North Bay Hydro Distribution Ltd.

Conservation and Demand Management

2011 Annual Report

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The Ontario Energy Board

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North Bay Hydro Distribution Ltd (NBH) is North Bay's Local Distribution Company (LDC), responsible for the distribution of electricity and the servicing and maintenance of North Bay's power line infrastructure. NBH is working hard to be the 'Best in Class' and provide superior service to all classes of customers served. Conservation and Demand Management (CDM) plays a key role in securing reliable, sustainable, and affordable energy supply. NBH feels that conservation is an essential part of its core services and can help customers to manage rising energy and operating costs.

The Ontario Energy Board (OEB) has set CDM targets for NBH, as a condition of its licence, to achieve 26.1 GWh of energy savings and 5.05 MW of summer peak demand savings, over the period from January 1, 2011 through December 31, 2014. This Annual Report covers NBH's CDM activities and progress towards its targets for the period from January 1, 2011 to December 31, 2011.

NBH is pleased to report solid progress in 2011 towards the achievement of its CDM targets. Despite start-up challenges, in 2011 NBH achieved 35% of its cumulative 2011-2014 energy target and 10% of its 2014 summer peak demand target, or 20% of its demand target if Demand Response 3 contracts signed in 2011 persist into 2014. Assuming similar participation rates in each of 2012, 2013 and 2014, NBH is on pace to hit 75% of its energy target. NBH will hit 44% of its demand target assuming DR3 contracts are only in place for one year, or 84% of its demand target if all 2011-2014 DR3 contracts persist until 2014.

North Bay is committed to working with the Ontario Power Authority (OPA) to deliver CDM programs for the remainder of the current CDM 2011-2014 framework. Despite this commitment NBH will be challenged to meet the targets established by the OEB without significant change in the OPA's program design and delivery functions. The primary problem is that both the OPA and the provincial government believe that conservation programs are necessary for system issues, not necessarily for working with customers to reduce costs according to their needs and opportunities. The province currently has an abundance of supply; which creates a great opportunity for delivering customer centric conservation programs that address the needs of the customers versus the needs of the electricity grid. This approach will help create a sustainable culture of conservation as it will eliminate barriers to projects which in reality are feasible and have added benefits for the participant.

2011 CDM program delivery

NBH offered a full suite of CDM programs available from the OPA for its residential, commercial, and industrial customers.

NBH's role in delivery of the initiatives included promotion, customer service, acting as the local "face" for the initiatives in the community, developing channel partner networks, reporting to the OPA, and providing technical support to customers to mature opportunities.

In all, over 8,700 out of 24,500 NBH customers (36%) participated in at least one of the CDM programs offered, making it is clear that North Bay supports conservation and all of its benefits.

Meeting NBH CDM targets

Based on experience in 2011, NBH expects that achieving 100% of CDM targets will remain a significant challenge. 2011 was a "start-up" year for OPA CDM program initiatives across the province. The OPA was not ready for the anticipated January 1, 2011 launch. Delays in the launch of OPA CDM programs

and challenges with the online program delivery systems also hindered the timely and efficient delivery of CDM programs. As a result of these delays, NBH did not meet its forecasted 2011 results.

Energy savings realized from participation in 2011 initiatives have greater impact on targets than savings realized from initiatives in 2012 and beyond. Making up for lost participation in 2011 will require a greater than one-to-one increase in participation in 2012-2014. To address this fact, NBH is currently re-evaluating energy savings goals. This re-evaluation will contribute to, but not necessarily get all the way to, closing the gap between expected savings and NBH's target savings.

NBH has several recommendations for the OPA to improve the current delivery of OPA CDM program initiatives. Unless the OPA and the province are prepared to move to an approach where system needs are balanced with customer opportunities and expectations, NBH will have great difficulty meeting energy and demand targets.

NBH's two major recommendations are:

1. **Continuing support for gas-fired co-gen projects**. NBH encountered significant challenges in gaining approval for a behind-the-meter cogeneration project at a new hospital, where the customer is keen to proceed if it can receive capital incentives from NBH. Although Minister Duncan, in his letter to LDCs of May 31, 2004 that launched CDM initiatives clearly indicated that "distributed energy options behind a customer's meter such as tri-generation, co-generation, ground source heat pumps, solar, wind, and biomass systems" should be supported by the Board, and despite Ministerial directives to the OPA to promote co-generation, NBH has faced numerous obstacles in getting this program off-the ground. First, in spite of the clear Provincial direction, the OPA's CESOP program excludes projects in NBH's service territory. Even though explicitly excluded, the OEB's definition of 'duplicative' for Board-approved programs also excludes cogen projects in North Bay Hydro (because of the OPA's program), and NBH has encountered obstacles to getting the project authorized under one of the other OPA programs. Until recently, the OPA agreed to support this program under the Process and Systems Upgrade Initiative, but has since decided to halt funding for 100% natural gas-fired cogeneration projects under this program. OPA has suggested, but not yet decided, that gas-fired cogen projects currently in the pipeline may remain eligible for incentives. There is concern that due to a lack of a timely decision from the OPA, the opportunity to realize 1500 kW of efficient generation will be lost. The hospital is seeking to increase backup power capability to 80% as the existing back-up generators can only supply up to a maximum of 40%, which is a significant risk for a facility that serves a large population in North Bay and surrounding areas. The project has been in concept and planning phase for over 3 years but procurement and implementation cannot begin without confirmation of capital incentives from North Bay Hydro. At this point, NBH is unable to confirm if capital incentives are available. This project alone will help NBH achieve 30% of its demand and 44% of its energy target. Significant time and resources have been spent in realizing this opportunity which is why NBH hopes that the OPA will fund this particular project. NBH is currently doing another feasibility study for a 400 – 600 kW cogeneration project at wastewater treatment facility that is still eligible under the PSUI because it is using bio-gas.
2. **Redefining the scope of the OPA residential program initiatives**. The residential program initiatives could be improved by strengthening the "whole home" approach already adopted by the OPA. The current OPA residential program initiatives offer incentives for fridge removals, heating and cooling upgrades, energy monitoring devices and other energy efficiency items (compact fluorescent lights, timers, programmable thermostats, etc.). However, they do not provide a clear message as to what measures a resident should focus on to maximize savings. Redefining the OPA residential program initiatives could include offering a home assessment, a

prioritized list of actions that are tailored to the individual home, and direct install of energy efficient measures at no cost (similar to the commercial Direct Install initiative and the low-income Home Assistance Program). This type of residential program would lead to deeper savings and better engagement from residential customers.

In addition other important recommendations include:

3. **Increasing incentive funding to the public sector for conservation activities**. Many public sector facilities and institutions are in need of major energy efficiency retrofits but are often significantly restricted by the up-front capital costs needed to proceed. NBH believes that the OPA should consider increasing CDM program incentive levels to help overcome the capital cost barriers faced by this sector.
4. **Increasing flexibility of OPA program rules and eligibility criteria**. NBH would like to see some program rules and requirements become more flexible; LDCs across the province could tailor CDM programs to meet the unique needs of their respective customers and drive up participation rates. This flexibility could be limited by ensuring that CDM programs remain cost-effective and continue to lead to quantifiable and verifiable energy savings.
5. **Shortening OPA response time**. NBH is concerned with the lag in response time on important decision-making matters submitted to the OPA. The OPA should focus its efforts towards ensuring that appropriate mechanisms are in place to enable timelier turnaround of important decisions. In particular, a timely response is required from the OPA to support complex energy efficiency projects where the eligibility criterion is unclear. Utilities find it difficult to commit to customers on the availability of financial incentives when the interpretation of the eligibility criteria is subjective. Due to a long eligibility verification process by the OPA, participants tend to lose interest and abandon their projects while local utilities miss out on viable conservation projects.

Board-approved program applications

NBH has not filed any applications to the OEB for Board-approved CDM Programs. Board-approved programs could be designed to address barriers specific to NBH, or deliver conservation initiatives to potential participants who may feel constrained by certain design and delivery features of existing OPA programs. Board-approved programs could also contribute greatly to the savings required to reduce the gap between expected and actual CDM results in the NBH service territory.

NBH sees some serious practical problems with the Board-approved program process. In light of the OEB's decision on the Toronto Hydro application for Board-approved programs, and the OEB taking a very broad and all-encompassing definition of 'duplicative', there appears to be no significant activity from any LDCs across the province in establishing these programs. This is troubling since the time required to go through program development and the approvals process means that the window for getting a Board-approved program established and have it achieve an appreciable amount of savings is rapidly closing. Despite the inactivity on this front, there remains the expectation that LDCs hit 100% of CDM targets.

Because of the current difficulties surrounding Board-approved program applications, NBH does not foresee pursuing these programs at this time. NBH will continue to evaluate the need and feasibility of Board-approved CDM programs as it tracks progress from province-wide programs and time-of-use

results; as opportunities present themselves, and as the conditions and requirements for approval evolve.

CDM program evaluation results

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

The commercial programs completed in 2011 contributed the most to the total energy savings (47%) and demand savings (54%) achieved by NBH in 2011. The residential programs contributed 23% and 18% of the energy and demand savings respectively, and industrial programs contributed 3% and 2%, respectively. However the industrial results take the very conservative assumption that DR3 contracts established in 2011 will not persist until 2014. The remaining savings are due to pre-2011 projects that were completed in 2011.

Additional comments

The OEB has made it a condition of NBH's Distributor's Licence to achieve required CDM targets. Given the 36% penetration rate in 2011 it is obvious that NBH is committed to conservation results. Despite this significant commitment, current restrictions and lack of flexibility in delivering programs that are tailored to the unique characteristics of NBH's region and customers create substantial barriers to NBH's ability to achieve the defined targets. NBH believes the OPA/OEB needs to take accountability for the gap between forecast and targets and make the necessary changes to the programs in order to address these limitations and facilitate the success of the conservation efforts. The success of the LDC depends on its ability to have and utilize all the opportunities available. If the necessary flexibility is not provided, NBH believes that the OPA/OEB need to collectively or individually provide NBH with the solutions that will ensure success in hitting 2014 targets.

Background

On March 31, 2010, the Minister of Energy and Infrastructure of Ontario, under the guidance of sections 27.1 and 27.2 of the Ontario Energy Board Act, 1998, directed the Ontario Energy Board (OEB) to establish Conservation and Demand Management (CDM) targets to be met by electricity distributors. Accordingly, on November 12, 2010, the OEB amended the distribution licence of North Bay Hydro to require North Bay Hydro, as a condition of its licence, to achieve 26.1 GWh of energy savings and 5.05 MW of summer peak demand savings, over the period beginning January 1, 2011 through December 31, 2014.

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

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

2011 Achievements and findings

North Bay Hydro (NBH) is pleased to report solid progress in 2011 towards the achievement of Conservation and Demand Management (CDM) targets.

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

Despite start-up challenges, in 2011, NBH achieved 35% of its cumulative 2011-2014 energy target. It also achieved 10% of its 2014 summer peak demand target, or 20% of its demand target if Demand Response 3 contracts signed in 2011 persist into 2014. Assuming similar participation rates in each of 2012, 2013 and 2014, NBH is on pace to hit 75% of its energy target. It will hit 44% of its demand target assuming DR3 contracts are only in place for one year, or 84% of its demand target if all 2011-2014 DR3 contracts persist until 2014.

North Bay Hydro was also the proud recipient of the Communications / Public Relations Excellence Award from the Ontario Electricity Distributor's Association (EDA) for delivering the "Watts Up With This?" Campaign. NBH's achievements could not have been met without the strong participation and involvement of North Bay residents, contractors, local businesses and service delivery agents. With over 8,700 CDM program participants in the NBH service territory, it is clear that North Bay supports conservation and all of its benefits.

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

Finally, NBH recently launched a **real-time monitoring pilot program** for large customers and have 4 of 10 expected participants already online. Though the real-time monitoring systems do not come with any obligations, these 4 customers have already reduced their demand and energy use dramatically by keeping non-essential equipment turned off and managing equipment start up times. These achievements show the efforts and dedication of the North Bay Hydro team in supporting all aspects of CDM across its service territory.

North Bay is committed to working with the Ontario Power Authority (OPA) to deliver CDM programs for the remainder of the current CDM 2011-2014 framework and beyond. It is pleased that the OPA made improvements to some OPA program initiatives, including increasing the Direct Install[1] incentive level to $1,500, and amending program requirements for ERII and Energy Audit initiatives.

NBH notes several opportunities where the OPA can improve the current delivery of OPA CDM program initiatives. These improvements are needed in order to make up for lost time in 2011 and meet the needs of the NBH customer base. The delays in establishing programs in 2011 have a large impact on energy savings; making up for lost participation in 2011 will require a greater than one-to-one increase in participation in 2012-2014. Furthermore, NBH is at a disadvantage due to the fact that it is a winter peaking utility. The OPA has focused its resources on developing programs that benefit summer peaking utilities. This does not create a level playing field for LDCs across the province, as winter peaking utilities will have greater difficulty in reducing its summer peak demand. Additionally, NBH's demand target represents a 9% reduction in its summer peak demand. This is not realistic due to the fact that NBH does not have the same loads driving demand compared with southern Ontario. Without the following improvements, NBH will have great difficulty in meeting its energy and demand targets:

1. **Continuing support for gas-fired co-gen projects**. NBH encountered significant challenges in gaining approval for a behind-the-meter cogeneration project at a new hospital, where the customer is keen to proceed if it can get financial support from NBH. Although Minister Duncan, in his letter to LDCs of May 31, 2004 that launched CDM initiatives clearly indicated that "distributed energy options behind a customer's meter such as tri-generation, co-generation, ground source heat pumps, solar, wind, and biomass systems" should be supported by the Board, and despite Ministerial directives to the OPA to promote co-generation, NBH has faced numerous obstacles in getting this program off-the ground. First, in spite of the clear Provincial direction, the OPA's CESOP program excludes projects in NBH's service territory. Even though explicitly excluded, the OEB's definition of 'duplicative' for Board-approved programs also excludes cogen projects in North Bay Hydro (because of the OPA's program), and NBH has encountered obstacles to getting the project authorized under one of the other OPA programs.

[1] For descriptions of all OPA program initiatives, see Section 2.

Until recently, the OPA agreed to support this program under the Process and Systems Upgrade Initiative, but has since decided to halt funding for gas-fired cogeneration projects under this program. OPA has suggested, but not yet decided, that gas-fired cogen projects currently in the pipeline may remain eligible for incentives. There is concern that due to a lack of a timely decision from the OPA, the opportunity to realize 1500 kW of efficient generation will be lost. NBH is currently doing another feasibility study for a 400 – 600 kW cogeneration project at wastewater treatment facility that is still eligible under the PSUI because it is using bio-gas.

2. **Increasing incentive funding to the public sector for conservation activities**. Many public sector facilities and institutions are in need of major energy efficiency retrofits but are often significantly restricted by the up-front capital costs needed to proceed. NBH believes that the OPA should consider increasing CDM program incentive levels to help overcome the capital cost barriers faced by this sector. Unlike projects in commercial, industrial and residential sectors, retrofits within the public sector go to improving services and infrastructure used and supported by all ratepayers.
3. **Redefining the scope of the OPA residential program initiatives**. The residential program initiatives could be improved by strengthening the "whole home" approach already adopted by the OPA. The current OPA residential program initiatives offer incentives for fridge removals, heating and cooling upgrades, energy monitoring devices and other energy efficiency items (compact fluorescent lights, timers, programmable thermostats, etc.). However, they do not provide a clear message as to what measures a resident should focus on to maximize savings. Redefining the OPA residential program initiatives could include offering a home assessment, a prioritized list of actions that are tailored to the individual home, and direct install of energy efficient measures at no cost (similar to the commercial Direct Install initiative and the low-income Home Assistance Program). This type of residential program would lead to deeper savings and better engagement from residential customers.
4. **Increasing flexibility of OPA program rules and eligibility criteria**. The OPA program initiatives are province-wide programs that are delivered consistently across the province with fixed program rules and requirements. NBH would like to see these rules and requirements become more flexible; LDCs across the province could tailor CDM programs to meet the unique needs of their respective customers and drive up participation rates. Program flexibility could provide LDCs with greater decision making ability on project eligibility, measure eligibility, incentive structure/levels, savings measurement and the like. LDCs would thus be able to provide potential participants with quicker decisions on project approval, and project conditions that are better suited to successful implementation. This flexibility could be limited by ensuring that CDM programs remain cost-effective and continue to lead to quantifiable and verifiable energy savings.
5. **Shortening OPA response time**. NBH is concerned with the lag in response time on important decision-making matters submitted to the OPA. Many of these matters involve project eligibility and funding criteria that must be resolved before a project can launch; lags in response time risk eliminating or seriously scaling back these projects. The OPA should focus its efforts towards respecting the needs of potential participants, and ensuring that appropriate mechanisms are in place to enable a timely turnaround of important decisions.

6. **Facilitating the approval of Board-approved programs**. LDCs faced unexpected challenges surrounding the approval for Board-Approved programs. The Board's over-restrictive interpretation of "duplication" of OPA program initiatives greatly hindered LDCs' ability to develop complementary programs to those offered by the OPA. These programs could have been designed to address barriers, or deliver conservation initiatives to potential participants who may feel constrained by certain design and delivery features of existing OPA programs. Board-approved programs could also contribute greatly to the savings required to reduce the gap between expected and actual CDM results in the NBH service territory. NBH hopes that updates to the Board-Approved program approvals process can be made that will facilitate the launch of such programs in the future.

NBH expects to continue delivery of CDM programs and make progress in 2012 towards its 2011-2014 energy and demand targets. NBH is committed to delivering conservation results, reducing greenhouse gas emissions, and promoting a culture of conservation in the community. This commitment can only be made possible with the support of the Ontario Energy Board and the Ontario Power Authority.

1 Board-Approved CDM Programs

1.1 Introduction

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

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

1.2 TOU Pricing

1.2.1 BACKGROUND

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

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

1.2.2 TOU PROGRAM DESCRIPTION

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

Initiative Frequency: Year-Round.

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

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

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

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

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

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

1.2.2.1 Initiative Activities/Progress:

North Bay Hydro began transitioning its RPP customers to TOU billing September 1, 2011. As of December 31st, 2011, 18,178 residential RPP customers (87%) and 1,541 GS<50 kW RPP customers (58% of all GS < 50 kW accounts) were on TOU billing.

1.3 NBH's Application with the OEB

North Bay Hydro has not filed any applications to the Board for Board-approved programs.

North Bay Hydro recognizes that OPA Province-wide programs were never designed to meet 100% of LDCs' targets, and sees Board-approved programs as an important means for extending the savings realized from the province-wide programs. In North Bay's CDM strategy filed November 1, 2010, it forecasted the use of Board-approved programs to hit 9% of its energy target and 30% of its demand target.

North Bay Hydro initiated work on a number of Board-approved programs in 2011 that addressed what it viewed as limitations in the province-wide programs, including some programs that specifically address the needs of customers in Northern Ontario with high electricity demand for winter heating. However, in light of the Board's decision on the Toronto Hydro application, and the Board taking a very broad and all-encompassing definition of 'duplicative', North Bay Hydro abandoned development of these programs.

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

2 OPA-Contracted Province-Wide CDM Programs

2.1 Introduction

Effective march 23,2011 , NBH entered into an agreement with the OPA to deliver CDM programs extending from January 1, 2011 to December 31, 2014. The CDM programs with their associated initiatives are listed in the table below. In addition, programs that were started prior to 2011 that were completed in 2011 are included.

Table 2: OPA-contracted province-wide CDM programs

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

Initiative	Schedule	Date schedule was posted	Customer class
			kW
Existing Building Commissioning Incentive	Schedule C-6	Feb 2011	All general service classes
New Construction and Major Renovation Initiative	Schedule C-4	Feb 2011	All general service classes
Energy Audit	Schedule C-1	Jan 26, 2011	All general service classes
Commercial Demand Response (part of the Residential program schedule)	Schedule B-3	Jan 26, 2011	General service < 50 kW
Demand Response 3 (part of the Industrial program schedule)	Schedule D-6	May 31, 2011	General service 50 kW & above
Industrial Program			
Process & System Upgrades	Schedule D-1	May 31, 2011	General service 50 kW & above
Monitoring & Targeting	Schedule D-2	May 31, 2011	General service 50 kW & above
Energy Manager	Schedule D-3	May 31, 2011	General service 50 kW & above
Efficiency: Equipment Replacement Incentive (part of the C&I program schedule)	Schedule C-2	May 31, 2011	General service 50 kW & above
Demand Response 3	Schedule D-6	May 31, 2011	General service 50 kW & above
Pre-2011 Programs completed in 2011			
Electricity Retrofit Incentive Program	n/a	n/a	All general service classes
High Performance New Construction	n/a	n/a	All general service classes
Multifamily Energy Efficiency Rebates	n/a	n/a	All general service classes

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

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

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

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

Initiative not in market in 2011	Objective	Status
	electricity demand during certain periods of the year pursuant to the DR 1 contract. The initiative provided DR payments for the actual electricity reduction provided during a demand response event.	
Industrial Program		
Demand Response 1	As above	There was no customer uptake for this initiative province-wide.

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

2.2 Program Descriptions

2.2.1 RESIDENTIAL PROGRAM

NBH partnered with third parties, including a local marketing firm and radio station to promote initiatives within the Residential Program. Activities included the following:

Participation at local events. North Bay Hydro participated in many events throughout the year:

- Home & Garden Show
- Chamber of Commerce monthly meeting
- Downtown Improvement Area after hours presentation
- Nipissing Parry-Sound District School Board meeting
- Downtown Christmas Walk
- Downtown Improvement Area monthly meeting
- City Energy Management meeting
- Chamber After Hours at New Mike Harris Learning Library
- Environmental Symposium with Nipissing Parry-Sound District School Board
- Girl Guides meeting

Of particular note was NBH's participation in Small Business Week at Northern Ontario's largest shopping Centre. It took up residence in the Centre Court of the Mall where it displayed a 60-year-old fridge next to a brand new one from one of the merchants in the mall as a promotion for the Appliance Retirement initiative. It caused quite a buzz as many people remembered the old fridge in their homes of years ago. Also of note was NBH's participation in the Downtown Christmas Walk where 20,000 people attend every year. This year NBH had 2 hydro trucks offering free bucket rides to everyone. This was a very successful event as NBH drew a huge crowd at its booth. At the event, NBH handed out Coupon Booklets and information brochures on the Appliance Retirement initiative.

In general, all of NBH's events were well attended and well received. These events allowed the NBH team to discuss details and answer any questions pertaining to the OPA programs. Attendance at the events also allowed NBH to be available on a one-on-one basis so that participants had the opportunity to ask more specific questions. North Bay Hydro has a very open and friendly relationship with the community and participates in many events.

Radio promotional spots: NBH partnered with the radio stations in North Bay to promote in-store events in conjunction with local retailers promoting the Coupon Booklet and Appliance Retirement initiative. Listeners were invited to visit locations throughout the area to pick up Coupon Booklets and were provided with details on when and where to do so. The radio promotional spots were also used to advertise NBH's involvement in the Small Business Week event and the Downtown Christmas Walk.

On-location promotion: NBH partnered with a third party to have a booth set up at various big box stores and other locations in North Bay to promote the Coupon Booklet and Appliance Retirement initiative. Staff at these booths presented promotional material and coupon booklets, and answered any questions for potential participants.

HVAC Incentive initiative promotion: NBH promoted the HVAC Incentive Initiative by hosting a lunch session that provided local contractors with information on the initiative. The lunch was successful in making contact with several local contractors and having contractors sign up to support the initiative.

2.2.1.1 APPLIANCE RETIREMENT INITIATIVE (Exhibit D)

Target Customer Type(s): Residential customers

Initiative Frequency: Year-round

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

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

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

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

Additional detail is available at the following websites:

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

In Market Date: March 23, 2011

Initiative Activities/Progress: Please see Section 2.2.1.

Lessons Learned:

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

2.2.1.2 APPLIANCE EXCHANGE INITIATIVE (Exhibit E)

Target Customer Type(s): Residential customers

Initiative Frequency: Spring and fall

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

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

Targeted End Uses: Window air conditioners and portable dehumidifiers

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

Additional detail is available at the following websites:

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

In Market Date: March 23, 2011

Initiative Activities/Progress: North Bay Hydro did not promote this Initiative specifically.

Lessons Learned:

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

2.2.1.3 HVAC INCENTIVES INITIATIVE (Exhibit B)

Target Customer Type(s): Residential customers

Initiative Frequency: Year-round

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

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

Targeted End Uses: Central air conditioners and furnaces

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

Additional detail is available at the following websites:

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

In Market Date: March 23, 2011

Initiative Activities/Progress: North Bay Hydro did not promote this Initiative specifically.

Lessons Learned:

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

2.2.1.4 CONSERVATION INSTANT COUPON BOOKLET INITIATIVE (Exhibit A)

Target Customer Type(s): Residential customers

Initiative Frequency: Year-round

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

Description: This Initiative provided customers with year-round coupons. The coupons offered instant rebates towards the purchase of a variety of low-cost, easy-to-install, energy-efficient measures that

could be redeemed at participating retailers. Booklets were directly mailed to customers and were also available at point-of-purchase. Downloadable coupons were also available at www.saveoneenergy.ca.

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

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

Additional detail is available at the following websites:

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

In Market Date: March 23, 2011

Initiative Activities/Progress: Please see Section 2.2.1.

Lessons Learned:

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

2.2.1.5 BI-ANNUAL RETAILER EVENT INITIATIVE (Exhibit C)

Target Customer Type(s): Residential customers

Initiative Frequency: Bi-annual events

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

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

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

Delivery: The OPA entered into arrangements with participating retailers to promote the discounted products, and to post and honour related coupons. NBH also referred local retailers to the OPA to participate in the program.

Additional detail is available at the following websites:

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

In Market Date: March 23, 2011

Initiative Activities/Progress: North Bay Hydro did not promote this Initiative specifically.

Lessons Learned:

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

2.2.1.6 RETAILER CO-OP

Target Customer Type(s): Residential customers

Initiative Frequency: Year-round

Objective: The objective of this initiative was to hold promotional events to encourage customers to purchase energy-efficiency measures (and go beyond the traditional bi-annual coupon events).

Description: This initiative provided NBH with the opportunity to work with retailers in its service area by holding special events at retail locations. These events were typically special promotions that encouraged customers to purchase energy-efficiency measures.

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

Delivery: Retailers applied to the OPA for co-op funding to run special events that promoted energy-efficiency to customers in their stores. NBH referred local retailers to the OPA to participate in the program. The OPA provided NBH with a list of retailers who qualified for co-op funding in its service territory as well as details of the proposed special events.

In Market Date: March 23, 2011

Initiative Activities/Progress: North Bay Hydro did not promote this Initiative specifically.

Lessons Learned:

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

2.2.1.7 RESIDENTIAL NEW CONSTRUCTION PROGRAM (Schedule B-2)

Target Customer Type(s): Residential customers

Initiative Frequency: Year-round

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

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

a) Incentives for homebuilders who installed electricity-efficiency measures from a prescriptive list or determined by a custom evaluation; and

b) Incentives for homebuilders who met or exceeded aggressive efficiency standards using the EnerGuide performance rating system.

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

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

Additional detail is available at the following websites:

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

In Market Date: March 23, 2011

Initiative Activities/Progress: North Bay Hydro did not promote this Initiative specifically.

Lessons Learned:

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

2.2.1.8 RESIDENTIAL DEMAND RESPONSE PROGRAM (Schedule B-3)

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

Initiative Frequency: Year-round

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

Description*:* This initiative, also known as ***peaksaver***PLUS ™, offered participants the option to receive a free programmable thermostat or switch, including installation. Participants also received access to price and real-time consumption information on an In Home Display (IHD). For the first 8 months of 2011 NBH opted to continue to offer the previous version of the ***peaksaver®*** load control program, which offered a programmable thermostat or switch and a $25 bill credit. The OPA referred to the continuation of the previous ***peaksaver®*** program into 2011 as the ***peaksaver®***Extension. After August 2011, the Extension ended and the program (including marketing) ceased until new IHD products became available.

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

Delivery: NBH recruited customers and procured technology

Additional detail is available at the following websites:

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

In Market Date: 2012

Initiative Activities/Progress: This initiative was not launched in 2011.

2.2.2 COMMERCIAL AND INSTITUTIONAL PROGRAM

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

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

Initiative Frequency: Year-round

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

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

a) Prescriptive projects, where prescribed measures replaced associated required base case equipment;

b) Engineered projects, where energy and demand savings and incentives were calculated for associated measures; or

c) Custom projects for energy efficiency upgrades not covered under prescriptive or engineering streams

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

Delivery: The initiative was delivered by NBH.

Additional detail is available at the following websites:

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

In Market Date: March 23, 2011

Initiative Activities/Progress:

NBH organized C&I events including lunches and workshops to promote ERII. It focused on building relationships with medium and large customers and helping them to identify opportunities. NBH invited medium to large businesses to attend a C&I workshop at the Clarion Resort where the following was discussed:

- Practical ways to save 5-10% of your energy consumption with little effort;
- Inside tips on the incentives available;
- 5 virtually free steps that customers can implement immediately to improve efficiencies;
- Making the wisest life-cycle choices when purchasing equipment to reduce operating costs; and
- Electrical Equipment 101 - everything you need to know about motors, fans/pumps, and compressors but haven't had time to ask.

NBH also offered free software tools and handbooks that businesses could take advantage of to evaluate technical and financial systems in their workplace. Attendees expressed interest in the topics presented. The workshop ran from 8 am to 2:30 pm, and included a group of 38 businesses. This number was ideal for conducting open discussions around the group.

Participants gave very positive ratings for the event on feedback forms. Participants were also asked about their interest in follow-up information, and/or preliminary walkthrough audits to identify opportunities. Many participants at the event requested that the NBH team go to their facility and conduct a preliminary energy audit. NBH hired consultants to visit large customers, conduct walkthrough audits, and provide them with “opportunity identification reports”. These reports identify how facilities can save energy/demand and reduce operating costs, and how saveONenergy programs can help. This has provided NBH with a ‘foot in the door’ and has helped with participation in initiatives such as ERII. NBH staff members are now conducting some of the walkthrough audits (for customers <200kW) to reduce costs. Approximately 6 site visits were conducted in 2011, and many more have been conducted in 2012.

North Bay Hydro has a very open and friendly relationship with the Business Community and has promoted ERII at a number of events including: Downtown Improvement Area monthly meetings, Chamber of Commerce monthly meetings, the City Energy Management Meeting, Downtown Improvement Area meetings, the Nipissing Parry-Sound District School Board meeting, and Chamber of Commerce meetings. All these events were well attended and well received. Attendees of the Chamber of Commerce monthly meeting, the Downtown Improvement meeting, and City of North Bay Energy Management meeting expressed the most interest in the potential benefits of the ERII program. These

small events also allowed the NBH team to discuss details pertaining to other OPA programs and answer questions. It also allowed NBH to be available on a one-on-one basis so that attendees could ask more specific questions.

North Bay Hydro also promoted the Initiative during Small Business Week, where it set up a booth in the centre court of Northern Ontario's largest shopping centre. NBH took the opportunity to present an incentive cheque to the mall for participating in ERII. The media was present to cover the cheque presentation. ERII was also promoted during the Christmas walk in November.

Lessons Learned:

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

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

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

Initiative Frequency: Year-round

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

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

Target End Uses: Lighting and water-heating measures

Delivery: Participants could enroll directly with NBH, or would be contacted by NBH or its Direct Install service provider.

Additional detail is available at the following websites:

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

In Market Date: March 23, 2011

Initiative Activities/Progress:

NBH managed the program with support from a third party to help drive uptake of the Direct Install Initiative. One of the third party's tasks is to telephone all contacts on a NBH GS < 50 kW customer list in order to promote the program. This strategy has worked very well so far, and has resulted in several projects coming down the pipeline. NBH completed 214 Small Business lighting projects in 2011.

Many North Bay businesses had previously taken advantage of the Power Savings Blitz (a predecessor to the Direct Install Initiative), so the current rate of success of the Initiative is unlikely to continue into 2013 and 2014. Overall, lighting projects seem to be starting to saturate as many customers have already changed over their lighting.

NBH also promoted the Direct Install Initiative at a number of events including: Downtown Improvement Area monthly meetings, Chamber of Commerce monthly meetings, the City Energy Management Meeting, the Downtown Improvement Area After Hours presentation, the Nipissing Parry-Sound District School Board meeting, and the Chamber of Commerce meeting. North Bay Hydro also promoted the Initiative during Small Business Week, where the NBH team set up a booth in the centre court of Northern Ontario's largest shopping centre. Finally, NBH promoted Direct Install during the Christmas walk in November.

Attendees of the Chamber of Commerce monthly meeting, the Downtown Improvement meeting, and City of North Bay Energy Management meeting expressed the most interest in the potential benefits of the Direct Install initiative. These small events also allowed the NBH team to discuss details pertaining to other OPA programs and answer questions. It also allowed NBH to be available on a one-on-one basis so that attendees could ask more specific questions.

Lessons Learned:

- The Direct Install Lighting and Water Heating Initiative is a continuation of the Power Saving Blitz Initiative offered by NBH from 2008-2010. Successful execution of the previous rendition of this initiative has resulted in diminished potential for the 2011-2014 initiative.
- The inclusion of a standard incentive for additional measures increased project size and drove higher energy and demand savings results.
- The cost of materials has experienced price volatility, reducing the margins for the electrical contractors participating in the program as installers and has led to a reduction in vendor channel participation.
- Due to backlogs in the payment system, participant incentive payment from the OPA to NBH, and therefore to the channel partner vendors, was commonly delayed.

- To address these issues, the LDCs have been working with the OPA in 2012 through its change management process to address:
    - Extending the target initiative population to include small agricultural customers;
    - Increasing the incentive envelope of $1,000 to $1,500 to ensure ongoing marketability of the program; and
    - Reviewing the eligible measure price list to support contractor participation.

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

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

Initiative Frequency: Year-round

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

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

a) Scoping study phase,

b) Investigation phase,

c) Implementation phase, and

d) Hand off/completion phase.

Targeted End Uses: Chilled water systems for space cooling

Delivery: NBH delivered.

Additional detail is available at the following websites:

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

In Market Date: March 23, 2011

Initiative Activities/Progress: North Bay Hydro has not actively promoted this program.

Lessons Learned:

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

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

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

Initiative Frequency: Year-round

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

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

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

Delivery: NBH delivered to customers and design decision makers.

Additional detail is available at the following websites:

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

In Market Date: March 23, 2011

Initiative Activities/Progress: North Bay Hydro has not actively promoted this program.

Lessons Learned:

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

2.2.2.5 ENERGY AUDIT INITIATIVE (Schedule C-1)

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

Initiative Frequency: Year-round

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

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

Targeted End Uses: Various

Delivery: NBH delivered.

Additional detail is available at the following websites:

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

In Market Date: March 23, 2011

Initiative Activities/Progress:

NBH organized C&I events including lunches and workshops that promote the Energy Audit Initiative alongside other programs. The Energy Audit Initiative was discussed at the C&I workshop at the Clarion Resort, discussed above under the ERII description.

NBH collected participant feedback forms. The feedback indicated positive reception of the event. NBH also asked participants about their interest in follow-up information, and/or preliminary walkthrough audits to identify opportunities. Many requests for a preliminary energy audit were received. NBH hired consultants to visit large customers, conduct walkthrough audits, and provide participants with "opportunity identification reports". These reports identify how facilities can save energy/demand and reduce operating costs, and how saveONenergy programs – including the Audit Initiative – can help. This has provided NBH with a 'foot in the door' and has helped with participation in initiatives such as ERII.

NBH also promoted the Energy Audit Initiative at a number of events including: Downtown Improvement Area Monthly meetings, Chamber of Commerce Monthly meetings, the City Energy Management Meeting, the Downtown Improvement Area after hour's presentation, the Nipissing Parry-Sound District School Board meeting, and the Chamber of Commerce meeting. The initiative was also promoted during Small Business Week, and the Christmas walk. All events were well attended and information was well received.

Lessons Learned:

- Little savings from projects resulting from audits were realized in 2011, but projects are expected for 2012.
- Customers expect a greater connection with other CDM initiatives as a result of completing the Energy Audit. The initiative should be reviewed under the OPA's change management process for the means to readily incent participants with audits in hand to implement other electricity savings initiatives.

2.2.3 INDUSTRIAL PROGRAM

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

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

Initiative Frequency: Year-round

Objectives: The objectives of this Initiative were 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 that are intrinsically complex and capital intensive; and
- Increase the capability of distribution customers to implement energy management and system optimization projects.

Description: PSUI was an energy management initiative that included three parts:

a) Preliminary engineering study,

b) Detailed engineering study, and

c) Project incentive.

The incentives were 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 was the lowest of:

a) $200/MWh of annualized electricity savings,

b) 70% of projects costs, or

c) A one-year pay back.

Targeted End Uses: Processes and systems

Delivery: NBH delivered

Additional detail is available at the following websites:

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

In Market Date: May 31, 2011

Initiative Activities/Progress: North Bay Hydro has not actively promoted this program.

Lessons Learned:

- The PSUI program targets large customers that are undertaking large capital projects. There is typically a long sales cycle to sell these projects, and then a long project development cycle. As

such, results from PSUI did not appear in 2011. Limited results are expected to appear in 2012. The majority of the results are expected in 2013-2014, with a much-reduced benefit to cumulative energy savings targets.

- Steps are being taken in the 2012 OPA change management process to simplify and streamline the micro-project application process and to allow smaller projects to be directed to the ERII stream.
- Given the size of the projects involved, the contract required for PSUI is a lengthy and complicated document. Attempts are being made through the OPA's change management process in 2012 to simplify the document while still protecting the ratepayer.
- With the considerable customer interest in on-site load displacement projects, the initiative should be reviewed to ensure that these projects may be accepted as part of the PSUI.

2.2.3.2 MONITORING & TARGETING INITIATIVE (Schedule D-2)

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

Initiative Frequency: Year-round

Objective: This initiative offered 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 to sustain the target level of savings for the term of the M&T agreement.

Description: This Initiative offered 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 oversaw energy usage, would then be able to use historical energy consumption performance to analyze and set targets.

Targeted End Uses:

Delivery: NBH delivered

Additional detail is available at the following websites:

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

In Market Date: May 31, 2011

Initiative Activities/Progress: North Bay Hydro has not actively promoted this program although it did discuss this program with a number of larger customers.

Lessons Learned:

- The M&T initiative was originally targeted at larger customers with the capacity to review the M&T data. This review requires the customer facility to employ an energy manager, or a person with equivalent qualifications, which has been a barrier for some customers. Through the OPA's change management process in 2012, changes are being made to both the M&T schedule and ERII to allow smaller facilities to employ M&T systems.

2.2.3.3 ENERGY MANAGER INITIATIVE (Schedule D-3)

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

Initiative Frequency: Year-round

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

Description: This Initiative provided customers the opportunity to access funding to engage an on-site, full-time embedded energy manager. The initiative also provided funding for an off-site roving energy manager who could be engaged by NBH to provide services for a number of customers. The role of the energy manager was to take control of a facility's energy use by monitoring performance, leading awareness programs, identifying opportunities for energy consumption improvement, and spearheading projects. Participants were funded for 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 had a target of 300 kW/year of energy savings from one or more facilities. NBH was eligible to receive funding of up to $120,000 for a Roving Energy Manager plus $8,000 for expenses.

Targeted End Uses:

Delivery: NBH delivered

Additional detail is available at the following websites:

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

In Market Date: May 31, 2011

Initiative Activities/Progress: North Bay Hydro discussed the Embedded Energy Manager program with a number of industrial customers who are currently reviewing the possibility of participating in the initiative.

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

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

Initiative Frequency: Year-round

Objective: This initiative offered NBH the opportunity to access funding for the employment of a KAM in order to support NBH in fulfilling its obligations related to the PSUI. The KAM was considered to be a key element in assisting the customer in overcoming traditional barriers related to energy management and help them achieve savings. The KAM was expected to achieve these results by building relationships and becoming a significant resource of knowledge to the customer.

Description:

Targeted End Uses:

Delivery:

Additional detail is available at the following website:

- 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

In Market Date: May 31, 2011

Initiative Activities/Progress: North Bay Hydro has not actively promoted this program.

2.2.3.5 DEMAND RESPONSE 3 (Schedule D-6)

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

Initiative Frequency: Year-round

Objective: This initiative provided participants with demand response (DR) payments for service to compensate them for making available electricity DR during a DR event**.**

Description: Demand Response 3 (DR3) was a DR initiative for commercial and industrial customers with demand of 50 kW or greater willing to reduce the amount of power being used during certain periods of the year. The DR3 Initiative was a contractual resource that was an economic alternative to procurement of new generation capacity. DR3 came with specific contractual obligations requiring participants to reduce their use of electricity relative to a baseline when called upon. This initiative provided regular payments to participants to be on standby and energy payments for the actual energy reduction provided during a demand response event. Participants were scheduled to be on standby approximately 1,600 hours per calendar year for possible dispatch of up to 100 hours or 200 hours within that year depending on the contract.

Targeted End Uses:

Delivery: DR3 was delivered by demand response providers (DRPs), under contract to the OPA. The OPA administered contracts with all DRPs as well as direct participants that provided in excess of 5 MW of demand response capacity. The OPA provided administration including settlement, measurement and verification, and dispatch. NBH was responsible for outreach and marketing efforts.

Additional detail is available at the following website:

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

In Market Date: May 31, 2011

Initiative Activities/Progress: North Bay Hydro has not contracted with a third party service provider but promoted the Demand Response 3 Initiative to its eligible service customers. In 2011, NBH contacted potential participants to raise awareness and interest in the program. Currently, the City's water treatment plant has signed on to the Initiative.

Lessons Learned:

- Customer data is not provided by the OPA on an individual customer basis due to contractual requirements with the aggregators. This limits NBH's ability to effectively market to prospective participants. NBH has approached the aggregators individually and is working to develop agreements in order to identify existing and potential participants in this initiative.

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

Target Customer Type(s): Income-Qualified Residential Customers

Initiative Frequency: Year-round

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

Description: This was a turnkey initiative for income-qualified customers. It offered residents the opportunity to take advantage of free installation of energy efficient measures that improved the comfort of their home, increased efficiency, and helped them save money. All eligible customers received a Basic and Extended Measures Audit, while customers with electric heat also received a Weatherization Audit. The Initiative was designed to enable coordination of efforts with gas utilities.

Targeted End Uses: End uses based on results of audit

Delivery: NBH delivered

Additional detail is available at the following website:

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

In Market Date: 2012

2.3 Participation

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

#	Initiative	Activity unit	Uptake/ participation units
Residential Program			
1	Appliance Retirement	Appliances	252
2	Appliance Exchange	Appliances	21
3	HVAC Incentives	Equipment	192
4	Conservation Instant Coupon Booklet	Coupons	3,446
5	Bi-Annual Retailer Event	Coupons	4,641
6	Retailer Co-op	Items	0

#	Initiative	Activity unit	Uptake/ participation units
7	Residential Demand Response	Devices	0
10	Residential New Construction	Houses	0
Commercial & Institutional Program			
11	Efficiency: Equipment Replacement	Projects	10
12	Direct Install Lighting	Projects	203
14	Existing Building Commissioning Incentive	Buildings	0
15	New Construction and Major Renovation Incentive	Buildings	0
16	Energy Audit	Audits	1
17	Commercial Demand Response (part of the Residential program schedule)	Devices	0
19	Demand Response 3 (part of the Industrial program schedule)	Facilities	1
Industrial Program			
20	Process & System Upgrades*	Projects	0
	a) preliminary study		0
	b) engineering study		0
	c) project incentive		0
21	Monitoring & Targeting	Projects	0
22	Energy Manager	Managers	0
23	Efficiency: Equipment Replacement Incentive (part of the C&I program schedule)	Projects	1
25	Demand Response 3	Facilities	0

#	Initiative	Activity unit	Uptake/ participation units
Home Assistance Program			
26	Home Assistance Program	Units	0
Pre 2011 Programs Completed in 2011			
27	Electricity Retrofit Incentive Program	Projects	18
28	High Performance New Construction	Projects	1
29	Multifamily Energy Efficiency Rebates	Projects	0

2.4 Spending

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

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

#	Initiative	Program Administration Budget (PAB)	Participant Based Funding (PBF)	Participant Incentives (PI)	Capability Building Funding (CBF)	TOTAL
Residential Program						
1	Appliance Retirement	$46,839				$46,839
2	Appliance Exchange	$0				$0
3	HVAC Incentives	$3,640				$3,640
4	Conservation Instant Coupon Booklet	$46,310				$46,310
5	Bi-Annual Retailer Event	$21				$21
6	Retailer Co-op	0				$0
7	Residential Demand Response	0				$0
10	Residential New Construction	$350				$350
Business Program						
11	Efficiency: Equipment Replacement	$89,449		$61,042		$150,491

#	Initiative	Program Administration Budget (PAB)	Participant Based Funding (PBF)	Participant Incentives (PI)	Capability Building Funding (CBF)	TOTAL
12	Direct Install Lighting	$45,987		$176,925.01		$222,912
14	Existing Building Commissioning Incentive	0				$0
15	New Construction and Major Renovation Initiative	0				$0
16	Energy Audit	$15,257		$1,735		$16,992
17	Commercial Demand Response (part of the Residential program schedule)	0				$0
19	Demand Response 3 (part of the Industrial program schedule)					
Industrial Program						
20	Process & System Upgrades					
	a) preliminary study					
	b) engineering study					
	c) program incentive					
21	Monitoring & Targeting					
22	Energy Manager					

#	Initiative	Program Administration Budget (PAB)	Participant Based Funding (PBF)	Participant Incentives (PI)	Capability Building Funding (CBF)	TOTAL
23	Efficiency: Equipment Replacement Incentive (part of the C&I program schedule)					
25	Demand Response 3	$23,359				$23,359
Home Assistance Program						
26	Home Assistance Program					
Pre 2011 Programs Completed in 2011						
27	Electricity Retrofit Incentive Program			$288,176		$288,176
28	High Performance New Construction					
29	Toronto Comprehensive					
30	Multifamily Energy Efficiency Rebates					
31	Data Centre Incentive Program					
32	NBH Green Suites					
	Total province-wide CDM programs	**$271,212**	**$0**	**$527,878**	**$0**	**$799,090**

The following details the funds that North Bay Hydro in the one-year period applicable to the Annual Report, on each of the OPA-Contracted Province-Wide CDM Programs that over the course of 2011 were Not In Market.

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

Table 5a: Allocation of PAB funding for initiatives not In market

#	Initiative	Program Administration Budget (PAB)
Initiatives not In market		
8	Midstream Electronics	
9	Midstream Pool Equipment	
13	Demand Service Space Cooling	$439
18	Demand Response 1 (Commercial)	
24	Demand Response 1 (Industrial)	
33	Home Energy Audit Tool	
	Total province-wide CDM initiatives not in market	**$439**

2.5 Evaluation

2.5.1 EVALUATION FINDINGS

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

Table 6: Evaluation Findings

#	Initiative	Evaluation findings
		Residential Program
1	Appliance Retirement	• Overall participation continues to decline year over year o Participation declined 17% from 2010 (from over 67,000 units in 2010 to over 56,000 units in 2011) • 97% of net resource savings achieved through the home pick-up stream o Measure Breakdown: 66% refrigerators, 30% freezers, 4% Dehumidifiers and window air conditioners • 3% of net resource savings achieved through the Retailer pick-up stream o Measure Breakdown: 90% refrigerators, 10% freezers • Net-to-Gross ratio for the initiative was 50% o Measure-level free ridership ranges from 82% for the retailer pick-up stream to 49% for the home pick-up stream o Measure-level spillover ranges from 3.7% for the retailer pick-up stream to 1.7% for the home pick-up stream
2	Appliance Exchange	• Overall eligible units exchanged declined by 36% from 2010 (from over 5,700 units in 2010 to over 3,600 units in 2011) o Measure Breakdown: 75% window air conditioners, 25% dehumidifiers • Dehumidifiers and window air conditioners contributed almost equally to the net energy savings achieved o Dehumidifiers provide more than three times the energy savings per unit

#	Initiative	Evaluation findings
		than window air conditioners • Window air conditioners contributed to 64% of the net peak demand savings achieved • Approximately 96% of consumers reported having replaced their exchanged units (as opposed to retiring the unit) • Net-to-Gross ratio for the initiative is consistent with previous evaluations (51.5%)
3	HVAC Incentives	• Total air conditioner and furnace installations increased by 14% (from over 95,800 units in 2010 to over 111,500 units in 2011) o Measure Breakdown: 64% furnaces, 10% tier 1 air conditioners (SEER 14.5) and 26% tier 2 air conditioners (SEER 15) o Measure breakdown did not change from 2010 to 2011 • The HVAC Incentives initiative continues to deliver the majority of both the energy (45%) and demand (83%) savings in the consumer program o Furnaces accounted for over 91% of energy savings achieved for this initiative • Net-to-Gross ratio for the initiative was 17% higher than 2010 (from 43% in 2010 to 60% in 2011) o Increase due in part to the removal of programmable thermostats from the program, and an increase in the net-to-gross ratio for both Furnaces and Tier 2 air conditioners (SEER 15)
4	Conservation Instant Coupon Booklet	• Customers redeemed nearly 210,000 coupons, translating to nearly 560,000 products o Majority of coupons redeemed were downloadable (~40%) or LDC-branded (~35%) o Majority of coupons redeemed were for multi-packs of standard spiral CFLs

#	Initiative	Evaluation findings
		(37%), followed by multi-packs of specialty CFLs (17%) • Per unit savings estimates and net-to-gross ratios for 2011 are based on a weighted average of 2009 and 2010 evaluation findings • Careful attention in the 2012 evaluation will be made for standard CFLs since it is believed that the market has largely been transformed
5	Bi-Annual Retailer Event	• Customers redeemed nearly 370,000 coupons, translating to over 870,000 products o Majority of coupons redeemed were for multi-packs of standard spiral CFLs (49%), followed by multi-packs of specialty CFLs (16%) • Per unit savings estimates and net-to-gross ratios for 2011 are based on a weighted average of 2009 and 2010 evaluation findings o Standard CFLs and heavy duty outdoor timers were reintroduced to the initiative in 2011 and contributed more than 64% of the initiative's 2011 net annual energy savings o While the volume of coupons redeemed for heavy duty outdoor timers was relatively small (less than 1%), the measure accounted for 10% of net annual savings due to high per unit savings • Careful attention in the 2012 evaluation will be made for standard CFLs since it is believed that the market has largely been transformed.
6	Retailer Co-op	• Initiative was not evaluated in 2011 due to low uptake. Verified Bi-Annual Retailer Event per unit assumptions and free-ridership rates were used to calculate net resource savings
7	Residential Demand Response	• Approximately 20,000 new devices were installed in 2011 o 99% of the new devices enrolled controlled residential central AC (CAC) • 2011 only saw 1 atypical event (in both weather and timing) that had limited participation across the province

#	Initiative	Evaluation findings
		o The ex ante impact developed through the 2009/2010 evaluations was maintained for 2011; residential CAC: 0.56 kW/device, commercial CAC: 0.64 kW/device, and Electric Water Heaters: 0.30 kW/device
10	Residential New Construction Initiative	• Initiative was not evaluated in 2011 due to limited uptake • Business case assumptions were used to calculate savings
Commercial & Institutional Program		
11	Efficiency: Equipment Replacement	• Gross verified energy savings were boosted by lighting projects in the prescriptive and custom measure tracks • Lighting projects overall were determined to have a realization rate of 112%; 116% when including interactive energy changes o On average, the evaluation found high realization rates as a result of both longer operating hours and larger wattage reductions than initial assumptions o Low realization rates for engineered lighting projects due to overstated operating hour assumptions • Custom non-lighting projects suffered from process issues such as: the absence of required M&V plans, the use of inappropriate assumptions , and the lack of adherence to the M&V plan • The final realization rate for summer peak demand was 94% o 84% was a result of different methodologies used to calculate peak demand savings o 10% due to the benefits from reduced air conditioning load in lighting retrofits • Overall net-to-gross ratios in the low 70's represent an improvement over the 2009 and 2010 ERIP program where net-to-gross ratios were in the low 60's and low 50's,

#	Initiative	Evaluation findings
		respectively. • Strict eligibility requirements and improvements in the pre-approval process contributed to the improvement in net-to-gross ratios
12	Direct Install Lighting	• Though overall performance is above expectations, participation continues to decline year over year as the initiative reaches maturity • 70% of province-wide resource savings persist to 2014 o Over 35% of the projects for 2011 included at least one CFL measure o Resource savings from CFLs in the commercial sector only persist for the industry standard of 3 years • Since 2009 the overall realization rate for this program has improved o 2011 evaluation recorded the highest energy realization rate to date at 89.5% o The hours of use values were held constant from the 2010 evaluation and continue to be the main driver of energy realization rate o Lights installed in "as needed" areas (e.g., bathrooms, storage areas) were determined to have very low realization rates due to the difference in actual energy saved vs. reported savings
14	Existing Building Commissioning Incentive	• Initiative was not evaluated in 2011, no completed projects in 2011
15	New Construction and Major Renovation Initiative	• Initiative was not evaluated in 2011 due to low uptake • Assumptions used are consistent with preliminary reporting based on the 2010 Evaluation findings and consultation with the C&I Work Group (100% realization rate and 50% net-to-gross ratio)
16	Energy Audit	• The evaluation is ongoing. The sample size for 2011 was too small to draw reliable

#	Initiative	Evaluation findings
		conclusions.
17	Commercial Demand Response (part of the Residential program schedule)	• See residential demand response (#7)
19	Demand Response 3 (part of the Industrial program schedule)	• See Demand Response 3 (#25)
Industrial Program		
20	Process & System Upgrades	• Initiative was not evaluated in 2011, no completed projects in 2011
21	Monitoring & Targeting	• Initiative was not evaluated in 2011, no completed projects in 2011
22	Energy Manager	• Initiative was not evaluated in 2011, no completed projects in 2011
23	Efficiency: Equipment Replacement Incentive (part of the C&I program schedule)	• See Efficiency: Equipment Replacement (#11)
25	Demand Response 3	• Program performance for Tier 1 customers increased with DR-3 participants providing 75% of contracted MW for both sectors o Industrial customers outperformed commercial customers by providing 84% and 76% of contracted MW, respectively • Program continues to diversify but still remains heavily concentrated with less than 5% of the contributors accounting for the majority (~60%) of the load reductions. • By increasing the number of contributors in each settlement account and implementation of the new baseline methodology the performance of the program is expected to increase

#	Initiative	Evaluation findings
Home Assistance Program		
26	Home Assistance Program	• Initiative was not evaluated in 2011 due to low uptake • Business Case assumptions were used to calculate savings
Pre-2011 Programs completed in 2011		
27	Electricity Retrofit Incentive Program	• Initiative was not evaluated • Net-to-Gross ratios used are consistent with the 2010 evaluation findings (multifamily buildings 99% realization rate and 62% net-to-gross ratio and C&I buildings 77% realization rate and 52% net-to-gross ratio)
28	High Performance New Construction	• Initiative was not evaluated • Net-to-Gross ratios used are consistent with the 2010 evaluation findings (realization rate of 100% and net-to-gross ratio of 50%)
29	Toronto Comprehensive	• Initiative was not evaluated • Net-to-Gross ratios used are consistent with the 2010 evaluation findings
30	Multifamily Energy Efficiency Rebates	• Initiative was not evaluated • Net-to-Gross ratios used are consistent with the 2010 evaluation findings
31	Data Centre Incentive Program	• Initiative was not evaluated
32	NBH Green Suites	• Initiative was not evaluated

2.5.2 EVALUATION RESULTS

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

Table 7: Evaluation Results

#	Initiative		Gross Savings		Net Savings		Contribution to Targets	
		NTG	Incremental Peak Demand Savings (kW)	Incremental Energy Savings (kWh)	Incremental Peak Demand Savings (kW)	Incremental Energy Savings (kWh)	Program-to-Date: Net Annual Peak Demand Savings (kW) in 2014	Program-to-Date: 2011-2014 Net Cumulative Energy Savings (kWh)
Residential Program								
1	Appliance Retirement	51%	31	206,247	16	106,705	15	426,112
2	Appliance Exchange	52%	5	7,852	3	4,047	2	15,622
3	HVAC Incentives	60%	112	224,853	67	133,752	67	535,006
4	Conservation Instant Coupon Booklet	114%	7	119,751	8	132,210	8	528,841
5	Bi-Annual Retailer Event	113%	8	143,448	9	156,717	9	626,867
6	Retailer Co-op	-	0	0	0	0	0	0
7	Residential Demand Response	-	0	0	0	0	0	0
10	Residential New Construction	-	0	0	0	0	0	0
Commercial & Institutional Program								
11	Efficiency: Equipment	72%	166	751,636	118	559,325	118	2,237,300

#	Initiative		Gross Savings		Net Savings		Contribution to Targets	
		NTG	Incremental Peak Demand Savings (kW)	Incremental Energy Savings (kWh)	Incremental Peak Demand Savings (kW)	Incremental Energy Savings (kWh)	Program-to-Date: Net Annual Peak Demand Savings (kW) in 2014	Program-to-Date: 2011-2014 Net Cumulative Energy Savings (kWh)
	Replacement							
12	Direct Install Lighting	93%	193	582,886	207	541,233	168	2,045,246
14	Existing Building Commissioning Incentive	-	0	0	0	0	0	0
15	New Construction and Major Renovation Incentive	-	0	0	0	0	0	0
16	Energy Audit	-	0	0	0	0	0	0
17	Commercial Demand Response (part of the Residential program schedule)		0	0	0	0	0	0
19	Demand Response 3 (part of the Industrial program schedule)		600	17,768	454	17,768	0	17,768
Industrial Program								
20	Process & System Upgrades	-	0	0	0	0	0	0
21	Monitoring & Targeting	-	0	0	0	0	0	0

#	Initiative		Gross Savings		Net Savings		Contribution to Targets	
		NTG	Incremental Peak Demand Savings (kW)	Incremental Energy Savings (kWh)	Incremental Peak Demand Savings (kW)	Incremental Energy Savings (kWh)	Program-to-Date: Net Annual Peak Demand Savings (kW) in 2014	Program-to-Date: 2011-2014 Net Cumulative Energy Savings (kWh)
22	Energy Manager	-	0	0	0	0	0	0
23	Efficiency: Equipment Replacement Incentive (part of the C&I program schedule)	75%	15	91,988	11	70,290	11	281,159
25	Demand Response 3		0	0	0	0	0	0
Home Assistance Program								
26	Home Assistance Program	-	0	0	0	0	0	0
Pre-2011 programs completed in 2011								
27	Electricity Retrofit Incentive Program	52%	195	941,407	102	491,904	102	1,967,615
28	High Performance New Construction	50%	54	278,652	27	139,326	27	557,303
29	Multifamily Energy Efficiency Rebates	-	0	0	0	0	0	0

Table 8: Summarized program results

Program	Gross Savings		Net Savings		Contribution to Targets	
	Incremental Peak Demand Savings (kW)	Incremental Energy Savings (kWh)	Incremental Peak Demand Savings (kW)	Incremental Energy Savings (kWh)	Program-to-Date: Net Annual Peak Demand Savings (kW) in 2014	Program-to-Date: 2011-2014 Net Cumulative Energy Savings (kWh)
Residential Program Total	162	702,151	101	533,430	100	2,132,449
Commercial & Institutional Program Total	959	1,352,290	778	1,118,325	286	4,300,314
Industrial Program Total	15	91,988	11	70,290	11	281,159
Home Assistance Program Total	0	0	0	0	0	0
Pre-2011 Programs completed in 2011 Total	249	1,220,059	129	631,229	129	2,524,918
Total OPA contracted province-wide CDM programs	**1,385**	**3,366,488**	**1,020**	**2,353,275**	**526**	**9,238,839**

2.6 Additional Comments

Looking forward to 2012 and beyond, North Bay Hydro expects to make continual progress towards targets.

On the Residential side, NBH is projecting to deliver peaksaver plus in the near future. NBH has initiated the delivery of the Home Assistance Program for social housing apartment buildings in town (242 units). NBH plans to target a large concentration of electrically heated single family homes in the future.

On the Industrial side, the Process and Systems Upgrade Initiative is now getting more uptake. At least one preliminary study and two detailed engineering studies were initiated.

To boost uptake of the C&I initiatives, NBH has plans to increase efforts to partner with local contractors, suppliers, and distributors; do more commercial and industrial events; and develop customer recognition activities. NBH is also now working with contractors to make the application process more streamlined.

North Bay Hydro expects that achieving its targets will remain a significant challenge. Energy savings realized from participation in 2011 Initiatives have greater impact on targets than savings realized from Initiatives in 2012 and beyond. Making up for lost participation in 2011 will require a greater than one-to-one increase in participation in 2012-2014. To address this fact, NBH is currently re-evaluating its energy savings goals. It is expected that this re-evaluation will contribute to, but not necessarily get all the way to, closing the gap between expected savings and NBH's target savings.

3 Combined CDM Reporting Elements

3.1 Progress Towards CDM Targets

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

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

Implementation Period	Annual (MW)			
	2011	2012	2013	2014
2011 – Verified	1.02	0.57	0.56	0.53
2012				
2013				
2014				
Verified Net Annual Peak Demand Savings in 2014:				**0.53**
NBH 2014 Annual CDM Capacity Target:				**5.05**
Verified Portion of Peak Demand Savings Target Achieved (%):				**10.42%**
NBH Strategy, Milestone submitted for 2011				**1.2 MW** **24%**
Variance (MW)	-0.4	-0.7	-0.7	-0.7

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

Implementation Period	Annual (GWh)				Cumulative (GWh)
	2011	2012	2013	2014	2011-2014
2011 – Verified	2.35	2.33	2.33	2.22	9.24
2012					
2013					

Implementation Period	Annual (GWh)				Cumulative (GWh)
	2011	2012	2013	2014	2011-2014
2014					
Verified Net Cumulative Energy Savings 2011-2014:					**9.24**
NBH 2011-2014 Cumulative CDM Energy Target:					**26.1**
Verified Portion of Cumulative Energy Target Achieved (%):					**35.40%**
NBH Strategy, Milestone submitted for 2011					**11.3 GWh** **43%**
Variance (GWh)	-0.54	-0.56	-0.39	-0.56	-2.03

3.2 CDM Strategy Modifications

The variance between forecasted CDM Strategy numbers and the savings realized by NBH's 2011 CDM programs are due to two main factors.

The first is that 2011 was a "start-up" year for OPA CDM Program initiatives across the province. Programs were not up and running in North Bay until the second half of March – and thus participation was less than expected by both the province and NBH.

The second is that the CDM Strategy had forecasted Board-approved programs to account for 1.1 GWh and 0.5 MW. These savings account for 54% and 74% of the energy and demand target variances, respectively.

The OPA has reported that it expects the OPA CDM programs to hit an average of 91% of the provincial energy target and 78% of the provincial demand target. Even with delays in the delivery of programs in 2011, NBH is on pace to achieve these provincial standards with its OPA programs.

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

- Lessons learned in delivering programs in 2011
- Findings of the third party program evaluations
- Identifying programs that have had greatest impact in its service territory
- Identifying programs that have had the greatest impact across the province
- Understanding which programs respond best to NBH marketing efforts
- Understanding which programs are best suited to meet the specific needs of its customer base

- Optimizing PAB expenditures to further increase participation in OPA CDM programs

NBH would consider a residential sector Board-approved program in the future if the Board-approved program applications process were facilitated. NBH expects that modifications to the CDM Strategy and the possible launch of a Board-approved program will help close the gap between expected savings and target savings.