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April 10, 2024

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

Attention: Jo-Anne Galarneau  
Executive Director and Board Secretary

**Re: Electrification, Conservation and Demand Management Report for the Year Ended  
December 31, 2023**

Please find enclosed Newfoundland and Labrador Hydro's Electrification, Conservation and Demand Management Report for the year ended December 31, 2023.

Should you have any questions, please contact the undersigned.

Yours truly,

**NEWFOUNDLAND AND LABRADOR HYDRO**

Shirley A. Walsh  
Senior Legal Counsel, Regulatory  
SAW/rr

Encl.

ecc:

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# Electrification, Conservation and Demand Management Report

For the Year Ended December 31, 2023

April 10, 2024

A report to the Board of Commissioners of Public Utilities



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## 1.0 Introduction

Electrification, Conservation and Demand Management (“ECDM”) activities undertaken by Newfoundland and Labrador Hydro (“Hydro”) include programs specifically targeted to Hydro’s customers as well as joint utility programs offered by both Hydro and Newfoundland Power Inc. (“Newfoundland Power”) (collectively, the “Utilities”) through the takeCHARGE partnership. The purpose of this report is to provide a summary of the costs and initiatives implemented by Hydro, including Hydro’s portion of costs related to the delivery of joint initiatives in 2023.

In 2023, Hydro’s residential, commercial, and industrial ECDM programs exceeded energy savings targets, yielding a total 1,810 MWh of annual incremental energy savings (134% of target). Since 2009, these programs have accumulated energy savings of 56,888 MWh.<sup>1</sup>

## 2.0 Coordination and Context

### 2.1 Utility Planning

Starting with the initial ECDM plan in 2008, the Utilities have designed and implemented a joint utility portfolio of programs for electricity customers within the province. Currently, programs offered through the joint utility model provide rebate options to address energy savings for residential and commercial electricity customers. The Utilities continuously evaluate customer conservation programs and periodically undertake third-party program evaluations to refine program design and support future planning.

ECDM activities for 2023 included the continuation of the residential and commercial rebate programs, the Isolated Communities Energy Efficiency Program, the Industrial Energy Efficiency Program, and the delivery of government-funded programs as detailed in Section 2.2. The description of the programs offered during 2023 through the joint utility partnership, including those specific to Hydro’s customers, are provided in Appendix A to this report.

### 2.2 Government Engagement and Programming

Building on its long-term partnerships, Hydro works directly with both the Nunatsiavut Government and the NunatuKavut Community Council on the delivery of energy efficiency programs in their respective

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<sup>1</sup> Numbers may not add due to rounding.

1 communities. Building upgrades, direct install of energy efficient products, and the co-delivery of  
2 programs benefit the local communities and increases the effectiveness of ECDM programming.

3 Hydro continues to have a positive working relationship with both the provincial and federal  
4 governments and remains engaged in dialogue on potential programming, policy, and partnership  
5 opportunities. Through these partnerships, Hydro delivered four government-funded programs to  
6 customers in 2023—the Low Carbon Economy Leadership Funding Program, the Electric Vehicle Rebate  
7 Program, the Oil to Electric Rebate Program (all provincially funded), and the Commercial Electric  
8 Vehicle Charger Rebate Program, which was funded through Natural Resources Canada’s Zero-Emission  
9 Vehicle Infrastructure Program. These four programs are fully cost recovered and required no funds  
10 from ratepayers.

### 11 **2.2.1 Low Carbon Economy Leadership Funding Program**

12 Hydro continued to deliver the Low Carbon Economy Leadership Funding Program to its oil heated  
13 customers on behalf of the federal and provincial governments through insulation and thermostat  
14 rebates. Seventeen insulation rebates for oil-heated customers were approved in areas served by Hydro  
15 in 2023.

### 16 **2.2.2 Electric Vehicle Rebate Program**

17 The Electric Vehicle Rebate Program is intended to encourage the purchase of an electric vehicle (“EV”)  
18 through a \$2,500 rebate for Battery Electric Vehicles (“BEV”) and a \$1,500 rebate for Plug-in Hybrid  
19 Electric Vehicles (“PHEV”). In 2023, the program approved a total of 703 rebate applications; 434 were  
20 for BEV and 269 were for PHEV. The Electric Vehicle Rebate Program requires a customer application  
21 post-sale, therefore its unlikely to capture 100% of EV sales within the province; however, 703 EV sales  
22 in 2023 represents 2.6% of total vehicle sales in Newfoundland and Labrador.<sup>2</sup>

### 23 **2.2.3 Oil to Electric Rebate Program**

24 The Oil to Electric Rebate Program provides rebates to help customers’ transition oil heated homes to  
25 electric-based space heating. There are approximately 40,000 registered heating oil tanks in the  
26 province. In 2023, the program provided a total of 880 rebates for customers who removed their oil  
27 heating system and replaced it with an electric alternative.<sup>3</sup> The third year of the program launched in

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<sup>2</sup> Based on 27,474 new vehicle sales in Newfoundland and Labrador as reported by Statistics Canada.

<sup>3</sup> The program was redesigned in 2023 and started to accept rebate applications in September of that year.

1 April 2023, and was expanded to include higher incentives for heat pump installations, higher incentives  
2 for income-qualified customers, and the exclusion of standalone baseboard resistance heat as a  
3 technology option.<sup>4</sup> Year three of the program is currently being delivered by both Utilities under the  
4 takeCHARGE partnership.<sup>5</sup>

#### 5 **2.2.4 Commercial EV Charger Rebate Program**

6 With the launch of the Commercial EV Charger Rebate Program in May 2022, qualified applicants can  
7 receive a rebate toward the cost to purchase and install qualifying Level 2 and Level 3 EV chargers at  
8 workplaces, in public places, or on street. Qualified applicants can receive a rebate for up to 50% of the  
9 costs to purchase and install eligible chargers, for a maximum of up to \$5,000 per Level 2 charger, and  
10 up to \$50,000 per Level 3 Direct Current Fast Charger. In 2023, the program funded the installation of 47  
11 EV charger plugs, and pre-approved project applications that will result in an additional 38 EV chargers  
12 when complete.

### 13 **2.3 Electrification System Impacts**

14 Hydro is closely monitoring the results of these government-funded programs delivered by the Utilities  
15 to better understand the potential impacts on the electrical system from electrification. Hydro's  
16 experience with these programs will help inform demand management strategies and customer  
17 education opportunities to limit the cost impacts on the electrical system from electrification. Hydro has  
18 also worked closely with the provincial government on changes to program design, which is resulting in  
19 more customers selecting technology choices with lower system impacts (i.e., heat pumps versus  
20 electric resistance heat).

21 Data and trends seen through this programming will also help inform Hydro's load forecasts for system  
22 planning purposes.

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<sup>4</sup> Costs associated with baseboard heaters qualify when combined with a heat pump.

<sup>5</sup> Hydro delivered this program in year one and year two on behalf of the provincial government. With takeCHARGE delivering programming in year three, each utility is responsible for rebating customers in communities within its own territory.

## 3.0 2023 ECDM Program Costs and Energy Savings

### 3.1 Portfolio Level Program Costs and Energy Savings

Table 1 provides customer participation,<sup>6</sup> annual energy savings, non-coincident peak demand savings and Levelized Utility Cost (“LUC”)<sup>7</sup> for each ECDM program in 2023.

**Table 1: Hydro’s 2023 ECDM Program Participation, Savings and LUC**

	<b>Customer Participation (Customers)</b>	<b>Annual Energy Savings (MWh)</b>	<b>Non-Coincident Demand Savings (kW)</b>	<b>LUC (c/kWh)</b>
<b>Residential Programs</b>				
Thermostats <sup>8</sup>	24	8	3	6.8
Insulation and Air Sealing	50	155	106	9.9
Heat Recovery Ventilators (“HRV”)	-	-	-	-
Instant Rebates <sup>9</sup>	1,265	115	15	11.9
Energy Savers Kits	576	464	124	2.7
Isolated Systems Community (Residential)	172	349	37	12.3
<b>Commercial Programs</b>				
Business Efficiency Program	21	204	28	7.9
Isolated Systems Business Efficiency Program	1	57	-	7.9
Isolated Systems Community (Commercial)	37	458	67	13.0
<b>Industrial Energy Efficiency Program</b>	-	-	-	-
<b>Total All Program</b>	<b>2,146</b>	<b>1,810</b>	<b>380</b>	<b>10.2</b>

<sup>6</sup> The transaction units are specific to each program. The Thermostats, Insulation and Air Sealing, and HRV Programs reflect approved rebates. The Instant Rebate Program reflects the number of products rebated through the program. The Energy Savers Kit Program participation indicates the number of kits that have been mailed to approved applicants. The Isolated Systems Community Program, both residential and commercial, denotes the number of residential and commercial customer premises that received direct installations. The Business Efficiency Program, Isolated Systems Business Efficiency Program, and Industrial Energy Efficiency Program reflect the number of completed retrofit projects.

<sup>7</sup> LUC is a method used to compare costs associated with conservation programs to the value of energy saved. The LUC represents the economic cost to the utility (cents per kWh) to achieve those energy savings. LUC is an industry metric that is calculated by discounting future energy savings resulting from conservation programs to a present value.

<sup>8</sup> This program concluded in 2023.

<sup>9</sup> This program concluded in 2023.

1 In Board Order No. P.U. 33(2022), Hydro’s proposed revisions to the existing ECDM Cost Deferral  
 2 Account to allow deferral of ECDM costs incurred for the Labrador Interconnected System was approved  
 3 beginning in 2023. Hydro’s total ECDM expenses from 2019 to 2023 across all of Hydro’s systems are  
 4 described in Table 2.

**Table 2: Hydro’s ECDM Portfolio Costs (\$000)<sup>10</sup>**

	<b>2019</b>	<b>2020</b>	<b>2021</b>	<b>2022</b>	<b>2023</b>
<b>General Costs</b>					
Education	124	68	67	69	71
Support	41	46	47	23	24
Planning	178	142	135	138	142
<b>Total General Costs</b>	<b>343</b>	<b>256</b>	<b>249</b>	<b>230</b>	<b>236</b>
<b>Program Costs</b>					
Thermostats	75	41	58	19	4
Insulation and Air Sealing	198	96	83	70	145
HRV	11	3	4	2	7
Instant Rebates	140	47	102	36	68
Energy Savers Kits	-	-	-	17	59
Residential Benchmarking	27	9	-	-	-
Isolated Load Control Pilot	17	-	-	-	-
Business Efficiency Program	118	60	77	83	112
Small Business Direct Install Pilot <sup>11</sup>	-	-	-	-	24
Isolated Systems Business Efficiency Program	24	23	43	18	29
Isolated Systems Community	988	291	1124	866	926
Industrial Energy Efficiency Program	142	-	14	14	18
<b>Total Program Costs</b>	<b>1,741</b>	<b>570</b>	<b>1,505</b>	<b>1,126</b>	<b>1,392</b>

5 Based on Board Order No. P.U. 18(2016), the cost-effectiveness of ECDM programs is evaluated using  
 6 the Total Resource Cost (“TRC”) and Program Administrator Cost (“PAC”) test. Table 3 and Table 4  
 7 provide the TRC and PAC test results for ECDM programs Hydro contributed to in 2023. Table 3 includes

<sup>10</sup> Numbers may not add due to rounding.

<sup>11</sup> Installations in communities served by Hydro began in 2023.

1 the TRC and PAC test scores for joint utility programs under the takeCHARGE partnership<sup>12</sup> for the  
 2 combined Island Interconnected System. Table 4 includes cost effectiveness results for the Isolated  
 3 Systems, which are provided by Hydro only.

**Table 3: Island Interconnected System Combined  
 ECDM Portfolio Cost-Effectiveness Results<sup>13</sup>**

<b>Program</b>	<b>TRC Test</b>	<b>PAC Test</b>
Thermostats	1.2	4.0
Insulation and Air Sealing	4.4	5.2
HRV	1.4	1.9
Instant Rebates	1.5	3.3
Energy Savers Kits	3.5	3.5
Business Efficiency Program	1.6	2.3

**Table 4: Isolated Systems  
 ECDM Portfolio Cost-Effectiveness Results**

<b>Program</b>	<b>TRC Test</b>	<b>PAC Test</b>
Isolated Systems Business Efficiency Program	1.5	10.4
Isolated Systems Community	2.1	1.9

4 **3.2 Residential Programs**

5 Hydro’s residential portfolio included five programs offered jointly by the Utilities (Thermostats,  
 6 Insulation and Air Sealing, HRV, instant rebates, and the low-income energy savers kit) and one offered  
 7 solely by Hydro (the Isolated Systems Community Energy Efficiency Program). Throughout 2023, Hydro  
 8 continued to promote the takeCHARGE programs and technologies. Local advertising and building  
 9 partnerships with retailers remains a priority and is an integral factor in the promotion of customer  
 10 rebate programs. In 2023, the Thermostat and Instant Rebates Programs both concluded. The  
 11 Thermostat Program was concluded due to declining program participation and peak demand impacts  
 12 on the Interconnected Systems. The Instant Rebates Program concluded due to changes in ENERGY STAR

<sup>12</sup> Joint utility programs include the Thermostats, Insulation and Air Sealing, HRV, Instant Rebates, Energy Savers Kit, and Business Efficiency Program.

<sup>13</sup> Results include the provincial portfolio results for the Island Interconnected System for both Utilities as well as the cost effectiveness scores from Hydro’s Isolated Energy Efficiency Programming.

1 lighting standards that make the program no longer viable. The Utilities will continue to monitor and  
2 evaluate the future viability of programs in 2024.

### 3 **3.3 Commercial Programs**

4 Hydro's commercial portfolio includes the Business Efficiency Program, offered jointly through the  
5 Utilities to provide prescriptive and custom rebates for commercial energy efficiency projects. Hydro  
6 also offers the Isolated Systems Business Efficiency Program to commercial customers in its isolated  
7 regions to provide technical support to identify economical energy efficiency opportunities and financial  
8 support for capital upgrades. Additionally, Hydro provides direct installs, energy audits, and building  
9 upgrades to several commercial customers in isolated communities through the Isolated Systems  
10 Community Energy Efficiency Program. Cumulatively, these programs exceeded Hydro's target, yielding  
11 719 MWh of energy savings in 2023.

12 In 2023, Hydro approved 21 rebates for commercial energy saving upgrades such as light emitting diode  
13 high-bay lighting and LED luminaires. One custom project was completed in the Isolated Systems  
14 Business Efficiency Program for an insulation upgrade project in Hydro's isolated service area.

15 In addition to existing commercial programs, takeCHARGE continued the Small Business Direct Install  
16 Pilot Program that launched in 2022. This pilot program is designed to help small businesses in select  
17 communities improve their energy efficiency through direct installations of LED lighting and water  
18 saving technologies. The program will run as a pilot until March 2024, when it will be evaluated to  
19 determine if the program should be offered to a wider customer base.

### 20 **3.4 Isolated Communities Energy Efficiency Program**

21 The Isolated Communities Energy Efficiency Program targets residential and commercial customers in  
22 Hydro's isolated diesel systems. The objective of the program is to provide outreach, education, and  
23 energy-efficient products to residential and business customers in the diesel system communities within  
24 Newfoundland and Labrador. From 2012 to 2023, the program has achieved over 12.5 GWh in energy  
25 savings and provided employment for over 55 residents of these communities.

26 In 2023, residential Isolated Communities Energy Efficiency Program offerings included direct install,  
27 smart and programmable thermostat installations, shifted energy smart water heater installations, heat  
28 pump installations, and offering the federal government's Greener Homes Grant Program. Commercial

1 offerings for Isolated Communities Energy Efficiency Program included lighting upgrades, energy audits,  
2 and piloting cost-shared commercial building upgrades.

### 3 **3.4.1 2023 Isolated Communities Energy Efficiency Program Results**

4 The residential direct install program for 2023 involved distributing kits containing energy saving  
5 products to eligible residents in the communities of Nain and Hopedale. The kits consisted of water  
6 saving technologies, LED specialty bulbs, smart power strips, and weather-stripping products. In addition  
7 to energy savings, the drop-off of energy savings kits to community members acted as an important  
8 opportunity for community engagement and local relationship building in the region. This program  
9 resulted in 134 MWh of annual electrical energy savings.

10 Smart and programmable thermostat installations were offered to residential customers with electric  
11 heating in the communities of the Labrador Straits region. The type of thermostat offered depended on  
12 criteria such as internet Wi-Fi capability and the availability of a smart phone or tablet in the home. In  
13 total, 63 programmable and 99 smart thermostats were installed which resulted in 66 MWh of annual  
14 electrical energy savings.

15 In 2023, 31 shifted energy units were installed on residential hot water tanks in the Labrador Straits  
16 region which resulted in 15 MWh of annual electrical energy savings. Shifted energy hot water  
17 controllers provide energy consumption savings through timed use and learning algorithms as well as  
18 providing demand response options.

19 The heat pump pilot program continued in 2023 with the installation of 20 single-zone, cold-climate,  
20 ductless mini-split heat pumps in the Labrador Straits and Port Hope Simpson regions. Customers  
21 eligible for a cost-shared heat pump installation were required to be primarily electrically heated and  
22 meet minimum R-value criteria. In total, the residential heat pump installations resulted in 107 MWh of  
23 annual electrical energy savings.

24 Direct installations of LED commercial lighting were completed based on opportunities identified during  
25 audits and data collected during previous surveys. Direct installations included the installation of LED

1 tubes, LED wallpacks and HID<sup>14</sup> replacement bulbs. Across 7 communities, 35 commercial buildings  
2 received lighting upgrades, which resulted in annual energy savings of 416 MWh.

### 3 **3.4.2 Energy Audits**

4 Hydro successfully leveraged the federal government’s Greener Homes Grant Program by offering  
5 support to electrically heated residents of the isolated communities enabling access to the program  
6 through Isolated Communities Energy Efficiency Program in 2023. This involved sending a certified  
7 energy advisor to the Straits region to perform “D” (pre-retrofit) and “E” (post-retrofit) level energy  
8 audits. Upgrades undertaken through this program were included in the deemed savings for Isolated  
9 Communities Energy Efficiency Program. In total, only eight “D” audits were completed in 2023 due to a  
10 combination of low registrations and homeowner unavailability. In 2023, two files were successfully  
11 closed out through this program yielding 26 MWh of energy savings from heat pump and insulation  
12 upgrades.

13 Hydro first introduced commercial energy audits through Isolated Communities Energy Efficiency  
14 Program to identify energy saving opportunities as the program transitioned to providing more offerings  
15 to the commercial sector in 2022. In 2023, 28 commercial building audits were completed throughout  
16 the communities of Port Hope Simpson, Charlottetown, St. Lewis, and Mary’s Harbour. Commercial  
17 buildings were selected for an energy audit based on survey data that was analyzed to identify buildings  
18 with high consumption and potential for energy reduction. Based on opportunities identified in the  
19 audits, the Isolated Communities Energy Efficiency Program piloted the introduction of commercial  
20 building upgrades, which implemented a cost-shared mechanism for two businesses to install heat  
21 pumps, which resulted in 42 MWh of annual energy savings.

### 22 **3.4.3 Innovation Day**

23 In addition to 2023 Isolated Communities Energy Efficiency Program offerings, Hydro held a two-day  
24 collaborative event called Innovation Day to support future planning of the program. Innovation Day  
25 served as a strategic conversation to explore and discuss program enhancements, evolutions, new  
26 technologies and partnerships for the Isolated Communities Energy Efficiency Program. The objective of  
27 this event was to find new, innovative, and practical solutions to energy related challenges in isolated  
28 diesel communities and find tangible ways to implement these into the Isolated Communities Energy

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<sup>14</sup> High Intensity Discharge (“HID”).

1 Efficiency Program. This event brought together many stakeholders including those from Indigenous  
2 governments, the provincial government, private sector representatives, and program delivery  
3 specialists. The introductory Innovation Day event was a success, and culminated in increased  
4 collaboration between the stakeholders of Isolated Communities Energy Efficiency Program and gave  
5 Hydro a clear path forward for the program in terms of priorities and next steps for future ECDM  
6 programming in isolated systems.

### 7 **3.5 Industrial Program**

8 Since 2010, Hydro has delivered the Industrial Energy Efficiency Program, which offers support and  
9 financial incentives for Hydro's Industrial customers based on projects for lighting retrofits, process  
10 improvements, equipment changes, loss prevention (e.g., heat, steam energy), and funding for energy  
11 audit consultant reports. Promotion of the Industrial Energy Efficiency Program is facilitated through  
12 Hydro's Key Account Management Framework to support improved project planning, scheduling, and  
13 execution. Within this framework, industrial customers are directly engaged with their Key Accounts  
14 Specialist to assist with the Industrial Energy Efficiency Program. This also allows Hydro to better  
15 understand customer facilities, processes, plans, and schedules for potential efficiency improvement  
16 projects. In 2023, no industrial energy efficiency projects were completed; however, Hydro's Key  
17 Accounts Specialist remains engaged with industrial customers to assist with future projects, should  
18 customers want to pursue them.

## 19 **4.0 Electrification**

20 In 2023, Hydro worked to expand the existing public EV charging network in the province. In Board  
21 Order No. P.U. 21(2023), an additional seven ultra-fast direct current chargers were approved for  
22 construction along the Trans-Canada Highway, complementing Hydro's existing EV charging network of  
23 23 public fast charging stations, 3 of which are located in Labrador.<sup>15</sup> The new assets are scheduled to go  
24 into service in 2025.<sup>16</sup>

25 Table 5 and Table 6 show the number of sessions, the energy usage and revenue from each Hydro  
26 owned public EV charging station for 2023.

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<sup>15</sup> A portion of Hydro's chargers are operated under the takeCHARGE partnership.

<sup>16</sup> The project is in partnership with the provincial government who will fund the majority of the capital cost of \$2.1 million; Hydro will contribute the remaining funds necessary (\$0.1 million). The capital funds were not proposed for inclusion in its regulated rate base for recovery from customers at this time.

**Table 5: 2023 Electric Vehicle Charging Stations Statistics – Non-Regulated<sup>17</sup>**

<b>Charger Location</b>	<b>Number of Sessions</b>	<b>Energy Usage (kWh)</b>	<b>Revenue<sup>18</sup> (\$)</b>
Bishop's Falls	763	23,192	6,272
Churchill Falls	17	751	229
Corner Brook	776	23,687	6,833
Deer Lake	844	22,844	6,332
Galway	1,913	49,556	14,141
Gander	1,106	33,209	9,056
Glovertown	671	17,581	4,832
Goobies	1,946	46,520	12,695
Holyrood	679	12,823	3,737
Happy Valley-Goose Bay	22	688	174
Labrador City	109	1,739	139
Channel-Port aux Basques	333	9,673	2,748
Port Blandford	545	13,517	3,572
Rocky Harbour	253	6,206	1,944
South Brook	706	17,980	4,942
Stephenville	210	4,936	1,597
Whitbourne	1,628	31,259	8,840
<b>Total</b>	<b>12,521</b>	<b>316,162</b>	<b>88,084</b>

**Table 6: 2023 Electric Vehicle Charging Stations Statistics – Regulated<sup>19</sup>**

<b>Charger Location</b>	<b>Number of Sessions</b>	<b>Energy Usage (kWh)</b>	<b>Revenue<sup>20</sup> (\$)</b>
Birchy Head	83	1,784	505
Cow Head	140	3,661	1,013
Flowers Cove	109	3,174	871
Port au Choix	68	1,956	536
Roddickton	13	286	55
St. Anthony	85	2,211	658
<b>Total</b>	<b>498</b>	<b>13,072</b>	<b>3,639</b>

<sup>17</sup> Numbers may not add due to rounding.

<sup>18</sup> Exclusive of taxes and payment processing fees.

<sup>19</sup> Numbers may not add due to rounding.

<sup>20</sup> Exclusive of taxes and payment processing fees.

1 In 2023, takeCHARGE launched a comprehensive new online EV fleet toolkit, offering much-needed  
2 information to help customers decide if an EV is right for their business. Resources and interactive tools  
3 can be found on the takeCHARGE website,<sup>21</sup> providing a reliable and easy-to-understand source of  
4 information on EV fleets. The resources on the website provide everything businesses and municipalities  
5 need to know about adding EVs to their fleets, including various medium-and heavy-duty vehicle EV  
6 models, commercial chargers, a fleet fuel savings calculator, and “EV Fleets 101.”

7 takeCHARGE received funding from Natural Resources Canada’s Zero Emission Vehicle Awareness  
8 Initiative to design and launch an electric medium- and heavy-duty vehicle (“MHDV”) initiative. The  
9 initiative aims to increase knowledge, awareness, and confidence in MHDVs. The initiative will involve  
10 developing a foundational program that includes research, testimonial videos, online training modules,  
11 and a lunch-and-learn panel series, ultimately enabling greater electric MHDV adoption in  
12 Newfoundland and Labrador.

## 13 **5.0 Planning and Evaluation**

14 The Utilities engage in external third-party evaluations and surveys to evaluate changes in market  
15 factors that impact the delivery of ECDM programs and to measure customer awareness, interest, and  
16 uptake in current programs. In 2023, the following third-party evaluations and surveys were undertaken:

- 17 • Annual Marketing Survey: to assess home energy use and energy saving practices, as well as  
18 awareness of, and participation in, the takeCHARGE programs;
- 19 • Insulation and Business Efficiency Program Evaluation: an external review of the Insulation and  
20 Business Efficiency Program concluded in 2023 that assessed program effectiveness,  
21 participation, satisfaction, as well as validated energy and demand savings achieved throughout  
22 the program;
- 23 • Energy Savers Kit: An external impact, process, and market evaluation for the low-income  
24 Energy Savers Kit Program was initiated in 2023. Based on the analysis, the evaluator will  
25 develop recommendations for program delivery and estimate program energy savings; and
- 26 • HRVs: A high-level review of the HRV Program was initiated in 2023 to evaluate program savings  
27 estimates and compare program processes to other jurisdictions in North America.

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<sup>21</sup> [www.takechargenl.ca/EVs](http://www.takechargenl.ca/EVs).

1 In December 2023, the Utilities contracted with Posterity Group Consulting Inc. to undertake the  
2 Conservation, Demand Management, and Electrification Potential Study to assess the technical,  
3 economic, and achievable potential for conservation, demand management, and electrification activities  
4 on the Island Interconnected System from 2025 to 2040. The study will conclude in 2024 and will be  
5 used by the Utilities to develop the next multi-year plan for electrification, conservation and demand  
6 management.

## 7 **6.0 Outreach and Support**

8 During 2023, Hydro continued to partner with Newfoundland Power to deliver the takeCHARGE  
9 program, which offers customer education and conservation awareness activities, primarily through  
10 promotion of its takeCHARGE rebate programs and outreach activities. Residential and business  
11 programs were promoted through activities including mass media marketing, targeted promotions,  
12 community outreach, school contests, trade ally development, and partnerships. Advertising campaigns  
13 included radio, online, and social media advertisements. Campaigns run throughout the year for  
14 insulation, thermostats, HRVs, instant rebates, heat pump education, and the Business Efficiency  
15 Program. The media chosen is based on the time of year that programs are in market and consumer  
16 purchasing behaviours.

17 The takeCHARGE team is also active on social media through a joint utility Facebook page (which has  
18 garnered over 15,600 likes), a YouTube channel, accounts on social media platforms X (formerly  
19 Twitter), Instagram, and LinkedIn, as well as a website. The takeCHARGE website continues to be a  
20 leading source of information for customers seeking energy-efficiency information.

21 The takeCHARGE of Your Town initiative invites municipalities to submit proposals that will support their  
22 efforts to develop or improve energy conservation or energy-efficiency projects. In 2023, Hydro  
23 awarded the Town of South Brook \$10,000 to upgrade the insulation in the community's town hall.

24 The "Make the Switch" Bulb Giveaway by takeCHARGE provides LED bulbs to selected non-profit  
25 organizations and other groups to help reduce operational lighting costs in their facilities or to help their  
26 members/residents be more energy efficient. In 2023, Hydro distributed 2,500 bulbs to 18 groups within  
27 Hydro's service territory.

1 takeCHARGE offered contests for schools with students from kindergarten to sixth grade and students  
2 from seventh to twelfth grade. These contests aim to increase student understanding of why saving  
3 energy is important and to demonstrate what they can do to conserve energy. In 2023, nine groups  
4 were awarded prizes ranging from \$500 to \$2,500.

5 The 14th annual takeCHARGE Energy Efficiency Week (September 23 to 29, 2023) and Business  
6 Efficiency Week (October 23 to 29, 2023) were dedicated to providing customers with information to  
7 assist them in saving energy and money through reducing their energy consumption. A full social media  
8 campaign was launched during each week and online webinars were held to engage customers.

9 The 5th annual takeCHARGE Luminary Awards were held in 2023. The awards program provides an  
10 opportunity to recognize companies, individuals, and communities contributing to energy efficiency in  
11 Newfoundland and Labrador. On October 25, 2023, the Luminary Awards event was held in-person and  
12 virtually, allowing all award winners to attend.

13 In 2023, takeCHARGE received awards for utility program of the year and promotional campaign of the  
14 year from ENERGY STAR Canada. The awards recognize utilities, manufacturers, retailers, associations,  
15 homebuilders, and buildings that have demonstrated excellence in offering Canadian consumers the  
16 most energy-efficient products and technology available. These awards are takeCHARGE's 6th and 7th  
17 ENERGY STAR Canada awards since 2020.

## 18 **7.0 Conclusion**

19 In 2023, Hydro continued to promote ECDM as a component of resource planning in Newfoundland and  
20 Labrador. ECDM is encouraged through joint utility programs offered by Hydro and Newfoundland  
21 Power through takeCHARGE as well as programming specifically targeted to Hydro's isolated and  
22 industrial customers. ECDM programs have been successful in providing education and fostering the  
23 development of a culture of energy conservation in the province. Overall, Hydro's efforts in 2023  
24 supported annual incremental energy savings of 1,810 MWh and cumulative energy savings of  
25 56,888 MWh since 2009.

26 Hydro has continued to work with its customers to understand needs and drivers of electrical  
27 consumption to support the achievement of sustainable energy savings through its programming.  
28 Additionally, Hydro has worked in partnership with the provincial and federal governments on various

1 programs and initiatives to support energy efficiency and a lower carbon economy. Hydro will use the  
2 information gathered from these programs to help inform future program requirements and manage  
3 system costs for customers.

4 In 2024, the Utilities will complete a Conservation, Demand Management, and Electrification Potential  
5 Study to assess the technical, economic, and achievable potential for conservation, demand  
6 management, and electrification activities on the Island Interconnected System for 2025–2040. After  
7 completion of this study, the Utilities will begin to develop their next multi-year plan for conservation  
8 and demand management.

# Appendix A

## Electrification, Conservation and Demand Management Program Descriptions



## 1 **Residential takeCHARGE Rebate Programs**

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

### 4 **Insulation Rebate Program**

5 The objective of this program is to provide incentives to increase the insulation R-value in residential  
6 basements, crawl spaces, and attics, thereby increasing the efficiency of the home's building envelope.  
7 Eligibility for the programs is limited to electrically heated homes, determined based on annual energy  
8 usage. Home retrofit projects are eligible. Customers can receive an incentive of 75% of basement wall  
9 and ceiling insulation materials up to \$1,000 and 50% of attic insulation material costs up to \$1,000. In  
10 October 2022, a duct-insulation rebate was added to the existing insulation rebate program, which  
11 offers rebates of 50% of the cost up to \$500 for insulating ductwork of a resident's primary heating  
12 source. In December 2022, an air-sealing rebate was also added on to the existing insulation rebate  
13 program, which offers rebates of up to \$500 for improvements in their air-leakage score based on a pre-  
14 and post-retrofit home energy assessment.

### 15 **Thermostat Rebate Program**

16 This program encourages installation of programmable and electronic thermostats to allow customers  
17 better control of the temperature in their home and to save energy. These high-performance  
18 thermostats provide accurate temperature control while the programmable option allows customers to  
19 set back the temperature automatically during the night or when they are away. Eligibility for the  
20 program is limited to electrically heated homes, determined on the basis of annual energy usage. Home  
21 retrofit projects and new home developments are eligible. Incentives of \$10 for each programmable  
22 thermostat and \$5 for each electronic high-performance thermostat are offered. This program  
23 concluded in 2023.

### 24 **HRV Rebate Program**

25 This program encourages customers to purchase a high-efficiency HRV to improve the efficiency of their  
26 home. Eligible measures in this program include HRV models that have a Sensible Recovery Efficiency of  
27 70% or more. Customers who purchase a high-efficiency HRV can receive a rebate of \$175. All  
28 customers are eligible for this program regardless of the age of the home or its heat source.

1 **Isolated System Community Energy Efficiency Program**

2 This Hydro program includes both residential and commercial components targeting customers in  
3 isolated diesel communities and L’Anse-au-Loup. The focus is on residential customers through the  
4 direct installation of a kit of technologies; at-cash-register coupons on small technologies and mail-in  
5 rebates on energy-efficient appliances. Commercial customers also receive a direct installation of a kit of  
6 technologies. The kit includes items for water savings, draft proofing, lighting, and other measures.

7 Homeowners receive education on energy efficiency and existing takeCHARGE rebate programs.  
8 Community events, social media promotions, and exchanges are held to promote the program and  
9 energy-efficiency awareness.

10 **Energy Savers Kit**

11 This low-income program provides income-qualified customers with a kit containing energy savings  
12 measures, educational materials, and instructions. The Energy Savers Kit contains products to help  
13 customers save on lighting costs, reduce hot water use, and seal drafts in their homes.

14 **Instant Rebates**

15 This program promotes a variety of smaller technologies, such as LED lighting and smart power bars,  
16 through instant rebates available at the cash registers of participating retailers. All customers are eligible  
17 for this program regardless of the age of the home or its heat source. This program concluded in 2023.

18 **Commercial takeCHARGE Rebate Programs**

19 **Business Efficiency Program**

20 The objective of this program is to improve electrical energy efficiency in a variety of commercial  
21 facilities and equipment types. The program components include financial incentives based on energy  
22 savings and other financial and educational supports to enable commercial facility owners to identify  
23 and implement energy-efficiency and demand-reduction projects.

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

1 **Isolated Systems Business Efficiency Program**

2 Hydro's Isolated Systems Business Efficiency Program was launched in 2012 and targets commercial  
3 customers in the isolated diesel communities and L'Anse-au-Loup. The program provides a custom  
4 approach to finding energy-efficiency solutions and financial assistance for feasibility studies and for  
5 retrofit projects. It has the same program design and offerings as the joint utility Business Efficiency  
6 Program but has higher incentive levels for retrofit work because of the higher avoided cost of  
7 generation in these systems.

8 **Industrial Energy Efficiency Program**

9 The objective of this program is to improve electrical energy efficiency in a variety of industrial  
10 processes. The program components include financial incentives based on energy savings and other  
11 supports to enable industrial facilities to identify and implement efficiency and conservation  
12 opportunities. This program is a custom program designed to respond to the unique needs of the  
13 industrial market rather than a prescriptive technology approach.