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HAND DELIVERED

April 8, 2019

Board of Commissioners
of Public Utilities
P.O. Box 21040
120 Torbay Road
St. John's, NL A1A 5B2

Attention: G. Cheryl Blundon
Director of Corporate Services
and Board Secretary

Ladies & Gentlemen:

Enclosed are the original and 9 copies of Newfoundland Power's *2018 Conservation and Demand Management Report* (the "Report").

In Order No. P.U. 7 (1996-97), the Board ordered, in effect, that Newfoundland Power file annual progress reports on its demand side management activities, including conservation. This report is filed in compliance with Order No. P.U. 7 (1996-97).

If you have any questions, please do not hesitate to call me at the number listed below.

Yours very truly,

A handwritten signature in blue ink, appearing to read "Gerard M. Hayes".

Gerard M. Hayes
Senior Counsel

Enclosures

c. Geoffrey P. Young
Newfoundland and Labrador Hydro

Newfoundland Power Inc.

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2018 Conservation and Demand Management Report

April 8, 2019

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1.0 Introduction

In Order No. P.U. 7 (1996-97), the Board ordered, in effect, that Newfoundland Power Inc. (“Newfoundland Power” or the “Company”) file annual progress reports on its demand side management activities, including conservation.

The report provides an update on the Company’s ongoing conservation and demand management (“CDM”) activities, and addresses the process for review of those activities.

Newfoundland Power and Newfoundland and Labrador Hydro (“Hydro”) offer a variety of information and financial supports to customers to help them manage their energy usage. Since 2009, the Company and Hydro (the “Utilities”) have offered customer energy conservation programs on a joint and coordinated basis under the takeCHARGE brand.

In 2015, the Utilities finalized the joint Five-Year Conservation Plan: 2016-2020 (the “2016 Plan”) which builds on the Utilities’ experience, and continues to reflect the principles underlying two previous joint, multi-year conservation plans.

In 2018, the Utilities continued to implement the 2016 Plan. The 2018 activities relate to expansion of the commercial program; completion of a commercial end use survey; continued initiatives to educate customers about heat pumps; and continuation of takeCHARGE’s partnership with the Government of Newfoundland and Labrador to offer the Energy Efficiency Loan Program (“EELP”).¹

While joint utility conservation initiatives under the takeCHARGE brand are available throughout the province, this report focuses on Newfoundland Power’s programs and activities.

2.0 CDM Programs

Newfoundland Power’s CDM program portfolio provides residential and commercial customers with incentives that result in quantifiable energy and demand savings. In 2018, the Company’s customer energy conservation programs achieved 39.5 GWh in energy savings.

Appendix A provides a detailed description of the individual residential and commercial takeCHARGE programs.

2.1 Conservation Programs

Programs Offered

In 2018, the Company offered five residential customer energy conservation programs. The residential customer energy conservation programs promote: (i) insulation; (ii) high performance thermostats; (iii) heat recovery ventilators (“HRVs”); (iv) various small technologies; and (v) low cost behavioural changes through the Benchmarking Program.² While these programs focus on reducing electrical energy consumption, many provide reductions in peak demand as well.

¹ EELP is a partnership with the Government of Newfoundland and Labrador where the government buys-down the normal interest rate offered to the Utilities’ customers to provide low-interest financing for basement and attic insulation, heat pumps, and home energy assessments.

² Benchmarking involves using social norms to encourage friendly competition to reduce electricity consumption by comparing customers’ energy usage with homes of similar attributes.

The Company continues to offer the Business Efficiency Program (“BEP”) for commercial customers. The BEP includes a variety of prescriptive product rebates, and incentives for custom energy efficiency upgrades to existing commercial facilities that focus on reducing electrical energy consumption and peak demand.

Program Results

Table 1 shows customer participation in the takeCHARGE programs for 2018, as well as the estimated energy and peak demand savings that have resulted from new participants.³

Table 1
takeCHARGE Program Participation and Savings
2018

<u>Residential Programs</u>	Customer Participation	Estimated Annual Energy Savings (MWh)	Estimated Peak Demand Savings (kW)
Insulation	1,494	4,374	1,814
Thermostat	2,668	3,180	0
HRV	609 ⁴	344	107
Instant Rebates (At-the-Cash)	N/A ⁵	11,834	2,162
Benchmarking (no financial rebate)	62,508	12,156	1,920
<u>Commercial Programs</u>			
Business Efficiency Program	299	7,595	1,298
<u>Total All Programs</u>	67,578	39,483	7,301

The Thermostat Rebate Program had the highest number of bill credit rebate program participants in 2018, representing approximately 56% of the bill credit rebate program participation.

The Benchmarking Program resulted in the highest contribution to energy savings in 2018, comprising 31% of total energy savings. The households of customers who have been receiving

³ Unless otherwise noted, estimated savings provided in this report are those that will accrue to participants on an annualized basis. Actual savings during the year of participation will be less, since this depends on the actual timing of installation. Benchmarking savings persist for one year.

⁴ An enhanced education effort with HRV installers helped to ensure that customers installed higher efficiency models and resulted in increased program participation.

⁵ The Instant Rebates Program resulted in 435,938 units purchased in 2018, however the number of customer participants is not available.

home energy reports since the program commenced in 2016 are showing marked improvement in their household energy savings.

Appendix A provides the details of customer participation, and energy and demand savings results for each of the takeCHARGE programs for 2018 and over the life of the program.

2.2 Demand Management

The Company's continued focus on demand management is reflected in the custom demand component offered in the BEP, and in the Curtailable Service Option (the "CSO").⁶

Business Efficiency Program

A custom demand incentive is available under the BEP for commercial customers to implement demand reduction measures that are economically viable and provide measurable demand reduction during peak times.

Curtailable Service Option

Twenty-two general service customers participated in the CSO during the 2017-2018 winter season, providing average load reduction of approximately 11.0 MW. This load reduction is exercised to reduce demand on the electrical system when generation reserves fall below normal operating levels.⁷

2.3 Program Development and Evaluation

Program Development

In 2018, takeCHARGE continued to review and develop programs to provide relevant energy conservation initiatives for customers.

Business Efficiency Program

A new lighting rebate was added to the BEP portfolio in 2018. Prescriptive rebates are now offered for LED tubes to replace less efficient fluorescent tube lamps.

Heat Pump Educational Initiative

In 2018, the heat pump educational initiative was expanded with increased web content, an installer FAQ to guide customers on which questions to ask their installer, and a heat pump savings calculator. The calculator allows homeowners to calculate their estimated energy savings and determine the payback period of a heat pump.

⁶ Under the BEP customers can receive incentives for demand reduction based on the amount of demand they are able to reduce during peak times. Incentives are based on project demand savings at \$100 per kW per month over the December to March period. Demand savings projects require a minimum of 50 kW savings and must be sustainable over 5 years.

⁷ Detailed results for the 2017-2018 winter peak season were submitted to the Board in the 2018 Curtailable Service Option Report dated April 27th, 2018.

Program Evaluation

In 2018, several takeCHARGE programs were evaluated. This included evaluation of the process and effectiveness of program delivery, and an evaluation of energy savings of various programs.

Benchmarking Program

This program promotes customer behavioural changes to improve energy efficiency. Benchmarking involves using social norms to encourage friendly competition to reduce electricity consumption. Participants showed high levels of engagement with the program in 2018. Approximately 93% of users report reading their Home Energy Reports and find the year-over-year comparison in their energy usage, and the comparison to similar houses of most use.⁸

Instant Rebate Program

In 2018, an external review of the takeCHARGE Instant Rebate program was completed. It examined the effectiveness of program design, administration and implementation, and also evaluated the gross and net energy and demand savings claimed by this program.

The evaluation shows the level of savings for LED light bulbs was higher than previously reported by Newfoundland Power. As a result, Newfoundland Power adopted the changes to energy savings recommended by the evaluator in 2018 to more accurately reflect savings achieved. Claimed savings prior to 2018 were not adjusted. High satisfaction levels with the program were reported from both customers (87%) and retail partners (86%).

Business Efficiency Program

An external review of the BEP was completed in 2018. The purpose of this evaluation was to validate the energy and demand savings achieved through the program, and provide recommendations for improving program delivery. The evaluation established some required changes to the energy savings claims of certain technologies.⁹ These changes were implemented in 2018.

The evaluation concluded that participants and trade allies are satisfied with the BEP with 88% of participants surveyed providing a rating of 8 or higher out of 10.

Research

Independent marketing research demonstrates the effectiveness of takeCHARGE marketing campaigns. Overall, 54% of householders who recalled seeing or hearing something related to the takeCHARGE program made changes to try and reduce their electricity usage as a result.¹⁰

⁸ Results were obtained through a survey of participants conducted by Econoler, an independent program evaluator.

⁹ Energy savings for LED light bulbs, LED high bay, LED exit signs, LED wall packs, fluorescent high bay, high performance T8 lamps, high efficiency showerheads, pre-rinse spray vales and ECM motors were adjusted.

¹⁰ 2018 Marketing Survey completed by MQO Research.

Customers report that they expect their utility to be involved with helping them conserve energy. 80% of respondents felt the utility company has a responsibility to provide information on energy efficiency.

A market saturation survey was conducted in 2018 to determine the number of households using various bulb types. Survey results showed that 43% of sockets in homes contain an LED bulb, 25% contain an incandescent bulb and 25% contain a compact fluorescent bulb. This leaves an estimated 3 million sockets to be converted to LED bulbs. Survey results also show the influence of the at-the-cash rebate program. Over 70% of those who purchased an LED bulb said the discount was very influential in their decision to purchase; while a further 21% said it was somewhat influential.¹¹ This survey will be repeated in 2019.

Program Economic Evaluation

As part of program planning and monitoring, Newfoundland Power regularly performs economic and energy savings evaluations of the customer energy conservation programs.¹² Inputs to the economic evaluation include information provided by program participants on rebate applications. This information includes technical data, such as the R-value of installed insulation, or the efficiency rating of an HRV, and the type of heating and geographic location of a home. Analysis of this data allows the Company to estimate a program's energy savings results, which are required for industry standard economic cost-benefit tests.

The Island Interconnected System is undergoing significant change. In 2018, Newfoundland was interconnected to the North American grid with the completion of the Maritime Link and the staged commissioning of the Labrador Island Link.¹³ During 2019 and 2020, it is expected that the generating units at Muskrat Falls will be in service.

In November 2018, Hydro completed a marginal cost update which reflects the marginal costs of energy and capacity on the island interconnected system. The need for additional generation capacity is uncertain and is currently being evaluated by the Board. The marginal cost update estimates that in 2021 the average hourly marginal energy cost will vary between 2.3 to 6.9¢/kWh, depending on the time of year. Marginal capacity cost estimates vary between 1 and 24¢/kWh.¹⁴ Based on the marginal cost estimates, the Utilities are in the process of re-evaluating all existing customer energy conservation programs through a Conservation Potential Study. When this is done, the Utilities will develop a new multi-year conservation plan.

One measure of cost effectiveness is the levelized utility cost of the customer conservation programs. The levelized utility cost represents the economic cost to the utility (per kWh) to generate energy savings. For 2018, the levelized utility cost of Newfoundland Power's energy

¹¹ Socket Saturation Survey conducted by MQO Research.

¹² The costs and benefits of the takeCHARGE programs are analyzed from the perspective of participants, the utility, non-participants and total resources.

¹³ In 2018 the Labrador Island Link is operating as a monopole line. During 2019, it is expected that the transmission line will begin operating as a bi-pole line.

¹⁴ Based on Hydro's Marginal Cost Update filed with the Board November 2018.

conservation programming was 2.9¢/kWh.¹⁵ This figure is lower than comparable estimates to supply energy during 2018. The marginal cost of energy during 2018 is estimated to be over 13¢/kWh based on production at the Holyrood thermal generating plant.¹⁶ These results indicate the Company's customer program offerings have achieved energy savings at a lower cost than alternate supply, effectively reducing overall electricity costs.

Appendix A provides the levelized utility cost results for each of the takeCHARGE programs for 2018 and over the life of the program to date.

3.0 Energy Conservation Promotion and Education

During 2018, Newfoundland Power continued its customer education and conservation awareness activities primarily through promotion of takeCHARGE customer rebate programs and outreach activities. These education and awareness activities involved mass media marketing and community outreach, including school programming, trade ally development and partnerships.

3.1 Media

Throughout 2018, broadcast, print, online and social media advertising created awareness for the takeCHARGE residential and business customer rebate programs. Eleven takeCHARGE newsletters were included with electricity bills throughout the year. These newsletters included tips for homeowners on how to save energy and promoted participation in the rebate programs.

A new educational advertising campaign was launched to help customers understand and manage their electricity use. The campaign introduced a local energy efficiency enthusiast, who helps customers eliminate “pesky scallywags” from their homes by outlining ways to save energy. Along with a television and online media campaign, a webpage was launched to help ensure customers are aware of all the opportunities to save energy in their homes.

Customer interest in heat pumps remains high with the heat pump education webpage receiving over 81,000 hits in 2018. Average time spent on the webpage was 3 minutes. The heat pump energy savings calculator was launched in September and received over 4,000 visits by year end.

Customers continued to visit TakeChargeNL.ca for a range of energy-efficiency advice and rebate program details. The website received over 411,000 visits in 2018.

During its 10th annual Energy Efficiency Week, from September 24th to 30th, takeCHARGE celebrated all the ways customers have saved energy over the past 10 years. Island-wide retailer

¹⁵ The levelized utility cost considers only utility program costs (i.e., program development, marketing, incentives and administration costs), not customer costs.

¹⁶ The price of fuel at Holyrood was \$82.59/BBL in 2018, with 618 kWh produced per barrel. The cost of production at Holyrood is estimated to be about 13.4 ¢/kWh based on calculated Holyrood energy costs provided by Hydro in February 2019.

events were held to provide customers with the opportunity to ask questions of takeCHARGE energy experts and save on energy efficient products.

3.2 Community Outreach

The Company participated in over 300 community and outreach events in 2018. Energy efficiency information was provided to diverse groups throughout the province, including retailers, senior citizens, associations, and trade allies. Through these activities, the takeCHARGE team raised awareness of energy conservation and the customer rebate programs.

The takeCHARGE team launched a new charitable initiative called “Make the Switch.” Through a proposal-based process, LED light bulbs were supplied to non-profit and community organizations in need. Approximately 1,700 LED bulbs were donated to 13 groups.

The takeCHARGE of Your Town Challenge received 20 proposals from municipalities for energy efficient upgrades within their communities. The Town of Gambo won the challenge in 2018, receiving \$7,500 to upgrade their post-top lighting in the Village Green to LED. Over \$60,000 has been provided to municipalities since the launch of the Challenge.

Newfoundland Power continued its educational outreach through the takeCHARGE K-I-C (Kids in Charge) Start school program. The program offers in-class presentations for K to 6 students and contests that promote energy efficiency behaviour for primary, elementary and high school students. In 2018, the Company’s takeCHARGE team presented to over 3,500 students in 50 schools.

takeCHARGE continued outreach to customers, while strengthening partnerships in the community. Newfoundland Power hosted Business Customer Energy Forums in Carbonear and Gander, and also hosted its first Residential Energy Efficiency Fair in Gander in 2018. These forums provided customers with an opportunity to ask questions about their energy use and learn about available rebates and programs. The Company also partnered with the Newfoundland and Labrador 50+ Federation to present at the group’s annual meeting in Marystown.

3.3 Trade Allies and Partners

Professional installers, contractors and electricians provide professional services and knowledge to customers that are interested in installing energy efficient products. Capitalizing on their direct interaction with customers, takeCHARGE works with these trade allies to influence purchase decisions and drive participation, especially in the retrofit market. Retail partners are also an integral trade ally. Information about takeCHARGE programs and energy efficient products displayed in their stores and flyers, and various special promotional events throughout the year, served to enhance customer education. In addition to three installer newsletters, which kept trade allies and partners up to date on programs, the takeCHARGE team held events across the province to promote the heat pump energy savings calculator. Heat pump installers and other key stakeholders were invited to learn more about the tool and share it with their customers.

Through a partnership with Empower, The Disability Resource Centre, the takeCHARGE message was shared with a new audience in 2018. takeCHARGE presentations were delivered to customers with sight and hearing impairments. In addition, printed materials were converted to braille and large print, and were delivered with the help of sign language interpreters.

In 2018, Newfoundland Power participated in commercial tradeshows and conferences across the island, including the Newfoundland and Labrador Construction Association Trade Show, St. John's Board of Trade Business Development Summit, the Clarenville Chamber of Commerce Business Symposium, and the Municipalities Newfoundland and Labrador Conference and Municipal Symposium.

A partnership with the NL Association of Realtors was developed in 2018 to allow local realtors to receive professional development credits for completing a virtual takeCHARGE training session to enhance their knowledge of energy efficiency.

The Company continued to partner with the Provincial Government, offering EELP to qualifying customers. Through the EELP, reduced rate financing is available for insulation, heat pumps and home energy assessments to assist customers with the financial barriers to make their homes more energy efficient.

Newfoundland Power participated in an electric vehicle working group created by the Provincial Office of Climate Change. The group was formed to develop a comprehensive assessment of the opportunities and challenges associated with increasing electric vehicle penetration in Newfoundland and Labrador. In response to increased customer interest in electric vehicles, the province has invited special interest groups to identify requirements to facilitate growth of this market with an anticipated benefit of reduced greenhouse gas emissions.

The Company launched its inaugural takeCHARGE Luminary Awards in 2018. The awards program provides an opportunity to recognize the progressive work that the Company's energy efficiency partnerships have achieved, while continuing to build valuable relationships with like-minded organizations. Individuals, organizations and communities from all across Newfoundland and Labrador were acknowledged for their commitments to energy efficiency.

4.0 CDM Costs

Table 2 summarizes Newfoundland Power's costs associated with CDM activities from 2014 to 2018.

Table 2
Conservation and Demand Management Costs
(\$000s)

	2014	2015	2016	2017	2018
General Conservation Costs					
Customer Education and Support ¹⁷	611	417	332	516	488
Planning ¹⁸	<u>734</u>	<u>600</u>	<u>102</u>	<u>104</u>	<u>282</u>
Total General Conservation Costs	1,345	1,017	434	620	770
Conservation Program Costs¹⁹					
<i>Residential</i>					
Insulation	704	741	771	1,082	1,152
Thermostats	192	298	415	538	412
Windows ²⁰	660	7	-	-	-
HRV	49	109	132	125	209
Benchmarking	-	-	474	837	813
Small Technologies	1,625	2,137	4,110	2,133	1,742
<i>Commercial</i>					
Lighting ²¹	358	187	-	-	-
Business Efficiency Program	<u>356</u>	<u>822</u>	<u>1,303</u>	<u>2,044</u>	<u>1,716</u>
Total Conservation Program Costs	3,944	4,301	7,205	6,758	6,044
CDM Capital Expenditures ²²	44	54	39	51	50
Demand Management Program Costs					
Curtailed Service Option	<u>255</u>	<u>364</u>	<u>361</u>	<u>436</u>	<u>388</u>
Total	<u>5,588</u>	<u>5,736</u>	<u>8,039</u>	<u>7,865</u>	<u>7,252²³</u>

¹⁷ The increase in Customer Education and Support costs in 2014 primarily reflects the expanded activity due to the Hotshot School Pilot Program. Cost increases for Customer Education and Support in 2017 are a result of support activities, school program and heat pump education initiatives.

¹⁸ Planning costs in 2014 reflect the costs associated with the Residential End Use Study, SmartPeak Direct Load Control Pilot and the start of the Conservation Potential Study ("CPS"). Planning costs in 2015 reflect the SmartPeak Direct Load Control Pilot, the CPS, and 2016 Plan. Planning costs in 2016 reflect the decrease in planning activities in 2016 to focus on program development and implementation. Planning costs in 2018 reflect commissioning of a Commercial End Use Survey and start of the 2019 Conservation Potential Study.

¹⁹ Variations in program costs primarily reflect variations in levels of participation, for example the increase in Small Technologies Program costs in 2016 is a result of higher than expected uptake in LED. The following are exceptions: 2017 Insulation cost increase due to program evaluation, and increased participation impacting incentives and program labour costs, and 2017 Benchmarking costs increased to reflect the first full year of program implementation.

²⁰ The Windows program ended December 2014. 2015 costs reflect customer applications processed in January 2015.

²¹ The Commercial Lighting program changed in 2016 to fall under the BEP.

²² Capital expenditures are associated with improvements to the TakeChargeNL.ca website and the Company's systems for program tracking and evaluation.

²³ The decrease in overall CDM spending in 2018 primarily reflects variations in program participation that resulted in higher energy savings, but lower incentive payouts.

5.0 Outlook

In 2019, the Company will continue to implement the 2016-2020 Conservation Plan. The Instant Rebate campaign will be extended into 2019.²⁴ The Company will also partner with the Provincial and Federal governments to deliver insulation and thermostat rebates to customers with oil heated homes. The Energy Efficiency in Oil Heated Homes Program is funded through the Low Carbon Economy Leadership Fund and administered through the Utilities.²⁵

The Company will continue to evaluate energy conservation programs from a variety of perspectives. In 2019, this will include consideration of an extension of the Benchmarking and Instant Rebate programs, which are currently scheduled to conclude at the end of the year.

With the uncertainty around future electricity rates, customers are expected to become more engaged in energy efficiency. Newfoundland Power's conservation programming, paired with community outreach, education and trade ally partnerships will help customers understand and manage their electricity use. In 2019, the Company will continue to build upon existing energy conservation resources with an expanded focus on education for businesses.

Significant changes to the province's electrical system need to be considered in evaluating the cost effectiveness of conservation programs. The Muskrat Falls hydroelectric development and the interconnection to the North American grid will affect system operations and costs. Once marginal cost projections are finalized, the cost effectiveness of all existing customer energy conservation programs will be re-evaluated. The Company is also conducting research to assist in determining rate mitigation strategies through conservation, demand management and beneficial electrification.

In 2019, the Utilities will complete a Conservation Potential Study to identify opportunities for energy saving and demand response in the Province. The process involves consultation with a variety of trade and customer representatives, allowing these stakeholders to provide input into the planning process and selection of program technologies. After completion of this study, the Utilities will begin to develop their next multi-year plan for conservation and demand management.

²⁴ The Instant Rebates program was originally scheduled to conclude in 2018. However, market research commissioned in 2017 showed significant room for growth in the residential LED market, with approximately 4.2 million sockets that could be converted to more efficient lighting.

²⁵ Through the Low Carbon Economy Leadership Fund, the Provincial and the Federal Governments are providing funding for insulation and thermostat upgrades in oil heated homes to reduce greenhouse gas emissions.

Appendix A

**takeCHARGE Program Descriptions, Participation
and Savings Results**

takeCHARGE Program Descriptions, Participation and Savings Results

The following tables provide details of customer participation levels achieved, savings results and the levelized utility cost (“LUC”) for each of the existing programs for 2018 and since implementation.²⁶

The estimated annual energy and peak demand savings in each year represent the savings resulting from participants in that year. The estimated life to date energy and peak demand savings reflect the energy saving measures installed by all participants in the program. These savings will continue to occur each year for the life of the installed measures.

Residential takeCHARGE Rebate Programs

Program incentives are processed primarily through customer applications. The programs are promoted in partnership with trade allies in 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 homes building envelope. Eligibility for the program 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 75% of basement wall and ceiling insulation material costs up to \$1,000, and 50% of attic insulation material costs up to \$1,000.

Table A-1 shows the achieved participation levels, savings results and the LUC for the Insulation program for 2018 and since implementation.

Table A-1
Insulation Rebate Program
Program Participation, Savings and Levelized Utility Cost

	Participation	Energy Savings (MWh)	Peak Demand Savings (kW)	LUC (¢/kWh)
2018	1,494	4,374	1,814	2.6
Life to Date²⁷	12,457	35,151	11,878	2.8

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 program is limited to electrically heated homes, determined on the basis of annual energy usage. Home retrofit projects and new home developments are

²⁶ The levelized utility cost represents the economic cost to the utility (per kWh) to save energy considering only utility program costs (i.e., program development, marketing, incentives and administration costs), not customer costs.

²⁷ Life to Date represents the program results since the launch of the program.

eligible. Incentives of \$10 for each programmable thermostat and \$5 for each electronic high performance thermostat are offered.

Table A-2 shows the achieved participation levels, savings results and the LUC for the Thermostat Program for 2018 and since implementation.

Table A-2
Thermostat Rebate Program
Program Participation, Savings and Levelized Utility Cost

	Participation	Energy Savings (MWh)	Peak Demand Savings (kW)²⁸	LUC (¢/kWh)
2018	2,668	3,180	-	1.4
Life to Date	20,879	18,496	-	1.9

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 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.

Table A-3 shows the achieved participation levels, savings results and the LUC for the HRV Program for 2018 and since implementation.

Table A-3
HRV Rebate Program
Program Participation, Savings and Levelized Utility Cost

	Participation	Energy Savings (MWh)	Peak Demand Savings (kW)	LUC (¢/kWh)
2018	609	344	107	6.6
Life to Date	1,936	1,084	338	7.3

Benchmarking Program

This program encourages customers to adopt energy efficient behavioural changes. Participants receive Home Energy Reports that provide insight into their home's electricity use. The reports help customers understand changes in their usage over time, as well as how they compare to similar homes. They will also include practical tips on how to save energy moving forward.

²⁸ The Company stopped claiming demand savings for programmable thermostats in 2017 as many programmed thermostats are set to come on during peak periods.

The program also includes an online component that allows customers to engage even further through weekly challenges and personalized saving plans.

Approximately 62,500 customers were randomly selected as participants in this program. Program participants broadly reflect the composition of Newfoundland Power's customer base in heating type and geographical distribution. No financial incentive is offered for this program.

Table A-4 shows the achieved participation levels for the Benchmarking program for 2018.

Table A-4
Benchmarking Program
Program Participation, Savings and Levelized Utility Cost

	Participation	Energy Savings (MWh)	Peak Demand Savings (kW)	LUC (¢/kWh)
2018	62,508	12,156	1,920	6.7
Life to Date	62,508	12,156	1,920	8.9 ²⁹

Small Technologies Program

This program promotes a variety of smaller technologies, such as LED lighting, and smart power bars, through instant rebates available at the cash register of participating retailers. All customers are eligible for this program regardless of age of home or heat source.

Table A-5 shows the participation levels achieved, savings results and the LUC for the Small Technologies Program for 2018 and since implementation.

Table A-5
Small Technologies Rebate Program
Program Participation, Savings and Levelized Utility Cost

	Bill Credit Rebates³⁰	At-the-Cash Rebates	Energy Savings (MWh)	Peak Demand Savings (kW)	LUC (¢/kWh)
2018	0	435,938	11,834	2,162	3.1
Life to Date	7,288	2,841,723	51,868	13,122	3.1

²⁹ Benchmarking savings are claimed for 1 year, however LUC for life of program is derived considering total savings in each year of the program and total costs.

³⁰ Bill credit rebates were for the Appliance and Electronics rebate component of the small technologies program which ended in 2017.

Commercial takeCHARGE Rebate Programs

Business Efficiency Program

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

Table A-6 shows the participation levels achieved, savings results and the LUC for the BEP for 2018 and since implementation.

Table A-6
Business Efficiency Program
Program Participation, Savings and Levelized Utility Cost

	Participation	Energy Savings (MWh)	Peak Demand Savings (kW)	LUC (¢/kWh)
2018	299	7,595	1,298	2.7
Life to Date	2,150	27,544	5,285	3.0

Total Results of takeCHARGE Rebate Programs

Table A-7 shows the participation levels achieved, savings results and LUC for all of the existing programs for 2018 and since implementation.

Table A-7
takeCHARGE Rebate Programs
Program Participation, Savings and Levelized Utility Cost

	Bill Credit Rebates	At-the-Cash Rebates	Energy Savings (MWh)	Peak Demand Savings (kW)	LUC (¢/kWh)	Provincial LUC (¢/kWh)³¹
2018	67,578 ³²	435,938	39,483	7,301	2.9	3.1
Life to Date	107,218	2,841,723	156,020	35,543	3.3	3.6

³¹ Provincial LUC represents the combined cost and energy savings of Newfoundland Power and Newfoundland and Labrador Hydro's Island Interconnected conservation program offerings.

³² Figure includes 62,508 participants in the benchmarking program.