Q. **Re: IN-NLH-012, p. 1 of 3**

Please provide:

- a copy of Hydro's CDM Report filed with the Board in March 2013, and
- documents describing in detail the Isolated System Community Energy Efficiency Program.

A. A copy of Hydro's CDM Report filed with the Board in March 2013 is provided in IN-NLH-165 Attachment 1. Please refer to PUB-NLH-313 Attachment 3 for details of the Isolated Systems Community Energy Efficiency Program.

A REPORT TO
THE BOARD OF COMMISSIONERS OF PUBLIC UTILITIES

2012 Conservation and Demand Management Report

NEWFOUNDLAND AND LABRADOR HYDRO

March 2013

newfoundland labrador hydro
a nalcor energy company

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1 Introduction

This report provides an overview of Newfoundland and Labrador Hydro's (Hydro) activities undertaken in 2012 on Conservation and Demand Management (CDM). The report also provides some information on the future outlook and provides an estimate of the value of CDM from a utility perspective.

While the focus is on CDM information and programs directed at customers, Hydro also places efforts on improving the energy efficiency of its own facilities and there were further successes in that program in 2012.

This report describes the provincial approach towards the CDM initiatives, but focuses on the costs and initiatives for Hydro's portion of program implementation. 2012 was a very active year for Hydro, with significant program expansions in both residential and commercial sectors, targeting the isolated diesel systems. In addition to large scale programming, a smaller program promoting block heater timers was launched for customers in the Labrador Interconnected System. The Five Year Energy Conservation Plan: 2012-2016 (the Plan) was filed with the Board in 2012 and outlines further program expansions for 2013 and 2014 for both commercial and residential customers.

2 Provincial Context

Energy conservation initiatives were a topic of discussion 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 plan was completed which outlined proposed energy conservation initiatives to be implemented jointly by Newfoundland Power and Hydro.

The focus of the Plan was and is on energy savings through the development of a culture of conservation. 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. Since that Plan, Hydro has also offered programs directly to their customers: the Coupon Pilot Program in 2010-2011, the Isolated Systems[1] Community Energy Efficiency Program, Isolated Systems Business Efficiency Program (ISBEP)[2] and a Block Heater Timer program, all launched in 2012. An overview of the programs offered during 2012 is included in Appendix A: CDM Programs and includes current programs offered both through a joint utility partnership or directly targeting Hydro's customers.

Through Order No. P.U. 14 (2009), the Board approved the definition and establishment of a Conservation Deferral Account. A definition for this deferral account was submitted to the Board on April 22, 2009 and is attached as Appendix B to this report.

The takeCHARGE brand was launched in 2008 as a joint utility effort and the first rebate programs were launched through takeCHARGE in 2009. Those same programs continue to be offered.

Hydro continues to have a positive working relationship with the Provincial Climate Change, Energy Efficiency and Emissions Trading Secretariat (CCEEET). In 2012, the takeCHARGE team provided support and feedback on the development of the energy efficiency portion of the Turn Back the Tide[3] website and social media activities regarding climate change and energy efficiency.

[1] These programs target isolated diesel systems as well as the L'anse au Loup System covering the south coast of Labrador.
[2] Board Order No. P.U. 3(2012) approved the deferral of 2012 costs related to the Conservation program.
[3] The Government of Newfoundland and Labrador's "Turn Back the Tide" campaign is being delivered by the Office of Climate Change, Energy Efficiency and Emissions Trading, and is a public awareness campaign on climate change and energy efficiency. The website address is www.turnbackthetide.ca.

3 Five Year Plan Activities

The Five Year Energy Conservation Plan: 2012-2016 was filed with the Board in 2012 and outlines further program expansions for 2013 and 2014 for both commercial and residential customers and provides for an evaluation and assessment of next steps for the industrial sector. In addition to the joint utility programs offered provincially, there are three programs offered by Hydro that directly target their customers in isolated and Labrador Interconnected systems. These are also offered through the takeCHARGE brand to maintain consistency for all utility offered energy conservation programs.

The takeCHARGE Energy Savers Rebate programs launched in June 2009 were offered through 2012. These programs have delivered energy savings and continue to prompt consumers to consider energy efficiency in their purchases. These programs target the highest end uses for the residential and commercial markets of heating and lighting, respectively. These programs are:

- Residential Windows;
- Residential Thermostats;
- Residential Insulation; and
- Commercial Lighting.

The Industrial Energy Efficiency Program (IEEP) launched in 2010 with the first project cash incentives approved in 2011 and additional projects completed in 2012. This program provides financial support for engineering feasibility studies of efficiency opportunities and capital projects.

In addition to these provincial rebate programs, Hydro launched programs for both residential and commercial customers. The Isolated System Energy Efficiency Program provided for direct install of a kit of technologies in a participating customer's home. The kit included 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. More than 85%[4] of homes received a direct install visit in the communities targeted in 2012.

In addition to the residential component of the program, commercial customers also received a direct install with lighting, draft sealing and water conservation measures. As well as the direct install visit, customers were made aware of the newly launched Isolated Systems Business Efficiency Program (ISBEP) that provides a custom approach towards finding energy efficiency solutions for the business community. Similar to the

[4] Final report from Summerhill Group indicates an 87.6% install rate for 2012.

IEEP, the program provides assessment of the opportunities at the customers' site and provides an incentive for capital work based on the predicted energy savings.

A smaller program was launched in the Labrador Interconnected System to promote and provide incentives for Block Heater Timers. Timers are rarely used in this region, although the penetration of block heaters is very high. This program was launched in partnership with corporate partners Iron Ore Company of Canada (IOC) and Cliffs (Wabush Mines) to provide giveaways, promotions and retail coupons on this technology. Our corporate partners are increasing the incentive amount and providing additional promotions and outreach for the program to customers in the Labrador West area.

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 2012 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 deferral account and the associated energy reductions.

Table 1: Hydro CDM Portfolio Costs ($000)

	2009	2010	2011[5]	2012
Windows	44	48	80	117
Insulation	40	60	140	126
Thermostats	13	19	31	47
Coupon Program	-	140	135	-
Commercial Lighting	13	12	59	20
Industrial	57	221	103	173
Block Heater Timer				31
Isolated Systems Community				858
ISBEP				93
Heat Recovery Ventilator				-
Business Efficiency Program				-
Small Technologies				-
Total Portfolio	**167**	**500**	**548**	**1,465**

[5] In the 2011 Conservation and Demand Management Report, the costs for Windows and Insulation were reversed in the 2011 column. This table provides a correction of that error.

Table 2: Hydro Annual Energy Savings (MWh)

	2009	2010	2011	2012
Windows	12	27	61	136
Insulation	31	84	407	383
Thermostats	6	25	27	43
Coupon Program	-	64	256	-
Commercial Lighting	3	10	227	95
Industrial	0	0	165	3,172
Block Heater Timer				0
Isolated Systems Community				1,673
ISBEP				3
Heat Recovery Ventilator				-
Business Efficiency Program				-
Small Technologies				-
Total	**52**	**210**	**1,143**	**5,505**

There are two components of the costs associated with the conservation and efficiency function. In addition to direct program costs which are charged to the Deferral Account, there are costs associated with general energy efficiency awareness and education, strategic planning and program development. These costs remain relatively stable regardless of the number of rebate programs currently offered in the portfolio.

These costs are outlined in Table 3: Hydro Support Costs, below.

Table 3: Hydro Support Costs 2009-2013 ($000)

	2009	2010	2011	2012
Education	262	106	212	200
Support	53	48	43	53
Planning	176	180	304	127
Total	**491**	**334**	**559**	**380**

4 2012 Program Highlights

takeCHARGE is a joint utility effort to provincial CDM programming that allows for economies of scale to be achieved in areas such as marketing and outreach efforts. The technologies selected for rebate programs address large energy use opportunities and have been verified as cost effective through standard utility economic screening. In addition, a range of education efforts around general energy efficiency messaging have also been implemented to develop a culture of conservation.

Participation continues to increase in Hydro's service area. Retailers continue to be key partners in reaching customers, and a pilot project undertaken in 2011-2012 with retailers to promote Energy Star Window purchases and rebate submission demonstrated this role. Select retailers completed applications on behalf of customers and received a small financial incentive for every eligible rebate submitted. This effort was both to increase the sales for Energy Star Windows but also to reduce the barriers of the application process for the customer. Hydro rebate participation numbers are typically low, so it is challenging to determine the exact impact of such an initiative, but it does seem to have had an impact. The lessons learned from this report will be used to determine further opportunities for retailer engagement on a provincial scale.

In the residential sector, there was growth in both the windows and thermostat programs. The decrease from 2011 savings in the insulation program is a result of the very strong activity around an aggressive insulation promotion and increased rebate that was held in 2011 that was not repeated in 2012.

Participation in the commercial lighting program has been a challenge in 2012 due to an increase in the cost of the more efficient lighting that is eligible for incentive. While the price has levelled out and even returned to previous cost levels, the local lighting suppliers are not yet following suit. The utilities continue to work with distributors to gain insight into the impacts this is having on the market.

Industrial Customer participation continues to be a challenge as customers focus on their own operation and processing, and energy efficiency does not appear to be a primary driver for resource allocation. There is still a great need for strong, hands-on support to enable customers to manage their daily operational priorities while examining energy efficiency and developing efficiency plans.

During 2012, takeCHARGE promotions continued through mass market media approaches, as well as through an increasing presence in social media with an active Facebook page and website. Using contests and engagement in discussions on energy efficiency, customers were able to learn about ways to conserve as well as hear about takeCHARGE programs. Social media continues to be an effective way to engage customers in discussing ways to conserve energy and the customer engagement has directed people to the website for additional detailed rebate program information.

5 Sector Highlights

In the residential sector, outreach and non-traditional promotions and awareness building continue to demonstrate strong results in reaching a diverse market. For example, the takeCHARGE program has been represented through community events, product exchanges and giveaways to reach customers in a variety of ways. The Isolated Systems Energy Efficiency Program in isolated communities provided events and open community dialogue, opportunities to participate in lighting exchanges as well as providing coupons for small technologies such as lighting at local retailers and the opportunity to have a number of items installed free of charge in the customer's home. The Program is administered by Summerhill Group on behalf of Hydro and through Summerhill, local people were hired and trained to deliver the program. The very high participation rate of more than 85% of homes is in large part due to the program having a local presence and engaging people on a personal level with regards to energy decisions at home.

The commercial market requires additional understanding and support of a different nature. In the summer of 2012, the ISBEP was launched, providing rebates and technical assistance for commercial customers in the isolated diesel communities and L'Anse au Loup area. This custom approach is similar to the IEEP and Hydro technical staff work with customers one on one to address their energy efficiency needs. Hydro had already learned from the IEEP that business customers require technical support in identifying the opportunities but also significant support in moving the project forward while they manage immediate business concerns.

In 2012, the IEEP had successes with continued participation in capital retrofits with one Industrial Customer on the Island Interconnected System. Additional projects were discussed and explored with other customers but were not completed. The challenges of keeping sustained interest in efficiency projects with competing business concerns has resulted in continued low numbers of projects and savings, despite the identification of cost effective projects.

Hydro will also continue to work with Newfoundland Power and other partners to determine emerging opportunities for CDM programming and develop appropriate strategies for developing a conservation culture in the province. The 2012 activities included filing the updated Plan, commencing discussions with CCEEET on changing codes in both commercial and residential sectors and new program launches for both sectors.

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 on the windows and thermostat programs and an increase in uptake on insulation. The commercial lighting challenges with market prices of the eligible technologies are reflected in this year's savings. 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[6]	2011	2012
Windows	12	16	38	50
Insulation	31	63	229	126
Thermostats	6	15	16	28
Coupon Program	0	47	166	-
Commercial Lighting	3	0	92	25
Industrial	0	0	165	3,172
Block Heater Timer				0
Isolated Systems Community				1,673
ISBEP				3
Heat Recovery Ventilator				-
Business Efficiency Program				-
Small Technologies				-
Total	**52**	**141**	**706**	**5,077**

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.

[6] In the 2011 Conservation and Demand Management Report, the energy savings for Windows and Insulation were reversed in the 2009 and 2010 columns. This table provides a correction of that error. Review of the savings information for 2010 showed that the Insulation savings reported (50 MWh/yr) were actual savings assumed from time of rebate submission and had not been annualized. This correction has been made, to ensure consistency with other programs and resulted in an increase in the savings to 63 MWh/yr.

Table 5: Program Costs from Deferral Account Activity ($000)

	2009	2010	2011[7]	2012
Windows	44	41	69	102
Insulation	40	53	116	108
Thermostats	13	18	25	43
Coupon Program	-	113	123	-
Commercial Lighting	13	-	43	10
Industrial	57	190	98	170
Block Heater Timer				-
Isolated Systems Community				858
ISBEP				93
Heat Recovery Ventilator				-
Business Efficiency Program				-
Small Technologies				-
Total Portfolio	**167**	**415**	**474**	**1,384**

[7] In the 2011 Conservation and Demand Management Report, the costs for Windows and Insulation were reversed in the 2011 column.

7 Program Participation and Savings

The following provides the breakdown of rebate transactions and savings for each of the programs in the Five Year Plan and the Coupon Pilot Program. These numbers reflect costs and savings associated with activity recorded in the Deferral Account.

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

Table 6: Life to Date Program Participation

	Number of Rebates				
Program	**2009**	**2010**	**2011**	**2012**	**Life to Date**
Energy Star Window Rebate Program	11	19	41	61	132
Insulation Rebate Program	14	24	104	50	192
Thermostat Rebate Program	4	28	32	45	109
Coupon Pilot Program	-	N/A	N/A	N/A	0
Commercial Lighting Rebate Program[8]	0	0	6,996	1,321	8,317
Industrial Energy Efficiency Program	0	0	1	1	2
Block Heater Timer				0	0
Isolated System Community				N/A	0
ISBEP				1	1
Heat Recovery Ventilator				-	0
Business Efficiency Program				-	0
Small Technologies				-	0

[8] For the Commercial Lighting Program, rebates can range from 10 efficient bulbs to hundreds of bulbs, and ballasts. For that reason, the numbers listed in this table are numbers of technologies rebated, rather than the actual number of rebates.

Table 7: Life to Date Energy Savings

	Estimated Energy Savings MWh/yr				
Program	**2009**	**2010**[9]	**2011**	**2012**	**Life to Date**
Energy Star Window Rebate Program	12	16	38	50	116
Insulation Rebate Program	31	63	229	126	449
Thermostat Rebate Program	6	15	16	28	65
Coupon Pilot Program	0	47	166	0	213
Commercial Lighting Rebate Program	0	0	92	25	117
Industrial Energy Efficiency Program	0	0	165	3,172	3,337
Block Heater Timer				0	0
Isolated System Community				1,673	1,673
ISBEP				3	3
Heat Recovery Ventilator					0
Business Efficiency Program					0
Small Technologies					0

[9] In the 2011 Conservation and Demand Management Report, the energy savings for Windows and Insulation were reversed in the 2009 and 2010 columns.

8 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 due primarily to the change in avoided fuel prices and an update from using 2009 dollars to 2012 dollars.

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

	Estimated Energy Savings MWh/yr				
Program	**2009**	**2010**	**2011**	**2012**	**Life to Date**
Energy Star Window Rebate Program	233	1,197	4,084	10,477	15,991
Insulation Rebate Program	1,078	6,037	25,469	57,650	90,234
Thermostat Rebate Program	61	893	2,879	6,635	10,468
Coupon Pilot Program	-	4,712	26,608	54,307	85,627
Commercial Lighting Rebate Program	-	-	7,972	21,582	29,554
Industrial Energy Efficiency Program	-	-	961	291,564	292,525
Block Heater Timer	-	-	-	0	0
Isolated System Community	-	-	-	167,906	167,906
ISBEP	-	-	-	221	221
Heat Recovery Ventilator	-	-	-	-	-
Business Efficiency Program	-	-	-	-	-
Small Technologies	-	-	-	-	-

Appendix A

CDM Program Concepts

Residential Windows

Program Description

The objective of this program is to increase the installation of *Energy Star* qualified windows, resulting in savings in space heating energy. The program components include rebates and financing, and a variety of education and marketing tools.

Target Market: Residential

This program targets residential customers, including new construction and replacement of existing windows at end of life. Eligibility is limited to electrically heated homes.

Eligible Measures

Eligible measures in this program are *Energy Star* qualified windows.

Delivery Strategy

Delivery of this program will be integrated with the revised *Wrap Up for Savings* insulation and thermostat programs.

Marketing initiatives will include partnering with retailers and trade allies in the home building and renovation industry, to target both do-it-yourself and professional installers. Communications will incorporate the *Energy Star* brand and related marketing support, as well as cross-promotion of the EcoEnergy Retrofit program from Natural Resources Canada. Tools and tactics will include retail and model home point-of-sale materials, advertising, tradeshows, community outreach and trade ally activities. Rebates and financing will be processed through customer application.

Residential Windows

Market Considerations

Energy Star qualified windows make up approximately 10% to 15% of window sales in the province, and understanding of the product is generally poor among customers and retailers. Initial cost is also a barrier to increased market penetration, due to a 10% to 15% price premium. Eligible windows are widely available. Local manufacturers produce approximately 50% of the provincial window sales, and most manufacturers offer *Energy Star* qualified products.

Incentive Strategy

Incentives for this program include rebates and financing. The rebate value will be based on the incremental cost of *Energy Star* qualified windows over the standard type.

Program Monitoring & Evaluation

The program will be monitored for participation level, service quality, and cost effectiveness, and a representative sample of installations will be inspected. Formal evaluations will be conducted within the first year of implementation, and biannually during operation.

Estimated Costs & Energy Savings

	2008	2009	2010	2011	2012	2013	Total
Estimated Costs ($000s)	40	420	400	500	510	610	2,480
Estimated Cumulative Energy Savings (MWh)	-	230	570	1,020	1,700	2,610	
Total Resource Cost (TRC)	2.4						

Residential Thermostats

Program Description

The existing thermostat rebate program will be revised based on the CDM Potential Study and market research. The continuing objective of this program is to increase the use of both programmable thermostats, which automatically set back room temperature, and high performance thermostats, which control room temperature very accurately, in order to save space heating energy. The program components include rebates and financing, and a variety of education and marketing tools.

Target Market: Residential

This program targets residential customers, including home retrofit and new construction. Eligibility is limited to electrically heated homes.

Eligible Measures

Eligible measures in this program include both programmable and high performance thermostats (for example, those which control within +/- 0.5C.)

Delivery Strategy

Delivery of this program will be integrated with the new residential windows and revised *Wrap Up for Savings* insulation programs.

Marketing initiatives will include partnering with manufacturers, retailers, electrical contractors, as well as homebuilders and real estate professionals to educate consumers regarding the energy savings and comfort benefits of programmable and high performance thermostats. Communications will incorporate cross-promotion of the EcoEnergy Retrofit program from Natural Resources Canada. Tools and tactics will include retail and model home point-of-sale materials, advertising, tradeshows, community outreach and trade ally activities. Rebates will be processed directly by authorized retailers and through customer-submitted coupons.

Residential Thermostats

Market Considerations

Sales of programmable and high performance thermostat types make up less than 10% of total thermostat sales provincially. Customer awareness of the important role of thermostats in heating system efficiency is low**.** Initial cost is a barrier to increased market penetration, particularly for new home construction where continued use of minimum quality thermostats represents significant lost opportunity. Availability of electronic high performance thermostats is currently limited in most areas, though programmable types are widely available.

Incentive Strategy

Incentives for this program include rebates and financing. The rebate value will be based on the incremental cost of the targeted thermostat types over the standard type.

Program Monitoring & Evaluation

The program will be monitored for participation level, service quality, and cost effectiveness, and a representative sample of installations will be inspected. Formal evaluations will be conducted within the first year of implementation, and biannually during operation.

Estimated Costs & Energy Savings [1]

	2008	2009	2010	2011	2012	2013	Total
Estimated Costs ($000s)	-	300	220	280	230	270	1,300
Estimated Cumulative Energy Savings (MWh)	-	270	650	1,210	1,910	2,650	
Total Resource Cost 2.4							

[1] Includes the cost of revising the existing program and the resulting energy savings. Excludes the cost and energy savings of existing program.

Residential Insulation

Program Description

The existing *Wrap Up for Savings* program will be revised based on the CDM Potential Study and market research. The continuing objective of this program is to increase the insulation level in basements, crawl spaces, walls and attics, resulting in savings in space heating energy. The program components include rebates and financing, and a variety of education and marketing tools.

Target Market: Residential

This program targets residential customers, including home retrofit and new construction. Eligibility is limited to electrically heated homes.

Eligible Measures

Eligible measures in this program include insulation upgrades to basements, crawl spaces, walls and attics. Rebates for new homes are limited to basement insulation beyond building code compliance. Technical requirements for each upgrade type will be reviewed during program detailed design.

Delivery Strategy

Delivery of this program will be integrated with the new residential windows and revised thermostat programs.

Marketing initiatives will include partnering with retailers and trade allies in the home building and renovation industry, to target both do-it-yourself and professional installers. Communications will incorporate cross-promotion of the EcoEnergy Retrofit program from Natural Resources Canada. Tools and tactics will include retail and model home point-of-sale materials, advertising, tradeshows, community outreach and trade ally activities. Rebates and financing will be processed through customer application.

Residential Insulation

Market Considerations

Older homes and small homes often have inadequate insulation levels. For example, over 45% of homes in the province built before 1950 have uninsulated basements. Most new homes constructed in the province still have no insulation on the concrete portion of basement walls. Initial cost is a barrier to increased market penetration, as is awareness of the impact on space heating energy, and the practical difficulties of renovating an existing living space. Recent experience with the *Wrap Up for Savings* program has shown participation to be responsive to awareness-building marketing activities.

Incentive Strategy

Incentives for this program include rebates and financing. The rebate value will be reviewed and will be restructured based on insulating value (R-value) rather than a prescriptive product list as currently offered.

Program Monitoring & Evaluation

The program will be monitored for participation level, service quality, and cost effectiveness and a representative sample of installations will be inspected. Formal evaluations will be conducted within the first year of implementation, and biannually during operation.

Estimated Costs & Energy Savings [1]

	2008	2009	2010	2011	2012	2013	Total
Estimated Costs ($000s)	40	1,210	1,210	1,400	1,430	1,590	6,880
Estimated Cumulative Energy Savings (MWh)	-	4,130	8,670	13,660	19,160	25,200	
Total Resource Cost 2.6							

[1] Includes the cost of revising the existing program and the resulting energy savings. Excludes the cost and energy savings of existing program.

Commercial Lighting

Program Description

The objective of this program is to increase the installation of more efficient lighting technologies in commercial buildings. The program components include rebates on a specific list of qualifying technologies, and a variety of education and marketing tools.

Target Market: Commercial

This program targets retrofit of commercial building lighting, encouraging customers to replace existing lighting equipment.

Eligible Measures

The list of eligible measures in this program is based on the technologies identified as eligible for rebate under existing programs offered by other Canadian utilities (for example Ottawa Hydro and BC Hydro). These include T8 fluorescent electronic ballasts or fixtures, compact fluorescent lights (CFLs), and *Energy Star LED* exit signs.

Delivery Strategy

This program is expected to be operational for three years. Delivery will be integrated with future commercial sector programming, which is expected to include a custom project-based incentive program similar to the industrial custom program.

Marketing initiatives will include partnering with lighting manufacturers, distributors, and electrical contractors who will carry the program to potential customers. The program will create business opportunities for trade allies to sell more efficient lighting products. This approach has proven effective in other jurisdictions and in previous Newfoundland Power experience. Tools and tactics will include trade ally and business association activities, such as workshops for contractors and distributors, retail point-of-sale materials, and advertising in trade publications. Demonstration projects will be selected from early participants. Rebates will be processed through customer application.

Commercial Lighting

Market Considerations

The largest portion of the market opportunity in commercial lighting is with standard T12 fluorescent tube lighting with electromagnetic ballasts. This technology is used in approximately 60% of existing commercial building interior lighting in the province, though new construction is almost exclusively using the more efficient T8 fluorescents with electronic ballasts. Federal regulations will remove the electromagnetic ballast from new sales starting in 2010. However, there is a significant opportunity for replacement of existing T12 installations prior to their normal end of life (average lifespan 17 years). Primary barriers to increased use of the more efficient products include the higher initial capital cost, and lack of understanding of the opportunity for energy and cost savings.

Incentive Strategy

Incentives for this program include rebates for a prescriptive list of eligible technologies. The list will be based on the technologies identified as eligible for rebate under existing programs offered by other Canadian utilities (for example Ottawa Hydro and BC Hydro).

Program Monitoring & Evaluation

The program will be monitored for participation level, service quality, and cost effectiveness and a representative sample of installations will be inspected. Formal evaluations will be conducted within the first year of implementation, and biannually during operation.

Estimated Costs & Energy Savings

	2008	2009	2010	2011	2012	2013	Total
Estimated Costs ($000s)	-	290	310	340	-	-	940
Estimated Cumulative Energy Savings (MWh)	-	590	1,760	2,930	2,930	2,930	

Total Resource Cost 1.1

Industrial Custom Program

Program Description

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.

Target Market: Industrial

This program targets retrofit of industrial process equipment in the transmission level customers served by Newfoundland and Labrador Hydro.

Eligible Measures

Eligibility of projects is based on engineering review and confirmation of estimated energy savings impact. Technologies include, but are not limited to, compressed air, pump systems, process equipment and process controls.

Delivery Strategy

This program will be delivered through a call for proposals to Industrial Customers (IC) for energy saving projects that meet set financial criteria. These proposals will undergo engineering review for approval. Selected projects will be eligible for rebates based on savings and payback period reductions, as well as enabling supports including facility education, energy audits and other customized offerings.

The program will be managed internally with external engineering verification of projects and monitoring and evaluation of energy savings. The utility will take the role of facilitator and consultant in providing methods for ICs to complete project proposals and implement approved projects.

This program model has been used successfully in other jurisdictions. To ensure the cost effectiveness of this model with the unique nature and size of the industrial market in Newfoundland and Labrador, this program will launch as a three-year program using a single call for proposals and full evaluation cycle.

Industrial Custom Program

Market Considerations

This market requires a one-on-one approach to project design and delivery. The program builds on the work already completed by the ICs, and addresses their unique barriers to improved efficiency, which include, but are not limited to, access to capital and human resources.

The lifecycle for each program transaction will be measured in months rather than weeks because of the need for review, contract development, implementation timelines and post-installation monitoring and evaluation. This type of program requires that facilities have financial and business stability to continue operations for a time period appropriate to achieve cost effective savings.

Incentive Strategy

Incentives for this program include rebates based on energy savings, as well as funding assistance for additional enabling mechanisms. Rebate levels, maximum rebate amounts and payment schedules will be determined in the program detailed design phase. Rebates for each approved project will be determined through the call for proposals process, based on the engineering proposal and following a schedule agreed upon by the customer and utility.

Program Monitoring & Evaluation

The program will be monitored for participation level, service quality, and cost effectiveness, including engineering review and inspection of all projects and assessment of long-term impact on customer processes. Formal program evaluations will be conducted within the first year of implementation, and biannually during operation.

Estimated Costs & Energy Savings

	2008	2009	2010	2011	2012	2013	Total
Estimated Costs ($000s)	100	1,470	2,640	4,270	-	-	8,480
Estimated Energy Savings (MWh)	-	-	-	20,000	45,000	45,000	
Total Resource Cost 2.9							

Residential Coupon Based Energy Efficiency Program

Program Description

This project is a coupon based energy efficiency program targeting Hydro's 31,000 residential customers located across the province in 220 communities. The program provides both at-the-cash coupon promotion for smaller efficiency technologies and mail in rebates for larger Energy Star appliances. This range allows customers to engage in energy efficiency with a wide range of purchase decisions. The program also provides necessary supports, awareness and mechanisms to allow small community retailers to participate and promote their products. All partners are supported by a local program representatives working in the field.

Target Market: Residential

This program targeted residential customers across a range of technology purchases.

Eligible Measures

Eligible measures include smaller items such as CFLs and LED holiday lights, but also some larger items such as Energy Star lighting fixtures, hot water tank wraps and Energy Star clothes washers. The program includes measures with savings resulting from primarily plug load and water heating savings.

Delivery Strategy

At launch the program has ten partner retailers. Local retailers in targeted communities were approached to procure products and offer the coupons for the duration of the program. The rebates on the ENERGY STAR® qualified dishwasher and refrigerator were made available more widely to the entire Hydro customer base through promotions online, info available through the call centre and bill inserts.

Residential Coupon Based Energy Efficiency Program

Market Considerations

This project was designed to:

- Deliver a new, accessible, TRC positive instant coupon-based energy efficiency program in Hydro communities and gain knowledge on the challenges of using this type of approach in communities of different sizes.
- Generate knowledge of energy conservation measures and awareness of the takeCHARGE program offerings.
- Establish new partnerships in the retail sector and engage them in an ongoing wider product offering program and gain a better understanding of Hydro's customer base on the interest in smaller energy efficiency technologies.
- Increase the market penetration of energy saving products and overall energy efficiency awareness.

Incentive Strategy

Incentives for this program include at-the-cash coupons which reduced the cost of the efficient products for the customer at purchase and two additional ENERGY STAR® appliance products with a mail-in rebate similar to the traditional takeCHARGE Energy Savers Rebate programs.

Program Monitoring & Evaluation

Evaluation components include examining the participation, the administration processes, and attitudes of the partners. These included:

- Coupon uptake: number of coupons distributed and number of coupons redeemed;
- Event participation: number of participants; and
- Retailer and participant experiences: number of participants who learned more about energy conservation, takeCHARGE and energy saving products based on interactions with the program.

Estimated Costs & Energy Savings

Costs ($000s)	$240,000-$265,000
Energy Savings (MWh)	473
TRC	2.05

Appendix B

Definition of Deferral Account

Newfoundland and Labrador Hydro
April 22, 2009

Conservation and Demand Management (CDM) Cost Deferral Account
Definition

The account shall be charged with the costs incurred in implementing the CDM Program Portfolio. The costs will include such items as detailed program development, promotional materials, advertising, pre and post customer installation checks, application and incentive processing, incentives, trade ally training, employee training, and program evaluation costs associated with programs in the CDM Program Portfolio.

The account will exclude any expenditure properly chargeable to plant accounts. The account shall also exclude conservation expenditures that are general in nature, such as costs associated with providing energy conservation awareness, responding to customer inquiries, planning, research and general supervision that are not associated with a specific program in the CDM Program Portfolio.

The account will exclude any expenditure related to programs or incentives that are fully recoverable from other parties, including government. Where a program or initiative is partially funded by other parties, the amount funded will be used to reduce the appropriate expenditures.

Costs associated with Labrador Interconnected customers will be tracked separately from costs associated with the other customers, as programs for the latter are based upon a cost structure which is significantly different from the Labrador Interconnected System and future disposition may be treated separately.

Transfers to, and from, the proposed account will be tax effected.

The disposition of any balance in this account will be subject to a future Order of the Board.