
## Conservation and Demand Management

# 2014 Annual Report

**Submitted to:**

**Ontario Energy Board**

**Submitted on September 30, 2015**

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# Executive Summary

This annual report is submitted by Kingston Hydro in accordance with the filing requirements set out in the Conservation and Demand Management ("CDM") Code for Electricity Distributors, issued September 16, 2010, Board File No. EB-2010-0215 specifically, the Appendix C Annual Report Template, as a progress report and update to Kingston Hydro's Strategy filed with the Ontario Energy Board ("Board" or "OEB") on November 1, 2010. Accordingly, this report outlines Kingston Hydro's CDM activities for the period of January 1, 2014 to December 31, 2014. It includes net peak demand and net energy savings achieved in 2011, 2012, 2013, and 2014, CDM program activities, successes and challenges.

Kingston Hydro's customers achieved outstanding conservation results throughout the 2011-2014 provincial conservation framework, exceeding both our local Net Peak Demand Savings Target and our local Cumulative kWh savings target.

Kingston Hydro is grateful for our customers' willingness to engage in local energy and water conservation programs delivered by Utilities Kingston. The cost effectiveness and customer service benefits of Utilities Kingston's multi-utility model have helped Kingston Hydro deliver on its targets with impressive cost-effectiveness.

In 2011 – 2014, Kingston Hydro contracted with the IESO to deliver a portfolio of province-wide CDM programs ("IESO Programs") to all customer segments including residential, commercial, institutional, industrial and low income. Utilities Kingston provided 13 province-wide saveONenergy programs to Kingston Hydro customers. Delivery of these programs was coordinated with delivery of other local energy and water conservation programs and incentives.

Kingston Hydro and Utilities Kingston believe that spending time one-on-one with individual customers and local contractors is the best and most cost-effective way to help build energy literacy and saveONenergy program awareness in our community. Utilities Kingston offers free, one-on-one, multi-utility conservation help to all of its customers, delivered by qualified conservation professionals.

For commercial, multi-residential and qualifying low-income residential customers, Utilities Kingston offers free, on-site energy and water efficiency walkthroughs and incentive application assistance, while collecting pre and post project evidence to verify the impact of their conservation investments.

In 2014, Utilities Kingston expanded the conservation services available to residential customers. It added capacity to offer customized conservation advice based on individual smart meter data analysis, increased demonstration and technical support for Utilities Kingston's "MyUtilities" portal, and launched the "Energy Insights" pilot program that offered proactive conservation recommendations, saveONenergy offers, energy use benchmarking, and information about where energy and natural gas is used in their individual home through a series of mailed or emailed reports.

The Independent Electricity System Operator (IESO) reports that by December 31, 2014 Kingston Hydro customers had achieved 7,483 kW or 112.9% of its 6630 kW Net Peak Demand Savings target. That's enough to supply about 6.6% of Kingston Hydro's 2014 summer peak load. In 2014, Kingston Hydro customers achieved marginal IESO-verified demand savings of 887 kW.

The IESO reports that between January 1, 2011 and December 31, 2014 Kingston Hydro customers achieved 45,958,623 kWh or 123.7% of its 37,160,000 kWh Cumulative kWh savings target. That's equivalent to 1.55% of total kWh purchases by Kingston Hydro from 2011-2014, or enough to power 5,714 average Kingston Hydro residential customers for a year. In 2014, Kingston Hydro customers achieved marginal IESO-verified kWh savings of 3,926,568 kWh.

Energy consumption savings generated in 2014 by Kingston Hydro customers were lower than those achieved in 2012 and 2013. Very large conservation projects by a local large user in 2012 and a full LED retrofit of City of Kingston-owned streetlights in 2013 helped savings achieved in those years exceed previous forecasts. There were no conservation projects of similar size completed in 2014, resulting in lower annual marginal savings achievements. Net Peak Demand savings achieved were strong in 2014, owing mainly to application of a site-specific net-to-gross ratio for a large Demand Response 3 (DR3) participant. Market saturation of the Home Assistance and Small Business Lighting programs also contributed to lower marginal savings achievements in 2014.

Kingston Hydro's IESO-approved saveONenergy Program Administration Budget for 2011-2014 was $1,734,488.06. Kingston Hydro spent $1,408,767.05, or 81% of this budget delivering saveONenergy programs from 2011-2014. Administrative spending in 2014 on IESO saveONenergy programs was $565,514. This is significantly higher than 2013 expenses for a number of reasons, including the "Energy Insights" report saveONenergy marketing initiative, increased capacity to provide residential and commercial customers with expert conservation assistance, rationalization of staffing levels to industry norms, and costs related to framework-end auditing, reconciliation and reporting that occurred in 2015 but are allocated to 2011-2014 Framework budgets.

In March 2014, Kingston Hydro and Utilities Kingston received the inaugural Electricity Distributors' Association "Conservation Leadership Excellence Award", sponsored by the IESO. Kingston Hydro acknowledges the support, investment, hard work, and persistence of its customers, staff, shareholder The City of Kingston, and the IESO in helping our community save energy, save money, and reduce our environmental footprint.

Kingston Hydro did not apply for any Board-approved CDM programs during 2014. However, as noted in the Guidelines for Electricity Distributors Conservation and Demand Management ("CDM Guidelines"), released April 26, 2012, the Board has deemed Time-of-Use ("TOU") pricing to be a province-wide Board-approved CDM program. The Ontario Power Authority ("OPA"), now Independent Electricity System Operator ("IESO"), is to provide measurement and verification on TOU. The TOU savings allocated to Kingston Hydro's 2011 -2014 targets are 273 kW and zero kWh.

Kingston Hydro will begin delivery of the 2016-2020 "Conservation First Framework (CFF)" programs as of January 1, 2016 as per Kingston Hydro's IESO-approved 2015-2020 Conservation Plan dated Sept. 8, 2015. To ensure a smooth transition to the new framework, 2011- 2014 Programs and Rules were extended into 2015 by the IESO at the direction of the Ministry of Energy.

# Background

On March 31, 2010, the Minister of Energy and Infrastructure of Ontario, under the guidance of sections 27.1 and 27.2 of the *Ontario Energy Board Act, 1998*, directed the Ontario Energy Board (OEB) to establish Conservation and Demand Management (CDM) targets for electricity distributors. Accordingly, on November 12, 2010, the OEB amended Kingston Hydro's distribution licence to require achievement of 37.16 GWh of energy savings and 6.63 MW of summer peak demand savings between January 1, 2011 and December 31, 2014.

To put Kingston Hydro's conservation challenge in perspective, the conservation targets represent a 5%-7% reduction in both energy consumption and summer peak demand. 37.16 GWh of electricity consumption is enough to supply 4,675 average Kingston Hydro Residential customers for a year. Kingston Hydro's summer peak MW target is equivalent to shutting off power for at least one of Kingston Hydro territory's top 3 employers (Queen's University, CFB Kingston, or Kingston General Hospital). The energy conservation targets set for Kingston Hydro are challenging, but achievable.

In accordance with the same Minister's directive, the OEB issued the Conservation and Demand Management Code for Electricity Distributors 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 licences. To comply with the Code requirements, Kingston Hydro submitted its CDM Strategy on November 1, 2010 which provided a high level of description of how Kingston Hydro intended to achieve its CDM targets. It further amended this plan with a Budget Addendum filed with the OEB June 10, 2011.

The OEB's 2011 CDM Results Report identified that the delay in the full suite of CDM programs being made available by the IESO and the absence of some programs negatively impacted the final 2011 results for the LDCs. This issue was also highlighted in Volumes I and II of the Environmental Commissioner's Report on Ontario's Annual Energy Conservation Progress.

On December 21, 2012, the Minister of Energy directed the IESO to fund CDM programs which meet the definition and criteria for IESO-contracted province-wide CDM programs for an additional one-year period from January 1, 2015 to December 31, 2015.

The Conservation and Demand Management 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, 2014 to December 31, 2014.

# 1 Conservation Framework

## 1.1 2011-2014 Framework

Ontario's current CDM framework is a key step towards creating a culture of conservation in the province. The Ontario Government ("Government") Directive to the OEB to establish CDM targets that would be met by electricity distributors recognizes the importance of CDM for both electricity customers and the electricity system. CDM helps customers manage rising energy costs, supports the provincial integrated supply plan, and addresses local distribution and transmission supply constraints. The past framework was intended to enable customers to benefit from a suite of both Board-approved and IESO province-wide programs and provide a portfolio that would meet both broad and specific customer needs.

The state of Board-approved programs and the current suite of province-wide IESO programs have limited CDM offerings to customers. This has produced limited savings and has restricted the associated opportunity for LDCs to meet their targets. The process to introduce changes to current program initiatives or to pilot new initiatives has been challenging, involving considerable cost and effort, which has resulted in limited benefits to customers and CDM savings.

Challenges faced by LDCs in the 2011-2014 framework, such as overbuilt governance and unnecessarily excessive legal requirements and misalignment of control and risks, have been addressed by the new directive. However, there are still many challenges to overcome and the new CDM framework should address the challenges of the current framework and build on its strengths.

## 1.2 Conservation First Framework

Kingston Hydro is supportive of the Government's renewed commitment for CDM in Ontario. LDCs are committed to working with the Government, IESO, Natural Gas Utilities and other stakeholders to develop programs for the new framework for CDM in the Province.

Long-term commitment for CDM funding and confirmation of the role of LDCs have been provided in the Minister's directive dated March 31, 2014, allowing LDCs to maintain current program infrastructure, including LDC staff and third party contracts as required.

The commitment also provided LDCs the program extensions required for continuity into the Conservation First Framework which was critical for all customers.

## 1.3 Board Approved CDM Programs

In its Decision and Order dated November 12, 2010 in EB-2010-0215 and EB-2010-0216, the OEB ordered that, to meet its mandatory CDM targets, "Each licensed electricity distributor must, as a condition of its licence, deliver Board-approved CDM programs, IESO-contracted province-wide CDM programs, or a combination of the two".

At this time, the implementation of TOU pricing is the only Board-approved CDM program that is being offered by Kingston Hydro.

## 1.4 TOU Pricing

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

### 1.4.1 TOU Pricing 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. TOU Pricing is enabled by the installation of smart meters and related infrastructure across Ontario.

The OEB establishes TOU prices and has made the implementation of this pricing mechanism mandatory for electricity 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. This means that smart metering and TOU implementation costs are recovered from the rates Kingston Hydro customers pay for local delivery of electricity, rather than from the price of electricity itself as are most other CDM activities.

### 1.4.2 TOU Program Description

**Objectives:** TOU pricing creates an economic incentive for residential and small business customers to shift their electricity use to off-peak times. Peak demand reductions are expected from TOU pricing, and energy conservation benefits may also be realized.

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

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

**Initiative Frequency:** The RPP TOU price is adjusted twice annually by the OEB. A summary of the RPP TOU pricing during 2014 is provided below:

| **RPP TOU** | | **Rates (cents/kWh)** | |
|---|---|---|---|
| **Effective Date** | **On Peak** | **Mid Peak** | **Off Peak** |
| November 1, 2013 | 12.9 | 10.9 | 7.2 |
| May 1, 2014 | 13.5 | 11.2 | 7.5 |
| November 1, 2014 | 14.0 | 11.4 | 7.7 |

**Delivery:** Pursuant to applicable codes, guidelines, and utility practice, Kingston Hydro has installed and maintains smart meters capable of collecting hourly interval electricity consumption data and an IT infrastructure that communicates with a Provincial smart meter Data Management/Repository (MDM/R) facility. The OEB sets hourly rates for electricity consumption for RPP customers that rise during times of increased electricity demand. Once two way communications with the MDM/R was achieved, Kingston Hydro transferred all RPP customers to TOU billing. TOU Billing was in effect for all eligible customers through 2014.

### 1.4.3 Participation

All of Kingston Hydro's 24,046 residential and 2981 GS<50kW customers are participants in TOU Pricing.

### 1.4.4 Spending

As filed in with the OEB (#EB-2012-0310), Kingston Hydro reports the following smart metering Costs as of December 31, 2011:

| | |
|---|---|
| 2014 Capital Cost: | $0 |
| 2014 OM&A: | $43,714 |
| Total OM&A: | $184,749 |
| Total Capital: | $4,752,407 |

### 1.4.5 Evaluation

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. The IESO reports that TOU Pricing contributed 273 kW towards Kingston Hydro's Net Peak Demand Savings target, and contributed zero kWh savings from 2011 through 2014.

## 1.5 CDM Variance Account

Kingston Hydro's CDM Variance Account balance as of December 31, 2014 is $186,093.32. This amount reflects lost revenues based on verified results of IESO saveONenergy Conservation Programs since the time of the last Lost Revenue Adjustment Mechanism claim made by Kingston Hydro as part of an OEB rate application. Specifically, the balance in this variance account reflects revenues lost by Kingston Hydro due to IESO verified consumption and demand reductions, allocated appropriately to the rate classes where savings occurred, and adjusted for non-rate impact CDM for saveONenergy funded projects with completion dates from January 1, 2011 through December 31, 2014. These values have been adjusted for measure persistence and the "half-year rule".

Kingston Hydro applied for disposition of this variance, plus accrued and forecast interest to the end of 2015 of $5,569.00 as part of its 2016 Cost of Service Custom IR OEB Rate Application EB-2015-0083.

## 1.6 Energy Insights Program

In 2014, Kingston Hydro and Utilities Kingston were one of a consortium of seven winter-peaking LDCs using smart meter data to produce "Energy Insights" reports for a selection of their residential customers.

This program provides customers with individualized reports telling them how they use energy in their home, how their energy use compares to homes of similar size and heating type, and how much they could save each year by participating in the saveONenergy programs that are best for them. While this initiative was funded through Kingston Hydro's IESO allocated Project Administration Budget, it would not have been possible without the province's investment in smart metering infrastructure and TOU Pricing.

The "Energy Insights" program is designed to help reduce household energy consumption and costs for residential customers. Approximately 9000 selected customers were mailed personalized reports that offered accurate information (within 10 per cent) about their personal energy use, as well as helpful hints to reduce electricity use and save money. These reports include specific information on the household's electricity consumption, including a calculated estimate of how much of their electricity use is caused by different uses (appliances, always on, heating & cooling); a comparison of energy use to similar homes in Kingston Hydro territory; and tailored tips on how to reduce electricity use. One-on-one conservation advice and help over the phone is also offered, including assistance interpreting their report and energy use profile.

The Energy Insights program targeted high winter consumption residences, quantifying end uses, benchmarking against similar buildings, and providing targeted tips and incentives. 8488 Kingston Hydro customers received a series of three or four reports each over the winter of 2014-15. A total of 8429 of these reports were delivered in 2014. The reports benchmark homes, suggest conservation measures tailored to be cost effective, quantify potential financial savings, and provide coupons for selected measures. By providing feedback over time, customers can see if their changes have had an effect. A control group of over 1000 homes was also analyzed, but did not receive Energy Insights reports to provide a baseline for assessing the conservation impact of the reports.

The smart meter data analysis conducted also provides Kingston Hydro with insights about which neighbourhoods or customers might benefit from further customized programming in the future. For example, air source heat pump retrofits were determined to be a cost effective residential conservation measure for customers who live in mobile homes. With potential energy and financial savings modeled, Kingston Hydro has the information needed to prepare a business case for this type of endeavor for the 2016-2020 period.

Customers were encouraged to interact one-on-one over the phone or email with a member of Utilities Kingston's conservation team to discuss their reports.

Preliminary EM&V results suggest that the average annual savings per household receiving Energy Insights reports is around 115 kWh. Aggregate annual energy savings calculated by comparing the energy use of the treatment group to the control group using advanced statistical methods suggest that the aggregate savings generated by the Energy Insights report program and one-on-one help offered over the winter of 2014-15 were 807,000 kWh.

A sample of these reports is included here:

Utilities Kingston

Kingston Hydro

Utilities Kingston is pleased to provide you with this report as part of an energy savings program to help inform your electricity use choices.

This report period: Sep. 16, 2013 to Apr. 30, 2014

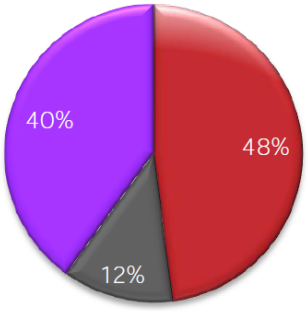
GREEN, SARAH
1234 DIVISION ST
KINGSTON ON K7L xWx

The SARAH GREEN Household
ENERGYINSIGHTS™ report
for 1234 DIVISION ST
Account #: 654321 Meter #: 123456

## Welcome to Utilities Kingston!

To help prepare you for your first full winter at 1234 DIVISION ST, we are pleased to provide you with some recommendations on how to save electricity and money.

For 1000-1999 sq ft single family homes like yours, an average of 48% of winter electricity use goes towards space heating.




Average Electricity Use Breakdown

for 1000-1999 sq ft single family homes in central Kingston with electric space heating (in % of kWh from Sep. 16, 2013 to Apr. 30, 2014)

- Electric Space Heating: baseboard heaters, electric furnaces, etc.
- Lights & Appliances: washers, dryers, dishwashers, stoves, water heaters, etc.
- AC: air conditioning, dehumidifiers and other space cooling appliances
- Always On: computers, PVRs & TVs on standby, chargers, clocks, stereos, some fridges, etc.

Want to update your home profile? Tell us more about your home at www.kingstonhydro.com/energyinsights and click on 'Talk to Us'.

For homes like yours, electricity used for space heating costs an average of $990 per year.

This can vary from $160 to $1,570 per year based on your heating system, home characteristics and, in particular, thermostat settings!

Want to save?

ENERGYINSIGHTS™ by Ecotagious

# Electric space heating offers big opportunities to save

☑ Set your thermostat to 16°C (61°F) at night and when away


Our bodies don't need the temperature to be as high to feel comfortable while we sleep.

And during the day, most people are comfortable at 20°C (68 °F).

SAVE
$20 to $200
per year

☑ Draft proof your home

Draft proofing is easy and inexpensive - providing a quick, big payback.

- ☑ Use weatherstripping and door sweeps to reduce drafts.
- ☑ Apply caulking around windows (where the drywall meets the frame) to keep the cold out.

SAVE
$30 to $310
per year

**Save on weatherstripping & programmable thermostats for baseboard heaters.**

For instant savings, redeem the **save**ON**energy**[OM] **COUPONS** included with this report at participating retailers, including:

Canadian Tire
Lowe's
RONA

The Home Depot
TSC Stores
Walmart


Find out more about the **save**ON**energy COUPONS** at www.saveONenergy.ca

Interested in one-on-one help identifying energy saving opportunities and incentives?
Email us at conservation@utilitieskingston.com
or call (613) 546-0000 and say 'conservation'.
Reports available in alternative format upon request.

Have a question? Want to provide your feedback?
Want to opt-out of receiving future reports?
Go to www.kingstonhydro.com/energyinsights
Or call (613) 546-0000 and say 'conservation'

Printed on 100% post-consumer recycled paper.

GREEN, SARAH
1234 DIVISION ST
KINGSTON ON K7L xWx

November 18, 2014

Dear SARAH GREEN,

Utilities Kingston and Kingston Hydro are committed to helping our customers save energy, water and money. As part of this commitment, we are launching a pilot program called *Energy Insights.*

*Energy Insights* puts your smart meter data to work for you, providing information specific to your home so that you and your family can focus on the most effective ways to conserve energy and save money.

Your first report has been included with this letter. Take a moment to review it and find actions you can take to save energy and money.

This first report includes an analysis of how much electricity homes with electric space heating (e.g. baseboard heaters, electric furnaces, etc.) like yours in our community use to heat their homes each winter, as well as tips to help you reduce your electricity use and save money.

Following reports will include:

- A breakdown of your household's electricity consumption, including a calculated estimate of how your electricity is being used (for example, to power appliances or to heat spaces);
- A comparison of your energy use to similar homes in our community;
- Tips on how to reduce your electricity use that have been tailored for you, focusing on the most cost-effective changes you can make;
- Information on how to take advantage of saveONenergy incentives for these changes.

You will continue to receive these reports throughout the 2014/15 winter heating season. If for any reason you do not wish to continue receiving these reports, or do not wish to participate in this pilot program, simply let us know at www.kingstonhydro.com/energyinsights and click on the "Talk to Us" tab, or call (613) 546-0000 and say "conservation" to speak directly with our Conservation team.

Please visit our *Energy Insights* website at www.kingstonhydro.com/energyinsights to:

- Provide your feedback;
- Give us more details about your home to further tailor future reports;
- Find answers to your questions in our FAQ section;
- Find new conservation tips each month; or
- Ask us a question.

These reports can help you make more informed choices about your electricity consumption. We welcome your feedback, and we thank you in advance for your help evaluating this program.

Regards,

Brianna Rustige
*Conservation Outreach Associate*

Printed on 100% post-consumer recycled paper.

# 2. IESO-Contracted Programs

## 2.1 Introduction

Kingston Hydro has entered into a contract with the OPA (now IESO). This agreement allows Kingston Hydro to deliver available "OPA Contracted" conservation programs to its customers. This agreement is effective January 1, 2011 through December 31, 2015. The IESO will measure and evaluate electricity savings applicable to Kingston Hydro's CDM targets achieved through delivery of these programs. IESO Contracted Programs, branded province wide as "saveONenergy" programs, are consistent in their design and eligibility across Ontario. These programs have four broad categories: Consumer, Commercial & Institutional, Industrial, and Low Income.

Additionally, the Ontario Energy Board has permitted Ontario LDCs to count OPA-contracted "Electricity Retrofit Incentive Program" (ERIP) and "High Performance New Construction" Program savings from projects started before 2011 but completed within the 2011-2014 period towards achievement of CDM targets. These savings relate to projects that had incentives pre-approved before January 1, 2011, but completed after January 1, 2011 in accordance with program terms and conditions.

The charts on the following pages list the saveONenergy initiatives that have been offered by the IESO to Kingston Hydro for delivery during 2011-2014. Also listed is a contract schedule reference, the date each program schedule was made available to Kingston Hydro, the customer class the program is targeted towards, and the status of Kingston Hydro's program offerings in 2014.

| Residential saveONenergy Programs | | | | |
|---|---|---|---|---|
| **OPA Contracted Initiative** | **Schedule Reference or Description** | **Date schedule posted** | **Customer Class** | **Offered by Kingston Hydro in 2014? (Y/N)** |
| Appliance Retirement | Schedule B-1, Exhibit D | *Jan 26, 2011* | *All residential rate classes* | **YES** |
| Appliance Exchange | Schedule B-1, Exhibit E | *Jan 26, 2011* | *All residential rate classes* | **YES** |
| HVAC Incentives | Schedule B-1, Exhibit B | *Jan 26, 2011* | *All residential rate classes* | **YES** |
| Conservation Instant Coupon Booklet | Schedule B-1, Exhibit A | *Jan 26, 2011* | *All residential rate classes* | **YES** |
| Bi-Annual Retailer Event | Schedule B-1, Exhibit C | *Jan 26, 2011* | *All residential rate classes* | **YES** |
| Retailer Co-op | | *Jan 26, 2011* | *All residential rate classes* | **NO** |
| Residential Demand Response | Schedule B-3 | *Aug 22, 2011* | *All residential rate classes and some commercial* | **NO** |
| New Construction Program | Schedule B-2 | *Jan 26, 2011* | *All residential rate classes* | **YES, No Customer Uptake** |
| Home Assistance Program | Schedule E-1 | *May 9, 2011* | *All residential rate classes* | **YES** |

| Commercial & Institutional saveONenergy Programs | | | | |
|---|---|---|---|---|
| **OPA Contracted Initiative** | **Schedule Reference or Description** | **Date schedule posted** | **Customer Class** | **Offered by Kingston Hydro in 2013? (Y/N)** |
| Efficiency: Equipment Replacement | Schedule C-2 | *Jan 26, 2011* | *All general service classes* | YES |
| Direct Install Lighting | Schedule C-3 | *Jan 26, 2011* | *General Service < 50 kW & qualified tenants embedded within GS>50kW services* | **YES** |
| Existing Building Commissioning Incentive | Schedule C-6 | *Feb, 2011* | *All general service classes* | **YES, No Customer Uptake** |
| New Construction and Major Renovation Initiative | Schedule C-4 | *Feb, 2011* | *All general service classes* | **YES** |
| Energy Audit | Schedule C-1 | *Jan 26, 2011* | *All general service classes* | **YES** |
| Commercial Demand Response (part of the Residential program schedule) | Schedule B-3 | *Jan 26, 2011* | *All general service classes* | **NO** |
| Demand Response 3 (part of the Industrial program schedule) | Schedule D-6 | *May 31, 2011* | *General Service 50 kW & above* | **YES** |
| Direct Service Space Cooling | Offers free servicing of air conditioning systems and refrigeration units for the purpose of achieving consumption and demand savings. | Program Not offered by OPA or IESO | *All general service classes* | **NO** |
| Demand Response 1 | Allows customers to voluntarily reduce electricity demand during certain periods of the year pursuant to the DR 1 contract. The contract provides payment for service for the actual electricity reduction provided. | Program Eliminated by OPA | *All general service classes* | **NO** |

| Industrial Programs | | | | |
|---|---|---|---|---|
| **OPA Contracted Initiative** | **Schedule Reference or Description** | **Date schedule posted** | **Customer Class** | **Offered by Kingston Hydro in 2013? (Y/N)** |
| Process & System Upgrades | Schedule D-1 | *May 31, 2011* | *General Service 50 kW & above* | **YES** |
| Monitoring & Targeting | Schedule D-2 | *May 31, 2011* | *General Service 50 kW & above* | **YES, No Customer Uptake** |
| Energy Manager | Schedule D-3 | *May 31, 2011* | *General Service 50 kW & above* | **Yes, No Customer Uptake** |
| Efficiency: Equipment Replacement Incentive (part of the C&I program schedule) | Schedule C-2 | *May 31, 2011* | *General Service 50 kW & above* | **YES** |
| Demand Response 3 | Schedule D-6 | *May 31, 2011* | *General Service 50 kW & above* | **YES** |
| Key Account Manager | | *Q3, 2012* | *Large User rate class* | **YES** |
| **Pre-2011 Programs completed in 2011** | | | | |
| Electricity Retrofit Incentive Program | n/a | *n/a* | *All general service classes* | **YES** |
| High Performance New Construction | n/a | *n/a* | *All general service classes* | **YES** |

As outlined in Kingston Hydro's OEB Filed 2011-2014 Budget Addendum, Kingston Hydro's allocation of Program Administration Funding from the Ontario Power Authority for the 2011-2014 Target Period by Program in its CDM Plan as filed in November 2010 was as follows:

Consumer Programs: $615,336.29

Commercial & Institutional Programs: $807,146.35

Industrial Programs: $105,830.83

Low Income Programs: $85,529.89

**Portfolio Total PAB: $1,613,843.36**

Some programs intended to be offered during the 2011-2014 period by the OPA to LDCs for delivery have been cancelled. The Direct Service Space Cooling initiative, Demand Response 1, and other consumer initiatives such as the Mid-stream Retail initiative will not be offered.

The IESO has approved amendments to Kingston Hydro's approved Program Administration Budget, enabling it to shift resources from other programs to address better than projected low-income program uptake and to engage additional contracted resources delivering the "Energy Insights" Consumer saveONenergy program marketing initiative along with seven other LDCs. This pilot initiative is discussed in detail in 2.2.1.9.

With the impact of these amendments to Kingston Hydro's IESO-approved 2011-2014 Program Administration Budget, Kingston Hydro's Portfolio Total PAB increased to $1,734,488.06. Kingston Hydro IESO-reported PAB expenditures from 2011-2014 total $1,414,804.23, or 81% of its 2011-2014 IESO-amended PAB budget.

## 2.2 Program Descriptions

### 2.2.1 RESIDENTIAL PROGRAMS

#### *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.

**Description:** This initiative 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**: The IESO 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
- saveONenergy website: https://saveONenergy.ca/Consumer/Programs/Appliance-Retirement.aspx

**Initiative Activities/Progress:** Kingston Hydro promotes the Appliance Retirement program on its website through its Customer Service Representatives, Conservation Advisors and through affiliated websites and communications (Utilities Kingston, The City of Kingston, and saveONenergy). Kingston Hydro customer service is provided by the same CSRs that provide information to the public about the City of Kingston

waste disposal options, creating a higher than average customer awareness rate. There is high awareness in the general public about this program due to province-wide marketing efforts.

The IESO reports that Kingston Hydro had 56 participants in the Appliance Retirement Program in 2014, compared to 46 in 2013, 91 in 2012, and 182 in 2011. Kingston Hydro has been offering this program since 2007. This program has achieved market saturation. It is slated to be wrapped up by the IESO in the near future within the 2015-2016 Conservation First Framework.

IESO-reported Verified Final Net Peak Demand Savings from this initiative at December 31, 2014: 22 kW, 0.3% of Target

IESO-reported Verified Cumulative energy 2011-2014 savings achieved as of December 31, 2014: 448,795 kWh, 1% of Target

**In Market Date:** Q2, 2011

**Lessons Learned:**

- Kingston Hydro was one of the first LDCs in Ontario to offer the pre-cursor program, the Great Refrigerator Roundup. That program was analogous to the Appliance Retirement Initiative, with Kingston acting as a pilot test community for the province-wide initiative that began in 2007. As outlined in Kingston Hydro's CDM Strategy, Kingston Hydro believes the Appliance Retirement Initiative has reached market saturation within its territory.

- In Kingston Hydro's opinion, inclusion of other appliances and the offer of a meaningful financial incentive toward purchase of a replacement appliance could revive customer interest in this program.

- Results are responsive to province wide advertising.

- Projected savings from this initiative are not high enough to warrant prioritization of it within Kingston Hydro's consumer marketing mix.

- This program will not be offered in the 2015-2020 Conservation First Framework.

### *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.

**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**: The IESO contracts with participating retailers for collection of eligible units.

Additional detail is available:

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

**Initiative Activities/Progress:**

Kingston Hydro would like to thank its customers, the Princess St. and Division St. Canadian Tire locations, for participating in this program.

The IESO reports that 41 appliances were exchanged through this program in 2014.

IESO-reported Verified Final Net Peak Demand Savings from this initiative at December 31, 2014: 20 kW, 0.3% of Target

IESO-reported Verified Cumulative energy 2011-2014 savings achieved as of December 31, 2014: 77,608 kWh, 0.2% of Target

**In Market Date:** Q2, 2011

**Lessons Learned:**

- Kingston Hydro territory encompasses only the older, central part of the City of Kingston. It has a very high proportion of students, lower-incomes, and rental properties. There are geographically concentrated, high-transience areas such as the student housing area within Kingston Hydro territory. As such, there is a thriving local secondary market in Kingston for small appliances such as air-conditioners and dehumidifiers. Landlords and tenants will typically leave appliances in place until failure or sell installed and existing units to new tenants. Unless the incentive towards a new unit is increased, Kingston Hydro does not believe its customers will participate in this program enough to contribute significantly towards achievement of Kingston Hydro's conservation targets. Most of Kingston's largest appliance dealers are located outside of Kingston Hydro's territory, leading to lower effectiveness of this program in Kingston Hydro territory.
- The "Energy Insights" program has given Kingston Hydro the ability to identify and target customers who have highly weather-dependent loads. Within the 2015-2020 framework, depending on the design of province wide initiatives, Kingston Hydro may be able to leverage this information to offer targeted point of sale rebates for exchanges.
- Service territory misalignment will continue to be an issue and disincentive towards Kingston Hydro's investment traditional retail and mass marketing initiatives.

### *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 central A/C by approved Heating, Refrigeration, and Air Conditioning Institute (HRAI) qualified contractors.

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

**Delivery:** The IESO contracts centrally for delivery of the program and LDCs encourage 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
- saveONenergy website: https://www.saveonenergy.ca/Consumer/Programs/HVAC-Rebates.aspx

**Initiative Activities/Progress:** Kingston Hydro promotes the HVAC incentives initiative through community relations and consumer event channels. Kingston Hydro and City of Kingston call centre staff are aware of the program and promote it to those who call looking for incentive information on furnaces. Contractor participation in Kingston Hydro territory is similar to that in comparable communities.

The IESO reports that 293 Kingston Hydro customers participated in this program during 2014. This is the highest level of participation since 2011.

IESO-reported Verified Final Net Peak Demand Savings from this initiative at December 31, 2014: 275 kW, 4.1% of Target.

IESO-reported Verified Cumulative energy 2011-2014 savings achieved as of December 31, 2014: 1,473,764 kWh, 4% of Target.

**In Market Date:** Q1, 2011

**Lessons Learned:**

- Compared to other centrally administered province-wide Consumer CDM programs, this program has been effective for Kingston Hydro. It has low administrative overhead and yields the highest 2014 achieved kW and kWh per customer for provincially administered Consumer programs.

- This program saw uptake increase dramatically in 2014. Targeted "Energy Insights" reports provided customers who had a forced air furnace, or had highly weather dependent electricity loads indicative of air conditioning loads with customized information about the incentive and how much they could save per year by installing more efficient equipment. Utilities Kingston fielded hundreds of calls about the program as a result of this highly effective marketing initiative.

- Channel engagement (i.e. collaboration with HRAI and HVAC contractors) is a highly effective method of connecting with customers at a time when they are making purchase decisions that can affect electricity consumption and demand for years to come. However, only 1,587 of Ontario's nearly 5000 HVAC contractors are enrolled to provide the incentive to customers. Training requirements and paperwork requirements are too onerous for the majority of Ontario contractors, leading to lower uptake rates.

- There appears to be spillover from non-HRAI contractors who are ineligible for this initiative. There are cases where smaller independent contractors or non-HRAI contractors are offering their own incentives to make sales (i.e. discounting their installations to match the value of the OPA incentive). As this occurs outside of the initiative, savings from these installations are not being captured.

- Kingston Hydro plans to continue offering this program. Depending on the province-wide program available from the IESO, Utilities Kingston will focus on local improvements to the program to increase contractor uptake and reduce red tape. Adding measures such as heat-pump installation at electrically heated homes and increased targeted marketing and remote home auditing enabled by "Energy Insights" may be able to sustain this initiative through the 2015-2020 period.

#### *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. They can be redeemed at participating retailers.

**Targeted End Uses:** ENERGY STAR® qualified CFLs & LED lights, 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, clotheslines, baseboard heater programmable thermostats and other equipment.

**Delivery**: The IESO contracts centrally for the distribution of the coupon booklets across Ontario. LDCs distribute coupons. The IESO enters into agreements with retailers to honour the coupons. Province-wide, mass marketed coupons are distributed by the IESO and LDCs are able to print their own,

specifically bar-coded coupons to customers through various means. In Kingston Hydro territory, this included distribution with Energy Insights reports, public events, municipal service centres, and on the back of municipal pay-and-display parking stubs.

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
- saveONenergy website: https://saveonenergy.ca/Consumer/Programs/Instant-Rebates.aspx

**Initiative Activities/Progress:** Booklets were directly mailed to customers by the IESO and were also made available by the IESO at retail point-of-purchases. Downloadable coupons were also available at www.saveONenergy.ca.

Kingston Hydro printed its own branded coupons which have been distributed at dozens of community events and public places, such as the annual off-grid Earth Hour concert, Public Works Day, the Home Show, in City and Utility public buildings, the SWITCH sustainable energy awards and Energy Conferences, Utilities Kingston's Water Conservation Garden, in Utilities Kingston energy and water conservation packages, and many others. In 2014, these coupons were also printed on the back of City of Kingston downtown pay-and-display parking slips.

Kingston Hydro branded coupons were also distributed as an integrated part of the "Energy Insights" saveONenergy program initiative. Smart meter data analysis and tax roll information were used to develop conservation recommendations for each recipient based on how energy is most likely used in their home. Coupons for these measures, along with yearly savings estimates were included with the reports. 9000 targeted customers received a series of two reports in 2014 that included customized coupon offers.

The IESO reports that 6,775 of these coupon redemptions were allocated to Kingston Hydro during 2014, well over the previous high of 2,694 in 2011. Kingston Hydro believes that the Energy Insights program, the updating of coupons by the IESO to include popular LED bulbs, and additional human resources dedicated to conservation outreach by Utilities Kingston are responsible for this dramatic increase in uptake.

The IESO reports that uptake of coupons was markedly higher in Kingston Hydro territory per capita compared to provincial averages. Kingston Hydro coded coupons represented 24% of redemptions reported by the IESO, compared to a provincial average of 15%. This suggests that targeted distribution methods used by Kingston Hydro have been more successful than those of other Ontario LDCs.

| | Kingston Hydro | | Province | |
|---|---|---|---|---|
| | Participation (Measures Redeemed) | Energy Savings | Participation (Measures Redeemed) | Energy Savings |
| LDC Coded | 1,597 | 43,508 | 175,360 | 4,645,495 |
| Allocated | 5,178 | 141,173 | 1,032,749 | 28,157,041 |
| **Total** | **6,775** | **184,681** | **1,208,108** | **32,802,537** |

IESO-reported Verified Final Net Peak Demand Savings from this initiative at December 31, 2014: 23 kW, 0.3% of Target

IESO-reported Verified Cumulative energy 2011-2014 savings achieved as of December 31, 2014: 677,353 kWh, 1.8% of Target.

**In Market Date: Q2, 2011**

**Lessons Learned:**

- The downloadable coupons are a very popular and effective communication tool. Year-round downloadable coupons helps drive traffic to the saveONenergy Consumer web-resources.

- Coupons are useful for engaging customers at public events in two ways

    - They are good for a starting point to discuss conservation for those who do not have a high level of energy literacy or who do not conserve.

    - They help identify those who are passionate conservers – these folks are proud to say that they have already done the things suggested in the coupons. This type of customer is almost as common as non-conservers at our booths.

- Coupon redemption rates are relatively low, but a dramatic increase in the number of Kingston Hydro bar-coded coupons distributed and targeted delivery to customers through the "Energy Insights" initiative have served to increase the total number of redemptions.

- If coupon processing costs are kept reasonable by the IESO for the 2015-2016 Conservation First Framework, this province wide program can continue to be a valuable way for Kingston Hydro to "start the conversation" with its customers about energy conservation.

### *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 IESO enters into arrangements with participating retailers to promote the discounted products, and to post and honour related coupons. LDCs may also refer retailers to the IESO. The "Energy

Insights" initiative made customers aware of opportunities for retrofitting energy using equipment in their own home.

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

**Initiative Activities/Progress:** Kingston Hydro did not conduct in-store marketing or promotion of Bi-Annual Retailer events.

The IESO reports that 24,190 purchases were allocated to Kingston Hydro under this program 2014.

The IESO reports that uptake of coupons was markedly higher in Kingston Hydro territory per capita compared to provincial averages, likely due to factors discussed in s. 2.2.1.4.

IESO-reported Verified Final Net Peak Demand Savings from this initiative at December 31, 2014: 62 kW, 0.9% of Target

IESO-reported Verified Cumulative energy 2011-2014 savings achieved as of December 31, 2014: 1,780,675 kWh, 4.8% of Target

**In Market Date:** Q2, 2012

**Lessons Learned:**

- The emergence of LED bulbs for households should drive coupon redemption in the coming years.
- Program evolution, including new products and review of incentive pricing for the coupon initiatives, must be a regular activity to ensure continued consumer interest.
- The IESO has done an incredible job upgrading measures lists and delivering this program province-wide.

### *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:** Various

**Delivery:** Retailers apply to the IESO for co-op funding to run special promotions that promote energy efficiency to customers in their stores. LDCs can refer retailers to the IESO. The IESO 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:** Kingston Hydro did not participate in Retailer Co-op activities. Resources were focused instead on coupon initiatives and rebate initiatives that were independent of an individual retail location and the "Energy Insights" initiative. The major consumer retailers of appliances, HVAC equipment, and other electronic devices that service Kingston are not in Kingston Hydro territory.

**In Market Date:** N/A

**Lessons Learned:**

- As most major retailers are outside of Kingston Hydro territory, allocating savings to Kingston Hydro for these efforts and evaluating results may prove extremely difficult, resource intensive, or impossible. Kingston Hydro does not want to confuse customers by promoting its own branded coupons at retailers in Hydro One territory, and would be difficult to allocate savings results accordingly.

### *2.2.1.7 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 peak demand 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).

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

**Delivery**: LDC's recruit customers and procure technology

Additional detail is available:

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

**Initiative Activities/Progress:** Kingston Hydro has chosen not to offer Residential Demand response to its customers. Kingston Hydro customers have much lower incidence of central A/C than the provincial average. In a service territory with a population of 58,000, more than 15,000 students leave during the summer months, reducing demand for air conditioning. A large portion of the population rents their homes and cannot consent to modifications to the thermostat or HVAC system. As Kingston Hydro is a winter peaking utility, there are few direct system benefits to investment in residential demand response. Utilities Kingston has participated in studies that suggest savings from IHDs do not have persistence enough to be cost effective.

Since Kingston Hydro has already achieved most of its peak demand reduction target, Kingston Hydro will continue to monitor the success of other utilities' IHD programs.

**In Market Date:** N/A

**Lessons Learned:** This program will not be offered by Kingston Hydro in the 2015-2020 Conservation First Framework as it is focused on kW demand savings and the new framework does not include kW peak demand savings targets.

### *2.2.1.8 NEW CONSTRUCTION PROGRAM (Schedule B-2)*

**Target Customer Type(s):** Residential New Home Builders

**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 switches, ECM motors, ENERGY STAR qualified central a/c, lighting control products, lighting fixtures, EnerGuide 83 whole homes, EnerGuide 85 whole homes

**Delivery:** Local engagement of builders will be the responsibility of the LDC and will be supported by IESO initiatives to drive 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

- saveONenergy website: https://www.saveonenergy.ca/Consumer/Programs/New-Residential-Construction.aspx

**Initiative Activities/Progress:** Though no applications for the New Construction program were completed in 2014, several potential applicants were identified through having Utilities Kingston representatives attend City planning and zoning pre-consultation meetings. Kingston Hydro territory does not have much green field construction of new homes, limiting opportunities for this initiative.

**In Market Date:** Q2, 2011

**Lessons Learned:**

- Administrative requirements must align with perceived stakeholder payback. The cost of EnerGuide home visits in the current marketplace and the administrative burden of applying for a single-home custom build project make participation in this program not worth the time of most homebuilders within Kingston Hydro territory. The program is only suitable for large tract-home builders. Increased incentives or new prescriptive measures are necessary to attract participation in Kingston Hydro territory.

- The program is not attractive for individuals or contractors building a small quantity of homes. This program is designed exclusively for large developers. Kingston Hydro would like to see more incentives and a lower administrative burden for smaller or individual home builders.

- Cooperation with local building and development officials is key to identifying and communicating with potential applicants. Coordinated marketing efforts are appreciated by builders who have many requirements, obligations, and opportunities to balance in a project.

## 2.2.2 COMMERCIAL, INSTITUTIONAL & INDUSTRIAL PROGRAMS

### *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, promoting investments in electricity conservation that reduce demand and consumption through equipment upgrades such as more energy efficient equipment for lighting, space cooling, ventilation and other purposes.

**Description:** The Equipment Replacement Incentive Initiative (ERII) offers financial incentives to customers for the upgrade of existing equipment to energy efficient equipment under the brand name of "saveONenergy Retrofit" program. Upgrade projects can be classified into one of three categories: prescriptive projects where prescribed measures replace associated required base case equipment; engineered projects where energy and demand savings and incentives are calculated using OPA supplied worksheets for associated measures; or custom projects for more complex or unique energy efficiency upgrades.

**Targeted End Uses:** lighting, space cooling, ventilation, pumps, motors, drives and other measures

**Delivery**: LDC delivered.

Additional detail is available:

- Schedule C-22: http://www.powerauthority.on.ca/sites/default/files/new_files/industry_stakeholders/current_electricity_contracts/pdfs/Schedule%20C-2%20ERII%20Initiative.pdf
- saveONenergy website: https://saveONenergy.ca/Business/Program-Overviews/Retrofit-for-Commercial.aspx

**Initiative Activities/Progress:** The Retrofit program continues to deliver the bulk of Kingston Hydro's CDM savings, and delivery resources are heavily focused on this program. This program offered the largest and most cost effective kWh savings opportunities of all saveONenergy initiatives. Many Retrofit projects take years to develop and reach completion, and many customers are repeat participants in the program. As such, special emphasis on developing long term relationships with customers has been vital to achieving Kingston Hydro's targets.

*Mayor Mark Gerretsen donned a hard hat and safety harness to finish changing the first streetlight to an LED bulb on Old Quarry Road. This project, partially funded by the RETROFIT program, replaced over 10,000 inefficient streetlights.*

*Whig Standard, April 9, 2013*
*Kingston Ontario*

Kingston Hydro runs the Retrofit program in-house, leveraging the close relationships it has with its customers. Utilities Kingston's Certified Energy Managers offer all Kingston Hydro Commercial, Institutional, and Industrial customers free electricity and water efficiency walkthroughs and one-on-one help filling out saveONenergy applications. Kingston Hydro believes that its policy of 100% pre and post project inspections for all ERII/Retrofit program projects allows it to form good working relationships, facilitates customer trust, and encourages repeat applications for new and expanded electricity

conservation measures at various facilities owned by an individual customer. This practice also ensures that savings can be verified.

In 2014, Kingston Hydro suspended its PAB funded "Retrofit Referral Fee" program due to declining enrollment by contractors who no longer needed an incentive to stimulate program interest.

The IESO reports that 75 ERII projects were completed in Kingston Hydro territory during 2014. While the number of applications per year has grown since 2011, Kingston Hydro observes a noted provincial trend of the typical Retrofit project decreasing in size. The Retrofit program appears to be more effective at delivering kWh savings than kW demand savings.

Net Peak Demand Savings from this initiative at December 31, 2014: 1342 kW, 20.1% of Target.

Cumulative 2011-2014 energy savings achieved as of December 31, 2014: 28,974,239.4 kWh, 78% of Target

**In Market Date:** Q2, 2011

*Kate Ducharme, from the Kingston Glass Studio and Galley, replaced old halogen display lights with LED lamps, improving lighting efficiency and reducing summertime cooling loads with help from the RETROFIT program.*

**Lessons Learned:**

- ERII (previously Equipment Replacement Incentive Program – ERIP, and branded as the saveONenergy RETROFIT program) has been offered by LDCs for many years. It is a high performing program that many of Kingston Hydro's commercial customers have been aware of for some time.

- The number of ERII projects completed in 2014 was 75, one less than in 2013. Kingston Hydro's customer service focus delivering timely pre-project approvals, free electricity efficiency

walkthroughs, and following up with customers on post-project applications has been very cost effective.

- Pre-project and post-project walkthroughs are required for each applicant by Kingston Hydro. Photographic evidence is collected of pre and post project equipment condition. Customers are made aware of their most cost effective conservation opportunities, and given options for future conservation projects. Help is offered one-on-one, in person, to each applicant. This ensures that most applications are entered correctly, minimizing administrative work. It also gives Kingston Hydro the opportunity to manage customer expectations realistically. Finally, the inspection and verification of pre and post project equipment condition and operation means that Kingston Hydro has an accurate accounting of actual savings in its territory and can demonstrate causation for ERII projects.

- By far the most successful means of customer engagement was leveraging existing relationships developed over years and word of mouth within the contractor community.

- Kingston Hydro finds that its customers prefer on-site inspections/walkthroughs, small workshops, and one-on-one interaction. They are not likely to work through an entire saveONenergy application on their own. Provision of one-on-one, on-site help, from someone business customers have a relationship with is key to the success of Kingston Hydro's ERII program.

  The Custom stream of the ERII program offers an opportunity to help fund innovative projects. The development cycle for these applications is long, in some cases multi-year. Working with customers on longer term, more innovative and "out there" ideas can achieve great results.

- The application system and process is burdensome for customers. Due to the complexity of the online application system, many customers prefer to use paper applications. One-on-one help from our conservation team is vital to help our customers overcome this challenge.

#### *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 free installation of eligible lighting and water heating measures of up to $1,500 plus additional cost sharing incentives to eligible owners and tenants of commercial, institutional and agricultural facilities, as well as multi-family buildings, for the purpose of achieving electricity savings and peak demand savings.

**Description:** The Direct Install Lighting Initiative (branded as the saveONenergy Small Business Lighting Program) targets customers in the General Service <50kW account category and other qualifying customers of multi-tenant commercial buildings. This Initiative offers turnkey lighting and electric water heater measures at no cost to qualifying small businesses. In addition, standard prescriptive incentives are

available for eligible equipment beyond the initial no-cost upgrades. On December 4, 2012, the no-cost/free installation limit was raised to $1500.

**Target End Uses:** Lighting in commercial, institutional and/or light industrial spaces.

**Delivery**: All Kingston Hydro GS<50kW and other qualifying customers have been contacted by Kingston Hydro by phone and with targeted mailings and other communications. Contracted resources provide outgoing calls to customers and assessment scheduling. Customers are offered a free lighting assessment from a Kingston Hydro representative where they receive a detailed business case for investment in DIL program eligible measures. They may then sign a work order and select the licensed electrical contractor of their preference to install the measures.

Additional detail is available:

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

**Initiative Activities/Progress:** An outgoing call campaign, marketing efforts with local business associations, and other communications continued in 2014. Expanded LED measures led to an increase in program enrollment, and the number of programs completed in 2014 increased to 110 compared to only 62 in 2013. Over 40% of eligible Kingston Hydro customers have received free lighting retrofits since 2008. Since OPA program rules prevent LDCs from offering the program to previous participants of the Power Savings Blitz that was in place from 2008 to 2011, potential uptake of the current Initiative was impacted. Major program or value proposition re-design and changes to eligibility are necessary to see significant uptake of a commercial direct install program in the future.

Net Annual Peak Demand Savings at December 31, 2014 from this initiative: 477 kW, 7.2% of Target.

Cumulative 2011-2014 energy savings achieved as of December 31, 2014: 4,602,374 kWh, 12.4% of Target

**In Market Date:** Q4, 2011

*Photo: Rudi Mogl, Owner of Tara Foods – invested in lighting and refrigeration upgrades with help from the Small Business Lighting and RETROFIT Programs.*

**Lessons Learned:**

- With over 40% of eligible customers participating in either the Power Savings Blitz or Small Business Lighting programs, remaining customers are typically either not responsive to marketing or were ineligible as they did not have enough eligible measure opportunities to meet program minimum work order values. After a significant dip in participation in 2013, participation rebounded somewhat in 2014, mostly due to the introduction of new LED lighting measures that made retrofits economic where they were not before and stimulated customer interest.

- By far the most effective marketing activity was an outgoing call campaign made by our contractors to targeted customers.

- Kingston Hydro uses a unique model whereby independent third-party assessors specially trained in energy efficiency auditing visit each participant. This means that ALL electricity efficiency opportunities are specified in the work order. This model ensures that all SBL-eligible conservation opportunities over and above the "free" $1500 are quantified and presented to customers.

- Kingston Hydro performed QA/QC as per OPA guidelines for 2014 completed work orders. A handful of minor discrepancies and only one major discrepancy were found. All have been corrected. Contractors involved in the program should be commended for doing high quality work, addressing all customer warranty issues, and ensuring that work orders are followed.

- Due to the persistence of customer complaints about door-to-door energy retailer sales tactics, evidence of retailers mis-representing themselves as representatives of Utilities Kingston, Kingston Hydro, "Ontario Hydro", "your hydro company" or the Ontario Power Authority, and resultant customer confusion, Utilities Kingston and Kingston Hydro have a 'no door-to-door' policy. While door to-door sales could be highly effective for the small commercial market, leading to uptake over and above the current SBL Program plateau, this Ontario energy market dynamic limits the availability of this option to LDCs and has eroded consumer trust in LDC and OPA/IESO branded programs.

### *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 scoping study, investigation, implementation and hand off/completion phases of building commissioning projects.

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

**Delivery:** LDC delivered.

Additional detail is available:

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

**Initiative Activities/Progress:** Kingston Hydro explored this initiative with its large customers who could benefit. It was not seen as a program that they were interested in. Kingston Hydro reports no participation, kW or kWh savings from this initiative.

**In Market Date: Q2, 2011**

**Lessons Learned:**

- There was no customer uptake for this initiative. Kingston Hydro's customers prefer the Retrofit Program to this initiative to fund capital upgrades.

### *2.2.2.4 NEW CONSTRUCTION AND MAJOR RENOVATION INITIATIVE (HPNC)*

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

**Initiative Frequency:** Year round

**Objective:** 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. 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.

**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.

Additional detail is available:

- Schedule C-4: http://www.powerauthority.on.ca/sites/default/files/page/ScheduleC-4NewContructionInitiativeV2.pdf
- saveONenergy website: https://saveONenergy.ca/Business/Program-Overviews/New-Construction.aspx

**Initiative Activities/Progress:** Kingston Hydro has worked with the City of Kingston's building department and has representatives in regular attendance at municipal "Pre-consultation" and planning meetings which all major construction and renovation projects within its territory go through. Kingston Hydro's efforts to reach builders before projects are approved or get building permits should result in moderate kW and kWh conservation achievements in the future. A number of modeling incentives and initial applications came in for projects that will be completed in future years.

Net Annual Peak Demand Savings at December 31, 2014 from this initiative: 71kW, 1% of Target.

Cumulative 2011-2014 energy savings achieved as of December 31, 2014: 207,322 kWh, 0.6% of Target.

**In Market Date:** Q2, 2011

**Lessons Learned:**

- Engagement of development proponents during the City of Kingston pre-consultation process is key to driving program participation. Follow up and engagement by Utilities Kingston conservation staff with both consulting engineers and developers is required to develop applications.

### *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 conducted by a qualified third party 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
- saveONenergy website: https://saveONenergy.ca/Business/Program-Overviews/Audit-Funding.aspx

**Initiative Activities/Progress:** During 2014, Kingston Hydro provided audit funding to five customers.

Net Annual Peak Demand Savings from this initiative at December 31, 2014: 110 kW, 1.6% of Target.

Cumulative 2011-2014 energy savings achieved as of December 31, 2014: 897,815 kWh, 2.4% of Target

**In Market Date:** Q2, 2011

**Lessons Learned:**

- Kingston Hydro's provision of free walkthrough electricity efficiency assessments and short reports for all commercial customers has made the audit program somewhat irrelevant for customers looking at simpler energy retrofits.
- The Audit Program has helped justify some significant investment in electricity conservation by a small number of customers. Condo boards in Kingston were the majority of participants in 2014.

### *2.2.2.6 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 projects 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 parts: 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 project costs

c) A one year payback

**Targeted End Uses:** Processes and systems at large industrial and or institutional customers

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

Additional detail is available:

- Schedule D-1: http://www.powerauthority.on.ca/sites/default/files/new_files/industry_stakeholders/current_e

lectricity_contracts/pdfs/Schedule%20D-1%20Process%20and%20Systems%20Upgrades%20Initiative.pdf

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

**Initiative Activities/Progress:** Numerous larger customers were approached by Kingston Hydro to gauge interest in the PSUI program. Most customers in Kingston Hydro territory either could not guarantee minimum kWh savings levels or were more interested in participating in the RETROFIT program.

Kingston Hydro believes that there is potential for a number of PSUI applications that are possible in years to come, partially due to the incentive for demand peak shaving provided to Class A customers through the Global Adjustment Allocation initiative of the IESO.

No participants in 2014. 0 kW and 0 kWh savings achieved.

**In Market Date:** Q2, 2011

**Lessons Learned:**

- The PSUI program targets large customers that are undertaking large capital projects. There is typically a long sales cycle to sell these projects, and then a long project development cycle. As such, results from PSUI are not projected before the end of 2014, and then only if some prospects follow through with an application.
- Given the size of the projects involved, the contract required for PSUI is a lengthy and complicated document. Application documents are extensive and unnecessarily detailed at the front end of the process, scaring some customers off.

### *2.2.2.7 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 systems in order to deliver a minimum savings target at the end of 24 months and sustain the savings for the term of the funding agreement.

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

**Targeted End Uses:** Various end uses at larger customers.

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

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

**Initiative Activities/Progress:** Kingston Hydro had no uptake by customers of this initiative during 2011-14 Period.

**In Market Date:** Q3, 2011

Lessons Learned: N/A

### *2.2.2.8 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.

**Targeted End Uses:**

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

Additional detail is available:

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

**Initiative Activities/Progress:** Kingston Hydro approached each of its largest customers early in the target period to make them aware of the opportunity for an embedded energy manager. Business cases were created by Kingston Hydro and its customers, and it was decided by the customers that they would prefer to utilize KAM resources rather than an embedded manager.

**In Market Date:** Q2, 2011

**Lessons Learned:** N/A

### *2.2.2.9 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 or ERII initiatives. 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:** See above.

**Targeted End Uses:** Large, Class A Customers with demand over 5 MW. In Kingston Hydro's territory, these include Kingston General Hospital, CFB Kingston, and Queen's University.

**Delivery:** Kingston Hydro had applied and been accepted as a junior member of a Hydro One/Veridian application to the OPA for KAM funding. Delivery of KAM resources to Kingston Hydro's Class A customers began in 2012.

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:** Union Gas supplies dedicated KAM resources to Kingston Hydro as part of its participation in a contract led by Hydro One. KAM resources were instrumental in helping Kingston General Hospital complete its post project submission and EM&V for a large custom ERII/Retrofit Project in 2013.

In 2014, Kingston Hydro cancelled its contracted KAM resources, and brought key Class A customer account management and CDM services in house to improve cost effectiveness and leverage longer term, local relationships that these customers have with Utilities Kingston CDM staff.

**In Market Date:** Q3 2012

**Lessons Learned:**

- KAM resources were a welcome, well-qualified addition to Kingston Hydro's conservation team. With Utilities Kingston conservation staff now developed to include two Certified Energy Mangers, these resources were no longer required.

### *2.2.2.10 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 for commercial and industrial customers with demand 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:** Large industrial loads, commercial & institutional loads, Behind the Meter Generation

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


*Al McLuskie and Chriss Rousseau of Kingston General Hospital. This single customer jointly owns a 5MW Demand Response generator and has already delivered 2.5MWh of energy savings and 300+ kW of demand savings through energy efficiency initiatives. By the end of 2014, they'll have completed phase 2 of a comprehensive electricity conservation RETROFIT program, achieving even more savings.*

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

**Initiative Activities/Progress:** The Queen's University-KGH Combined Heat and Power Facility entered into a long-term DR3 contract with the OPA in Q1, 2011. This contract provides 5MW of demand response capacity through December 31, 2014. Kingston Hydro's peak demand target and net verified savings under Scenario 2 show that 66.6% of Kingston Hydro's peak demand target has been met from this facility alone.

In order to facilitate this large amount of demand response generation capability, Kingston Hydro continues to work with Queen's-KGH to make changes to operational and notification protocols, make capital investments in the distribution system and SCADA system to allow for safe and coordinated demand response operation, and to maximize the ability of the facility to respond in all situations to notifications from the IESO.

It should be noted that the bulk of expenses incurred by Kingston Hydro in the course of enabling demand response capability for the 5MW Queen's-KGH CHP generator were not PAB eligible expenses. Much of the engineering and technical work required is fundable through rates or customer charges as per the Distribution System Code and are exclusive of CDM programming.

Significant adjustments have been made to past year results to both properly reflect the program classification of this project, and to reflect application of a site-specific net-to-gross ratio, reflecting the uniqueness of this project in comparison to other Commercial and Institutional demand response providers.

Net Peak Demand Savings from this initiative at December 31, 2014: 4, 440 kW, 66.6% of Target.

Cumulative 2011-2014 energy savings achieved as of December 31, 2014: 283,299 kWh, 0.76% of Target

**In Market Date:** Q1, 2011

**Lessons Learned:**

- Despite Kingston Hydro referring many commercial customers to DR3 aggregators, few customers in Kingston seem to have the scale of DR capacity needed to enter into an economically feasible DR contract with an aggregator.

### 2.2.3 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.

**Targeted End Uses**: Lighting, phantom load, refrigeration, air conditioning, dehumidification, electric heating, and others.

**Delivery:** LDC delivered.

Additional detail is available:

- Schedule E http://www.powerauthority.on.ca/sites/default/files/page/Low%20Income%20Schedule%20-%20redacted%20version.pdf
- saveONenergy Website: https://saveonenergy.ca/homeassistance/

**Initiative Activities/Progress:** Delivery of the program did not start until Q3 2012. Kingston Hydro's Home Assistance Program (HAP) team has enrolled a number of Social Housing Providers in the program, resulting in the opportunity to visit 349 pre-qualified participants in 2013. In 2014, the stock of pre-qualified social housing residences was exhausted within Kingston Hydro territory. As a result, HAP participation dwindled to 43 in 2014. Compared to the ease of reaching pre-qualified social housing residents, enrolling members of the general public who need to undergo a very onerous qualification and application procedure inhibits uptake.

Customer feedback about the program was overwhelmingly positive. Customers who participated in the program achieved annual electricity consumption reductions of around 800 kWh, equivalent to a 10% reduction in consumption for the average Kingston Hydro residential customer. Integration and delivery of water and gas savings measures during HAP visits took place, delivering further program enabled savings and leveraging Utilities Kingston's multi-utility model to improve cost effectiveness and savings achievement for this program.

Utilities Kingston's Home Assistance Program Team

Net Peak Demand Savings from this initiative at December 31, 2014: 40 kW, 0.6% of Target.

Cumulative 2011-2014 energy savings achieved as of December 31, 2014: 730,262 kWh, 2% of Target

**In Market Date:** Q3, 2012

**Lessons Learned:**

- Each Home Assistance Program retrofit completed in 2014 ensured an in-home assessment and one-on-one conservation education session. For those customers comfortable using a computer with an internet connection, the assessor also helped the customer sign up for Utilities Kingston's new "MyUtilities" portal, an online tool which allows customers to analyze their smart meter, water, and gas consumption data. This portal offers access to analysis and data viewing tools that help drive conservation.
- This program has forged stronger links between Utilities Kingston's Credit and Collection staff, the Conservation Department, and local social services providers.
- The program has high fixed costs, customers who are hard to reach using direct or mass marketing efforts, and much more administratively burdensome application and retrofit procedures than comparable Commercial and Institutional programs. A low income Ontarian has to go through more paperwork to receive a few light bulbs and some one-on-one help than a business owner has to go through to get thousands of dollars of free lighting and additional incentives through the SBL program. The application and qualification process needs to be streamlined and made more accessible by the IESO in line with the needs and abilities of the target market for the HAP program.
- Kingston Hydro's 2011-2014 CDM strategy notes that the prevalence of seniors, students, and households with lower than average incomes makes it an especially relevant program for our community.

### 2.2.4 PRE-2011 PROGRAMS COMPLETED IN 2011

#### *2.2.4.1 ELECTRICITY RETROFIT INCENTIVE PROGRAM*

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

**Initiative Frequency:** Year-round

**Objective:** Analogous to ERII, refer to section 2.2.2.1.

**Description:** Analogous to ERII, refer to section 2.2.2.1.

**Targeted End Uses**: Analogous to ERII, refer to section 2.2.2.1.

**Delivery**: Analogous to ERII, refer to section 2.2.2.1.

**Initiative Activities/Progress:**

The IESO reports that zero pre-2011 ERIP projects were completed in 2014 within Kingston Hydro territory.

Net Annual Peak Demand Savings in MW at December 31, 2014 from this initiative: 12 kW, 0.2% of Target

Cumulative 2011-2014 energy savings from this initiative achieved as of December 31, 2014: 317,348 kWh, 0.1% of Target

#### *2.2.4.2 HIGH PERFORMANCE NEW CONSTRUCTION*

**Target Customer Type(s):** Commercial, Institutional, and Agricultural 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 High Performance 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**: The High Performance New Construction program was delivered by Enbridge Gas under contract with the IESO (and subcontracted to Union Gas), which ran until December 2010.

**Initiative Activities/Progress:** The IESO reports that zero pre-2011 HPNC projects were completed in 2014.

Net Annual Peak Demand Savings at December 31, 2014 from pre-2011 projects: 155 kW, 2.3% of Target

Cumulative 2011-2014 energy savings from this initiative achieved as of December 31, 2014: 2,305,850 kWh, 6.2% of Target

### 2.2.5 PROGRAM ENABLED SAVINGS

Over the 2011-14 period Kingston Hydro engaged in three Program Enabled Savings projects.

Utilities Kingston service advisors aided in the retrofit of 18 Electric domestic water heaters to gas units, leading to over 283,000 cumulative gross kWh of electrical load taken off the grid. These savings are considered fuel switching, and do not count towards Kingston Hydro's CDM targets. They are likewise not included in any LRAMVA amounts requested by Kingston Hydro.

Utilities Kingston's water conservation programs also save electricity. By reducing the volume of water and sewage that Utilities Kingston has to treat and pump, water conservation has been calculated by Utilities Kingston to save 0.466 kWh/m3 of avoided consumption. Since Kingston Hydro saveONenergy programs and Utilities Kingston water conservation programs are delivered in tandem, over 80,000 kWh of gross electricity savings from avoided water consumption were achieved indirectly by Utilities Kingston

customers receiving water conservation incentives. These customers included Home Assistance Program participants without electric water heating, who received free water conservation measures funded by Utilities Kingston.

Kingston Hydro's Program Enabled Savings that count towards Kingston Hydro's CDM targets, verified by the IESO with appropriate net to gross and realization rates applied totaled 4,712 kWh. Kingston Hydro could address this by paying for third-party technical verification of Program Enabled Savings, but the cost of such an endeavor would outweigh the benefit of counting such small savings towards CDM targets.

Finally, Kingston Hydro's Energy Insights Program, launched in the winter of 2014, delivered program enabled savings over the 2014-2015 heating season. This program and its results are discussed at length in s 1.7.1. Savings created from coupons cashed by Energy Insights program participants in 2014 are tallied towards Kingston Hydro's 2011-2014 CDM results. Savings created through behavioural change or non-incented savings, estimated at 806,000 kWh of annual savings, will be claimed by Kingston Hydro once final EM&V reporting is complete and savings will be allocated to the 2015 program year.

## 2.3 Participation

| # | Initiative | Unit | 2014 Participation |
|---|---|---|---|
| **Consumer Program** | | | |
| 1 | Appliance Retirement | Appliances | 56 |
| 2 | Appliance Exchange | Appliances | 41 |
| 3 | HVAC Incentives | Equipment | 293 |
| 4 | Conservation Instant Coupon Booklet | Products | 6,775 |
| 5 | Bi-Annual Retailer Event | Products | 24,190 |
| 6 | Retailer Co-op | Products | 0 |
| 7 | Residential Demand Response | Devices | 0 |
| 8 | Residential New Construction | Houses | 0 |
| **Business Program** | | | |
| 9 | Efficiency: Equipment Replacement | Projects | 75 |
| 10 | Direct Install Lighting | Projects | 110 |
| 11 | Existing Building Commissioning Incentive | Buildings | 0 |
| 12 | New Construction and Major Renovation Incentive | Buildings | 2 |
| 13 | Energy Audit | Audits | 5 |
| 14 | Commercial Demand Response (part of the Residential program schedule) | Devices | 0 |
| 15 | Demand Response 3 (part of the Industrial program schedule) | Facilities | 2 |
| **Industrial Program** | | | |
| 16 | Process & System Upgrades | Projects[2] | 0 |
| 17 | Monitoring & Targeting | Projects[3] | 0 |
| 18 | Energy Manager | Managers[2 3] | 0 |
| 19 | Efficiency: Equipment Replacement Incentive (part of the C&I program schedule) | Projects | 0 |
| 20 | Demand Response 3 | Facilities | 1 |
| **Home Assistance Program** | | | |
| 21 | Home Assistance Program | Homes | 43 |
| **Pre 2011 Programs Completed in 2011** | | | |
| 22 | Electricity Retrofit Incentive Program | Projects | 0 |
| 23 | High Performance New Construction | Projects | 0 |

*All figures from IESO Verified Kingston Hydro Conservation Results, 2014*

## 2.4 Spending

**Kingston Hydro Corporation OPA Reported Initiative and Program Level Spending By Year**

| Initiative | Program Administration Costs | | | | *Customer Incentives | | | |
|---|---|---|---|---|---|---|---|---|
| | 2011 | 2012 | 2013 | 2014 | 2011 | 2012 | 2013 | 2014 *** |
| **Consumer Program** | | | | | | | | |
| Appliance Retirement | $5,689.00 | $13,503.00 | $17,261.00 | $37,388.79 | $24,625.00 | $26,068.00 | $11,120.00 | $13,537.39 |
| Appliance Exchange | - | - | - | - | - | $1,990.00 | $207.91 | $1,217.76 |
| HVAC Incentives | $5,689.00 | $13,503.00 | $20,518.00 | $71,529.04 | $86,220.00 | $93,869.00 | $44,500.00 | $73,250.00 |
| Conservation Instant Coupon Booklet | $5,689.00 | $13,503.00 | $20,909.00 | $71,529.04 | $734.00 | $4,136.00 | $1,258.00 | $4,887.01 |
| Bi-Annual Retailer Event | - | - | - | - | $2,752.00 | $6,518.00 | $11,494.00 | $58,695.35 |
| Retailer Co-op | - | - | - | - | Included in Bi-annual Retailer Event | | | |
| Residential New Construction | $5,689.00 | $13,503.00 | $0.00 | $37,163.79 | $19.00 | $28.00 | $0.00 | $0.00 |
| **Consumer Program Total** | **$22,756** | **$54,012** | **$58,688** | **$217,611** | **$114,349** | **$132,610** | **$68,372** | **$151,588** |
| **Business Program** | | | | | | | | |
| Retrofit | $34,682.00 | $114,542.00 | $103,947.00 | $126,077.74 | $0.00 | $400,504.00 | $256,050.00 | $413,033.36 |
| **Direct Install Lighting | $51,661.00 | $100,881.00 | $36,865.00 | $94,032.71 | $88,835.00 | $341,529.00 | $66,983.00 | $130,222.60 |
| Building Commissioning | $10,079.00 | $0.00 | $0.00 | - | $0.00 | $0.00 | $0.00 | $0.00 |
| New Construction | $9,909.00 | $18,760.00 | $11,411.00 | $13,912.90 | $0.00 | $0.00 | $1,970.00 | $83,537.90 |
| Energy Audit | $9,909.00 | $18,760.00 | $10,157.00 | $13,784.93 | $0.00 | $0.00 | $39,994.00 | $6,717.00 |
| **Business Program Total** | **$116,240** | **$252,943** | **$162,380** | **$247,808** | **$88,835** | **$742,033** | **$364,996** | **$633,511** |
| **Industrial Program** | | | | | | | | |
| Process & System Upgrades | $0.00 | $0.00 | $0.00 | $9,725.92 | $0.00 | $0.00 | $0.00 | $0.00 |
| Monitoring & Targeting | $0.00 | $0.00 | $0.00 | $4,862.96 | $0.00 | $0.00 | $0.00 | $0.00 |
| Demand Response 3 | $840.96 | $9,938.79 | $11,499.21 | $4,862.96 | n/a | n/a | n/a | n/a |
| Energy Manager | $841.00 | $9,939.00 | $4,928.00 | $1,006.35 | $0.00 | $0.00 | $0.00 | $0.00 |
| **Industrial Program Total** | **$1,682** | **$19,878** | **$16,427** | **$20,458** | **$0** | **$0** | **$0** | **$0** |
| **Home Assistance Program** | | | | | | | | |
| Home Assistance Program | $4,722.00 | $55,015.00 | $78,092.00 | $79,636.51 | $0.00 | $1,645.00 | $162,872.00 | $52,732.38 |
| **Home Assistance Program Total** | **$4,722** | **$55,015** | **$78,092** | **$79,637** | **$0** | **$1,645** | **$162,872** | **$52,732** |
| **Pre-2011 Programs completed in 2011** | | | | | | | | |
| Pre-2011 Programs completed in 2011 Total | - | - | - | - | $97,410.00 | $172,175.00 | $18,332.00 | n/a |
| **Pre-2011 Programs completed in 2011 Total** | **$0** | **$0** | **$0** | **$0** | **$97,410** | **$172,175** | **$18,332** | **$0** |
| **Other** | | | | | | | | |
| Program Enabled Savings | - | - | - | - | - | - | - | |
| **Other Total** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **IESO-Contracted LDC Portfolio Total** | **$143,718** | **$361,970** | **$299,160** | **$545,055** | **$300,594** | **$1,046,818** | **$451,700** | **$785,098** |

| **Kingston Hydro Calculated Financial Performance of Electricity CDM Portfolio** | |
|---|---|
| Total 2011-2014 Portfolio Spending | $3,934,113.82 |
| Cumulative 2011-2014 kWh Savings | 45,958,623 |
| Estimated avoided supply cost per kWh | $0.13 |
| Estimated Customer Savings/System Savings, 2011-2014 | $5,974,620.99 |

Incentives for Demand Response 3 paid directly from the IESO to participants are excluded for the purposes of this report.
*2011-2013 numbers are actuals and represent amounts paid to LDCs/vendors for each initiative (i.e. excludes accruals), therefore savings can be in a different year than the incentive payments.
**Customer Incentive values align with install dates as reported in the small business lighting portal
*** Consumer Incentive dollar values estimated based on 2013 IESO-reported $/participant. No 2014 values available from IESO

## 2.5 Evaluation

Kingston Hydro's IESO-reported 2011-2014 CDM Results report is attached. This report provides evaluation results for each saveONenergy initiative, including Gross and Net savings, data showing both Kingston Hydro verified savings and province-wide savings for comparison, Net to Gross factors for all initiatives in all years, and Realization Rates for all programs in all years.

Kingston Hydro is committed to compliance with all saveONenergy program rules and relevant CDM codes and standards. Kingston Hydro performs Evaluation Measurement & Verification in compliance the ISEO Master CDM Agreement requirements. In 2014, a Program Audit was completed for Kingston Hydro's saveONenergy program delivery by Bronson Consulting on behalf of the IESO. This "CDM Program Quality Assurance Inspection – Kingston Hydro" report, dated May 13, 2014 and available from the IESO detailed several discrepancies and issues. The causes of issues identified in this report have been identified, full internal program delivery reviews of contractors and staff procedure and a full compliance review of all paperwork were undertaken, and Kingston Hydro took actions to remediate discrepancies and ensure compliance to the satisfaction of the Auditors and IESO Evaluation team.

Of 1202 total installations funded by saveONenergy incentives administered by Kingston Hydro from 2011 through 2013, and reviewed post-audit, less than 5% were found to have irregularities in incentive documentation.

A full audit of PAB Expenditures by Kingston Hydro for the 2014 program year, conducted by Bronson Consulting on behalf of the IESO, is currently underway.

Kingston Hydro is grateful for the diligence shown by the IESO in ensuring saveONenergy program compliance by us and our customers and providing good stewardship of rate-payer funds, in the form of reasonable program requirements, application procedures, and financial settlement guidelines.

## 2.6 Additional Comments

Kingston Hydro believes that attentive customer service and in-person, on-site conservation consultations are key to conservation program success. Programs get better results when customers have someone to talk to. IESO programs and application procedures assume a level of sophistication, computer literacy, and energy management knowledge that many Kingston Hydro customers do not have.

*"The folks from Utilities Kingston came in, took a look at our business, pointed out our best electricity and water saving opportunities, and offered help with applications for financial incentives," says Richard Mitchell, Owner –Operator of The Queen's Inn.*

We need to thank our customers for the trust they have put in Utilities Kingston and Kingston Hydro by directing investment away from core business functions or discretionary consumer spending to electricity conservation. We are proud to have helped our customers save money and reduce the environmental impact of their electricity use.

Kingston Hydro is fortunate that its relationship with affiliate Utilities Kingston allows close collaboration with the local water, wastewater, and natural gas provider, as required in the CDM Code. This improves conservation program cost effectiveness and value to its customers.

We are grateful for the assistance and patience of the staff of the IESO as we sought to improve program delivery, transactional efficiency, and fully verify savings and Master Agreement compliance for the 2011-2014 Framework and prepare Kingston Hydro's 2015-2020 "Conservation First Framework" Conservation Plan.

# 3 Combined CDM Reporting Elements

## 3.1 Progress Towards CDM Targets

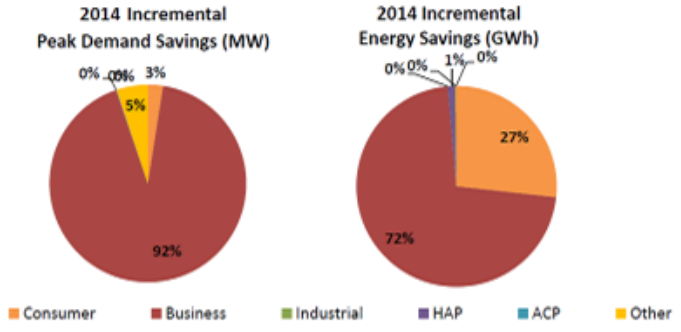
**IESO-Contracted Province-Wide CDM Programs: 2011-2014 Final Results Report**

LDC: Kingston Hydro Corporation

| Final 2014 Achievement Against Targets | 2014 Incremental | 2011-2014 Achievement Against Target | % of Target Achieved |
|---|---|---|---|
| Net Annual Peak Demand Savings (MW) | 5.3 | 7.5 | 112.9% |
| Net Energy Savings (GWh) | 3.9 | 46.0 | 123.7% |

*Unless otherwise noted, results are presented using scenario 1 which assumes that demand response resources have a persistence of 1 year*

**Achievement by Sector**




**Comparison: LDC Achievement vs. LDC Community Achievement (Progress to Target)**

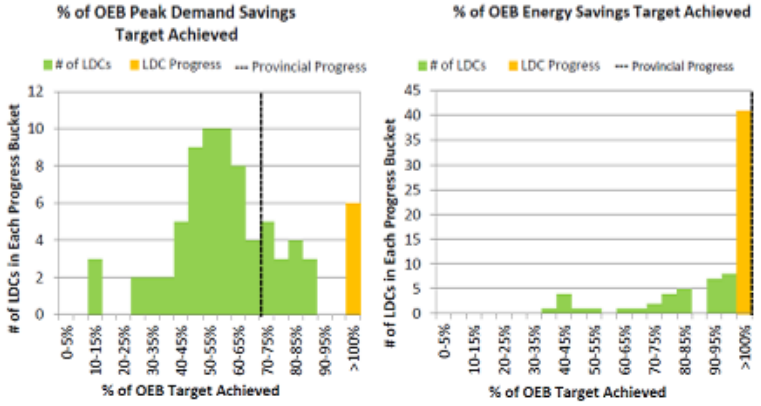


Table 1: Kingston Hydro Corporation Initiative and Program Level Net Savings by Year

| Initiative | Unit | Incremental Activity (new program activity occurring within the specified reporting period) | | | | Net Incremental Peak Demand Savings (kW) (new peak demand savings from activity within the specified reporting period) | | | | Net Incremental Energy Savings (kWh) (new energy savings from activity within the specified reporting period) | | | | Program-to-Date Verified Progress to Target (excludes DR) | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 2011* | 2012* | 2013* | 2014 | 2011 | 2012 | 2013 | 2014 | 2011 | 2012 | 2013 | 2014 | 2014 Net Annual Peak Demand Savings (kW) | 2011-2014 Net Cumulative Energy Savings (kWh) |
| | | | | | | | | | | | | | | 2014 | 2014 |
| **Consumer Program** | | | | | | | | | | | | | | | |
| Appliance Retirement | Appliances | 182 | 91 | 46 | 56 | 10 | 5 | 3 | 4 | 69,602 | 36,436 | 19,133 | 23,017 | 22 | 448,795 |
| Appliance Exchange | Appliances | 22 | 67 | 7 | 41 | 2 | 9 | 1 | 8 | 2,646 | 16,002 | 2,586 | 15,147 | 20 | 77,608 |
| HVAC Incentives | Equipment | 293 | 225 | 178 | 293 | 118 | 53 | 38 | 65 | 230,820 | 95,798 | 69,936 | 123,220 | 275 | 1,473,764 |
| Conservation Instant Coupon Booklet | Items | 2,694 | 155 | 1,745 | 6,775 | 6 | 1 | 3 | 13 | 98,588 | 7,010 | 38,644 | 184,681 | 23 | 677,353 |
| Bi-Annual Retailer Event | Items | 4,774 | 5,319 | 4,737 | 24,190 | 8 | 7 | 6 | 40 | 147,342 | 134,277 | 86,136 | 616,205 | 62 | 1,780,675 |
| Retailer Co-op | Items | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Residential Demand Response | Devices | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Residential Demand Response (IHD) | Devices | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Residential New Construction | Homes | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Consumer Program Total** | | | | | | **145** | **76** | **51** | **132** | **548,997** | **289,524** | **216,435** | **962,270** | **402** | **4,458,195** |
| **Business Program** | | | | | | | | | | | | | | | |
| Retrofit | Projects | 40 | 63 | 76 | 75 | 360 | 536 | 240 | 233 | 1,921,835 | 3,121,717 | 5,089,596 | 1,834,238 | 1,342 | 28,974,239 |
| Direct Install Lighting | Projects | 108 | 386 | 62 | 110 | 105 | 238 | 64 | 93 | 264,376 | 942,755 | 222,932 | 338,658 | 477 | 4,602,374 |
| Building Commissioning | Buildings | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| New Construction | Buildings | 0 | 6 | 7 | 7 | 0 | 1 | 22 | 49 | 0 | 1,597 | 58,807 | 84,977 | 71 | 207,377 |
| Energy Audit | Audits | 3 | 7 | 2 | 5 | 0 | 26 | 18 | 67 | 0 | 125,881 | 96,902 | 326,368 | 110 | 897,815 |
| Small Commercial Demand Response | Devices | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Small Commercial Demand Response (IHD) | Devices | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Demand Response 3 | Facilities | 3 | 3 | 2 | 2 | 4,018 | 4,030 | 3,894 | 4,440 | 156,889 | 58,581 | 52,002 | 0 | 4,440 | 267,472 |
| **Business Program Total** | | | | | | **4,484** | **4,831** | **4,238** | **4,882** | **2,343,100** | **4,250,531** | **5,520,234** | **2,584,191** | **6,441** | **34,949,222** |
| **Industrial Program** | | | | | | | | | | | | | | | |
| Process & System Upgrades | Projects | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Monitoring & Targeting | Projects | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Energy Manager | Projects | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Retrofit | Projects | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Demand Response 3* | Facilities | 0 | 1 | 1 | 0 | 0 | 349 | 326 | 0 | 0 | 8,416 | 7,412 | 0 | 0 | 15,828 |
| **Industrial Program Total** | | | | | | **0** | **349** | **326** | **0** | **0** | **8,416** | **7,412** | **0** | **0** | **15,828** |
| **Home Assistance Program** | | | | | | | | | | | | | | | |
| Home Assistance Program | Homes | 0 | 71 | 549 | 45 | 0 | 6 | 27 | 8 | 0 | 48,513 | 272,016 | 46,220 | 40 | 730,262 |
| **Home Assistance Program Total** | | | | | | **0** | **6** | **27** | **8** | **0** | **48,513** | **272,016** | **46,220** | **40** | **730,262** |
| **Aboriginal Program** | | | | | | | | | | | | | | | |
| Home Assistance Program | Homes | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Direct Install Lighting | Projects | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Aboriginal Program Total** | | | | | | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** |
| **Pre-2011 Programs completed in 2011** | | | | | | | | | | | | | | | |
| Electricity Retrofit Incentive Program | Projects | 3 | 0 | 0 | 0 | 12 | 0 | 0 | 0 | 79,337 | 0 | 0 | 0 | 12 | 317,348 |
| High Performance New Construction | Projects | 3 | 2 | 0 | 0 | 64 | 90 | 0 | 0 | 331,043 | 327,226 | 0 | 0 | 155 | 2,305,850 |
| Toronto Comprehensive | Projects | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Multifamily Energy Efficiency Rebates | Projects | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| LDC Custom Programs | Projects | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Pre 2011 Programs completed in 2011 Total** | | | | | | **77** | **90** | **0** | **0** | **410,380** | **327,226** | **0** | **0** | **167** | **2,623,198** |
| **Other** | | | | | | | | | | | | | | | |
| Program Enabled Savings | Projects | 0 | 5 | 6 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4,712 | 0 | 4,712 |
| Time-of-Use Savings | Homes | 0 | 0 | 0 | n/a | 0 | 0 | 0 | 273 | 0 | 0 | 0 | 0 | 273 | 0 |
| LDC Pilots | Projects | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Other Total** | | | | | | **0** | **0** | **0** | **273** | **0** | **0** | **0** | **4,712** | **273** | **4,712** |
| **Adjustments to 2011 Verified Results** | | | | | | | **83** | **0** | **0** | | **491,455** | **0** | **44,852** | **83** | **2,144,346** |
| **Adjustments to 2012 Verified Results** | | | | | | | | **45** | **3** | | | **142,728** | **35,925** | **49** | **536,052** |
| **Adjustments to 2013 Verified Results** | | | | | | | | | **28** | | | | **248,397** | **28** | **496,807** |
| **Energy Efficiency Total** | | | | | | **687** | **573** | **422** | **855** | **3,145,588** | **4,857,213** | **5,956,685** | **3,597,595** | **2,883** | **42,498,118** |
| **Demand Response Total (Scenario 1)** | | | | | | **4,018** | **4,379** | **4,220** | **4,440** | **156,889** | **66,996** | **59,414** | **0** | **4,440** | **283,299** |
| **Adjustments to Previous Years' Verified Results Total** | | | | | | **0** | **83** | **45** | **32** | **0** | **491,455** | **142,728** | **329,175** | **160** | **3,177,206** |
| **OPA-Contracted LDC Portfolio Total (Inc. Adjustments)** | | | | | | **4,705** | **5,435** | **4,687** | **5,327** | **3,302,477** | **5,415,664** | **6,158,825** | **3,926,568** | **7,483** | **45,958,623** |
| | | | | | | | | | | | | | **Full OEB Target:** | **6,630** | **37,160,000** |
| | | | | | | | | | | | | | **% of Full OEB Target Achieved to Date (Scenario 1):** | **112.9%** | **123.7%** |

Activity and savings for Demand Response resources for each year represent the savings from all active facilities or devices contracted since January 1, 2011 (reported cumulatively).
*Results contain a DR contributor that was applied to Kingston Hydro's service territory in error in 2012 and 2013 respectively. The contributor has been removed in 2014.

*Includes adjustments after Final Reports were issued

Results presented using scenario 1 which assumes that demand response resources have a persistence of 1 year

## 3.2 Modifications to CDM Strategy

Since the 2011-2014 Target period is over, and Kingston Hydro has exceeded both its OEB-mandated Net Peak Demand and Net Cumulative Energy savings targets, no modifications to Kingston Hydro's CDM Strategy are required.

# 4. Contact Information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brustige@utilitieskingston.com

## Message from the Vice President:

The IESO is pleased to provide the enclosed 2011-2014 Final Results Report. This report is designed to help populate LDC Annual Reports that will be submitted to the Ontario Energy Board (OEB) in September 2015.

**2011-2014 Conservation Framework Highlights:**

- LDCs have made significant achievements against dual energy and peak demand savings targets. Collectively, the LDCs have achieved 109% of the energy target and 70% of the peak demand target.
- Momentum has built as we transition to the Conservation First Framework. 2014 demonstrated an achievement of over 1 TWh of net incremental energy savings, positioning us well for average net incremental energy savings of 1.2 TWh required in the new framework to meet our 2020 CDM targets.
- Throughout the past framework, program results have become more predictable year over year as noted in the increasingly smaller variance between quarterly preliminary results and verified final results.
- Customer engagement continued to increase in both the Consumer and Business Programs. Between 2011 - 2014 consumers have purchased over 10 million energy efficient products through the saveONenergy COUPONS program. Customers in RETROFIT continue to declare a positive experience participating in the program with 86% likely to recommend.
- saveONenergy has seen a steady and significant increase in unaided brand awareness by 33% from 2011-2014
- Conservation is becoming even more cost-effective as programs become more efficient and effective. 2014 proved early investments in long lead time projects will pay off with the high savings now being realized in programs like PROCESS & SYSTEMS and RETROFIT. Within 4 cents per kWh, Conservation programs continue to be a valuable and cost effective resource for customers across the province.

The 2011-2014 Final Results within this report vary from the Draft 2011-2014 Final Results Report for the following reasons:

- Savings from Time of Use pricing are included in the Final Results Report. Overall the province saved 55 MWs from Time-of-Use pricing in 2014, or 0.73% of residential summer peak demand.
- Between August 4th and August 28th, the IESO and LDCs have worked collaboratively to reconcile projects from 2011-2014 Final Results Report to ensure every eligible project was captured and accurately reported.
- Verified savings from Innovation Fund pilots are also included for participating LDCs.

All results will be considered final for the 2011-2014 Conservation Framework. Any additional program activity not captured in the 2011-2014 Final Results Report will not be included as part of a future adjustment process.

Please continue to monitor saveONenergy E-blasts for future updates and should you have any other questions or comments please contact LDC.Support@ieso.ca.

We appreciate your collaboration and cooperation throughout the reporting and evaluation process and we look forward to the success ahead in the Conservation First Framework.

Sincerely,

Terry Young

## Table of Contents

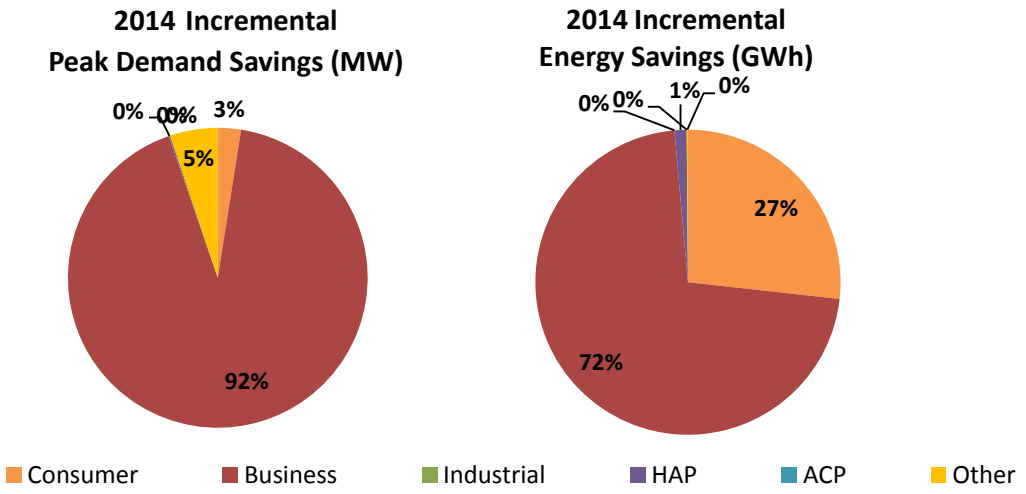
## IESO-Contracted Province-Wide CDM Programs: 2011-2014 Final Results Report

**LDC:** Kingston Hydro Corporation

| Final 2014 Achievement Against Targets | 2014 Incremental | 2011-2014 Achievement Against Target | % of Target Achieved |
|---|---|---|---|
| **Net Annual Peak Demand Savings (MW)** | 5.3 | 7.5 | **112.9%** |
| **Net Energy Savings (GWh)** | 3.9 | 46.0 | **123.7%** |

*Unless otherwise noted, results are presented using scenario 1 which assumes that demand response resources have a persistence of 1 year*

## Achievement by Sector




## Comparison: LDC Achievement vs. LDC Community Achievement (Progress to Target)

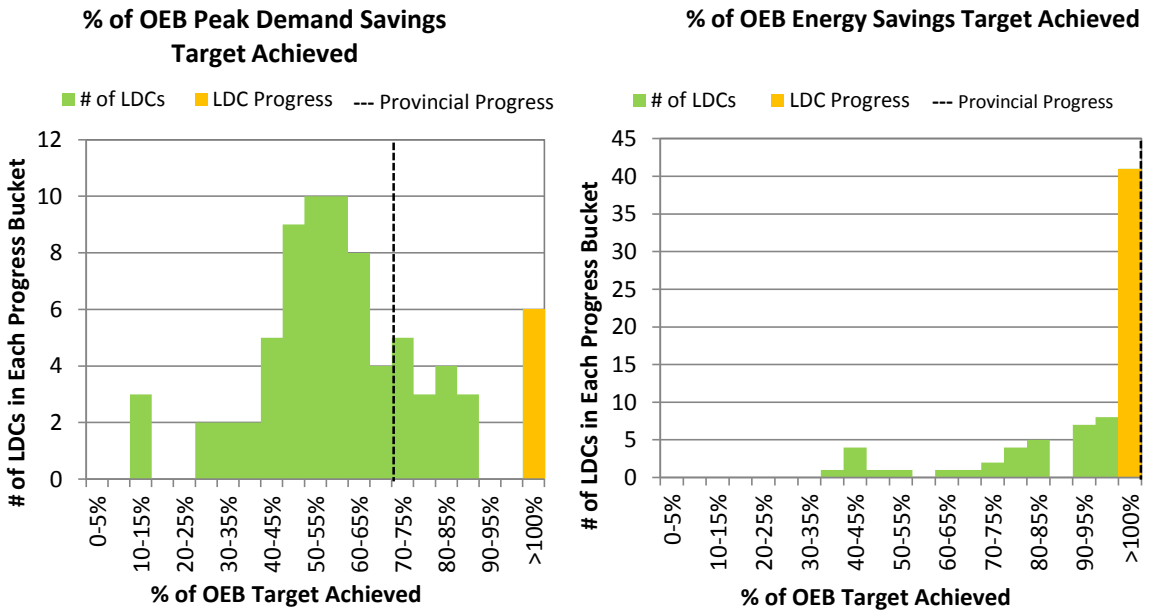


Table 1: Kingston Hydro Corporation Initiative and Program Level Net Savings by Year

| Initiative | Unit | Incremental Activity (new program activity occurring within the specified reporting period) | | | | Net Incremental Peak Demand Savings (kW) (new peak demand savings from activity within the specified reporting period) | | | | Net Incremental Energy Savings (kWh) (new energy savings from activity within the specified reporting period) | | | | Program-to-Date Verified Progress to Target (excludes DR) | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | | | 2014 Net Annual Peak Demand Savings (kW) | 2011-2014 Net Cumulative Energy Savings (kWh) |
| | | 2011* | 2012* | 2013* | 2014 | 2011 | 2012 | 2013 | 2014 | 2011 | 2012 | 2013 | 2014 | 2014 | 2014 |
| **Consumer Program** | | | | | | | | | | | | | | | |
| Appliance Retirement | Appliances | 182 | 91 | 46 | 56 | 10 | 5 | 3 | 4 | 69,602 | 36,436 | 19,133 | 23,017 | 22 | 448,795 |
| Appliance Exchange | Appliances | 22 | 67 | 7 | 41 | 2 | 9 | 1 | 8 | 2,646 | 16,002 | 2,586 | 15,147 | 20 | 77,608 |
| HVAC Incentives | Equipment | 293 | 225 | 178 | 293 | 118 | 53 | 38 | 65 | 230,820 | 95,798 | 69,936 | 123,220 | 275 | 1,473,764 |
| Conservation Instant Coupon Booklet | Items | 2,694 | 155 | 1,745 | 6,775 | 6 | 1 | 3 | 13 | 98,588 | 7,010 | 38,644 | 184,681 | 23 | 677,353 |
| Bi-Annual Retailer Event | Items | 4,774 | 5,319 | 4,737 | 24,190 | 8 | 7 | 6 | 40 | 147,342 | 134,277 | 86,136 | 616,205 | 62 | 1,780,675 |
| Retailer Co-op | Items | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Residential Demand Response | Devices | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Residential Demand Response (IHD) | Devices | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Residential New Construction | Homes | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Consumer Program Total** | | | | | | **145** | **76** | **51** | **132** | **548,997** | **289,524** | **216,435** | **962,270** | **402** | **4,458,195** |
| **Business Program** | | | | | | | | | | | | | | | |
| Retrofit | Projects | 40 | 63 | 76 | 75 | 360 | 536 | 240 | 233 | 1,921,835 | 3,121,717 | 5,089,596 | 1,834,238 | 1,342 | 28,974,239 |
| Direct Install Lighting | Projects | 108 | 386 | 62 | 110 | 105 | 238 | 64 | 93 | 264,376 | 942,755 | 222,932 | 338,658 | 477 | 4,602,374 |
| Building Commissioning | Buildings | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| New Construction | Buildings | 0 | 6 | 2 | 2 | 0 | 1 | 22 | 49 | 0 | 1,597 | 58,802 | 84,927 | 71 | 207,322 |
| Energy Audit | Audits | 3 | 7 | 2 | 5 | 0 | 26 | 18 | 67 | 0 | 125,881 | 96,902 | 326,368 | 110 | 897,815 |
| Small Commercial Demand Response | Devices | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Small Commercial Demand Response (IHD) | Devices | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Demand Response 3 | Facilities | 3 | 3 | 2 | 2 | 4,018 | 4,030 | 3,894 | 4,440 | 156,889 | 58,581 | 52,002 | 0 | 4,440 | 267,472 |
| **Business Program Total** | | | | | | **4,484** | **4,831** | **4,238** | **4,882** | **2,343,100** | **4,250,531** | **5,520,234** | **2,584,191** | **6,441** | **34,949,222** |
| **Industrial Program** | | | | | | | | | | | | | | | |
| Process & System Upgrades | Projects | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Monitoring & Targeting | Projects | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Energy Manager | Projects | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Retrofit | Projects | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Demand Response 3† | Facilities | 0 | 1 | 1 | 0 | 0 | 349 | 326 | 0 | 0 | 8,416 | 7,412 | 0 | 0 | 15,828 |
| **Industrial Program Total** | | | | | | **0** | **349** | **326** | **0** | **0** | **8,416** | **7,412** | **0** | **0** | **15,828** |
| **Home Assistance Program** | | | | | | | | | | | | | | | |
| Home Assistance Program | Homes | 0 | 71 | 349 | 43 | 0 | 6 | 27 | 8 | 0 | 48,513 | 272,016 | 46,220 | 40 | 730,262 |
| **Home Assistance Program Total** | | | | | | **0** | **6** | **27** | **8** | **0** | **48,513** | **272,016** | **46,220** | **40** | **730,262** |
| **Aboriginal Program** | | | | | | | | | | | | | | | |
| Home Assistance Program | Homes | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Direct Install Lighting | Projects | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Aboriginal Program Total** | | | | | | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** |
| **Pre-2011 Programs completed in 2011** | | | | | | | | | | | | | | | |
| Electricity Retrofit Incentive Program | Projects | 3 | 0 | 0 | 0 | 12 | 0 | 0 | 0 | 79,337 | 0 | 0 | 0 | 12 | 317,348 |
| High Performance New Construction | Projects | 3 | 2 | 0 | 0 | 64 | 90 | 0 | 0 | 331,043 | 327,226 | 0 | 0 | 155 | 2,305,850 |
| Toronto Comprehensive | Projects | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Multifamily Energy Efficiency Rebates | Projects | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| LDC Custom Programs | Projects | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Pre-2011 Programs completed in 2011 Total** | | | | | | **77** | **90** | **0** | **0** | **410,380** | **327,226** | **0** | **0** | **167** | **2,623,198** |
| **Other** | | | | | | | | | | | | | | | |
| Program Enabled Savings | Projects | 0 | 3 | 6 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4,712 | 0 | 4,712 |
| Time-of-Use Savings | Homes | 0 | 0 | 0 | n/a | 0 | 0 | 0 | 273 | 0 | 0 | 0 | 0 | 273 | 0 |
| LDC Pilots | Projects | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Other Total** | | | | | | **0** | **0** | **0** | **273** | **0** | **0** | **0** | **4,712** | **273** | **4,712** |
| **Adjustments to 2011 Verified Results** | | | | | | | **83** | **0** | **0** | | **491,455** | **0** | **44,852** | **83** | **2,144,346** |
| **Adjustments to 2012 Verified Results** | | | | | | | | **45** | **3** | | | **142,728** | **35,925** | **49** | **536,052** |
| **Adjustments to 2013 Verified Results** | | | | | | | | | **28** | | | | **248,397** | **28** | **496,807** |
| **Energy Efficiency Total** | | | | | | **687** | **973** | **422** | **855** | **3,145,588** | **4,857,213** | **5,956,683** | **3,597,393** | **2,883** | **42,498,118** |
| **Demand Response Total (Scenario 1)** | | | | | | **4,018** | **4,379** | **4,220** | **4,440** | **156,889** | **66,996** | **59,414** | **0** | **4,440** | **283,299** |
| **Adjustments to Previous Years' Verified Results Total** | | | | | | **0** | **83** | **45** | **32** | **0** | **491,455** | **142,728** | **329,175** | **160** | **3,177,206** |
| **OPA-Contracted LDC Portfolio Total (inc. Adjustments)** | | | | | | **4,705** | **5,435** | **4,687** | **5,327** | **3,302,477** | **5,415,664** | **6,158,825** | **3,926,568** | **7,483** | **45,958,623** |
| | | | | | | | | | | | | | **Full OEB Target:** | **6,630** | **37,160,000** |
| | | | | | | | | | | | | | **% of Full OEB Target Achieved to Date (Scenario 1):** | **112.9%** | **123.7%** |

Activity and savings for Demand Response resources for each year represent the savings from all active facilities or devices contracted since January 1, 2011 (reported cumulatively).
†Results contain a DR contributor that was applied to Kingston Hydro's service territory in error in 2012 and 2013 respectively. The contributor has been removed in 2014.

*Includes adjustments after Final Reports were issued

Results presented using scenario 1 which assumes that demand response resources have a persistence of 1 year

Table 2: Adjustments to Kingston Hydro Corporation Net Verified Results due to Variances

| Initiative | Unit | Incremental Activity (new program activity occurring within the specified reporting period) | | | | Net Incremental Peak Demand Savings (kW) (new peak demand savings from activity within the specified reporting period) | | | | Net Incremental Energy Savings (kWh) (new energy savings from activity within the specified reporting period) | | | | Program-to-Date Verified Progress to Target (excludes DR) | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | | | 2014 Net Annual Peak Demand Savings (kW) | 2011-2014 Net Cumulative Energy Savings (kWh) |
| | | 2011* | 2012* | 2013* | 2014 | 2011 | 2012 | 2013 | 2014 | 2011 | 2012 | 2013 | 2014 | 2014 | 2014 |
| **Consumer Program** | | | | | | | | | | | | | | | |
| Appliance Retirement | Appliances | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 |
| Appliance Exchange | Appliances | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 |
| HVAC Incentives | Equipment | -74 | 9 | 15 | | -24 | 2 | 3 | | -46,099 | 3,615 | 5,655 | | -19 | -162,242 |
| Conservation Instant Coupon Booklet | Items | 41 | 0 | 5 | | 0 | 0 | 0 | | 1,382 | 0 | 118 | | 0 | 5,764 |
| Bi-Annual Retailer Event | Items | 410 | 0 | 0 | | 1 | 0 | 0 | | 10,947 | 0 | 0 | | 1 | 43,788 |
| Retailer Co-op | Items | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 |
| Residential Demand Response | Devices | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 |
| Residential Demand Response (IHD) | Devices | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 |
| Residential New Construction | Homes | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 |
| **Consumer Program Total** | | | | | | **-23** | **2** | **3** | | **-33,770** | **3,615** | **5,773** | | **-18** | **-112,690** |
| **Business Program** | | | | | | | | | | | | | | | |
| Retrofit | Projects | 2 | 3 | 8 | | 3 | 15 | 21 | | 14,398 | 35,104 | 201,407 | | 39 | 564,838 |
| Direct Install Lighting | Projects | 5 | 16 | 0 | | 5 | 20 | 0 | | 15,858 | 65,451 | 0 | | 25 | 259,787 |
| Building Commissioning | Buildings | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 |
| New Construction | Buildings | 0 | 0 | 1 | | 0 | 0 | 3 | | 0 | 0 | 6,441 | | 3 | 12,881 |
| Energy Audit | Audits | 2 | 2 | 0 | | 11 | 12 | 0 | | 52,797 | 56,331 | 64 | | 22 | 380,308 |
| Small Commercial Demand Response | Devices | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 |
| Small Commercial Demand Response (IHD) | Devices | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 |
| Demand Response 3 | Facilities | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 |
| **Business Program Total** | | | | | | **20** | **46** | **24** | | **83,053** | **156,886** | **207,912** | | **90** | **1,217,814** |
| **Industrial Program** | | | | | | | | | | | | | | | |
| Process & System Upgrades | Projects | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 |
| Monitoring & Targeting | Projects | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 |
| Energy Manager | Projects | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 |
| Retrofit | Projects | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 |
| Demand Response 3 | Facilities | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 |
| **Industrial Program Total** | | | | | | **0** | **0** | **0** | | **0** | **0** | **0** | | **0** | **0** |
| **Home Assistance Program** | | | | | | | | | | | | | | | |
| Home Assistance Program | Homes | 0 | 9 | 6 | | 0 | 0 | 1 | | 0 | 4,062 | 6,453 | | 1 | 25,034 |
| **Home Assistance Program Total** | | | | | | **0** | **0** | **1** | | **0** | **4,062** | **6,453** | | **1** | **25,034** |
| **Aboriginal Program** | | | | | | | | | | | | | | | |
| Home Assistance Program | Homes | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 |
| Direct Install Lighting | Projects | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 |
| **Aboriginal Program Total** | | | | | | **0** | **0** | **0** | | **0** | **0** | **0** | | **0** | **0** |
| **Pre-2011 Programs completed in 2011** | | | | | | | | | | | | | | | |
| Electricity Retrofit Incentive Program | Projects | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 |
| High Performance New Construction | Projects | 2 | 0 | 0 | | 87 | 0 | 0 | | 444,616 | 0 | 0 | | 87 | 1,778,464 |
| Toronto Comprehensive | Projects | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 |
| Multifamily Energy Efficiency Rebates | Projects | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 |
| LDC Custom Programs | Projects | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 |
| **Pre-2011 Programs completed in 2011 Total** | | | | | | **87** | **0** | **0** | | **444,616** | **0** | **0** | | **87** | **1,778,464** |
| **Other** | | | | | | | | | | | | | | | |
| Program Enabled Savings | Projects | 9 | 3 | 6 | | 0 | 0 | 0 | | 42,408 | 14,136 | 28,272 | | 0 | 268,584 |
| Time-of-Use Savings | Homes | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 |
| LDC Pilots | Projects | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 |
| **Other Total** | | | | | | **0** | **0** | **0** | | **42,408** | **14,136** | **28,272** | | **0** | **268,584** |
| **Adjustments to 2011 Verified Results** | | | | | | **83** | | | | **536,307** | | | | **83** | **2,144,346** |
| **Adjustments to 2012 Verified Results** | | | | | | | **49** | | | | **178,700** | | | **49** | **536,052** |
| **Adjustments to 2013 Verified Results** | | | | | | | | **28** | | | | **248,410** | | **28** | **496,807** |
| **Total Adjustments to Previous Years' Verified Results** | | | | | | **83** | **49** | **28** | | **536,307** | **178,700** | **248,410** | | **160** | **3,177,206** |

Activity and savings for Demand Response resources for each year represent the savings from all active facilities or devices contracted since January 1, 2011 (reported cumulatively).

Adjustments to previous years' results shown in this table will not align to adjustments shown in Table 1 as the information presented above is presented in the implementation year. Adjustements in Table 1 reflect persisted savings in the year in which that adjustment is verified.

**Table 3: Kingston Hydro Corporation Realization Rate & NTG**

| Initiative | Peak Demand Savings | | | | | | | | Energy Savings | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Realization Rate | | | | Net-to-Gross Ratio | | | | Realization Rate | | | | Net-to-Gross Ratio | | | |
| | 2011 | 2012 | 2013 | 2014 | 2011 | 2012 | 2013 | 2014 | 2011 | 2012 | 2013 | 2014 | 2011 | 2012 | 2013 | 2014 |
| **Consumer Program** | | | | | | | | | | | | | | | | |
| Appliance Retirement | 1.00 | 1.00 | n/a | n/a | 0.49 | 0.46 | 0.42 | 0.42 | 1.00 | 1.00 | n/a | n/a | 0.50 | 0.47 | 0.44 | 0.44 |
| Appliance Exchange | 1.00 | 1.00 | 1.00 | 1.00 | 0.52 | 0.52 | 0.53 | 0.53 | 1.00 | 1.00 | 1.00 | 1.00 | 0.52 | 0.52 | 0.53 | 0.53 |
| HVAC Incentives | 1.00 | 1.00 | n/a | 1.00 | 0.60 | 0.49 | 0.48 | 0.51 | 1.00 | 1.00 | n/a | 1.00 | 0.60 | 0.49 | 0.48 | 0.51 |
| Conservation Instant Coupon Booklet | 1.00 | 1.00 | 1.00 | 1.00 | 1.14 | 1.00 | 1.11 | 1.60 | 1.00 | 1.00 | 1.00 | 1.00 | 1.11 | 1.05 | 1.13 | 1.61 |
| Bi-Annual Retailer Event | 1.00 | 1.00 | 1.00 | 1.00 | 1.13 | 0.91 | 1.04 | 1.74 | 1.00 | 1.00 | 1.00 | 1.00 | 1.10 | 0.92 | 1.04 | 1.75 |
| Retailer Co-op | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a |
| Residential Demand Response | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a |
| Residential Demand Response (IHD) | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a |
| Residential New Construction | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a |
| **Business Program** | | | | | | | | | | | | | | | | |
| Retrofit | 0.93 | 0.99 | 0.92 | 0.86 | 0.69 | 0.77 | 0.74 | 0.72 | 1.08 | 1.09 | 0.96 | 1.08 | 0.69 | 0.75 | 0.66 | 0.72 |
| Direct Install Lighting | 1.08 | 0.68 | 0.81 | 0.78 | 0.93 | 0.94 | 0.94 | 0.94 | 0.90 | 0.85 | 0.84 | 0.83 | 0.93 | 0.94 | 0.94 | 0.94 |
| Building Commissioning | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a |
| New Construction | n/a | 0.86 | 1.00 | 0.99 | n/a | 0.49 | 0.54 | 0.54 | n/a | 0.84 | 1.00 | 1.00 | n/a | 0.49 | 0.54 | 0.54 |
| Energy Audit | n/a | n/a | 1.02 | 0.96 | n/a | n/a | 0.66 | 0.68 | n/a | n/a | 0.97 | 1.00 | n/a | n/a | 0.66 | 0.67 |
| Small Commercial Demand Response | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a |
| Small Commercial Demand Response (IHD) | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a |
| Demand Response 3 | 0.76 | n/a | n/a | n/a | n/a | n/a | n/a | n/a | 1.00 | n/a | n/a | n/a | n/a | n/a | n/a | n/a |
| **Industrial Program** | | | | | | | | | | | | | | | | |
| Process & System Upgrades | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a |
| Monitoring & Targeting | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a |
| Energy Manager | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a |
| Retrofit | | | | | | | | | | | | | | | | |
| Demand Response 3 | 0.84 | n/a | n/a | n/a | n/a | n/a | n/a | n/a | 1.00 | n/a | n/a | n/a | n/a | n/a | n/a | n/a |
| **Home Assistance Program** | | | | | | | | | | | | | | | | |
| Home Assistance Program | n/a | 0.16 | 0.55 | 0.19 | n/a | 1.00 | 1.00 | 1.00 | n/a | 0.98 | 0.89 | 0.81 | n/a | 1.00 | 1.00 | 1.00 |
| **Aboriginal Program** | | | | | | | | | | | | | | | | |
| Home Assistance Program | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a |
| Direct Install Lighting | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a |
| **Pre-2011 Programs completed in 2011** | | | | | | | | | | | | | | | | |
| Electricity Retrofit Incentive Program | 0.84 | n/a | n/a | n/a | 0.55 | n/a | n/a | n/a | 0.85 | n/a | n/a | n/a | 0.56 | n/a | n/a | n/a |
| High Performance New Construction | 1.00 | 1.00 | 1.00 | 1.00 | 0.50 | 0.50 | 0.50 | 0.50 | 1.00 | 1.00 | 1.00 | 1.00 | 0.50 | 0.50 | 0.50 | 0.50 |
| Toronto Comprehensive | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a |
| Multifamily Energy Efficiency Rebates | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a |
| LDC Custom Programs | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a |
| **Other** | | | | | | | | | | | | | | | | |
| Program Enabled Savings | n/a | n/a | n/a | n/a | n/a | n/a | n/a | 1.00 | n/a | n/a | n/a | 0.96 | n/a | n/a | n/a | 1.00 |
| Time-of-Use Savings | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a |
| LDC Pilots | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a |

## Summary Achievement Against CDM Targets

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

## Table 4: Net Peak Demand Savings at the End User Level (MW) (Scenario 1)

| Implementation Period | Annual | | | |
|---|---|---|---|---|
| | 2011 | 2012 | 2013 | 2014 |
| **2011 - Verified** | 4.7 | 0.7 | 0.7 | 0.7 |
| **2012 - Verified†** | 0.1 | 5.4 | 1.1 | 1.0 |
| **2013 - Verified†** | 0.0 | 0.0 | 4.7 | 0.5 |
| **2014 - Verified†** | 0.0 | 0.0 | 0.0 | 5.3 |
| **Verified Net Annual Peak Demand Savings Persisting in 2014:** | | | | **7.5** |
| **Kingston Hydro Corporation 2014 Annual CDM Capacity Target:** | | | | **6.6** |
| **Verified Portion of Peak Demand Savings Target Achieved in 2014 (%):** | | | | **112.9%** |

## Table 5: Net Energy Savings at the End User Level (GWh)

| Implementation Period | Annual | | | | Cumulative |
|---|---|---|---|---|---|
| | 2011 | 2012 | 2013 | 2014 | 2011-2014 |
| **2011 - Verified** | 3.3 | 3.1 | 3.1 | 3.1 | 12.7 |
| **2012 - Verified†** | 0.5 | 5.4 | 5.3 | 5.2 | 16.5 |
| **2013 - Verified†** | 0.0 | 0.1 | 6.2 | 6.1 | 12.4 |
| **2014 - Verified†** | 0.0 | 0.1 | 0.33 | 3.9 | 4.4 |
| **Verified Net Cumulative Energy Savings 2011-2014:** | | | | | **46.0** |
| **Kingston Hydro Corporation 2011-2014 Annual CDM Energy Target:** | | | | | **37.2** |
| **Verified Portion of Cumulative Energy Target Achieved in 2014 (%):** | | | | | **123.7%** |

*†Includes adjustments to previous years' verified results*

*Results presented using scenario 1 which assumes that demand response resources have a persistence of 1 year*

Table 6: Province-Wide Initiatives and Program Level Net Savings by Year (Scenario 1)

| Initiative | Unit | Incremental Activity (new program activity occurring within the specified reporting period) | | | | Net Incremental Peak Demand Savings (kW) (new peak demand savings from activity within the specified reporting period) | | | | Net Incremental Energy Savings (kWh) (new energy savings from activity within the specified reporting period) | | | | Program-to-Date Verified Progress to Target (excludes DR) | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | | | 2014 Net Annual Peak Demand Savings (kW) | 2011-2014 Net Cumulative Energy Savings (kWh) |
| | | 2011* | 2012* | 2013* | 2014 | 2011 | 2012 | 2013 | 2014 | 2011 | 2012 | 2013 | 2014 | 2014 | 2014 |
| **Consumer Program** | | | | | | | | | | | | | | | |
| Appliance Retirement | Appliances | 56,110 | 34,146 | 20,952 | 22,563 | 3,299 | 2,011 | 1,433 | 1,617 | 23,005,812 | 13,424,518 | 8,713,107 | 9,497,343 | 8,221 | 159,100,415 |
| Appliance Exchange | Appliances | 3,688 | 3,836 | 5,337 | 5,685 | 371 | 556 | 1,106 | 1,178 | 450,187 | 974,621 | 1,971,701 | 2,100,266 | 2,973 | 10,556,192 |
| HVAC Incentives | Equipment | 92,748 | 87,540 | 96,286 | 113,002 | 32,037 | 19,060 | 19,552 | 23,106 | 59,437,670 | 32,841,283 | 33,923,592 | 42,888,217 | 93,755 | 447,009,930 |
| Conservation Instant Coupon Booklet | Items | 567,678 | 30,891 | 347,946 | 1,208,108 | 1,344 | 230 | 517 | 2,440 | 21,211,537 | 1,398,202 | 7,707,573 | 32,802,537 | 4,531 | 137,258,436 |
| Bi-Annual Retailer Event | Items | 952,149 | 1,060,901 | 944,772 | 4,824,751 | 1,681 | 1,480 | 1,184 | 8,043 | 29,387,468 | 26,781,674 | 17,179,841 | 122,902,769 | 12,389 | 355,157,348 |
| Retailer Co-op | Items | 152 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2,652 | 0 | 0 | 0 | 0 | 10,607 |
| Residential Demand Response | Devices | 19,550 | 98,388 | 171,733 | 241,381 | 10,947 | 49,038 | 93,076 | 117,513 | 24,870 | 359,408 | 390,303 | 8,379 | 117,513 | 782,960 |
| Residential Demand Response (IHD) | Devices | 0 | 49,689 | 133,657 | 188,577 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Residential New Construction | Homes | 27 | 21 | 279 | 2,367 | 0 | 2 | 18 | 369 | 743 | 17,152 | 163,690 | 2,330,865 | 390 | 2,712,676 |
| **Consumer Program Total** | | | | | | **49,681** | **72,377** | **116,886** | **154,267** | **133,520,941** | **75,796,859** | **70,049,807** | **212,530,376** | **239,772** | **1,112,588,565** |
| **Business Program** | | | | | | | | | | | | | | | |
| Retrofit | Projects | 2,828 | 6,481 | 9,746 | 10,925 | 24,467 | 61,147 | 59,678 | 70,662 | 136,002,258 | 314,922,468 | 345,346,008 | 462,903,521 | 213,493 | 2,631,401,223 |
| Direct Install Lighting | Projects | 20,741 | 18,691 | 17,833 | 23,784 | 23,724 | 15,284 | 18,708 | 23,419 | 61,076,701 | 57,345,798 | 64,315,558 | 84,503,302 | 73,304 | 604,196,658 |
| Building Commissioning | Buildings | 0 | 0 | 0 | 5 | 0 | 0 | 0 | 988 | 0 | 0 | 0 | 1,513,377 | 988 | 1,513,377 |
| New Construction | Buildings | 25 | 98 | 158 | 226 | 123 | 764 | 1,584 | 6,432 | 411,717 | 1,814,721 | 4,959,266 | 20,381,204 | 8,904 | 37,390,767 |
| Energy Audit | Audits | 222 | 357 | 589 | 473 | 0 | 1,450 | 2,811 | 6,323 | 0 | 7,049,351 | 15,455,795 | 30,874,399 | 10,583 | 82,934,042 |
| Small Commercial Demand Response | Devices | 132 | 294 | 1,211 | 3,652 | 84 | 187 | 773 | 2,116 | 157 | 1,068 | 373 | 319 | 2,116 | 1,916 |
| Small Commercial Demand Response (IHD) | Devices | 0 | 0 | 378 | 820 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Demand Response 3 | Facilities | 145 | 151 | 175 | 180 | 16,218 | 19,389 | 23,706 | 23,380 | 633,421 | 281,823 | 346,659 | 0 | 23,380 | 1,261,903 |
| **Business Program Total** | | | | | | **64,617** | **98,221** | **107,261** | **133,319** | **198,124,253** | **381,415,230** | **430,423,659** | **600,176,121** | **332,769** | **3,358,699,887** |
| **Industrial Program** | | | | | | | | | | | | | | | |
| Process & System Upgrades | Projects | 0 | 0 | 5 | 10 | 0 | 0 | 294 | 9,692 | 0 | 0 | 2,603,764 | 72,053,255 | 9,986 | 77,260,782 |
| Monitoring & Targeting | Projects | 0 | 1 | 3 | 5 | 0 | 0 | 0 | 102 | 0 | 0 | 0 | 502,517 | 102 | 502,517 |
| Energy Manager | Projects | 1 | 132 | 306 | 379 | 0 | 1,086 | 3,558 | 5,191 | 0 | 7,372,108 | 21,994,263 | 40,436,427 | 8,384 | 95,324,998 |
| Retrofit | Projects | 433 | 0 | 0 | 0 | 4,615 | 0 | 0 | 0 | 28,866,840 | 0 | 0 | 0 | 4,613 | 115,462,282 |
| Demand Response 3 | Facilities | 124 | 185 | 281 | 336 | 52,484 | 74,056 | 162,543 | 166,082 | 3,080,737 | 1,784,712 | 4,309,160 | 0 | 166,082 | 9,174,609 |
| **Industrial Program Total** | | | | | | **57,098** | **75,141** | **166,395** | **181,066** | **31,947,577** | **9,156,820** | **28,907,187** | **112,992,199** | **189,168** | **297,725,188** |
| **Home Assistance Program** | | | | | | | | | | | | | | | |
| Home Assistance Program | Homes | 46 | 5,920 | 29,654 | 25,424 | 2 | 566 | 2,361 | 2,466 | 39,283 | 5,442,232 | 20,987,275 | 19,582,658 | 5,370 | 77,532,571 |
| **Home Assistance Program Total** | | | | | | **2** | **566** | **2,361** | **2,466** | **39,283** | **5,442,232** | **20,987,275** | **19,582,658** | **5,370** | **77,532,571** |
| **Aboriginal Program** | | | | | | | | | | | | | | | |
| Home Assistance Program | Homes | 0 | 0 | 717 | 1,125 | 0 | 0 | 267 | 549 | 0 | 0 | 1,609,393 | 3,101,207 | 816 | 6,319,993 |
| Direct Install Lighting | Projects | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Aboriginal Program Total** | | | | | | **0** | **0** | **267** | **549** | **0** | **0** | **1,609,393** | **3,101,207** | **816** | **6,319,993** |
| **Pre-2011 Programs completed in 2011** | | | | | | | | | | | | | | | |
| Electricity Retrofit Incentive Program | Projects | 2,028 | 0 | 0 | 0 | 21,662 | 0 | 0 | 0 | 121,138,219 | 0 | 0 | 0 | 21,662 | 484,552,876 |
| High Performance New Construction | Projects | 182 | 73 | 19 | 3 | 5,098 | 3,251 | 772 | 134 | 26,185,591 | 11,901,944 | 3,522,240 | 688,738 | 9,255 | 148,181,415 |
| Toronto Comprehensive | Projects | 577 | 15 | 4 | 5 | 15,805 | 0 | 0 | 281 | 86,964,886 | 0 | 0 | 2,479,840 | 16,086 | 350,339,385 |
| Multifamily Energy Efficiency Rebates | Projects | 110 | 0 | 0 | 0 | 1,981 | 0 | 0 | 0 | 7,595,683 | 0 | 0 | 0 | 1,981 | 30,382,733 |
| LDC Custom Programs | Projects | 8 | 0 | 0 | 0 | 399 | 0 | 0 | 0 | 1,367,170 | 0 | 0 | 0 | 399 | 5,468,679 |
| **Pre-2011 Programs completed in 2011 Total** | | | | | | **44,945** | **3,251** | **772** | **415** | **243,251,550** | **11,901,944** | **3,522,240** | **3,168,578** | **49,382** | **1,018,925,088** |
| **Other** | | | | | | | | | | | | | | | |
| Program Enabled Savings | Projects | 33 | 71 | 46 | 43 | 0 | 2,304 | 3,692 | 5,500 | 0 | 1,188,362 | 4,075,382 | 19,035,337 | 11,496 | 30,751,187 |
| Time-of-Use Savings | Homes | 0 | 0 | 0 | n/a | 0 | 0 | 0 | 54,795 | 0 | 0 | 0 | 0 | 54,795 | 0 |
| LDC Pilots | Projects | 0 | 0 | 0 | 1,174 | 0 | 0 | 0 | 1,170 | 0 | 0 | 0 | 5,061,522 | 1,170 | 5,061,522 |
| **Other Total** | | | | | | **0** | **2,304** | **3,692** | **61,466** | **0** | **1,188,362** | **4,075,382** | **24,096,859** | **67,462** | **35,812,709** |
| **Adjustments to 2011 Verified Results** | | | | | | | **1,406** | **641** | **1,418** | | **18,689,081** | **1,736,381** | **7,319,857** | **3,215** | **110,143,550** |
| **Adjustments to 2012 Verified Results** | | | | | | | | **6,260** | **9,221** | | | **41,947,840** | **37,080,215** | **15,401** | **238,780,637** |
| **Adjustments to 2013 Verified Results** | | | | | | | | | **24,391** | | | | **150,785,808** | **24,391** | **296,465,211** |
| **Energy Efficiency Total** | | | | | | **136,610** | **109,191** | **117,536** | **224,457** | **603,144,419** | **482,474,435** | **554,528,447** | **975,639,300** | **575,647** | **5,896,382,612** |
| **Demand Response Total (Scenario 1)** | | | | | | **79,733** | **142,670** | **280,099** | **309,091** | **3,739,185** | **2,427,011** | **5,046,495** | **8,698** | **309,091** | **11,221,389** |
| **Adjustments to Previous Years' Verified Results Total** | | | | | | **0** | **1,406** | **6,901** | **35,030** | **0** | **18,689,081** | **43,684,221** | **195,185,880** | **43,006** | **645,389,397** |
| **OPA-Contracted LDC Portfolio Total (inc. Adjustments)** | | | | | | **216,343** | **253,267** | **404,536** | **568,578** | **606,883,604** | **503,590,526** | **603,259,163** | **1,170,833,878** | **927,745** | **6,552,993,397** |
| | | | | | | | | | | | | | **Full OEB Target:** | **1,330,000** | **6,000,000,000** |
| | | | | | | | | | | | | | **% of Full OEB Target Achieved to Date (Scenario 1):** | **70%** | **109%** |

Activity and savings for Demand Response resources for each year represent the savings from all active facilities or devices contracted since January 1, 2011 (reported cumulatively).

*Includes adjustments after Final Reports were issued

Results presented using scenario 1 which assumes that demand response resources have a persistence of 1 year

Table 7: Adjustments to Province-Wide Net Verified Results due to Variances

| Initiative | Unit | Incremental Activity (new program activity occurring within the specified reporting period) | | | | Net Incremental Peak Demand Savings (kW) (new peak demand savings from activity within the specified reporting period) | | | | Net Incremental Energy Savings (kWh) (new energy savings from activity within the specified reporting period) | | | | Program-to-Date Verified Progress to Target (excludes DR) | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | | | 2014 Net Annual Peak Demand Savings (kW) | 2011-2014 Net Cumulative Energy Savings (kWh) |
| | | 2011* | 2012* | 2013* | 2014 | 2011 | 2012 | 2013 | 2014 | 2011 | 2012 | 2013 | 2014 | 2014 | 2014 |
| **Consumer Program** | | | | | | | | | | | | | | | |
| Appliance Retirement | Appliances | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 |
| Appliance Exchange | Appliances | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 |
| HVAC Incentives | Equipment | -18,839 | 2,319 | 4,705 | | -5,270 | 479 | 1,037 | | -9,707,002 | 955,512 | 1,838,408 | | -3,754 | -32,284,656 |
| Conservation Instant Coupon Booklet | Items | 8,216 | 0 | 1,050 | | 16 | 0 | 2 | | 275,655 | 0 | 23,571 | | 18 | 1,149,763 |
| Bi-Annual Retailer Event | Items | 81,817 | 0 | 0 | | 108 | 0 | 0 | | 2,183,391 | 0 | 0 | | 108 | 8,733,563 |
| Retailer Co-op | Items | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 |
| Residential Demand Response | Devices | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 |
| Residential Demand Response (IHD) | Devices | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 |
| Residential New Construction | Homes | 20 | 2 | 193 | | 1 | 1 | 72 | | 14,667 | 985 | 441,938 | | 74 | 945,497 |
| **Consumer Program Total** | | | | | | **-5,145** | **480** | **1,111** | | **-7,233,290** | **956,497** | **2,303,917** | | **-3,555** | **-21,664,975** |
| **Business Program** | | | | | | | | | | | | | | | |
| Retrofit | Projects | 312 | 876 | 961 | | 3,208 | 7,233 | 11,961 | | 16,266,129 | 42,498,052 | 78,146,280 | | 22,056 | 347,545,386 |
| Direct Install Lighting | Projects | 444 | 197 | 51 | | 501 | 204 | 46 | | 1,250,388 | 736,541 | 164,667 | | 620 | 7,158,143 |
| Building Commissioning | Buildings | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 |
| New Construction | Buildings | 15 | 29 | 72 | | 850 | 1,304 | 2,241 | | 3,604,553 | 4,825,774 | 8,636,179 | | 4,401 | 46,187,216 |
| Energy Audit | Audits | 119 | 77 | 270 | | 604 | 439 | 2,383 | | 2,945,189 | 2,145,367 | 13,100,635 | | 3,426 | 44,418,129 |
| Small Commercial Demand Response | Devices | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 |
| Small Commercial Demand Response (IHD) | Devices | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 |
| Demand Response 3 | Facilities | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 |
| **Business Program Total** | | | | | | **5,162** | **9,181** | **16,631** | | **24,066,259** | **50,205,734** | **100,047,761** | | **30,503** | **385,148,444** |
| **Industrial Program** | | | | | | | | | | | | | | | |
| Process & System Upgrades | Projects | 0 | 0 | 2 | | 0 | 0 | 324 | | 0 | 0 | 968,659 | | 324 | 1,937,318 |
| Monitoring & Targeting | Projects | 0 | 1 | 3 | | 0 | 0 | 54 | | 0 | 528,000 | 639,348 | | 54 | 2,862,696 |
| Energy Manager | Projects | 1 | 93 | 101 | | 27 | 1,067 | 2,395 | | 241,515 | 8,266,841 | 25,814,853 | | 4,345 | 81,853,489 |
| Retrofit | Projects | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 |
| Demand Response 3 | Facilities | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 |
| **Industrial Program Total** | | | | | | **27** | **1,067** | **2,774** | | **241,515** | **8,794,841** | **27,422,860** | | **4,723** | **61,215,516** |
| **Home Assistance Program** | | | | | | | | | | | | | | | |
| Home Assistance Program | Homes | 0 | 887 | 2,898 | | 0 | 222 | 791 | | 0 | 1,316,749 | 4,321,794 | | 1,009 | 12,515,300 |
| **Home Assistance Program Total** | | | | | | **0** | **222** | **791** | | **0** | **1,316,749** | **4,321,794** | | **1,009** | **8,581,177** |
| **Aboriginal Program** | | | | | | | | | | | | | | | |
| Home Assistance Program | Homes | 0 | 0 | 133 | | 0 | 0 | 134 | | 0 | 0 | 563,715 | | 134 | 1,127,430 |
| Direct Install Lighting | Projects | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 |
| **Aboriginal Program Total** | | | | | | **0** | **0** | **134** | | **0** | **0** | **563,715** | | **134** | **1,127,430** |
| **Pre-2011 Programs completed in 2011** | | | | | | | | | | | | | | | |
| Electricity Retrofit Incentive Program | Projects | 12 | 0 | 0 | | 138 | 0 | 0 | | 545,536 | 0 | 0 | | 138 | 2,182,145 |
| High Performance New Construction | Projects | 37 | 4 | 15 | | 1,507 | 363 | -184 | | 2,398,941 | 2,832,533 | -993,596 | | 1,686 | 16,106,171 |
| Toronto Comprehensive | Projects | 0 | 15 | 4 | | 0 | 672 | 185 | | 0 | 4,523,517 | 1,324,388 | | 857 | 16,219,327 |
| Multifamily Energy Efficiency Rebates | Projects | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 |
| LDC Custom Programs | Projects | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 |
| **Pre-2011 Programs completed in 2011 Total** | | | | | | **1,645** | **1,035** | **2** | | **2,944,477** | **7,356,050** | **330,792** | | **2,682** | **11,104,528** |
| **Other** | | | | | | | | | | | | | | | |
| Program Enabled Savings | Projects | 33 | 55 | 33 | | 1,776 | 3,712 | 2,020 | | 7,727,573 | 11,481,687 | 10,688,564 | | 7,509 | 86,732,481 |
| Time-of-Use Savings | Homes | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 |
| LDC Pilots | Projects | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 |
| **Other Total** | | | | | | **1,776** | **3,712** | **2,020** | | **7,727,573** | **11,481,687** | **10,688,564** | | **7,509** | **86,732,481** |
| **Adjustments to 2011 Verified Results** | | | | | | **3,465** | | | | **27,746,535** | | | | **3,215** | **110,143,550** |
| **Adjustments to 2012 Verified Results** | | | | | | | **15,697** | | | | **80,111,558** | | | **15,401** | **238,780,637** |
| **Adjustments to 2013 Verified Results** | | | | | | | | **23,463** | | | | **145,679,403** | | **24,391** | **296,465,211** |
| **Adjustments to Previous Years' Verified Results Total** | | | | | | **3,465** | **15,697** | **23,463** | | **27,746,535** | **80,111,558** | **145,679,403** | | **43,006** | **645,389,397** |

Activity and savings for Demand Response resources for each year represent the savings from all active facilities or devices contracted since January 1, 2011 (reported cumulatively).

Adjustments to previous years' results shown in this table will not align to adjustments shown in Table 1 as the information presented above is presented in the implementation year. Adjustements in Table 1 reflect persisted savings in the year in which that adjustment is verified.

**Table 8: Province-Wide Realization Rate & NTG**

| Initiative | Peak Demand Savings | | | | | | | | Energy Savings | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Realization Rate | | | | Net-to-Gross Ratio | | | | Realization Rate | | | | Net-to-Gross Ratio | | | |
| | 2011 | 2012 | 2013 | 2014 | 2011 | 2012 | 2013 | 2014 | 2011 | 2012 | 2013 | 2014 | 2011 | 2012 | 2013 | 2014 |
| **Consumer Program** | | | | | | | | | | | | | | | | |
| Appliance Retirement | 1.00 | 1.00 | 1.00 | 1.00 | 0.51 | 0.46 | 0.42 | 0.45 | 1.00 | 1.00 | 1.00 | 1.00 | 0.46 | 0.47 | 0.44 | 0.47 |
| Appliance Exchange | 1.00 | 1.00 | 1.00 | 1.00 | 0.51 | 0.52 | 0.53 | 0.53 | 1.00 | 1.00 | 1.00 | 1.00 | 0.52 | 0.52 | 0.53 | 0.53 |
| HVAC Incentives | 1.00 | 1.00 | 1.00 | 1.00 | 0.60 | 0.50 | 0.48 | 0.48 | 1.00 | 1.00 | 1.00 | 1.00 | 0.50 | 0.49 | 0.48 | 0.48 |
| Conservation Instant Coupon Booklet | 1.00 | 1.00 | 1.00 | 1.00 | 1.14 | 1.00 | 1.11 | 1.69 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.05 | 1.13 | 1.73 |
| Bi-Annual Retailer Event | 1.00 | 1.00 | 1.00 | 1.00 | 1.12 | 0.91 | 1.04 | 1.74 | 1.00 | 1.00 | 1.00 | 1.00 | 0.91 | 0.92 | 1.04 | 1.75 |
| Retailer Co-op | 1.00 | n/a | n/a | n/a | 0.68 | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a |
| Residential Demand Response | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a |
| Residential Demand Response (IHD) | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a |
| Residential New Construction | 1.00 | 3.65 | 0.78 | 1.03 | 0.41 | 0.49 | 0.63 | 0.63 | 3.65 | 7.17 | 3.09 | 0.62 | 0.49 | 0.49 | 0.63 | 0.63 |
| **Business Program** | | | | | | | | | | | | | | | | |
| Retrofit | 1.06 | 0.93 | 0.92 | 0.84 | 0.72 | 0.75 | 0.73 | 0.71 | 0.93 | 1.05 | 1.01 | 0.98 | 0.75 | 0.76 | 0.73 | 0.72 |
| Direct Install Lighting | 1.08 | 0.69 | 0.82 | 0.78 | 1.08 | 0.94 | 0.94 | 0.94 | 0.69 | 0.85 | 0.84 | 0.83 | 0.94 | 0.94 | 0.94 | 0.94 |
| Building Commissioning | n/a | n/a | n/a | 1.97 | n/a | n/a | n/a | 1.00 | n/a | n/a | n/a | 1.16 | n/a | n/a | n/a | 1.00 |
| New Construction | 0.50 | 0.98 | 0.68 | 0.71 | 0.50 | 0.49 | 0.54 | 0.54 | 0.98 | 0.99 | 0.76 | 0.79 | 0.49 | 0.49 | 0.54 | 0.54 |
| Energy Audit | n/a | n/a | 1.02 | 0.96 | n/a | n/a | 0.66 | 0.68 | n/a | n/a | 0.97 | 1.00 | n/a | n/a | 0.66 | 0.67 |
| Small Commercial Demand Response | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a |
| Small Commercial Demand Response (IHD) | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a |
| Demand Response 3 | 0.76 | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a |
| **Industrial Program** | | | | | | | | | | | | | | | | |
| Process & System Upgrades | n/a | n/a | 0.85 | 0.96 | n/a | n/a | 0.94 | 0.79 | n/a | n/a | 0.87 | 0.96 | n/a | n/a | 0.93 | 0.80 |
| Monitoring & Targeting | n/a | n/a | n/a | 0.59 | n/a | n/a | n/a | 1.00 | n/a | n/a | n/a | 0.36 | n/a | n/a | n/a | 1.00 |
| Energy Manager | n/a | 1.16 | 0.90 | 0.91 | n/a | 0.90 | 0.90 | 0.90 | 1.16 | 1.16 | 0.90 | 0.96 | 0.90 | 0.90 | 0.90 | 0.85 |
| Retrofit | 1.11 | n/a | n/a | n/a | 0.72 | n/a | n/a | n/a | 0.91 | n/a | n/a | n/a | 0.75 | n/a | n/a | n/a |
| Demand Response 3 | 0.84 | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a |
| **Home Assistance Program** | | | | | | | | | | | | | | | | |
| Home Assistance Program | 1.00 | 0.32 | 0.26 | 0.49 | 0.70 | 1.00 | 1.00 | 1.00 | 0.32 | 0.99 | 0.88 | 0.78 | 1.00 | 1.00 | 1.00 | 1.00 |
| **Aboriginal Program** | | | | | | | | | | | | | | | | |
| Home Assistance Program | n/a | n/a | 0.05 | 0.15 | n/a | n/a | 1.00 | 1.00 | n/a | n/a | 0.95 | 0.97 | n/a | n/a | 1.00 | 1.00 |
| Direct Install Lighting | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a |
| **Pre-2011 Programs completed in 2011** | | | | | | | | | | | | | | | | |
| Electricity Retrofit Incentive Program | 0.80 | n/a | n/a | n/a | 0.54 | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a |
| High Performance New Construction | 1.00 | 1.00 | 1.00 | n/a | 0.49 | 0.50 | 0.50 | 0.50 | 1.00 | 1.00 | 1.00 | n/a | 0.50 | 0.50 | 0.50 | 0.50 |
| Toronto Comprehensive | 1.13 | n/a | n/a | n/a | 0.50 | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a |
| Multifamily Energy Efficiency Rebates | 0.93 | n/a | n/a | n/a | 0.78 | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a |
| LDC Custom Programs | 1.00 | n/a | n/a | n/a | 1.00 | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a |
| **Other** | | | | | | | | | | | | | | | | |
| Program Enabled Savings | n/a | 1.06 | 1.00 | 0.86 | n/a | 1.00 | 1.00 | 1.00 | n/a | 2.26 | 1.00 | 0.98 | n/a | 1.00 | 1.00 | 1.00 |
| Time-of-Use Savings | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a |
| LDC Pilots | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a | n/a |

## Summary Provincial Progress Towards CDM Targets

### Table 9: Province-Wide Net Peak Demand Savings at the End User Level (MW)

| Implementation Period | Annual | | | |
|---|---|---|---|---|
| | 2011 | 2012 | 2013 | 2014 |
| **2011** | 216.3 | 136.6 | 135.8 | 129.0 |
| **2012†** | 1.4 | 253.3 | 109.8 | 108.2 |
| **2013†** | 0.6 | 7.0 | 404.5 | 122.0 |
| **2014†** | 1.4 | 10.8 | 34.2 | 568.6 |
| **Verified Net Annual Peak Demand Savings in 2014:** | | | | **927.7** |
| **2014 Annual CDM Capacity Target:** | | | | **1,330** |
| **Verified Portion of Peak Demand Savings Target Achieved in 2014 (%):** | | | | **69.8%** |

### Table 10: Province-Wide Net Energy Savings at the End-User Level (GWh)

| Implementation Period | Annual | | | | Cumulative |
|---|---|---|---|---|---|
| | 2011 | 2012 | 2013 | 2014 | 2011-2014 |
| **2011** | 606.9 | 603.0 | 601.0 | 582.3 | 2,393.1 |
| **2012†** | 18.7 | 503.6 | 498.4 | 492.6 | 1,513.3 |
| **2013†** | 1.7 | 44.4 | 603.3 | 583.4 | 1,232.8 |
| **2014†** | 7.3 | 44.8 | 191.0 | 1,170.8 | 1,413.9 |
| **Verified Net Cumulative Energy Savings 2011-2014:** | | | | | **6,553.0** |
| **2011-2014 Cumulative CDM Energy Target:** | | | | | **6,000** |
| **Verified Portion of Cumulative Energy Target Achieved in 2014 (%):** | | | | | **109.2%** |

*†Includes adjustments to previous years' verified results*

*Results presented using scenario 1 which assumes that demand response resources have a persistence of 1 year*

## METHODOLOGY

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

| EQUATIONS | |
|---|---|
| Prescriptive Measures and Projects | **Gross Savings = Activity * Per Unit Assumption**<br>**Net Savings = Gross Savings * Net-to-Gross Ratio**<br>**All savings are annualized (i.e. the savings are the same regardless of time of year a project was completed or measure installed)** |
| Engineered and Custom Projects | **Gross Savings = Reported Savings * Realization Rate**<br>**Net Savings = Gross Savings * Net-to-Gross Ratio**<br>**All savings are annualized (i.e. the savings are the same regardless of time of year a project was completed or measure installed)** |
| Demand Response | **Peak Demand: Gross Savings = Net Savings = contracted MW at contributor level * Provincial contracted to ex ante ratio**<br>**Energy: Gross Savings = Net Savings = provincial ex post energy savings * LDC proportion of total provincial contracted MW**<br>**All savings are annualized (i.e. the savings are the same regardless of the time of year a participant began offering DR)** |
| Adjustments to Previous Years' Verified Results | All variances from the Final Annual Results Reports from prior years will be adjusted within this report. Any variances with regards to projects counts, data lag, and calculations etc., will be made within this report. Considers the cumulative effect of energy savings. |

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

| Initiative | Attributing Savings to LDCs | Savings 'start' Date | Calculating Resource Savings |
|---|---|---|---|
| Conservation Instant Coupon Booklet | LDC-coded coupons directly attributed to LDC. Otherwise results are allocated based on average of 2008 & 2009 residential throughput. | Savings are considered to begin in the year in which the coupon was redeemed. | Peak demand and energy savings are determined using the verified measure level per unit assumption multiplied by the uptake in the market (gross) taking into account net-to-gross factors such as free-ridership and spillover (net) at the measure level. |
| Bi-Annual Retailer Event | Results are allocated based on average of 2008 & 2009 residential throughput. | Savings are considered to begin in the year in which the event occurs. | |
| Retailer Co-op | When postal code information is provided by the customer, results are directly attributed. If postal code information is not available, results are allocated based on average of 2008 & 2009 residential throughput. | Savings are considered to begin in the year of the home visit and installation date. | Peak demand and energy savings are determined using the verified measure level per unit assumption multiplied by the uptake in the market (gross) taking into account net-to-gross factors such as free-ridership and spillover (net) at the measure level. |
| Residential Demand Response | Results are directly attributed to LDC based on data provided to IESO through project completion reports and continuing participant lists. | Savings are considered to begin in the year the device was installed and/or when a customer signed a peaksaver PLUS™ participant agreement. | Peak demand savings are based on an ex ante estimate assuming a 1 in 10 weather year and represents the "insurance value" of the initiative. Energy savings are based on an ex post estimate which reflects the savings that occurred as a result of activations in the year and accounts for any “snapback” in energy consumption experienced after the event. Savings are assumed to persist for only 1 year, reflecting that savings will only occur if the resource is activated. |

| Initiative | Attributing Savings to LDCs | Savings 'start' Date | Calculating Resource Savings |
|---|---|---|---|
| Residential New Construction | Results are directly attributed to LDC based on LDC identified in application in the iCon system. Initiative was not evaluated in 2011, reported results are presented with forecast assumptions as per the business case. | Savings are considered to begin in the year of the project completion date. | Peak demand and energy savings are determined using the verified measure level per unit assumption multiplied by the uptake in the market (gross) taking into account net-to-gross factors such as free-ridership and spillover (net) at the measure level. |
| **Business Program** | | | |
| Efficiency: Equipment Replacement | Results are directly attributed to LDC based on LDC identified at the facility level in the iCon system. Projects in the Application Status: "Post-Stage Submission" are included (excluding "Payment denied by LDC"); Please see page  for Building type to Sector mapping. | Savings are considered to begin in the year of the actual project completion date in the iCON system. | Peak demand and energy savings are determined by the total savings for a given project as reported in the iCON system (reported). A realization rate is applied to the reported savings  to ensure that these savings align with EM&V protocols and reflect the savings that were actually realized (i.e. how many light bulbs were actually installed vs. what was reported) (gross). Net savings takes into account net-to-gross factors such as free-ridership and spillover (net). Both realization rate and net-to-gross ratios can differ for energy and demand savings and depend on the mix of projects within an LDC territory (i.e. lighting or non-lighting project, engineered/custom/prescriptive track). |
| | Additional Note: project counts were derived by filtering out invalid statuses (e.g. Post-Project Submission - Payment denied by LDC) and only including projects with an "Actual Project Completion Date" in 2014) | | |

| Initiative | Attributing Savings to LDCs | Savings 'start' Date | Calculating Resource Savings |
|---|---|---|---|
| Direct Installed Lighting | Results are directly attributed to LDC based on the LDC specified on the work order. | Savings are considered to begin in the year of the actual project completion date. | Peak demand and energy savings are determined using the verified measure level per unit assumptions multiplied by the uptake of each measure accounting for the realization rate for both peak demand and energy to reflect the savings that were actually realized (i.e. how many light bulbs were actually installed vs. what was reported) (gross). Net savings take into account net-to-gross factors such as free-ridership and spillover for both peak demand and energy savings at the program level (net). |
| Existing Building Commissioning Incentive | Results are directly attributed to LDC based on LDC identified in the application. | Savings are considered to begin in the year of the actual project completion date. | Peak demand and energy savings are determined by the total savings for a given project as reported (reported). A realization rate is applied to the reported savings to ensure that these savings align with EM&V protocols and reflect the savings that were actually realized (i.e. how many light bulbs were actually installed vs. what was reported) (gross). Net savings takes into account net-to-gross factors such as free-ridership and spillover (net). |
| New Construction and Major Renovation Incentive | Results are directly attributed to LDC based on LDC identified in the application. | Savings are considered to begin in the year of the actual project completion date. | |
| Energy Audit | Projects are directly attributed to LDC based on LDC identified in the application. | Savings are considered to begin in the year of the audit date. | Peak demand and energy savings are determined by the total savings resulting from an audit as reported (reported). A realization rate is applied to the reported savings to ensure that these savings align with EM&V protocols and reflect the savings that were actually realized (i.e. how many light bulbs were actually installed vs. what was reported) (gross). Net savings takes into account net-to-gross factors such as free-ridership and spillover (net). |

| Initiative | Attributing Savings to LDCs | Savings 'start' Date | Calculating Resource Savings |
|---|---|---|---|
| Commercial Demand Response (part of the Residential program schedule) | Results are directly attributed to LDC based on data provided to IESO through project completion reports and continuing participant lists | Savings are considered to begin in the year the device was installed and/or when a customer signed a peaksaver PLUS™ participant agreement. | Peak demand savings are based on an ex ante estimate assuming a 1 in 10 weather year and represents the "insurance value" of the initiative. Energy savings are based on an ex post estimate which reflects the savings that occurred as a result of activations in the year. Savings are assumed to persist for only 1 year, reflecting that savings will only occur if the resource is activated. |
| Demand Response 3 (part of the Industrial program schedule) | Results are attributed to LDCs based on the total contracted megawatts at the contributor level as of December 31st, applying the provincial ex ante to contracted ratio (ex ante estimate/contracted megawatts); Ex post energy savings are attributed to the LDC based on their proportion of the total contracted megawatts at the contributor level. | Savings are considered to begin in the year in which the contributor signed up to participate in demand response. | Peak demand savings are ex ante estimates based on the load reduction capability that can be expected for the purposes of planning. The ex ante estimates factor in both scheduled non-performances (i.e. maintenance) and historical performance. Energy savings are based on an ex post estimate which reflects the savings that actually occurred as a results of activations in the year. Savings are assumed to persist for 1 year, reflecting that savings will not occur if the resource is not activated and additional costs are incurred to activate the resource. |
| **Industrial Program** | | | |
| Process & System Upgrades | Results are directly attributed to LDC based on LDC identified in application. | Savings are considered to begin in the year in which the incentive project was completed. | Peak demand and energy savings are determined by the total savings from a given project as reported (reported). A realization rate is applied to the reported savings to ensure that these savings align with EM&V protocols and reflect the savings that were actually realized (i.e. how many light bulbs were actually installed vs. what was reported) (gross). Net savings takes into account net-to-gross factors such as free-ridership and spillover (net). |

| Initiative | Attributing Savings to LDCs | Savings 'start' Date | Calculating Resource Savings |
|---|---|---|---|
| Monitoring & Targeting | Results are directly attributed to LDC based on LDC identified in the application. | Savings are considered to begin in the year in which the incentive project was completed. | Peak demand and energy savings are determined by the total savings from a given project as reported (reported). A realization rate is applied to the reported savings to ensure that these savings align with EM&V protocols and reflect the savings that were actually realized (i.e. how many light bulbs were actually installed vs. what was reported) (gross). Net savings takes into account net-to-gross factors such as free-ridership and spillover (net). |
| Energy Manager | Results are directly attributed to LDC based on LDC identified in the application. | Savings are considered to begin in the year in which the project was completed by the energy manager. If no date is specified the savings will begin the year of the Quarterly Report submitted by the energy manager. | Peak demand and energy savings are determined by the total savings from a given project as reported (reported). A realization rate is applied to the reported savings to ensure that these savings align with EM&V protocols and reflect the savings that were actually realized (i.e. how many light bulbs were actually installed vs. what was reported) (gross). Net savings takes into account net-to-gross factors such as free-ridership and spillover (net). |

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

| Initiative | Attributing Savings to LDCs | Savings 'start' Date | Calculating Resource Savings |
|---|---|---|---|
| **Home Assistance Program** | | | |
| Home Assistance Program | Results are directly attributed to LDC based on LDC identified in the application. | Savings are considered to begin in the year in which the measures were installed. | Peak demand and energy savings are determined using the measure level per unit assumption multiplied by the uptake of each measure (gross), taking into account net-to-gross factors such as free-ridership and spillover (net) at the measure level. |
| **Aboriginal Program** | | | |
| Aboriginal Program | Results are directly attributed to LDC based on LDC identified in the application. | Savings are considered to begin in the year in which the measures were installed. | Peak demand and energy savings are determined using the measure level per unit assumption multiplied by the uptake of each measure (gross), taking into account net-to-gross factors such as free-ridership and spillover (net) at the measure level. |

| Initiative | Attributing Savings to LDCs | Savings 'start' Date | Calculating Resource Savings |
|---|---|---|---|
| **Pre-2011 Programs completed in 2011** | | | |
| Electricity Retrofit Incentive Program | Results are directly attributed to LDC based on LDC identified in the application; Initiative was not evaluated in 2011, 2012, 2013 or 2014 assumptions as per 2010 evaluation. | Savings are considered to begin in the year in which a project was completed. | Peak demand and energy savings are determined by the total savings from a given project as reported. A realization rate is applied to the reported savings to ensure that these savings align with EM&V protocols and reflect the savings that were actually realized (i.e. how many light bulbs were actually installed vs. what was reported) (gross). Net savings takes into account net-to-gross factors such as free-ridership and spillover (net). If energy savings are not available, an estimate is made based on the kWh to kW ratio in the provincial results from the 2010 evaluated results (http://www.powerauthority.on.ca/evaluation-measurement-and-verification/evaluation-reports). |
| High Performance New Construction | Results are directly attributed to LDC based on customer data provided to the OPA from Enbridge; Initiative was not evaluated in 2011, 2012, 2013 or 2014, assumptions as per 2010 evaluation. | Savings are considered to begin in the year in which a project was completed. | |
| Toronto Comprehensive | Program run exclusively in Toronto Hydro-Electric System Limited service territory; Initiative was not evaluated in 2011, 2012, 2013 or 2014, assumptions as per 2010 evaluation. | | |

| Initiative | Attributing Savings to LDCs | Savings 'start' Date | Calculating Resource Savings |
|---|---|---|---|
| Multifamily Energy Efficiency Rebates | Results are directly attributed to LDC based on LDC identified in the application; Initiative was not evaluated in 2011, 2012, 2013 or 2014, assumptions as per 2010 evaluation. | Savings are considered to begin in the year in which a project was completed. | Peak demand and energy savings are determined by the total savings from a given project as reported (reported). A realization rate is applied to the reported savings to ensure that these savings align with EM&V protocols and reflect the savings that were actually realized (i.e. how many light bulbs were actually installed vs. what was reported) (gross). Net savings takes into account net-to-gross factors such as free-ridership and spillover (net). If energy savings are not available, an estimate is made based on the kWh to kW ratio in the provincial results from the 2010 evaluated results (http://www.powerauthority.on.ca/evaluation-measurement-and-verification/evaluation-reports). |
| Data Centre Incentive Program | Program run exclusively in PowerStream Inc. service territory; Initiative was not evaluated in 2011, assumptions as per 2009 evaluation. | | |
| EnWin Green Suites | Program run exclusively in ENWIN Utilities Ltd. service territory; Initiative was not evaluated in 2011 or 2012, assumptions as per 2010 evaluation. | | |

## Consumer Program Allocation Methodology

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

| Local Distribution Company | Allocation |
|---|---|
| Algoma Power Inc. | 0.2% |
| Atikokan Hydro Inc. | 0.0% |
| Attawapiskat Power Corporation | 0.0% |
| Bluewater Power Distribution Corporation | 0.6% |
| Brant County Power Inc. | 0.2% |
| Brantford Power Inc. | 0.7% |
| Burlington Hydro Inc. | 1.4% |
| Cambridge and North Dumfries Hydro Inc. | 1.0% |
| Canadian Niagara Power Inc. | 0.5% |
| Centre Wellington Hydro Ltd. | 0.1% |
| Chapleau Public Utilities Corporation | 0.0% |
| COLLUS Power Corporation | 0.3% |
| Cooperative Hydro Embrun Inc. | 0.0% |
| E.L.K. Energy Inc. | 0.2% |
| Enersource Hydro Mississauga Inc. | 3.9% |
| ENTEGRUS | 0.6% |
| ENWIN Utilities Ltd. | 1.6% |
| Erie Thames Powerlines Corporation | 0.4% |
| Espanola Regional Hydro Distribution Corporation | 0.1% |
| Essex Powerlines Corporation | 0.7% |
| Festival Hydro Inc. | 0.3% |
| Fort Albany Power Corporation | 0.0% |
| Fort Frances Power Corporation | 0.1% |
| Greater Sudbury Hydro Inc. | 1.0% |
| Grimsby Power Inc. | 0.2% |
| Guelph Hydro Electric Systems Inc. | 0.9% |
| Haldimand County Hydro Inc. | 0.4% |
| Halton Hills Hydro Inc. | 0.5% |
| Hearst Power Distribution Company Limited | 0.1% |
| Horizon Utilities Corporation | 4.0% |
| Hydro 2000 Inc. | 0.0% |
| Hydro Hawkesbury Inc. | 0.1% |
| Hydro One Brampton Networks Inc. | 2.8% |
| Hydro One Networks Inc. | 30.0% |
| Hydro Ottawa Limited | 5.6% |
| Innisfil Hydro Distribution Systems Limited | 0.4% |
| Kashechewan Power Corporation | 0.0% |
| Kenora Hydro Electric Corporation Ltd. | 0.1% |
| Kingston Hydro Corporation | 0.5% |
| Kitchener-Wilmot Hydro Inc. | 1.6% |
| Lakefront Utilities Inc. | 0.2% |

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

## Reporting Glossary

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

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

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

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

**Incremental: the new resource savings attributable to activity procured in a particular reporting period based on when the savings are considered to 'start'.**

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

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

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

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

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

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

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

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

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

Table 11: Kingston Hydro Corporation Initiative and Program Level Gross Savings by Year

| Initiative | Unit | Gross Incremental Peak Demand Savings (kW) (new peak demand savings from activity within the specified reporting period) | | | | Gross Incremental Energy Savings (kWh) (new energy savings from activity within the specified reporting period) | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | 2011 | 2012 | 2013 | 2014 | 2011 | 2012 | 2013 | 2014 |
| **Consumer Program** | | | | | | | | | |
| Appliance Retirement** | Appliances | 21 | 5 | 7 | 10 | 149,910 | 36,436 | 41,013 | 49,380 |
| Appliance Exchange** | Appliances | 4 | 9 | 3 | 16 | 5,133 | 16,002 | 4,913 | 28,778 |
| HVAC Incentives | Equipment | 198 | 108 | 80 | 138 | 387,439 | 196,491 | 148,039 | 259,617 |
| Conservation Instant Coupon Booklet | Items | 5 | 1 | 2 | 8 | 89,538 | 6,648 | 34,305 | 106,712 |
| Bi-Annual Retailer Event | Items | 8 | 8 | 6 | 23 | 134,867 | 146,513 | 82,433 | 352,239 |
| Retailer Co-op | Items | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Residential Demand Response | Devices | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Residential Demand Response (IHD) | Devices | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Residential New Construction | Homes | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Consumer Program Total** | | **236** | **131** | **98** | **194** | **766,888** | **402,089** | **310,704** | **796,727** |
| **Business Program** | | | | | | | | | |
| Retrofit | Projects | 525 | 628 | 325 | 309 | 2,792,968 | 3,762,095 | 7,689,168 | 2,514,764 |
| Direct Install Lighting | Projects | 98 | 319 | 68 | 99 | 284,722 | 1,133,023 | 236,189 | 358,798 |
| Building Commissioning | Buildings | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| New Construction | Buildings | 0 | 2 | 40 | 91 | 0 | 3,878 | 108,893 | 157,273 |
| Energy Audit | Audits | 0 | 26 | 27 | 99 | 0 | 125,881 | 146,621 | 486,390 |
| Small Commercial Demand Response | Devices | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Small Commercial Demand Response (IHD) | Devices | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Demand Response 3 | Facilities | 4,018 | 4,030 | 3,894 | 4,440 | 156,889 | 58,581 | 52,002 | 0 |
| **Business Program Total** | | **4,642** | **5,005** | **4,354** | **5,038** | **3,234,580** | **5,083,458** | **8,232,873** | **3,517,225** |
| **Industrial Program** | | | | | | | | | |
| Process & System Upgrades | Projects | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Monitoring & Targeting | Projects | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Energy Manager | Projects | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Retrofit | Projects | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Demand Response 3 | Facilities | 0 | 349 | 326 | 0 | 0 | 8,416 | 7,412 | 0 |
| **Industrial Program Total** | | **0** | **349** | **326** | **0** | **0** | **8,416** | **7,412** | **0** |
| **Home Assistance Program** | | | | | | | | | |
| Home Assistance Program | Homes | 0 | 36 | 27 | 8 | 0 | 49,691 | 272,016 | 46,220 |
| **Home Assistance Program Total** | | **0** | **36** | **27** | **8** | **0** | **49,691** | **272,016** | **46,220** |
| **Aboriginal Program** | | | | | | | | | |
| Home Assistance Program | Homes | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Direct Install Lighting | Projects | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Aboriginal Program Total** | | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** |
| **Pre-2011 Programs completed in 2011** | | | | | | | | | |
| Electricity Retrofit Incentive Program | Projects | 23 | 0 | 0 | 0 | 143,411 | 0 | 0 | 0 |
| High Performance New Construction | Projects | 129 | 181 | 0 | 0 | 662,086 | 654,451 | 0 | 0 |
| Toronto Comprehensive | Projects | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Multifamily Energy Efficiency Rebates | Projects | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| LDC Custom Programs | Projects | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Pre-2011 Programs completed in 2011 Total** | | **152** | **181** | **0** | **0** | **805,497** | **654,451** | **0** | **0** |
| **Other** | | | | | | | | | |
| Program Enabled Savings | Projects | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4,712 |
| Time-of-Use Savings | Homes | 0 | 0 | 0 | 273 | 0 | 0 | 0 | 0 |
| LDC Pilots | Projects | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Other Total** | | **0** | **0** | **0** | **273** | **0** | **0** | **0** | **4,712** |
| **Adjustments to 2011 Verified Results** | | | **286** | **0** | **1** | | **26,117** | **0** | **46,010** |
| **Adjustments to 2012 Verified Results** | | | | **55** | **5** | | | **159,148** | **43,055** |
| **Adjustments to 2013 Verified Results** | | | | | **43** | | | | **347,062** |
| **Energy Efficiency Total** | | **1,011** | **1,323** | **584** | **1,073** | **4,650,075** | **6,131,109** | **8,763,591** | **4,364,883** |
| **Demand Response Total** | | **4,018** | **4,379** | **4,220** | **4,440** | **156,889** | **66,996** | **59,414** | **0** |
| **Adjustments to Previous Years' Verified Results Total** | | **0** | **286** | **55** | **49** | **0** | **26,117** | **159,148** | **436,127** |
| **OPA-Contracted LDC Portfolio Total (inc. Adjustments)** | | **5,029** | **5,988** | **4,859** | **5,562** | **4,806,965** | **6,224,223** | **8,982,153** | **4,801,011** |

Activity and savings for Demand Response resources for each year represent the savings from all active facilities or devices contracted since January 1, 2011 (reported cumulatively).

*Includes adjustments after Final Reports were issued

Results presented using scenario 1 which assumes that demand response resources have a persistence of 1 year

Gross results are presented for informational purposes only and are not considered official 2014 Final Verified Results

**Net results substituted for gross results due to unavailability of data

Table 12: Adjustments to Kingston Hydro Corporation Gross Verified Results due to Variances

| Initiative | Unit | Gross Incremental Peak Demand Savings (kW) (new peak demand savings from activity within the specified reporting period) | | | | Gross Incremental Energy Savings (kWh) (new energy savings from activity within the specified reporting period) | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | 2011 | 2012 | 2013 | 2014 | 2011 | 2012 | 2013 | 2014 |
| **Consumer Program** | | | | | | | | | |
| Appliance Retirement | Appliances | 0 | 0 | 0 | | 0 | 0 | 0 | |
| Appliance Exchange | Appliances | 0 | 0 | 0 | | 0 | 0 | 0 | |
| HVAC Incentives | Equipment | -40 | 4 | 7 | | -77,308 | 7,423 | 11,878 | |
| Conservation Instant Coupon Booklet | Items | 0 | 0 | 0 | | 1,283 | 0 | 104 | |
| Bi-Annual Retailer Event | Items | 1 | 0 | 0 | | 11,901 | 0 | 0 | |
| Retailer Co-op | Items | 0 | 0 | 0 | | 0 | 0 | 0 | |
| Residential Demand Response | Devices | 0 | 0 | 0 | | 0 | 0 | 0 | |
| Residential Demand Response (IHD) | Devices | 0 | 0 | 0 | | 0 | 0 | 0 | |
| Residential New Construction | Homes | 0 | 0 | 0 | | 0 | 0 | 0 | |
| **Consumer Program Total** | | **-39** | **4** | **7** | | **-64,124** | **7,423** | **11,982** | |
| **Business Program** | | | | | | | | | |
| Retrofit | Projects | 5 | 20 | 30 | | 18,932 | 47,988 | 288,343 | |
| Direct Install Lighting | Projects | 6 | 21 | 0 | | 17,079 | 69,479 | 0 | |
| Building Commissioning | Buildings | 0 | 0 | 0 | | 0 | 0 | 0 | |
| New Construction | Buildings | 2 | 0 | 6 | | 3,878 | 0 | 11,927 | |
| Energy Audit | Audits | 10 | 10 | 0 | | 50,353 | 59,162 | 97 | |
| Small Commercial Demand Response | Devices | 0 | 0 | 0 | | 0 | 0 | 0 | |
| Small Commercial Demand Response (IHD) | Devices | 0 | 0 | 0 | | 0 | 0 | 0 | |
| Demand Response 3 | Facilities | 0 | 0 | 0 | | 0 | 0 | 0 | |
| **Business Program Total** | | **23** | **51** | **36** | | **90,241** | **176,629** | **300,368** | |
| **Industrial Program** | | | | | | | | | |
| Process & System Upgrades | Projects | 0 | 0 | 0 | | 0 | 0 | 0 | |
| Monitoring & Targeting | Projects | 0 | 0 | 0 | | 0 | 0 | 0 | |
| Energy Manager | Projects | 0 | 0 | 0 | | 0 | 0 | 0 | |
| Retrofit | Projects | 0 | 0 | 0 | | 0 | 0 | 0 | |
| Demand Response 3 | Facilities | 0 | 0 | 0 | | 0 | 0 | 0 | |
| **Industrial Program Total** | | **0** | **0** | **0** | | **0** | **0** | **0** | |
| **Home Assistance Program** | | | | | | | | | |
| Home Assistance Program | Homes | 0 | 0 | 1 | | 0 | 4,062 | 6,453 | |
| **Home Assistance Program Total** | | **0** | **0** | **1** | | **0** | **4,062** | **6,453** | |
| **Aboriginal Program** | | | | | | | | | |
| Home Assistance Program | Homes | 0 | 0 | 0 | | 0 | 0 | 0 | |
| Direct Install Lighting | Projects | 0 | 0 | 0 | | 0 | 0 | 0 | |
| **Aboriginal Program Total** | | **0** | **0** | **0** | | **0** | **0** | **0** | |
| **Pre-2011 Programs completed in 2011** | | | | | | | | | |
| Electricity Retrofit Incentive Program | Projects | 0 | 0 | 0 | | 0 | 0 | 0 | |
| High Performance New Construction | Projects | 302 | 0 | 0 | | 0 | 0 | 0 | |
| Toronto Comprehensive | Projects | 0 | 0 | 0 | | 0 | 0 | 0 | |
| Multifamily Energy Efficiency Rebates | Projects | 0 | 0 | 0 | | 0 | 0 | 0 | |
| LDC Custom Programs | Projects | 0 | 0 | 0 | | 0 | 0 | 0 | |
| **Pre-2011 Programs completed in 2011 Total** | | **302** | **0** | **0** | | **0** | **0** | **0** | |
| **Other** | | | | | | | | | |
| Program Enabled Savings | Projects | 0 | 0 | 0 | | 0 | 14,136 | 28,272 | |
| Time-of-Use Savings | Homes | 0 | 0 | 0 | | 0 | 0 | 0 | |
| LDC Pilots | Projects | 0 | 0 | 0 | | 0 | 0 | 0 | |
| **Other Total** | | **0** | **0** | **0** | | **0** | **14,136** | **28,272** | |
| **Adjustments to 2011 Verified Results** | | **286** | | | | **26,117** | | | |
| **Adjustments to 2012 Verified Results** | | | **55** | | | | **202,250** | | |
| **Adjustments to 2013 Verified Results** | | | | **44** | | | | **347,075** | |
| **Total Adjustments to Previous Years' Verified Results** | | **286** | **55** | **44** | | **26,117** | **202,250** | **347,075** | |

Activity and savings for Demand Response resources for each year represent the savings from all active facilities or devices contracted since January 1, 2011 (reported cumulatively).

Gross results are presented for informational purposes only and are not considered official 2014 Final Verified Results

Table 13: Province-Wide Initiatives and Program Level Gross Savings by Year

| Initiative | Unit | Gross Incremental Peak Demand Savings (kW) (new peak demand savings from activity within the specified reporting period) | | | | Gross Incremental Energy Savings (kWh) (new energy savings from activity within the specified reporting period) | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | 2011 | 2012 | 2013 | 2014 | 2011 | 2012 | 2013 | 2014 |
| **Consumer Program** | | | | | | | | | |
| Appliance Retirement** | Appliances | 6,750 | 2,011 | 3,151 | 3,579 | 45,971,627 | 13,424,518 | 18,616,239 | 20,315,770 |
| Appliance Exchange** | Appliances | 719 | 556 | 2,101 | 2,238 | 873,531 | 974,621 | 3,746,106 | 3,990,372 |
| HVAC Incentives | Equipment | 53,209 | 38,346 | 40,418 | 48,467 | 99,413,430 | 66,929,213 | 71,225,037 | 90,274,814 |
| Conservation Instant Coupon Booklet | Items | 1,184 | 231 | 464 | 1,442 | 19,192,453 | 1,325,898 | 6,842,244 | 19,000,254 |
| Bi-Annual Retailer Event | Items | 1,504 | 1,622 | 1,142 | 4,626 | 26,899,265 | 29,222,072 | 16,441,329 | 70,254,471 |
| Retailer Co-op | Items | 0 | 0 | 0 | 0 | 3,917 | 0 | 0 | 0 |
| Residential Demand Response | Devices | 10,390 | 49,038 | 93,076 | 117,513 | 23,597 | 359,408 | 390,303 | 8,379 |
| Residential Demand Response (IHD) | Devices | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Residential New Construction | Homes | 0 | 1 | 29 | 587 | 1,813 | 4,884 | 259,826 | 3,699,786 |
| **Consumer Program Total** | | **73,757** | **91,805** | **140,380** | **178,452** | **192,379,633** | **112,240,615** | **117,521,084** | **207,543,846** |
| **Business Program** | | | | | | | | | |
| Retrofit | Projects | 34,201 | 78,965 | 82,896 | 98,849 | 184,070,265 | 387,817,248 | 478,410,896 | 642,515,421 |
| Direct Install Lighting | Projects | 22,155 | 20,469 | 19,807 | 24,794 | 65,777,197 | 68,896,046 | 68,140,249 | 89,528,509 |
| Building Commissioning | Buildings | 0 | 0 | 0 | 988 | 0 | 0 | 0 | 1,513,377 |
| New Construction | Buildings | 247 | 1,596 | 2,934 | 11,911 | 823,434 | 3,755,869 | 9,183,826 | 37,742,970 |
| Energy Audit | Audits | 0 | 1,450 | 4,283 | 9,367 | 0 | 7,049,351 | 23,386,108 | 46,012,517 |
| Small Commercial Demand Response | Devices | 55 | 187 | 773 | 2,116 | 131 | 1,068 | 373 | 319 |
| Small Commercial Demand Response (IHD) | Devices | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Demand Response 3 | Facilities | 21,390 | 19,389 | 23,706 | 23,380 | 633,421 | 281,823 | 346,659 | 0 |
| **Business Program Total** | | **78,048** | **122,056** | **134,399** | **171,405** | **251,304,448** | **467,801,406** | **579,468,111** | **817,313,113** |
| **Industrial Program** | | | | | | | | | |
| Process & System Upgrades | Projects | 0 | 0 | 313 | 12,287 | 0 | 0 | 2,799,746 | 90,463,617 |
| Monitoring & Targeting | Projects | 0 | 0 | 0 | 102 | 0 | 0 | 0 | 502,517 |
| Energy Manager | Projects | 0 | 1,034 | 3,953 | 5,767 | 0 | 7,067,535 | 24,438,070 | 44,929,364 |
| Retrofit | Projects | 6,372 | 0 | 0 | 0 | 38,412,408 | 0 | 0 | 0 |
| Demand Response 3 | Facilities | 176,180 | 74,056 | 162,543 | 166,082 | 4,243,958 | 1,784,712 | 4,309,160 | 0 |
| **Industrial Program Total** | | **182,552** | **75,090** | **166,809** | **184,238** | **42,656,366** | **8,852,247** | **31,546,976** | **135,895,498** |
| **Home Assistance Program** | | | | | | | | | |
| Home Assistance Program | Homes | 4 | 1,777 | 2,361 | 2,466 | 56,119 | 5,524,230 | 20,987,275 | 19,582,658 |
| **Home Assistance Program Total** | | **4** | **1,777** | **2,361** | **2,466** | **56,119** | **5,524,230** | **20,987,275** | **19,582,658** |
| **Aboriginal Program** | | | | | | | | | |
| Home Assistance Program | Homes | 0 | 0 | 267 | 549 | 0 | 0 | 1,609,393 | 3,101,207 |
| Direct Install Lighting | Projects | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Aboriginal Program Total** | | **0** | **0** | **267** | **549** | **0** | **0** | **1,609,393** | **3,101,207** |
| **Pre-2011 Programs completed in 2011** | | | | | | | | | |
| Electricity Retrofit Incentive Program | Projects | 40,418 | 0 | 0 | 0 | 223,956,390 | 0 | 0 | 0 |
| High Performance New Construction | Projects | 10,197 | 6,501 | 772 | 268 | 52,371,183 | 23,803,888 | 3,522,240 | 1,377,475 |
| Toronto Comprehensive | Projects | 33,467 | 0 | 0 | 802 | 174,070,574 | 0 | 0 | 7,085,257 |
| Multifamily Energy Efficiency Rebates | Projects | 2,553 | 0 | 0 | 0 | 9,774,792 | 0 | 0 | 0 |
| LDC Custom Programs | Projects | 534 | 0 | 0 | 0 | 649,140 | 0 | 0 | 0 |
| **Pre-2011 Programs completed in 2011 Total** | | **87,169** | **6,501** | **772** | **1,070** | **460,822,079** | **23,803,888** | **3,522,240** | **8,462,733** |
| **Other** | | | | | | | | | |
| Program Enabled Savings | Projects | 0 | 2,177 | 3,692 | 5,500 | 0 | 525,011 | 4,075,382 | 19,035,337 |
| Time-of-Use Savings | Homes | 0 | 0 | 0 | 54,795 | 0 | 0 | 0 | 0 |
| LDC Pilots | Projects | 0 | 0 | 0 | 1,170 | 0 | 0 | 0 | 5,061,522 |
| **Other Total** | | **0** | **2,177** | **3,692** | **60,296** | **0** | **525,011** | **4,075,382** | **19,035,337** |
| **Adjustments to 2011 Verified Results** | | | **13,266** | **645** | **1,601** | | **48,705,294** | **20,581** | **6,028** |
| **Adjustments to 2012 Verified Results** | | | | **8,632** | **13,449** | | | **54,301,893** | **59,098,939** |
| **Adjustments to 2013 Verified Results** | | | | | **34,727** | | | | **206,413,158** |
| **Energy Efficiency Total** | | **213,515** | **156,735** | **168,583** | **289,384** | **942,317,539** | **616,320,385** | **753,683,966** | **1,210,925,694** |
| **Demand Response Total** | | **208,015** | **142,670** | **280,099** | **309,091** | **4,901,107** | **2,427,011** | **5,046,495** | **8,698** |
| **Adjustments to Previous Years' Verified Results Total** | | **0** | **13,266** | **9,277** | **49,777** | **0** | **48,705,294** | **54,322,474** | **265,518,125** |
| **OPA-Contracted LDC Portfolio Total (inc. Adjustments)** | | **421,530** | **312,671** | **457,958** | **648,252** | **947,218,646** | **667,452,690** | **813,052,934** | **1,476,452,516** |

Activity and savings for Demand Response resources for each year represent the savings from all active facilities or devices contracted since January 1, 2011 (reported cumulatively).

Gross results are presented for informational purposes only and are not considered official 2014 Final Verified Results

**Net results substituted for gross results due to unavailability of data

Table 14: Adjustments to Province-Wide Gross Verified Results due to Variances

| Initiative | Unit | Gross Incremental Peak Demand Savings (kW) (new peak demand savings from activity within the specified reporting period) | | | | Gross Incremental Energy Savings (kWh) (new energy savings from activity within the specified reporting period) | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | 2011 | 2012 | 2013 | 2014 | 2011 | 2012 | 2013 | 2014 |
| **Consumer Program** | | | | | | | | | |
| Appliance Retirement | Appliances | 0 | 0 | 0 | | 0 | 0 | 0 | |
| Appliance Exchange | Appliances | 0 | 0 | 0 | | 0 | 0 | 0 | |
| HVAC Incentives | Equipment | -8,759 | 1,091 | 2,157 | | -16,241,086 | 1,952,473 | 3,873,449 | |
| Conservation Instant Coupon Booklet | Items | 15 | 0 | 1 | | 255,975 | 0 | 20,668 | |
| Bi-Annual Retailer Event | Items | 117 | 0 | 0 | | 2,373,616 | 0 | 0 | |
| Retailer Co-op | Items | 0 | 0 | 0 | | 0 | 0 | 0 | |
| Residential Demand Response | Devices | 0 | 0 | 0 | | 0 | 0 | 0 | |
| Residential Demand Response (IHD) | Devices | 0 | 0 | 0 | | 0 | 0 | 0 | |
| Residential New Construction | Homes | 1 | 1 | 115 | | 330,093 | 2,009 | 701,488 | |
| **Consumer Program Total** | | **-8,628** | **1,092** | **2,273** | | **-13,281,402** | **1,954,483** | **4,595,605** | |
| **Business Program** | | | | | | | | | |
| Retrofit | Projects | 4,511 | 10,114 | 16,584 | | 22,046,931 | 58,528,789 | 108,677,566 | |
| Direct Install Lighting | Projects | 541 | 217 | 49 | | 1,346,618 | 781,858 | 174,460 | |
| Building Commissioning | Buildings | 0 | 0 | 0 | | 0 | 0 | 0 | |
| New Construction | Buildings | 3,287 | 2,673 | 4,151 | | 11,323,593 | 9,884,305 | 15,992,924 | |
| Energy Audit | Audits | 656 | 488 | 3,631 | | 2,391,744 | 2,386,374 | 19,822,524 | |
| Small Commercial Demand Response | Devices | 0 | 0 | 0 | | 0 | 0 | 0 | |
| Small Commercial Demand Response (IHD) | Devices | 0 | 0 | 0 | | 0 | 0 | 0 | |
| Demand Response 3 | Facilities | 0 | 0 | 0 | | 0 | 0 | 0 | |
| **Business Program Total** | | **8,996** | **13,491** | **24,414** | | **37,108,886** | **71,581,326** | **144,667,473** | |
| **Industrial Program** | | | | | | | | | |
| Process & System Upgrades | Projects | 0 | 0 | 426 | | 0 | 0 | 1,232,785 | |
| Monitoring & Targeting | Projects | 0 | 0 | 54 | | 0 | 528,000 | 639,348 | |
| Energy Manager | Projects | 29 | 1,071 | 2,687 | | 0 | 8,968,007 | 28,893,596 | |
| Retrofit | Projects | 0 | 0 | 0 | | 0 | 0 | 0 | |
| Demand Response 3 | Facilities | 0 | 0 | 0 | | 0 | 0 | 0 | |
| **Industrial Program Total** | | **29** | **1,071** | **3,168** | | **0** | **9,496,007** | **30,765,729** | |
| **Home Assistance Program** | | | | | | | | | |
| Home Assistance Program | Homes | 0 | 222 | 791 | | 0 | 1,316,749 | 4,321,794 | |
| **Home Assistance Program Total** | | **0** | **222** | **791** | | **0** | **1,316,749** | **4,321,794** | |
| **Aboriginal Program** | | | | | | | | | |
| Home Assistance Program | Homes | 0 | 0 | 134 | | 0 | 0 | 563,715 | |
| Direct Install Lighting | Projects | 0 | 0 | 0 | | 0 | 0 | 0 | |
| **Aboriginal Program Total** | | **0** | **0** | **134** | | **0** | **0** | **563,715** | |
| **Pre-2011 Programs completed in 2011** | | | | | | | | | |
| Electricity Retrofit Incentive Program | Projects | 266 | 0 | 0 | | 1,049,108 | 0 | 0 | |
| High Performance New Construction | Projects | 13,072 | 727 | 405 | | 23,905,663 | 5,665,066 | 1,535,048 | |
| Toronto Comprehensive | Projects | 0 | 1,920 | 529 | | 0 | 12,924,335 | 3,783,965 | |
| Multifamily Energy Efficiency Rebates | Projects | 0 | 0 | 0 | | 0 | 0 | 0 | |
| LDC Custom Programs | Projects | 0 | 0 | 0 | | 0 | 0 | 0 | |
| **Pre-2011 Programs completed in 2011 Total** | | **13,337** | **2,647** | **934** | | **24,954,771** | **18,589,400** | **5,319,013** | |
| **Other** | | | | | | | | | |
| Program Enabled Savings | Projects | 1,776 | 3,712 | 2,020 | | 1,673,712 | 11,481,687 | 10,688,564 | |
| Time-of-Use Savings | Homes | 0 | 0 | 0 | | 0 | 0 | 0 | |
| LDC Pilots | Projects | 0 | 0 | 0 | | 0 | 0 | 0 | |
| **Other Total** | | **1,776** | **3,712** | **2,020** | | **1,673,712** | **11,481,687** | **10,688,564** | |
| **Adjustments to 2011 Verified Results** | | **15,511** | | | | **50,455,967** | | | |
| **Adjustments to 2012 Verified Results** | | | **22,235** | | | | **114,419,652** | | |
| **Adjustments to 2013 Verified Results** | | | | **33,734** | | | | **200,921,892** | |
| **Adjustments to Previous Years' Verified Results Total** | | **15,511** | **22,235** | **33,734** | | **50,455,967** | **114,419,652** | **200,921,892** | |

Activity and savings for Demand Response resources for each year represent the savings from all active facilities or devices contracted since January 1, 2011 (reported cumulatively).

*Includes adjustments after Final Reports were issued

Results presented using scenario 1 which assumes that demand response resources have a persistence of 1 year

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