

A REPORT TO
THE BOARD OF COMMISSIONERS OF PUBLIC UTILITIES

2013 Conservation and Demand Management Report

NEWFOUNDLAND AND LABRADOR HYDRO

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1 Introduction

This report provides an overview of Conservation and Demand Management (CDM) activities undertaken by Newfoundland and Labrador Hydro (Hydro) in 2013. The report also provides information on major activities planned for 2014 and provides an estimate of the value of CDM from a utility perspective.

The programming described in this report includes the joint utility programs offered through *takeCHARGE* but focuses on the costs and initiatives for Hydro's portion of program implementation. Hydro also offers programs under the *takeCHARGE* banner targeting only Hydro customers.

The initial *takeCHARGE* programs were launched in 2009 and while those programs remain in market, a wide range of programs have been added in subsequent years and available through 2013. Programs have also seen changes in offerings and eligibility requirements. Evaluations and program reviews are underway for long-standing programs as well.

2 Coordination and Context

2.1 Utility Planning

Energy conservation initiative was a topic of interest during Hydro's 2006 General Rate Application (GRA). Since that time, a CDM Potential Study was completed in 2008. From that, a five-year strategic plan¹ was completed which outlined proposed energy conservation initiatives to be implemented jointly by Newfoundland Power and Hydro (the Utilities). The Utilities have since designed and implemented a robust joint utility portfolio of programs. Current programs offered through the joint utility model are available for residential and commercial customer classes and provide rebate options to address energy savings for the larger energy consumers for each class.

The updated strategic plan² continued the focus on joint utility programs but also outlined additional program opportunities identified and implemented by Hydro to address additional opportunities in higher avoided cost isolated diesel systems in addition to a program for block heater timers in the Labrador Interconnected System. Hydro launched the Isolated Systems Business Efficiency Program (ISBEP) in the Isolated and L'Anse au Loup Systems in 2012 and an expansion of this program model was launched through the joint utility partnership late in 2013. Hydro has been developing programs and approaches outside the joint utility approach to engage customers with additional ways to conserve and to provide learnings for potential expanded offerings through joint utility programs. In this way, Hydro's retailer coupon program

¹ Five Year Energy Conservation Plan: 2008-2012

² Five Year Energy Conservation Plan: 2012-2016

offered in 2010-2011 has created the impetus for the Small Technology program to be launched provincially in 2014 which provides the same at-cash and mail-in coupons for a range of technologies including lighting and appliances. The ISBEP, launched in 2012, is the predecessor of the Business Efficiency Program, launched provincially in 2013 for commercial customers.

In 2012 Hydro launched a program to promote the use of block heater timers. This program is unique to the Labrador Interconnected System because of its extremely cold climate which presents a significant conservation opportunity for Hydro. The program launch event was a giveaway of block heater timers to provide awareness in the market of the technology and was then followed up with a coupon in store for purchase discount. The program was set to run two winter seasons (2012-2013 and 2013-2014). An evaluation report will be completed in the fourth quarter of 2014.

The focus of both joint utility CDM plans was on energy savings through the longer-term goal of the development of a culture of conservation and has not included a demand management component. Hydro is currently working to complete an updated marginal cost study to gauge the need for and potentially guide future initiatives around demand management.

The activities in the plan include rebate programs for each sector – residential, commercial and industrial – and supporting activities for awareness, education and community engagement to stimulate attitude change. An overview of the programs offered during 2013 is included in Appendix A: CDM Program Descriptions and includes current programs offered both through a joint utility partnership and those directly targeting Hydro's customers.

The Utilities have begun third party formal program evaluations. In 2013 work began with DNV GL-Energy³ to complete a market and process evaluation of the residential joint utility programs. This work will be completed in 2014 and the Utilities will develop a plan to address recommendations from the evaluation. The Utilities will be working to conduct joint utility program reviews and evaluation in the future on an annual basis. As well in 2014, Hydro will be reviewing the two Isolated Systems' programs to assess the next steps for each program offering as they were outlined as three-year programs in the current Five-Year CDM plan. Hydro will also be conducting an evaluation of the block heater timer program in 2014.

2.2 Government Engagement

Hydro continues to have a positive working relationship with the Provincial Climate Change Energy Efficiency and Emissions Trading Secretariat (CCEET) and remains engaged in dialogue on potential programming, policy, and partnership opportunities. In 2013, Hydro worked with CCEET on the development of tools for educating the public and builders on changes to the National Building Code of Canada impacting new residential builds. Hydro has been engaged in discussions regarding updates to national energy codes for commercial buildings and their

³ DNV-GL Energy is recognized within the energy efficiency sector, providing program evaluation and assessments.

energy efficiency impacts in the Province. As well, Hydro was involved in the development of tools to engage provincial departments and agencies in the continued roll out of the Building Better Buildings Policy⁴.

Public outreach continues on climate change through the Province's Turn Back the Tide program. Hydro works with CCEEET staff on the coordination of messaging on the energy efficiency component of that campaign, primarily through social media.

3 CDM Programs

3.1 Portfolio Level Program Costs and Energy Savings

Table 1: Hydro CDM Portfolio Costs, and Table 2: Hydro Annual Energy Savings, describe Hydro's total CDM expenses and energy savings from 2009 to 2013 across all of Hydro's systems including the Labrador Interconnected System. This report will provide further detail and breakdown of those costs that will be recovered through the CDM Deferral Account⁵ and the associated energy reductions in section 6 Regulated Program Energy Savings and Program Costs.

Table 1: Hydro's CDM Portfolio Spending (\$000s)					
	2009	2010	2011	2012	2013
Windows	44	48	80	117	169
Insulation	40	60	140	126	157
Thermostats	13	19	31	47	51
Coupon Program	-	140	135	-	-
Commercial Lighting	13	12	59	20	29
Industrial	57	221	103	173	89
Block Heater Timer	-	-	-	31	8
Isolated Systems Community	-	-	-	858	871
ISBEP	-	-	-	93	115
Heat Recovery Ventilator	-	-	-	-	11
Business Efficiency Program	-	-	-	-	45
Small Technologies	-	-	-	-	1
Total	167	500	548	1,465	1,546

⁴ Build Better Buildings Policy was established by the Province to establish guidelines for environmental sustainability and energy efficiency for government funded buildings. Additional information can be found at www.gov.nl.ca/nr/publications/energy/betterbuildingspolicy.pdf

⁵The CDM Cost Deferral Account is meant to defer the program costs for regulated Hydro (excludes program costs for the Labrador Interconnected System). The Board approved the deferral of Hydro's 2013 program costs in Board Order No. P.U. 35(2013).

Table 2: Hydro's Annual Energy Savings (MWh)					
	2009	2010	2011	2012	2013
Windows	13	37	61	136	99
Insulation	35	126	404	382	545
Thermostats	9	35	30	53	24
Coupon Program	-	64	256	-	-
Commercial Lighting	3	10	227	95	99
Industrial	-	-	165	3,172	-
Block Heater Timer	-	-	-	-	288
Isolated Systems Community	-	-	-	1,673	1,096
ISBEP	-	-	-	3	26
Heat Recovery Ventilator	-	-	-	-	-
Business Efficiency Program	-	-	-	-	-
Total	60	272	1,143	5,514	2,177

3.2 Residential Programs

Hydro's residential portfolio includes four programs offered jointly by the Utilities and two solely by Hydro. The joint utility programs launched in 2009 of ENERGY STAR® windows, Insulation and Thermostats continue to be offered through 2013 with insulation having a very successful year. This is primarily due to the participation of builders insulating basements in new builds.

During 2013, Hydro had an increased presence in local retailer flyers to promote these technologies. This will continue to be a focus moving forward to provide additional local advertising and to create a stronger partnership with retailers in promoting the rebates.

As of January 1, 2014 both insulation and Energy Star windows were no longer eligible for new builds. This is due to updated building codes for the Province that requires insulated basements and windows with specifications in line with current Energy Star standard. The thermostat program will remain unaffected. With these changes in eligibility, the focus will be to reach the existing home retrofit market.

The High Efficiency Heat Recovery Ventilation (HRV) program was launched in the fall of 2013, providing a \$175 rebate for HRVs with a Sensible Recovery Efficiency (SRE) of 70% or greater that is installed by an HRAI⁶ certified installer. This rebate is eligible for new and existing homes, regardless of heating source as the savings come primarily from savings in the equipment's operation. Hydro has been working with installers to ensure they are aware of the specifications for eligible models and are promoting high efficiency products.

⁶ Heating Refrigeration and Air Conditioning Institute

The Isolated Systems Community Energy Efficiency Program is a program engaging residential and commercial customers in the Isolated and L'Anse Au Loup systems. It is administered by Summerhill Group⁷, and involves a number of interventions. In 2013, there were six components implemented:

- 1,153 customers (1,073 residential and 80 commercial) received a direct install of items including lighting and water conservation tools and education and information on other ways to conserve. This represented a 94.5% installation rate for the target geography in 2013;
- Drain Water Heat Recovery⁸ Pilot (DWHR) - Thirty-three customers across Labrador received a Power Pipe® installation, achieving energy savings of 22.98 MWh. Installations were completed in Cartwright, Charlottetown, Makkovik, Mary's Harbour, Port Hope Simpson, and the Labrador Straits and evaluation of these participants will inform next steps for this technology;
- Retail Discount Coupons continue to be in place but are receiving low uptake. Coupons are available for smaller items including low flow showerheads, CFLs and timers;
- Appliance Mail-in Rebates provide discounts for larger items in the home and encourage the purchase of high efficiency models;
- Pop-up Shop Pilots were hosted to assist in bringing smaller technologies to customers as participation in the retailer coupons remains low; and
- Seasonal LED Light String Exchange (SLED) was held in five communities.

The Block Heater Timer program was launched in 2012 but no savings were reported until 2013 due to the need to validate savings through surveys. Participation in 2012 was through the product giveaway events held in Labrador City and Goose Bay. Participants agreed to be contacted with a survey on their use of the product and attitudes towards the product. These surveys were conducted near the end of the block heater season and determined that there was a 63% installation rate which Hydro views as a positive result. The giveaway was intended to get the technology into the community and generate positive experiences and attitudes towards the timers which was followed up by discount coupons for later purchase at local partnering retailers. Participation was minimal through the coupon program for the first year, ending spring 2013, but promotions in the fall have increased uptake.

3.3 Commercial Programs

The uptake of the HP T-8 lighting systems has continued to be a challenge through 2013. Hydro's customer base for T-8 commercial lighting has a significant amount of government

⁷ Summerhill Group is an energy efficiency services company specializing in consumer engagement program delivery with offices in Toronto and Halifax.

⁸ Drain-water (or greywater) heat recovery systems capture this energy from water already used (for example, to shower, wash dishes, or wash clothing) to preheat cold water entering the water heater or going to other water fixtures. This reduces the amount of energy needed for water heating.

facilities that use specific tendering processes making changing product specifications from standard fixtures to more efficient models challenging. Hydro continues to work with the Province to secure the purchase of eligible lighting. In 2013 the list of eligible technologies was expanded to include lighting for medium and high bay options such as warehouses and arenas. The initial HP T-8 lighting systems were provided as a buy down of the incremental cost⁹. This program design resulted in savings, but many customers purchasing eligible products were unaware of the programs existence. The expanded technologies for medium and high bay are available to customers through mail-in rebates. To inform customers of the new mail-in rebates, there will be an increase in the promotion of the Commercial Lighting program in 2014 including trade publications, mail outs and other methods.

There were more than 40 walkthrough audits conducted by Hydro technical staff in the Island and Labrador Isolates Systems, to identify opportunities and assist customers to progress through the ISBEP from opportunity identification to technical analysis and project completion with the goal of completed retrofits in 2014. The ISBEP saw two retrofit projects fully completed in 2013, involving upgrades to lighting in a retail location and the addition of variable frequency drives to a processing system in a fish plant. Together these projects resulted in approximately \$10,000 of incentives paid by Hydro and annual savings of 26 MWh. Commercial retrofits can have a significant delay due to planning and budget cycles, however, activity is expected to be strong in 2014.

The launch of the Business Efficiency Program in November of 2013 enabled Hydro staff to conduct walkthrough audits on the Labrador Interconnected System and the Great Northern Peninsula and will be expanded to other regions. This program is designed with the same model as the ISBEP, providing walkthrough audits, technical support, financial support of feasibility studies and capital retrofits. This program had a lower incentive level as the Island Interconnected and Labrador Interconnected Systems have lower avoided costs than those of the Isolated Systems, and Hydro anticipates the first projects to be completed in 2014.

3.4 Industrial Program

The Industrial Energy Efficiency Program (IEEP) was launched in 2010 as a three-year pilot and was closed to new applicants in the fall of 2013. This program provides financial support for engineering feasibility studies of efficiency opportunities and capital projects. While positive discussions took place with all Industrial Customers, only Corner Brook Pulp & Paper fully participated from the initial facility end use profile through to completed capital projects. CLEAResult has been engaged to conduct a review of the pilot and assess opportunities for moving forward, which was completed in first quarter 2014. Initial findings indicate there continues to be a strong interest among Industrial Customers in participating but challenges with competing business priorities have hampered uptake of the program. CLEAResults

⁹ Incremental buy down programs provide a more efficient product for the same price as the less efficient model because the utility subsidizes the increased cost for the customer.

recommendations will be used to develop a continued plan to ensure relevant programming is available to the industrial sector.

There were no Industrial Customer projects completed in 2013 but there were three significant projects approved just before the close of the pilot. These three projects, which are all with Corner Brook Pulp & Paper, will result in annual savings of 15 GWh. They have a total project cost of \$2.4M, with Hydro's incentive covering 50% of those costs at \$1.2M. The projects are all expected to be completed in 2014.

4 Planning and Evaluation

As the CDM portfolio continues to expand in programs and complexity, the evaluation processes for programs have also progressed. In 2013, the Utilities engaged DNV-GL Energy to conduct a market and process evaluation of the Energy Star windows, insulation and thermostat programs. The evaluation will explore changes in the market place, the impacts of the programs on consumers and provide recommendations on next step program improvements. The research is being conducted by means of extensive surveys and analysis of retailers, participants and non-participants and will conclude in 2014. Initial results show that participants were very satisfied with the programs¹⁰. Home visits continue to happen for at least 5% of all participants to verify the install of the technology but also to promote other rebates and engage in energy efficiency.

In 2013, the Utilities began an "End Use Survey" of commercial buildings completed by CBCL Limited¹¹. The survey will provide a set of in-depth profiles of energy end use in more than 50 buildings across a number of sectors to provide additional information on the local commercial market and provide a key input to the update of the CDM Potential Study to be started by the Utilities in 2014. The data collection was primarily conducted in 2013 with the final summary report and database tools to be completed in 2014.

Hydro is also conducting reviews and evaluations of programs offered directly to its customers. The IEEP is undergoing a review at the end of the three-year pilot. CLEAResult has been engaged to complete a process review of the pilot and provide recommendations for improvements in approach. The bulk of interviews with program staff and customers were completed in 2013 with the final report being completed in 2014. Initial indications are that customer interest in energy efficiency programs is high and the program has provided value to those who have participated. Hydro will be preparing a plan to offer energy efficiency programming to Industrial Customers on an ongoing basis and will seek Board approval of a longer-term approach.

¹⁰ 76% to 93% indicated a very satisfied rating of participants surveyed.

¹¹ CBCL Limited is a multi-disciplinary consulting engineering firm that provides expertise in energy modeling, end use profiling and energy efficiency auditing.

5 Outreach and Support

During 2013, Hydro continued its customer education and conservation awareness activities primarily through promotion of its *takeCHARGE* rebate programs and outreach activities. Residential and Business programs are promoted through activities including mass media marketing, targeted promotions, community outreach, school programming, and trade ally development and partnerships.

The new “Saving Energy – There’s money in that!” advertising campaign was launched in September 2013, with three new *takeCHARGE* television ads featuring the insulation, thermostat and Energy Star Windows rebate programs. The advertising campaign, which included newspaper, radio, online and social media advertisements, also highlighted the new HRV rebate program. A direct mail to qualifying customers of the thermostat rebate was done during 2013 to increase customer awareness.

takeCHARGE is also active in social media through a joint utility Facebook fan page, YouTube channel and Twitter account. To date, approximately 11,000 Facebook users have “liked” the *takeCHARGE* Facebook fan page, and YouTube views are continuing to increase. *takeCHARGE* has also gained almost 200 Twitter followers since initiating a Twitter presence in September 2013.

Hydro engages with retailers, suppliers and other groups through presentations, and interactive booth displays to promote programs, answer questions and promote energy conservation. In addition, *takeCHARGE* launched the K-I-C (Kids in Charge) school program as a way to develop energy efficiency awareness in children from kindergarten to grade six. The program involves in-class presentations and contests designed to raise awareness of the importance of conserving energy at home and school. Since the beginning of the 2013/2014 school year, Hydro’s *takeCHARGE team* has presented to approximately 150 students.

In 2013, *takeCHARGE* held the 5th annual Energy Efficiency Week from October 19 to October 25, 2013. Energy Efficiency Week is a way to promote general energy efficiency and engage in more participative methods of promotions. The main initiatives in 2013 were a Facebook Contest asking people “Are you an Energy Efficiency Super Saver?” Customers participated in the contest by posting pictures to Facebook illustrating the ways they conserve energy. A contest for grade K-6 classes was launched provincially asking students to explain how and why energy efficiency is important to them. Hydro areas accounted for 13 of the 34 entries. Again the Utilities offered the “*takeCHARGE* of Your Town Challenge” to increase energy efficiency in residents’ homes, businesses and municipal facilities. Participating towns were awarded points for their involvement in specific energy efficiency milestones and events. The Town of Placentia won the 2013 challenge, receiving \$7,500 towards an energy efficiency/environmental improvement in the community. Hydro municipalities accounted for three out of the 13 who signed up, to participate in this year’s Challenge.

Table 3: Hydro's Support Costs 2009-2013 (\$000s)					
	2009	2010	2011	2012	2013
Education	262	106	212	200	192
Support	53	48	43	53	66
Planning	176	180	304	127	56
Total	491	334	559	380	314

6 Regulated Program Energy Savings and Program Costs

Table 4 below illustrates the energy savings from Hydro customers in relation to programming associated with the annual regulated deferral request. In 2012, there was growth in the windows and thermostat programs and an increase in uptake on insulation. The strong successes in the IEEP and the Isolated System Community Energy Efficiency Program reflect efforts to offer a program model that responds to the needs of the customers being targeted. Strong facilitation and support was provided for the IEEP participants and one-on-one community level participation opportunities provided through the Isolated System Community Energy Efficiency Program. A small energy savings in 2012 resulted from the completion of the first project through the ISBEP program.

Table 4: Energy Savings from Deferral Account Activity (MWh)					
	2009	2010	2011	2012	2013
Windows	8	14	38	50	43
Insulation	29	63	229	126	123
Thermostats	2	16	16	28	14
Coupon Program	-	47	166	-	-
Commercial Lighting	3	-	92	25	19
Industrial	-	-	165	3,172	-
Isolated Systems Community	-	-	-	1,673	1,096
ISBEP	-	-	-	3	26
Heat Recovery Ventilator	-	-	-	-	1
Business Efficiency Program	-	-	-	-	-
Total	42	140	706	5,077	1,322

The costs associated with the delivery of the CDM program portfolio include direct costs for advertising, salaries, rebates and other expenses directly associated with a specific rebate program. These costs vary depending on the uptake of the program and the number of programs offered. Table 5: Program Costs from Deferral Account Activity provides a program level breakdown.

Table 5: Program Costs from Deferral Account Activity (\$000s)					
	2009	2010	2011	2012	2013
Windows	44	41	69	102	150
Insulation	40	53	116	108	112
Thermostats	13	18	25	43	47
Coupon Program	-	113	123	-	-
Commercial Lighting	13	-	43	10	17
Industrial	57	190	98	170	88
Isolated Systems Community	-	-	-	858	871
ISBEP	-	-	-	93	115
Heat Recovery Ventilator	-	-	-	-	8
Business Efficiency Program	-	-	-	-	40
Small Technologies	-	-	-	-	1
Total	167	415	474	1,384	1,449

7 Program Participation and Savings

Table 6 provides the breakdown of rebate transactions and savings for each of the programs in the Five-Year Plan and the Coupon Pilot Program. The transaction units are specific to each program. The Residential Energy Star Window, Insulation, Thermostat and HRV programs reflect approved rebates. The Coupon Program reflects numbers of coupons redeemed. The Commercial Lighting Program reflects the number of technologies rebated through the program. The Block Heater Timer Program reflects the number of timers determined to be installed through post-giveaway surveys or coupon redemption. The ISBEP, Industrial and Business Efficiency Programs reflect the number of completed retrofit projects. Finally, the Isolated Systems Program denotes the number of direct installs completed for both residential and commercial customers.

Table 6: Life to Date Program Participation						
Program	2009	2010	2011	2012	2013	2013 Life to Date
Windows	11	19	41	61	48	180
Insulation	14	24	104	50	53	245
Thermostat	4	28	32	45	23	132
Coupon Program	-	3,178	5,832	-	-	-
Commercial Lighting	-	-	6,996	1,321	1,078	9,395
Industrial	-	-	1	1	-	2
Isolated Systems Community	-	-	-	1,355	1,153	2,508
ISBEP	-	-	-	1	1	2
Heat Recovery Ventilator	-	-	-	-	1	1
Business Efficiency Program	-	-	-	-	-	-

The estimated energy savings represent savings from participants in that year through the Deferral Account activity. These savings will occur each year for the life of the measures installed.

Table 7: Life to Date Energy Savings						
Program	Estimated energy savings (MWh)					2013 Life to Date
	2009	2010	2011	2012	2013	
Windows	8	14	38	50	43	153
Insulation	29	63	229	126	123	570
Thermostat	2	16	16	28	14	76
Coupon Program	-	47	166	-	-	213
Commercial Lighting	3	-	92	25	19	139
Industrial	-	-	165	3,172	-	3,337
Isolated Systems Community	-	-	-	1,673	1,096	2,769
ISBEP	-	-	-	3	26	29
Heat Recovery Ventilator	-	-	-	-	1	1
Business Efficiency Program	-	-	-	-	-	-
Total	42	140	706	5,077	1,322	7,287

8 2014 Summary

The portfolio of programs continues to expand for Hydro with the launch of the Small Technologies program in June 2014. This program will provide redeemable coupons for small technologies and provide additional ways for customers to save energy.

Work will conclude with DNV-GL Energy on residential programs, with CLEAResult's work on the IEEP and with internal review of the Block Heater Timer Program. In addition, Summerhill will be providing support in determining next steps in engaging Isolated Systems in energy efficiency beyond 2014.

In addition to evaluating and reviewing existing programs and launching new programs, Hydro will also be engaged in planning work for the next iteration of CDM programs for Hydro customers and through the joint utility process.

9 Life to Date Value of Program Energy Savings

The value of energy and demand savings has been estimated from a utility perspective based on overall cost reductions associated with the program costs recorded in the Deferral Account. It includes Holyrood fuel savings and impacts on transmission and distribution costs including losses. No losses are included for the Industrial Energy Efficiency Program as they are transmission level customers. Estimated energy and demand savings are based on when the customer completed installation of energy saving measures during the year, and allow for reductions due to free ridership. This estimate is less than that based on savings accrued to participants on an annual basis, as presented elsewhere in this report. The value of energy savings changes each year primarily due to the change in avoided fuel prices and an update from using 2009 dollars to 2013 dollars.

Table 8: Life to Date Value of Energy Savings (2013 \$s)

Program	2009	2010	2011	2012	2013	2013 Life to Date
Windows	237	982	2,942	6,518	5,974	16,653
Insulation	1,098	5,053	19,803	32,815	19,044	77,813
Thermostat	62	847	2,025	3,830	2,945	9,708
Coupon Program	-	2,403	14,147	34,362	-	50,912
Commercial Lighting	-	-	8,118	13,880	5,083	27,082
Industrial	-	-	980	296,302	-	297,282
Isolated Systems Community	-	-	-	175,232	387,034	562,265
ISBEP	-	-	-	336	1,863	2,200
Heat Recovery Ventilator	-	-	-	-	-	-
Business Efficiency Program	-	-	-	-	-	-
Total	1,397	9,286	48,016	563,275	421,944	1,043,916

Appendix A

CDM Program Descriptions

Residential takeCHARGE Rebate Programs

Program applications are processed primarily through customer applications. The programs are promoted in partnership with trade allies in the retail, home building and renovation industries.

Insulation Rebate Program

The objective of this program is to provide incentives to increase the insulation R-value in residential basements, crawl spaces and attics, thereby increasing the efficiency of the home's building envelope. Eligibility for the programs is limited to electrically heated homes, determined on the basis of annual energy usage. Home retrofit projects are eligible. Customers can receive an incentive of one cent per R-value per square foot of insulation added to their attics and two cents per R-value per square foot of insulation added to basement walls or ceilings.

Thermostat Rebate Program

This program encourages installation of programmable and electronic thermostats to allow customers better control of the temperature in their home and to save energy. These high performance thermostats allow customers to set back the temperature during the night or when they are away. Eligibility for the programs is limited to electrically heated homes, determined on the basis of annual energy usage. Home retrofit projects and new home developments are eligible. Incentives of \$10 for each programmable thermostat and \$5 for each electronic high performance thermostat are offered.

ENERGY STAR Window Rebate Program

This program encourages customers to purchase ENERGY STAR rated windows over standard windows to improve the efficiency of their home's building envelope and reduce space heating energy. Eligibility for the programs is limited to electrically heated homes, determined on the basis of annual energy usage. Home retrofit projects are eligible. Customers who purchase ENERGY STAR windows can receive a rebate of \$2 per square foot of window installed.

HRV Rebate Program

This program encourages customers to purchase a high efficiency HRV to improve the efficiency of their home. Eligible measures in this program include all HRV models that have a Sensible Recovery Efficiency of 70% or more. Customers who purchase a high efficiency HRV can receive a rebate of \$175. All customers are eligible for this program regardless of age of home or heat source.

Isolated System Community Energy Efficiency Program – Hydro Program

This program provided both residential and commercial components targeting customers in Isolated and L'Anse au Loup Systems. The focus is on residential customers through the direct install of a kit of technologies, at-cash coupons on

small technologies and mail-in rebates on energy efficient appliances. Commercial customers also receive a direct install of a kit of technologies. The kit includes items for water savings, draft proofing, lighting and other measures.

Homeowners received education on energy efficiency and information on the existing takeCHARGE rebate programs. There were community events, social media promotions and exchanges held to promote the program and energy efficiency awareness.

Through this program Hydro has piloted a number of approaches and technologies to assess their validity for the rural market including pop up retail shops, drain water heat recovery, and in 2014, Hydro will be exploring residential air sealing and online sales opportunities for energy efficient products.

Block Heater Timer Program – Hydro Program

Targeting customers in the Labrador Interconnected System this program encouraged the purchase of energy saving Block Heater Timers through in-store discounts offered at partnering retailers. The program launched with a giveaway of the technology to create awareness of the product as there was little or no use of the technology before the program. The incentive was offered over two winter seasons (2012-2013 and 2013-2014) and will end in spring 2014.

Commercial *takeCHARGE* Rebate Programs

Commercial Lighting Incentive Program

The Commercial Lighting Program targets energy reductions through more efficient lighting technologies in commercial buildings. The Commercial Lighting Program offers incentives for lamps and ballasts to commercial customers in an effort to reduce the cost differential for upgrading to the higher efficiency lighting systems and provide a sales incentive for the lighting distributor.

The Commercial Lighting Program also includes incentives for LED exit signs for retrofit applications. High bay fluorescent lighting, including T8 and T5 fluorescent fixtures used in areas with high ceilings, such as warehouses, gymnasiums, arenas and garages are also eligible for incentives.

These lighting technologies offer energy savings of 25% to 90% compared to standard lighting systems. The program is primarily promoted through local lighting distributors. It is a requirement of the program that the lighting distributors provide the Company with sales and customer data for program tracking.

Business Efficiency Program

Launched in 2013, the objective of this program is to improve electrical energy efficiency in a variety of commercial facilities and equipment types. The program components include financial incentives based on energy savings, and other financial and educational supports to enable commercial facility owners to identify and implement energy efficiency projects.

This program is available for existing commercial facilities that can save energy by installing more efficient equipment and systems. The program includes custom projects and rebates for specific measures on a per unit basis.

Isolated Systems Business Efficiency Program (ISBEP) – Hydro Program

The ISBEP was launched in 2012 and targets commercial customers in the Isolated and L'Anse au Loup Systems. The program provides a custom approach to finding energy efficiency solutions and provides free energy walkthroughs as well as financial assistance for feasibility studies and for retrofit projects. It has the same program design and offerings as the joint utility Business Efficiency Program, but has higher incentive levels for retrofit work because of the higher avoided cost of generation in these systems.

Industrial Energy Efficiency Program (IEEP)

The objective of this program is to improve electrical energy efficiency in a variety of industrial processes. The program components include financial incentives based on energy savings, and other supports to enable industrial facilities to identify and implement efficiency and conservation opportunities. This program is a custom program to respond to the unique needs of the industrial market, rather than a prescriptive technology approach. It was launched as a three-year pilot program in 2010 and was closed to new projects in 2013. It is currently under an external consultant review and Hydro will be developing a longer-term strategy for energy efficiency in the industrial sector.