April 17, 2024

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

Attention: Jo-Anne Galarneau
Executive Director and Board Secretary

Dear Ms. Galarneau:

Please find enclosed Newfoundland Power's *2023 Conservation, Demand Management and Electrification Report*, filed in compliance with Order No. P.U. 7 (1996-97).

If you have any questions, please contact the undersigned.

Yours truly,

Dominic Foley
Legal Counsel

Enclosure

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Newfoundland and Labrador Hydro

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2023 Conservation, Demand Management and Electrification Report

April 17, 2024

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1.0 Introduction

In Order No. P.U. 7 (1996-97), the Newfoundland and Labrador Board of Commissioners of Public Utilities (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 activities.

Since 2009, Newfoundland Power and Newfoundland and Labrador Hydro ("Hydro") (collectively the "Utilities") have offered conservation and demand management ("CDM") programs on a joint and coordinated basis under the takeCHARGE partnership. Customer CDM programs were implemented by the Utilities throughout 2023 in a manner consistent with past practice and existing Board orders.

Electrification initiatives in 2023 consisted of the operation of the Company's ten electric vehicle ("EV") charging stations approved by the Board in Order No. P.U. 30 (2021), work associated with the EV Load Management Pilot Project approved by the Board in Order No. P.U. 23 (2023), as well as customer education and awareness activities.

While CDM programs and electrification initiatives under takeCHARGE are available throughout the province, this report focuses on the results and evaluation of Newfoundland Power's CDM programs and electrification initiatives.

2.0 CDM Programs

2.1 Program Delivery

Newfoundland Power's CDM programs provide residential and commercial customers with incentives that result in quantifiable energy and demand savings.

In 2023, Newfoundland Power offered six CDM programs for residential customers. These programs targeted: (i) insulation and air sealing; (ii) high performance thermostats; (iii) heat recovery ventilators ("HRVs"); (iv) various small technologies through the Instant Rebates Program; (v) low-cost behavioural changes through the Benchmarking Program,[1] and (vi) the Energy Savers Kit Program, which provides free energy efficiency kits to income qualified customers. These programs reduce electrical energy and peak demand consumption.

The Company continued to offer the Business Efficiency Program for commercial customers in 2023. The Business Efficiency Program has three components: (i) prescriptive rebates; (ii) custom energy rebates; and (iii) custom demand rebates. Prescriptive rebates provide money back when customers purchase and install eligible products. For custom energy rebates, a takeCHARGE employee consults with the customer to develop an energy saving project that is

[1] Also referred to as the Home Energy Report Program, the Benchmarking Program involves using social norms to encourage friendly competition to reduce electricity consumption. The reports compare customers' energy usage with that of homes having similar attributes.

customized to their individual circumstances.[2] Custom demand rebates are available to commercial customers who implement individualized demand reduction measures that are economically viable and provide measurable demand reduction during peak times.[3]

The Instant Rebate Program and the Thermostat Program both concluded at the end of 2023. Both programs have been successful in helping customers save energy and money since their inception. The Instant Rebates Program provided energy savings of over 82 GWh to customers and the Thermostat Program allowed customers to save over 24 GWh of energy.

LED lighting has been the primary product purchased through the Instant Rebate Program since the program's launch in 2014. Customer reported socket saturation of LED bulbs increased from 43% in 2018 to 67% in 2022. Over the course of the Instant Rebate program, LED adoption increased, while the price of LED bulbs decreased. The program is no longer needed to increase adoption of LED bulb sales.

The Thermostat Program, which has been offered as a takeCHARGE rebate since 2009, ended due to technology saturation, decreasing annual participation, less energy savings able to be attributed per thermostat, and the average price of thermostats rising. The combination of these factors make it challenging for the program to pass the required cost-effectiveness screening. Both programs have been successful in helping customers save energy and money.

[2] Incentives are provided on an individualized basis for projects that are cost-effective from the customer and utility perspective. A rebate of 10 ¢/kWh is paid for the energy savings the customer achieves in the first year of the project.

[3] Under the Business Efficiency Program, customers can receive incentives for demand reduction based on the amount of demand they are able to reduce during peak times. This one-time incentive is based on project demand savings at $100 per kW per month over the December to March period. Demand savings projects require a minimum savings of 50 kW and must be sustainable over five years.

2.2 Program Results

Table 1 provides customer participation in Newfoundland Power's CDM programs for 2023, as well as the estimated energy and peak demand savings achieved by new participants.[4]

Table 1:
Newfoundland Power
2023 CDM Program Participation and Savings

	Customer Participation	Annual Energy Savings (MWh)	Peak Demand Savings (kW)
Residential Programs			
Insulation and Air Sealing Program	1,096	2,932	2,063
Thermostat Program	866	255	80
HRV Program	499	274	85
Instant Rebates Program	N/A[5]	5,706	1,069
Benchmarking Program	83,561	15,860	9,030
Energy Savers Kit Program	2,547	2,105	603
Commercial Programs			
Business Efficiency Program	297	4,593	494
Total All Programs	**88,866**	**31,725**	**13,424**

In 2023, the Company's CDM programs achieved incremental energy savings of 31.7 GWh and incremental peak demand savings of 13.4 MW. The Benchmarking Program resulted in the highest contribution to energy and peak demand savings in 2023, comprising approximately 50% of total energy savings and 67% of total peak demand savings.

In addition to CDM programs, the Company continued to offer the Curtailable Service Option to Rate 2.3 and 2.4 customers in 2023. Twenty-four General Service customers participated in the Curtailable Service Option during the 2022-2023 winter season, providing an average aggregate load reduction of approximately 12.4 MW.[6]

Appendix A of this report provides the detailed results for each CDM program for 2023 and over the life of the programs.

[4] Unless otherwise noted, estimated savings indicated in this report are provided on an annualized basis. Actual savings during the year of participation will be less, since this depends on the actual timing of installation. Due to the nature of customer behavioural changes, Benchmarking Program savings are assumed for one year only.

[5] The Instant Rebates Program resulted in 206,461 units purchased in 2023; however, the number of participants is not available as customer information is not captured at the point of purchase.

[6] This load reduction is exercised to reduce demand on the electrical system when generation reserves fall below normal operating levels.

2.3 Program Evaluation

The cost-effectiveness of CDM programs is evaluated using the Total Resource Cost ("TRC") test and Program Administrator Cost ("PAC") test, as approved by the Board in Order No. P.U. 18 (2016). These tests are applied annually to assess the cost-effectiveness of CDM programs. Both tests provide a benefit-to-cost ratio whereby a result of 1.0 or greater indicates that a program is cost-effective.

Table 2 provides the TRC and PAC test results for Newfoundland Power's CDM programs in 2023.[7]

Table 2:
Newfoundland Power
CDM Program Cost-Effectiveness Results
(2023)

Program	TRC Test	PAC Test
Insulation and Air Sealing Program	4.7	5.5
Thermostat Program	1.3	4.2
HRV Program	1.4	1.9
Instant Rebates Program	1.5	3.5
Energy Savers Kit Program	3.5	3.5
Benchmarking Program	4.2	4.2
Business Efficiency Program	1.7	2.7
Total Portfolio	**2.8**	**4.0**

The TRC and PAC test results indicate that the benefits of Newfoundland Power's CDM programs were at least 2.8 times the cost of implementing those programs in 2023.

In addition to cost-effectiveness testing, Newfoundland Power evaluates changes in market factors that may impact its program delivery. This may include third-party evaluations of certain programs or studies to evaluate changes in technologies, industry standards or customer behaviour. Evaluations were conducted of the following programs and initiatives in 2023:

(i) Energy Savers Kit Program

Guidehouse completed an evaluation of the Energy Savers Kit Program in 2023. The evaluation included an impact evaluation to confirm the savings of the program, as well as a process evaluation in which customers were surveyed to assess how well the program was being delivered.

[7] The TRC and PAC tests were conducted using updated marginal cost information provided by Hydro in the fourth quarter of 2023.

The evaluation showed that the savings claimed by takeCHARGE for these programs align with the expectations of Guidehouse,[8] and that there are high levels of customer product installation for those who receive the kits, with the average in-service rate for all products being 88%.

Satisfaction levels with the program are also high, with over 93% of participants being either extremely or somewhat satisfied, and over 90% of participants being likely to recommend the program to someone else.

(ii) Benchmarking Program

The Benchmarking Program promotes behavioural changes to improve customers' energy efficiency. The 2023 evaluation completed by Guidehouse showed high levels of participant engagement. Approximately 93% of users reported they read their Home Energy Reports. Of these customers, most found everything in the report to be of value, with specific references to the comparisons of energy use to previous months and years. The evaluation also confirmed the energy and peak demand savings associated with the program, which can be found in Table 1.

(iii) HRV Program

The takeCHARGE HRV Program was evaluated by Guidehouse in 2023. The evaluation focused on the energy savings impacts from the program, as well as completing a jurisdictional scan to see how the takeCHARGE program compares to similar programs in other jurisdictions. The evaluation found that the takeCHARGE estimate of energy savings per unit are a conservative estimate compared to the weighted average savings of the HRV units that are actually rebated through the program.[9] The evaluation also found that the rebate offered by takeCHARGE is in line with comparable programs in other jurisdictions.

(iv) Heat Pump Load Research Study

After setting a record system peak in February 2023, Newfoundland Power's ductless heat pump ("DHP") load study results were analyzed by Econoler Inc. after the 2023 winter season to confirm the peak impacts of DHPs. Econoler Inc. evaluated both the top 10 and top 20 hours of electricity system peak to observe differences in customers with DHPs and electric resistance heating. The evaluation demonstrated continued savings in peak demand during the 2022-2023 winter season, which included temperatures below -15ºC.

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[8] Newfoundland Power claimed energy savings of 792 kWhs and 613 kWhs per year for kits sent to electrically heated homes and non-electrically heated homes, respectively. The Guidehouse evaluation resulted in savings of 861 kWh and 584 kWh for kits sent to electrically heated homes and non-electrically heated homes, respectively. The savings figures have been updated for kits rebated in 2023 onwards.

[9] takeCHARGE claims energy savings of 570 kWh per year for an HRV installed in an electrically heated home. The evaluated savings of HRVs actually rebated by takeCHARGE was 734 kWh per year. As the weighted average can change from year to year depending on the type of units rebated, takeCHARGE has opted to keep its savings estimate conservative at 570 kWh per year for future program planning purposes.

3.0 Education and Awareness

3.1 Media and Advertising

Throughout 2023, broadcast, print, online and social media advertising created awareness for residential and commercial CDM programs.

The 2023 takeCHARGE marketing survey conducted by MQO Research continued to show high levels of takeCHARGE program awareness amongst customers. In 2023, 88% of households surveyed had heard of the takeCHARGE program, most often associating it with rebates, financing or discounts (43%) and tips on how to save energy (9%). Of those customers that were familiar with takeCHARGE, 54% recalled seeing something from television, with 23% reporting from social media and 19% from bill inserts.

Twelve takeCHARGE inserts were included with electricity bills throughout the year. These inserts included energy-saving tips for homeowners and promoted participation in the rebate programs.

Energy Efficiency Week ran from September 23 to 29, 2023, highlighting the importance of energy efficiency to Newfoundland Power and its customers. Customers had the opportunity to connect with energy experts at retail locations island-wide and participate in a free energy efficiency webinar. takeCHARGE staff also appeared on the NTV Evening Newshour to provide fall and winter energy savings tips to customers. Additionally, several municipalities and provincial leaders made official statements recognizing *Energy Efficiency Week*.

takeCHARGE celebrated the 10-year anniversary of the Business Efficiency Program during *Business Efficiency Week 2023* from October 23 to 29, 2023. The objective was to raise awareness of the program, provide energy efficiency tips and celebrate the energy efficiency achievements of past participants. Local businesses who have participated were highlighted in social media and online advertisements.

Customers continued to visit takechargenl.ca for a range of energy solutions advice and program details. The website received over 643,000 visits in 2023.

3.2 Community Outreach

The takeCHARGE team raises awareness of energy efficiency and CDM programs through a variety of community and outreach activities.

Following the return of in-person events in late 2022, takeCHARGE participated in 147 external events and completed 39 external presentations throughout 2023, providing an opportunity to connect directly with customers. Some key events included: the Canadian Home Builders Association of Newfoundland and Labrador's *Home Show*; the *Downhome Expo*; the Municipalities Newfoundland and Labrador annual Conference and Municipal Symposium; the Hospitality Newfoundland and Labrador Annual Conference; the 50+ Federation Annual

Conference; the econext Annual Conference and Idea-Thon; and Memorial University *CPA Data Analytics Hackathon* and Botanical Gardens *Merry and Bright Festival.*

In 2023 takeCHARGE launched "The Energy Source", an e-mail newsletter aimed at providing customers and partners with the latest information on rebates, energy-saving tips and events. Subscribers have the option to receive information that is most relevant to them under four categories: i) residential; ii) business; iii) installer; and iv) electric vehicle news. The e-newsletter has over 3,800 subscribers, and an average e-mail open rate of 56%. This is more than double the 21.2% average open rate for other companies using the same e-mail platform, *MailChimp*.

Access to LED bulbs was increased for lower-income households through the *Make the Switch* initiative. Research shows that customers with lower household incomes are less likely to have LED bulbs in their homes. Among households with annual incomes of less than $40,000, only 60% of sockets have an LED bulb.[10] The *Make the Switch* initiative distributed over 21,000 LED bulbs through community groups and organizations, via partnerships with Newfoundland and Labrador Housing Corporation, the Association for New Canadians, multiple municipalities and multiple senior's community groups.

The 2023 *takeCHARGE of Your Town Challenge* received 57 proposals from municipalities for energy-efficiency upgrades within their communities. The Town of Carbonear was awarded $10,000 to install mini-split heat pumps at the Carbonear Railway Station, a designated heritage building and Southcott winner. The building has become a central location for activities, performances, and community gatherings year-round.

Newfoundland Power educated students on energy conservation through the *takeCHARGE Kids in Charge (K-I-C) Start* school program. The program offers presentations for students in Kindergarten to Grade 6 and contests that promote energy-efficient behaviours for primary, elementary and high school students. In 2023, takeCHARGE completed 17 presentations across eight schools, reaching over 410 students. takeCHARGE received 38 entries to the school contests in 2023.

In July 2023, the takeCHARGE EV Roadshow took place, with five planned stops including St. John's, Clarenville, Gander, Deer Lake and Corner Brook.[11] The event aimed to provide customers with information to consider if an EV is right for them. Attendees could view a variety of EVs and ask questions of those most familiar with the vehicles, including takeCHARGE employees as well as EV owners and retailers. In total, 729 people attended the events, demonstrating a 40% increase from the 2022 EV Roadshow. There were a total of 48 EVs on display throughout the week, with 139 people participating in 77 test drives.

[10] Results from *2022 Socket Saturation Survey* completed by MQO research.
[11] The Corner Brook event was cancelled due to inclement weather.

3.3 Trade Allies and Partners

In 2023, takeCHARGE was recognized for playing a key role in advancing energy efficiency and demonstrating the value of investing in smart energy choices when it received its sixth and seventh ENERGY STAR® Canada Awards. The awards recognized the takeCHARGE Instant Rebates Program as "Utility Program of the Year" for the fourth year in a row, and awarded takeCHARGE with "Promotional Campaign of the Year" for the third time in four years.

takeCHARGE hosted the fifth "Luminary Awards" in October 2023. The Luminary Awards recognize companies, organizations, communities and individuals across Newfoundland and Labrador that are taking steps to use energy wisely, and inspiring others to do the same. This year, 16 awards were distributed in nine different categories.[12]

Newfoundland Power began administering the Oil to Electric rebate program for its customers on behalf of the Federal and Provincial governments in 2023. The program aims to reduce greenhouse gas ("GHG") emissions by removing oil heating sources from homes. To do this, the program provides customers with rebates for various electric heating systems, with enhanced rebates for customers installing heat pumps and those with low to moderate incomes. Administering this program allows Newfoundland Power to obtain valuable information on where these heating conversions are happening on its grid.

The Government of Canada's *Low Carbon Economy Leadership Fund* aims to reduce GHG emissions through reducing consumption for customers continuing to heat their homes with home heating oil. Through this initiative and provincial government funding, takeCHARGE offers its Insulation Program and Thermostat Program to customers with oil heating. The program concluded in March of 2024 as the Government of Canada shifts its focus to electric heating conversions through the Oil to Electric rebate program.

4.0 Electrification Initiatives

In Order No. P.U. 30 (2021), Newfoundland Power's proposed supplemental 2021 capital expenditure for the deployment of ten electric vehicle charging stations was approved. Each of these stations contains a 62.5 kW direct current fast charger ("DCFC") and a 7.2 kW Level 2 charger.

[12] Awards were provided in the categories of "Community Impact Award", "Leadership Award – Individual", "Leadership Award – Organization", "Innovation Award", "Partnership Award", "Retail Partnership Award", "Electric Vehicle Awareness Award", "Leadership in Conservation and Electrification Award", and the "BIG Award".

Table 3 shows the number of sessions, the energy usage and revenue from each Newfoundland Power owned public EV charging station for 2023, the first full calendar year that all sites were available to customers.

Table 3:
Electric Vehicle Charging Stations Statistics
2023

Charger Locations	Number of Sessions	Energy Usage (kWh)	Revenue ($)
Paradise	1,416	29,641	$10,076
Carbonear	532	6,883	$2,051
Lewisporte	409	11,433	$3,521
Marystown	331	8,419	$2,604
Port Rexton	272	6,408	$2,065
Robinsons	241	4,524	$1,362
Bonavista	134	3,174	$975
Fermeuse	103	1,121	$407
Trepassey	39	471	$158
St. Mary's	36	616	$208
Total	**3,513**	**72,690**	**$23,427**

In 2022 there were 1,541 sessions at Newfoundland Power owned and operated EV charging stations producing 28,109 kWh of energy usage and revenue of $9,523.

In Order No P.U. 23 (2023), the Board approved Newfoundland Power's application to recover costs through its Electrification Cost Deferral Account for a pilot project to assess load management strategies for EVs.

The pilot began in the fourth quarter of 2023 and aims to understand EV charging behaviours in the province, as well as the effectiveness, costs and challenges of different strategies to shift EV load to off peak periods. Contracts have been awarded to the program implementor, AutoGrid, and the program evaluator, Guidehouse. Recruitment of customers was also initiated in 2023 by way of expressions of interest from EV drivers and official recruitment e-mails being sent to selected participants in 2023. The pilot will conclude in the second quarter of 2025.

5.0 CDM and Electrification Costs

Table 4 on the following page summarizes Newfoundland Power's CDM-related costs from 2019 to 2023.

Table 4:
Newfoundland Power
CDME Costs ($000s)

	2019	2020	2021	2022	2023
General Costs					
Customer Education and Support[13]	421	429	489	527	639
Planning[14]	1,082	429	262	331	804
Total General Costs	***1,503***	***858***	***751***	***858***	***1,443***
Program Costs					
Insulation and Air Sealing Program	1,379	1,393	1,176	1,350	1,500
Thermostat Program[15]	421	324	294	146	57
HRV Program	145	157	205	229	214
Benchmarking Program[16]	793	770	974	986	1,122
Instant Rebates Program	1,448	973	1,020	959	927
Energy Savers Kit Program	-	-	103	288	370
Business Efficiency Program	1,687	1,344	1,035	938	1,259
Total Program Costs[17]	***5,873***	***4,961***	***4,807***	***4,896***	***5,449***
Capital Costs[18]					
CDM Capital Expenditures	21	57	41	72	61
EV Charging Network[19]	-	-	-	1,481	-
Total Capital Costs	***21***	***57***	***41***	***1,553***	***61***
Other Costs					
EV Load Management Pilot					242
EV Charging Network[20]	-	-	-	28	99
Curtailable Service Option	375	398	403	408	432
Total Other Costs	***375***	***398***	***403***	***436***	***773***
Total Costs	**7,772**	**6,274**	**6,002**	**7,743**	**7,726**

[13] 2022 and 2023 costs are shown net of approximately $48,000 in funding received from Natural Resources Canada in 2022 and $69,000 in 2023 associated with EV education and awareness activities.

[14] Planning costs in 2019 reflect completion of the Dunsky Energy Potential Study, development of the *Electrification, Conservation and Demand Management Plan* (the "2021 Plan"), and the heat pump load research study. Costs in 2020 reflect completion of the 2021 Plan. Costs in 2022 reflect implementation of the Small Business Direct Install Pilot Program. Costs in 2023 reflect the completion of end use surveys, the start of the 2023-24 Potential Study, the Small Business Direct Install program and conclusion of the heat pump study.

[15] Thermostat Program costs decreased in 2022 due to lower participation and decreased marketing costs. Costs in 2023 reflect the close out of the program.

[16] Benchmarking expenses in 2023 include a one-time upgrade fee of $250,000 for the vendors updated platform.

[17] Variations in program costs primarily reflect varying levels of customer participation.

[18] Capital expenditures are associated with improvements to the takeCHARGE website and the Company's tracking systems. Variations are based upon requirements for new and concluding programs.

[19] 2022 costs are shown net of $550,000 received from Natural Resources Canada for EV charging stations.

[20] Costs related to the operation and maintenance of the EV Charging Network. Costs in 2023 represent the first full year of Charging Network operation. Costs also include pre-paying of network fees for the next five years with a cost savings of $12,000.

6.0 Outlook

CDM programs remain an essential part of managing peak demand while meeting customers' expectations that their utility help them with their energy costs.

The next takeCHARGE Potential Study will be completed in 2024. Posterity Group has been selected as the consultant for the study, which will analyze the potential for energy efficiency, demand management and electrification on the Island Interconnected System. The study outputs will be used as a key input into the next takeCHARGE multi-year planning cycle and will factor into which customer programs takeCHARGE offers to customers.

Newfoundland Power will continue work associated with its EV Load Management Pilot throughout 2024, including energy monitoring and demand response event activities. The pilot will provide valuable information with respect to the measures which are appropriate to manage EV load in the province, and to understand the challenges, costs and expected load shifting that can be achieved using both active and passive demand response measures. takeCHARGE will also conclude its two-year Small Business Direct Install Pilot Program in 2024. This program provided free installation on selected measures to small business customers in the St. John's and Corner Brook areas. The pilot will be evaluated to determine the energy savings, customer participation and program costs to determine if this initiative is a viable option for a future program.

takeCHARGE will continue programs for customers with low income, by instituting a small pilot project to allow for the direct installation of attic insulation, at no cost, for income qualified customers. These customers often face financial barriers to participating in energy efficiency programs. Direct install programs are an effective way to overcome this barrier. Due to the value of energy and the capacity savings that an insulation project provides, this project is expected to be cost-effective. This program will complement the already in-place Energy Savers Kit program, which provides a free energy efficiency kit to income qualified customers.

takeCHARGE has been granted funding for education and awareness initiatives for medium and heavy duty EVs from Natural Resources Canada. The funding, which was granted in September 2023, runs until March 2025 and will cover 50% of the project costs. Through this initiative, takeCHARGE will complete customer surveys, as well as develop online resources, training modules and an online advertising and social media campaign relating to medium and heavy-duty vehicles.

Appendix A
takeCHARGE Program Descriptions and Results

1.0 Introduction

The following tables provide details of customer participation levels, savings results achieved and the levelized utility cost ("LUC") for each CDM program for 2023 and since implementation.[21] The TRC and PAC test results for 2023 are based upon forecast marginal costs of energy and capacity.[22]

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 savings associated with energy-saving technologies that have been installed by all participants in the program. These savings will continue to occur each year for the life of the installed measures.

2.0 Residential Programs

2.1 Insulation and Air Sealing Program

The objective of the Insulation 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 or ceiling insulation material costs up to $1,000, and 50% of attic insulation material costs up to $1,000.

In 2022, the insulation program was expanded to include insulation for heating ducts in unconditioned spaces, as well as an air sealing component. Customers applying for duct insulation can receive an incentive of 50% of their material costs up to $500, and air sealing customers can receive an incentive of up to $500 depending on the results of their pre and post air sealing assessments.

[21] The LUC 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.

[22] The TRC test accounts for customer costs and benefits, whereas the PAC test accounts for costs and benefits incurred by the utility only.

Table A-1 shows the customer participation levels, savings results achieved, and the LUC for the Insulation and Air Sealing Program for 2023 and since implementation.

Table A-1:
Insulation and Air Sealing Program Results

	Customer Participation	Energy Savings (MWh)	Peak Demand Savings (kW)	LUC (¢/kWh)
2023	1,096	2,932	2,063	5.6
Life to Date[23]	19,216	54,540	21,726	3.1

2023 TRC Result: 4.7
2023 PAC Result: 5.5

2.2 Thermostat Program

The Thermostat Program encouraged the installation of programmable and electronic thermostats, which provide customers with better control of the temperature in their home and to save energy. High performance programmable 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 were eligible. Incentives of $10 per programmable thermostat and $5 per electronic high-performance thermostat were offered. The thermostat program ended on December 31, 2023.

Table A-2 shows the customer participation levels, savings results achieved, and the LUC for the Thermostat Program for 2023 and since implementation.

Table A-2:
Thermostat Program Results

	Customer Participation	Energy Savings (MWh)	Peak Demand Savings (kW)	LUC (¢/kWh)
2023	866	255	80	3.8
Life to Date	28,810	24,924	3,400	2.1

2023 TRC Result: 1.3
2023 PAC Result: 4.2

[23] "Life to Date" represents the program results since the launch of the program.

2.3 Heat Recovery Ventilator ("HRV") Program

The HRV 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 the age of their home or heat source.

Table A-3 shows the customer participation levels, savings results achieved, and the LUC for the HRV Program for 2023 and since implementation.

Table A-3:
HRV Program Results

	Customer Participation	Energy Savings (MWh)	Peak Demand Savings (kW)	LUC (¢/kWh)
2023	499	274	85	8.4
Life to Date	4,480	2,470	771	7.4

2023 TRC Result: 1.4
2023 PAC Result: 1.9

2.4 Benchmarking Program

The Benchmarking 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. Reports also include practical tips on how to save energy moving forward. The program includes an online portal component that allows customers to engage even further through weekly challenges and personalized savings plans.

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 geographic distribution. No financial incentive is offered for this program.

Table A-4 shows the customer participation levels, savings results achieved, and the LUC for the Benchmarking Program for 2023 and since implementation.

Table A-4:
Benchmarking Program Results

	Customer Participation	Energy Savings (MWh)	Peak Demand Savings (kW)	LUC (¢/kWh)
2023	83,561	15,860	9,030	7.1
Life to Date[24]	83,561	15,860	9,030	6.3[25]

2023 TRC Result: 4.2
2023 PAC Result: 4.2

[24] Due to the nature of customer behavioural changes, benchmarking savings are assumed for one year only.
[25] While Benchmarking Program savings are claimed for one year, the LUC for the life of program is derived considering the sum of savings and program costs in all years the program has been offered.

2.5 Instant Rebates Program

The Instant Rebates Program promoted a variety of smaller technologies, such as LED bulbs and high-efficiency showerheads, through rebates available at the cash register of participating retailers. All customers were eligible for this program regardless of the age of their home or heat source. The program concluded in 2023.

Table A-5 shows the customer participation levels, savings results achieved, and the LUC for the Instant Rebates Program for 2023 and since implementation.

Table A-5:
Instant Rebates Program Results

	Customer Participation [26]	At-the-Cash Rebates	Energy Savings (MWh)	Peak Demand Savings (kW)	LUC (¢/kWh)
2023	0	206,461	5,706	1,069	3.0
Life to Date	7,288	4,114,014	82,999	18,982	2.9

2023 TRC Result: 1.5
2023 PAC Result: 3.5

[26] The Instant Rebates Program was previously included as part of a Small Technologies Program, which also included an on-bill rebate component for Appliances and Electronics. The Appliances and Electronics component ended in 2017. The life to date customer participation presented in Table A-5 represents participants in the Appliance and Electronics component prior to its end. Customer participation data is not tracked for the Instant Rebates Program.

2.6 Energy Savers Kit Program

The Energy Savers Kit Program provides free energy efficiency kits to income qualified customers. Customers are qualified based upon their net income and the number of people living in the household. Qualifying customers receive a kit with specific contents depending on if they have electric heat or not.[27] Customers who install all products in their kit may see energy savings of up to $100 per year.

Table A-6 shows the customer participation levels, savings results achieved, and the LUC for the Energy Savings Kit Program for 2023 and since implementation.

Table A-6:
Energy Savers Kit Program Results

	Customer Participation	Energy Savings (MWh)	Peak Demand Savings (kW)	LUC (¢/kWh)
2023	2,547	2,105	603	2.9
Life to Date	4,809	3,755	1,050	2.6

2023 TRC Result: 3.5
2023 PAC Result: 3.5

[27] Customers who do not have electric heat do not receive all of the kit contents such as weatherproofing items that will decrease their space heating costs. They do receive items such as LED bulbs and showerheads to reduce their electricity costs for these end uses.

3.0 Commercial takeCHARGE Programs

3.1 Business Efficiency Program

The objective of the Business Efficiency Program is to improve electrical energy efficiency in a variety of commercial facilities and equipment types. 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-7 shows the customer participation levels, savings results achieved, and the LUC for the Business Efficiency Program for 2023 and since implementation.

Table A-7:
Business Efficiency Program Results

	Customer Participation	Energy Savings (MWh)	Peak Demand Savings (kW)	LUC (¢/kWh)
2023	297	4,593	494	3.5
Life to Date	3,495	52,350	9,151	2.9

2023 TRC Result: 1.7
2023 PAC Result: 2.7

4.0 Total Results of takeCHARGE Programs

Table A-8 shows the participation levels, savings results achieved, and the LUC for all of the programs for 2023 and since implementation.

Table A-8:
takeCHARGE Programs
Total Results

	Customer Participation	At-the-Cash Rebates	Energy Savings (MWh)	Peak Demand Savings (kW)	LUC (¢/kWh)	Provincial LUC (¢/kWh)[28]
2023	88,866[29]	206,461	31,725	13,424	4.3	4.5
Life to Date	151,659[30]	4,114,014	236,898	64,110	3.3	3.3

Table A-9 shows the TRC and PAC test results for Newfoundland Power's residential and commercial portfolios, along with the provincial portfolio, which includes Hydro's Island Interconnected System costs and energy savings.

Table A-9:
takeCHARGE Programs
TRC and PAC Test Results
(2023)

	TRC Result	PAC Result
Residential Portfolio	3.1	4.3
Commercial Portfolio	1.7	2.7
Provincial Portfolio	2.7	3.8

[28] "Provincial LUC" represents the combined cost and energy savings of the Utilities' Island Interconnected CDM program offerings.

[29] Figure consists of 83,561 participants in the 2023 Benchmarking Program, and 5,305 participants in on-bill rebate programs.

[30] Prior years' participants in the Benchmarking Program are not included in this number.