Industrial program schedule)	Facilities	0
Industrial Program			
16	Process & System Upgrades	Projects	0
17	Monitoring & Targeting	Projects	0

18	Energy Manager	Managers	0
19	Efficiency: Equipment Replacement Incentive (part of the C&I program schedule)	Projects	2
20	Demand Response 3	Facilities	0
Home Assistance Program			
21	Home Assistance Program	Units	0
Pre 2011 Programs Completed in 2011			
22	Electricity Retrofit Incentive Program	Projects	11
23	High Performance New Construction	Projects	1

2.4 Spending

Many programs didn't come to market as initially planned, and the success in attaining participation in all areas was not realized due to delays by the OPA in bringing multiple programs to market. The funding spent was based on the anticipated release of all programs to market in 2011. Many of these programs are now in market and therefore spending in these areas should be considered proactive marketing and in positioning ourselves and laying the groundwork required in preparation and anticipation of future benefit.

Table 2: Spending

#	Initiative	Program Administration Budget (PAB)	Participant Based Funding (PBF)	Participant Incentives (PI)	Capability Building Funding (CBF)	TOTAL
Consumer Program						
1	Appliance Retirement	1,308.74*				
2	Appliance Exchange	1,308.74*				
3	HVAC Incentives	1,308.74*				
4	Conservation Instant Coupon Booklet	1,308.74*				
5	Bi-Annual Retailer Event	1,308.74*				
6	Retailer Co-op					
7	Residential Demand Response	18,567.84				
8	New Construction Program	17,617.27				
Business Program						
9	Efficiency: Equipment Replacement	55,704.93				
10	Direct Installed Lighting	32,776.37				

11	Existing Building Commissioning Incentive	22,282.92				
12	New Construction and Major Renovation Initiative	20,873.33				
13	Energy Audit	16,689.39				
14	Commercial Demand Response (part of the Residential program schedule)	Included in Residential Demand Response				
15	Demand Response 3 (part of the Industrial program schedule)	Included in Industrial Program Demand Response				
Industrial Program						
16	Process & System Upgrades					
	a) preliminary study	686.47*				
	b) engineering study	686.47*				
	c) program incentive	686.47*				
17	Monitoring & Targeting	686.47*				
18	Energy Manager	686.47*				

19	Efficiency: Equipment Replacement Incentive (part of the C&I program schedule)	Included in C&I Program				
20	Demand Response 3	2,098.32				
Home Assistance Program						
21	Home Assistance Program	3,988.33				
Pre 2011 Programs Completed in 2011						
22	Electricity Retrofit Incentive Program					
23	High Performance New Construction					
TOTAL Province-wide CDM PROGRAMS		204,923.80				

*Many of the programs, although not in market, did require interpretation, discussion, management and planning. As this was done at the program level, associated costs were spread equally to the initiatives within each program and include OPA programs not yet in market. (Midstream Electronics, Midstream Pool Equipment, Demand Service Space Cooling, Demand Response 1, Demand Response 2)

2.5 Evaluation

2.5.1 EVALUATION FINDINGS

Table 3: Evaluation Findings

#	Initiative	Evaluation Findings
Consumer Program		
1	Appliance Retirement	<ul style="list-style-type: none"> * 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	<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) * Measure Breakdown: 75% window air conditioners, 25% dehumidifiers * Dehumidifiers and window air conditioners contributed almost equally to the net energy savings achieved * 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)

		<ul style="list-style-type: none"> * 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 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 <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%) 	
5	Bi-Annual Retailer Event	<ul style="list-style-type: none"> * Per unit savings estimates and net-to-gross ratios for 2011 are based on a 	

		<p>weighted average of 2009 and 2010 evaluation findings</p> <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	Retailer Co-op	<ul style="list-style-type: none"> * 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	<ul style="list-style-type: none"> * 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 across the province * 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	New Construction Initiative	<ul style="list-style-type: none"> * Initiative was not evaluated in 2011 due to limited uptake * Business case assumptions were used to calculate savings 	
Business Program			
9	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 * 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 	

		<ul style="list-style-type: none"> * 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 	
10	Direct Installed Lighting	<ul style="list-style-type: none"> * 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 <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 	
11	Existing Building Commissioning Incentive	<ul style="list-style-type: none"> * Initiative was not evaluated in 2011, no completed projects in 2011 	
12	New Construction and Major	<ul style="list-style-type: none"> * Initiative was not evaluated in 2011 due to low uptake 	

	Renovation Initiative	* 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	

		<p>participants providing 75% of contracted MW for both sectors</p> <ul style="list-style-type: none"> * 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 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
Home Assistance Program		
21	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
Pre-2011 Programs completed in 2011		
22	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)
23	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

Table 4: Evaluation Results

#	Initiative	Net To Gross Ratio		Gross Savings		Net Savings		Contribution to Targets	
		Peak Demand Savings	Energy Savings	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)
Consumer Program									
1	Appliance Retirement	49%	50%	33	223,654	15	106,597	15	426,286
2	Appliance Exchange	52%	52%	7	8,118	4	4,184	1	14,281
3	HVAC Incentives	60%	60%	321	618,205	192	368,523	192	1,474,092
4	Conservation Instant Coupon Booklet	114%	111%	7	120,317	8	132,571	8	530,285
5	Bi-Annual Retailer Event	113%	110%	11	191,855	12	209,601	12	838,405
6	Retailer Co-op	-	-	0	0	0	0	0	0
7	Residential Demand Response	-	-	8	0	8	0	0	0

8	New Construction Program	-	-	0	0	0	0	0	0
Business Program									
9	Efficiency: Equipment Replacement	74%	75%	90	550,798	66	413,045	66	1,652,180
10	Direct Installed Lighting	93%	93%	39	98,346	41	91,318	30	337,617
11	Existing Building Commissioning Incentive	-	-	0	0	0	0	0	0
12	New Construction and Major Renovation Incentive	-	-	0	0	0	0	0	0
13	Energy Audit	-	-	0	0	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)	n/a	n/a	0	0	0	0	0	0
Industrial Program									
16	Process & System Upgrades	-	-	0	0	0	0	0	0
17	Monitoring & Targeting	-	-	0	0	0	0	0	0
18	Energy Manager	-	-	0	0	0	0	0	0
19	Efficiency: Equipment Replacement Incentive (part of the C&I program schedule)	74%	77%	177	1,076,751	132	824,402	132	3,297,609
20	Demand Response 3	n/a	n/a	0	0	0	0	0	0
Home Assistance Program									

21	Home Assistance Program	-	-	0	0	0	0	0	0
Pre-2011 Programs completed in 2011									
22	Electricity Retrofit Incentive Program	52%	52%	128	618,482	67	321,610	67	1,286,442
23	High Performance New Construction	50%	50%	41	211,911	21	105,956	21	423,822

Table 5: 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	387	1,162,149	239	821,476	228	3,283,350
Commercial & Institutional Program Total	128	649,144	108	504,363	97	1,989,797
Industrial Program Total	177	1,076,751	132	824,402	132	3,297,609
Home Assistance Program Total	0	0	0	0	0	0
Pre-2011 Programs completed in 2011 Total	170	830,393	87	427,566	87	1,710,264
Total OPA Contracted Province-Wide CDM Programs	862	3,718,437	566	2,577,808	545	10,281,020

2.6 Additional Comments

As previously noted, 2011 was a transitional year. Time was required to receive and absorb initial schedules followed by the OPA and LDC's working together through change management requirements to further develop and refine many areas of CDM initiatives. Planning and implementing management strategies, procurement of services and resources, and setup of infrastructure for ultimate deployment of the programs to our customers.

While many of the programs were initially released in 2011 many were in their infancy and subject to multiple change management requirements. Results suffered accordingly. Looking forward to 2012, there is significant traction across the entire Initiative portfolio, such that PDI is now seeing the results of a maturing program. In looking back, 2011 was a busy but ultimately rewarding year as much was accomplished to smooth the path for success to be realized in coming years.

3 Combined CDM Reporting Elements

3.1 Progress towards CDM Targets

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

Implementation Period	Annual (MW)			
	2011	2012	2013	2014
2011 - Verified	0.57	0.56	0.56	0.54
2012				
2013				
2014				
Verified Net Annual Peak Demand Savings in 2014:				.54
PDI 2014 Annual CDM Capacity Target:				8.72
Verified Portion of Peak Demand Savings Target Achieved (%):				6.24%
PDI Strategy, Milestone submitted for 2011				-20%
Variance	-13.76%			

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

Implementation Period	Annual (GWh)				Cumulative (GWh)
	2011	2012	2013	2014	2011-2014
2011 - Verified	2.58	2.58	2.58	2.55	10.28
2012					
2013					
2014					

Verified Net Cumulative Energy Savings 2011-2014:					10.28
PDI 2011-2014 Cumulative CDM Energy Target:					38.45
Verified Portion of Cumulative Energy Target Achieved (%):					26.74%
PDI Strategy, Milestone submitted for 2011					23.53%
Variance	3.21%				

3.2 CDM Strategy Modifications

PDI has gained new insight after participating in the first year of the suite of 2011-2014 CDM programs. We feel much better equipped to forge ahead and continuing with our initial strategy plans. In continuing to put forth the magnitude of effort and work that we have in 2011, the benefits will be recognized as a result of the foundation we have laid.

In streamlining our channel partner niche and empowered with a much clearer understanding of our roles, goals and potential, we continue to strive to be partners in conservation to our consumers in reducing energy consumption and costs and to the province by attaining the demand reduction targets set out.

The challenge for PDI remains in finding strategies for Custom programs that do not duplicate the OPA initiatives. PDI has made recommendation to the OPA on specific areas where we believe the province could benefit from infrastructure/programs that have already been deployed. These included;

- Daily Water Heater Load shifting to “Off Peak” to provide additional benefit to customers on TOU billing. This request is coming directly from PDI customers who are expecting benefits previously experienced through PDI’s past load shifting programs.
- Demand Response for window air conditioning which provides a low cost customer self installed solution. PDI plans to pursue these concepts further with the OPA or through submission to the OEB as a custom program.

PDI will monitor their success and achievements in early 2012 to determine the need and viability of revising our strategy for custom programs.

Through the experience in the last four years in participating in CDM programs, PDI, along with other LDC’s in the province of Ontario, have come to the realization that these programs are long term initiatives that require ongoing application of resources, extended and continual customer education and engagement before overall conservation potential and benefit is fully realized.