Newfoundland and Labrador Hydro
Hydro Place. 500 Columbus Drive
P.O. Box 12400. St. John's. NL
Canada A1B 4K7
t. 709.737.1400 I f. 709.737.1800
nlhydro.com

February 15, 2023

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

Attention: Cheryl Blundon
Director of Corporate Services and Board Secretary

Re: Quarterly Regulatory Report for the Quarter Ended December 31, 2022

Enclosed is Newfoundland and Labrador Hydro's ("Hydro") "Quarterly Regulatory Report for the Quarter Ended December 31, 2022."

The Quarterly Regulatory Report is divided into four reports, as follows:

1) Quarterly Summary;
2) Performance Indicators;
3) Contribution In Aid of Construction; and
4) Customer Damage Claims.

Hydro will provide the financial data in Tabs 1 and 2, as well as the entirety of Tab 5 (Inter-Affiliate Transactions), once audited financial information becomes available.

If you have any questions on the enclosed, please contact the undersigned.

Yours truly,

NEWFOUNDLAND AND LABRADOR HYDRO

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

Encl.

ecc:

Board of Commissioners of Public Utilities
Jacqui H. Glynn
PUB Official Email

Newfoundland Power Inc.
Dominic J. Foley
Lindsay S.A. Hollett
Regulatory Email

Quarterly Regulatory Report

Quarter Ended December 31, 2022

February 15, 2023

A report to the Board of Commissioners of Public Utilities

Index

Tab 1

Quarterly Summary

Quarter Ended December 31, 2022

Contents

List of Appendices

Appendix A: Generation Unit Outages

Appendix B: Financial Schedules (To be provided when audited financial information becomes available)

List of Attachments

Attachment 1: Rate Stabilization Plan Report

Attachment 2: Supply Cost Variance Deferral Account Report

1.0 Highlights

Table 1: Highlights Year-to-Date

	2022 Actual	2022 Target	2021 Actual
Safety			
Lead/Lag Ratio	851:1	1,000:1	1,032:1
All-Injury Frequency ("AIF") Rate	0.92	0.50	1.01
Lost-Time Injury Frequency ("LTIF") Rate	0.26	0.15	0.76
Reliability			
SAIDI[1]	2.44	2.84	3.03
SAIFI[2]	1.08	1.16	1.45
Production			
Quarter End Reservoir Storage (GWh)	2,095	N/A	1,723
Hydraulic Production (GWh)	4,643.6	4,604.3	4,495.0
Holyrood No. 6 Fuel Oil Average Cost ($/bbl[3])	125	87	79
Holyrood Efficiency (kWh/bbl)	573	583	568
Electricity Delivery (GWh)			
Energy Sales	7,922	7,307	7,019
Financial ($ Millions)[4]			
Revenue	N/A	632.9	579.0
Operating Expenses	N/A	130.1	126.1
Net Income (Loss)	N/A	33.9	35.8
RSP[5]($ Millions)			
RSP Balance	52.3	N/A[6]	56.5
Supply Cost Variance Deferral Account ($ Millions)			
Cumulative Net Balance	190.4	115.9	18.3[7]
FTE[8] Employees[9,10]			
Regulated	789.8	797.2	792.1

[1] System Average Interruption Duration Index ("SAIDI").
[2] System Average Interruption Frequency Index ("SAIFI").
[3] Barrel ("bbl.").
[4] Financial figures exclude non-regulated activities.
[5] Rate Stabilization Plan ("RSP").
[6] Newfoundland and Labrador Hydro ("Hydro") did not establish RSP targets for 2022 as, at the time of development of Hydro's 2022 budget, it was presumed that the RSP would be included in the Supply Cost Variance Deferral Account, as reflected in "Supply Cost Accounting Application," Newfoundland and Labrador Hydro, July 29, 2021.
[7] The December 31, 2021 Supply Cost Variance Deferral ending balance was $18.3 million. It is noted that there was an opening adjustment to the Supply Cost Variance Deferral resulting in a 2023 opening balance of $16.9 million.
[8] Full-time equivalent ("FTE").
[9] One FTE is the equivalent of actual paid regular hours—2,080 hours per year in the operating environment and 1,950 hours per year in Hydro's head office environment.
[10] Figures shown are net FTEs. Net FTE's are regulated Hydro based employees, plus time charged to regulated Hydro, less time charged from regulated Hydro to the non-regulated lines of business.

2.0 Safety

2.1 Safety at Hydro

Safety is Hydro's first priority. Hydro continues to foster a safety culture that promotes a zero-harm mindset. Hydro's framework for safety performance includes a balanced focus on culture, people, and process as it continues to ensure its safety program reflects standards that are similar to that contained in ISO 45001. Leading indicators such as safety meetings, Occupational Health and Safety Committee meetings, leadership safety interactions, and the safety and health monitoring plan, among other performance indicators, continue to be tracked and discussed to ensure safety and health are a continuous part of Hydro's work focus.

2.2 Safety Performance

An overview of Hydro's safety performance is provided in Table 2.

Table 2: Safety Performance Detail[11]

	YTD[12] Q4 2022	YTD Q3 2022	YTD Q4 2021
Lost-Time Injuries	2	2	6
Medical Treatment Injuries	5	3	2
Lead/Lag Ratio	851:1	833:1	1,032:1
AIF Rate	0.92	0.91	1.01
LTIF Rate	0.26	0.36	0.76
Severity Rate (Days Lost)	1.31(10)	1.81(10)	31.22(248)
High Potential Incidents	2	2	4[13]

2.2.1 All-Injury Frequency Rate

Hydro experienced five medical treatment injuries and two lost-time injuries in 2022, resulting in an AIF rate of 0.92, a decrease over 2021. Musculoskeletal injuries ("MSI") were the most prevalent type of injury for 2022. Mitigation measures related to MSI trends include improved ergonomics programming and awareness as well as identification of high-risk exposure groups to prioritize prevention awareness initiatives through the internal injury prevention campaign.

[11] Injury statistics reflect Hydro employees only.
[12] Year-to-date ("YTD").
[13] Previously reported as 5 due to a categorical error.

A comparison of Hydro's AIF rate over the past ten years and the current year-end AIF rate is provided in Chart 1.

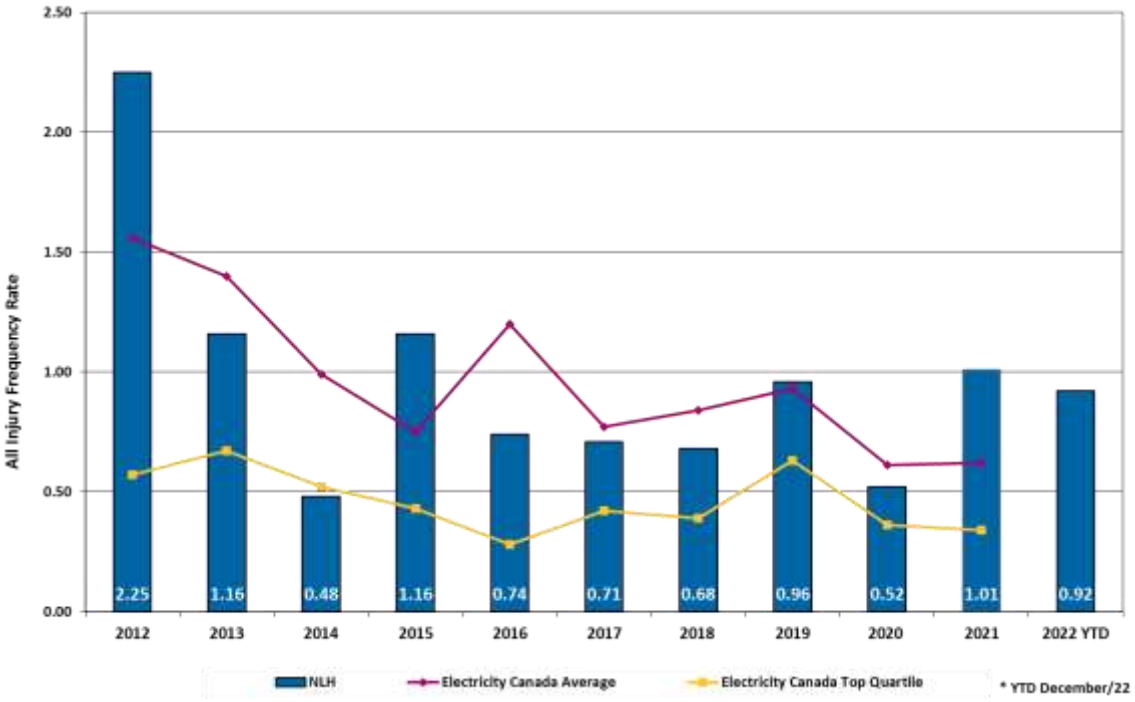


Chart 1: Hydro's AIF Compared to Electricity Canada Benchmarks[14,15]

2.2.2 Lost-Time Injury Frequency Rate

As of the end of the 2022, there were two lost-time injuries, resulting in a LTIF rate of 0.26.

A comparison of Hydro's annual LTIF rate for the past ten years and the current year-end LTIF rate is provided in Chart 2.

[14] Safety and Health performance metrics are compared to Electricity Canada utility members in Group 2 (300-1,500 employees).
[15] Electricity Canada benchmarks for 2022 were not available as of the date this report was published.

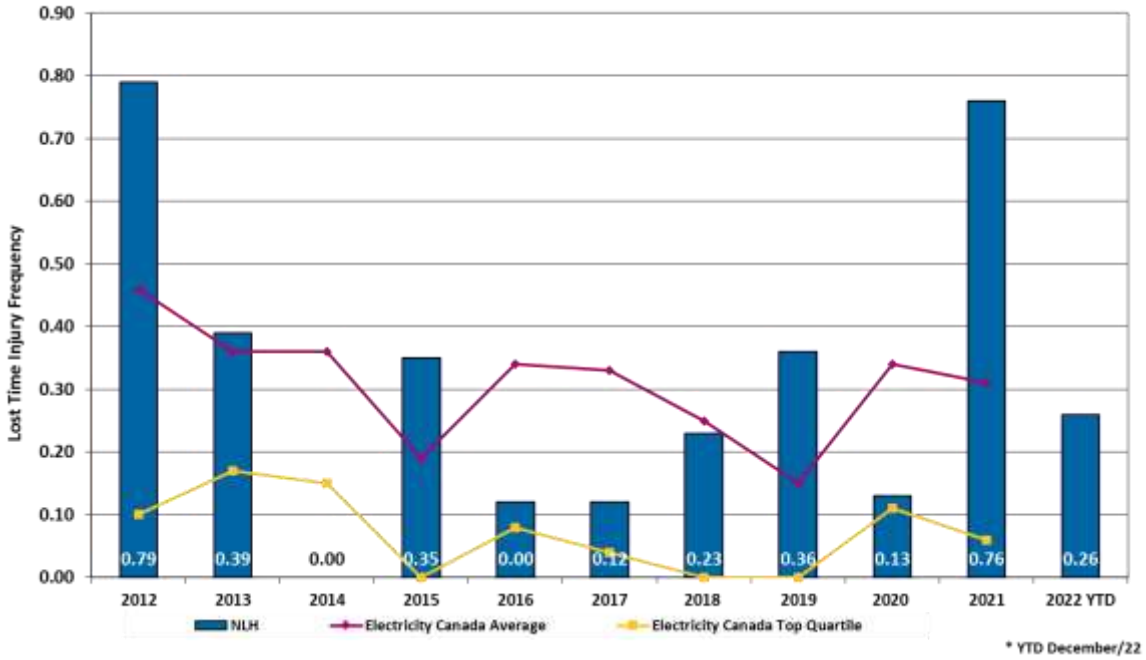


Chart 2: Hydro's LTIF Compared to Electricity Canada Benchmarks[16,17]

2.2.3 Lost-Time Severity Rate

There were no new lost-time injuries during the last quarter of 2022. As such, Hydro's lost-time severity rate to year end was 1.31, based on two lost-time injuries and ten lost days. Hydro has an Early and Safe Return to Work program and policy that focuses on early intervention and workplace accommodation to minimize the impact of injury and illness to employees. The goal is to support the affected employee's return to meaningful work as soon as possible in a manner that is respectful of their physical and psychological well-being.

Hydro's annual lost-time severity rate for the past decade compared to the current year end is provided in Chart 3.

[16] Safety and Health performance metrics are compared to Electricity Canada utility members in Group 2 (300-1,500 employees).
[17] Electricity Canada benchmarks for 2022 were not available as of the date this report was published.

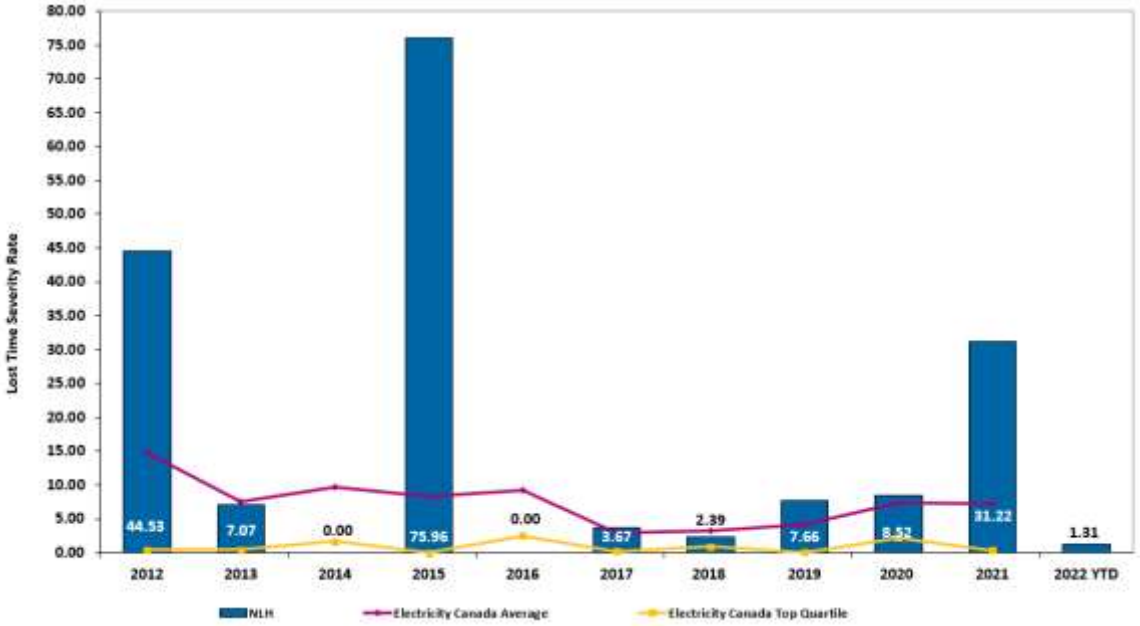


Chart 3: Hydro's Lost-Time Severity Rate[18]

2.3 Line Contacts

Hydro had five reportable line contact incidents by third-parties during the current quarter, as shown in Table 3. No injuries to persons were sustained as a result of these incidents. Additional information for these line contact incidents is provided in Table 4.

Table 3: Line Contact with Distribution System

Type of Contact	No. of Incidents
Contacts by Individuals	0
Contacts by Equipment/Vehicles	5

[18] Electricity Canada benchmarks for 2022 were not available as of the date this report was published.

Table 4: Line Contact Equipment/Vehicle Incidents

Date	Location	Incident Description
05-Oct-2022	Mary's Harbour	Excavator hooked guy wire breaking pole and tearing drop wire down.
27-Oct-2022	Happy Valley	Dump truck leaving dump with box up hooked and broke triplex drop wire.
04-Nov-2022	St. Alban's	Excavator made contact with neutral line.
14-Nov-2022	Joe Batt's Arm	Snow plow struck pole.
06-Dec-2022	Bay d'Espoir	Driver left roadway and struck and broke a pole.

Hydro continues to work toward reducing line contact incidents by increasing public and contractor awareness of the hazards associated with contacting power lines. In recent years, activities have included providing education about safety risks through social media as well as direct communication with contractors. Hydro also participates in a multi-stakeholder industry working group on electrical contact prevention that actively explores ways to minimize line contacts.

2.4 Safety Initiatives

Hydro's focus on ensuring the safety of its employees, contractors, and the public continued during the current quarter. The advancement of Hydro's safety and health initiatives related to mental health and wellness are ongoing and include:

- Activities around reducing musculoskeletal injuries, including a rollout of Hydro's Corporate Ergonomics program, and ergonomics awareness sessions during safety meetings;
- Continued promotion of the new health and wellness application to make health and wellness resources more accessible to all employees;
- Improving contractor safety management; and
- Progressing the annual Safety and Health Monitoring Plan through targeted inspections, audits, and field compliance audits.

3.0 Reliability

3.1 Customer Reliability Indicators

A summary of customer reliability indicators[19] is provided in Table 5. Additional information regarding these reliability indicators is included in Tab 2 of the "2022 Annual Report on Key Performance Indicators."

Table 5: Customer Reliability Indicators

	Current Quarter	
	2022	**2021**
End Consumer[20] SAIDI	0.44	1.03
End Consumer SAIFI	0.31	0.45
T-SAIDI[21]	34	87
T-SAIFI[22]	0.32	0.68
UFLS[23] Events	2	2
Service Continuity SAIDI	3.11	7.51
Service Continuity SAIFI	0.78	2.28

3.1.1 End Consumer SAIDI

End Consumer SAIDI measures reliability to all end customers of electricity in the province who are supplied by Hydro. It is a measure of the duration of service interruptions experienced as a result of Hydro system events but does not reflect service interruptions that are a result of issues on Newfoundland Power's distribution system. The largest contributor to End-Consumer SAIDI during the fourth quarter was an unplanned outage to eastern Labrador.

3.1.2 End-Consumer SAIFI

End-Consumer SAIFI measures reliability to all end customers of electricity in the province who are supplied by Hydro. It is a measure of the frequency of service interruptions experienced as a result of Hydro system events but does not reflect service interruptions that are a result of issues on

[19] Customer reliability indicators are calculated excluding any significant events, which are events that exceed reasonable design and/or operational limits of the electrical power system.
[20] End-Consumer is a reliability measure of all end consumers of electricity in the province supplied by Hydro. The measure is a combination of Hydro's service continuity data and Newfoundland Power Inc.'s ("Newfoundland Power") service continuity data for loss of supply outages resulting from events on Hydro's system.
[21] Transmission System Average Interruption Duration Index ("T-SAIDI").
[22] Transmission System Average Interruption Frequency Index ("T-SAIFI").
[23] Under Frequency Load Shedding ("UFLS").

Newfoundland Power's distribution system. The largest contributor to End-Consumer SAIFI during the fourth quarter was an outage that occurred to Newfoundland Power customers due to an UFLS event.

3.1.3 T-SAIDI and T-SAIFI

T-SAIDI and T-SAIFI are reliability indicators for bulk transmission assets that measure the average duration and frequency of outages in minutes per delivery point. The events that made the largest impacts on T-SAIDI and T-SAIFI were unplanned outages in eastern Labrador.

3.1.4 Service Continuity SAIDI and SAIFI

Service Continuity SAIDI and SAIFI measure the duration and frequency of service interruptions to Hydro's Isolated and Interconnected systems. The largest contributors to service continuity SAIDI and SAIFI during the fourth quarter were related to unplanned outages for customers in eastern Labrador.

3.2 Live-Line Work

There were approximately 20,000 customer hours of outages avoided during the current quarter due to the use of live-line work. This corresponds to 0.12 avoided interruptions per customer for distribution SAIFI and 0.52 outage hours avoided per customer for distribution SAIDI.

3.3 Generation Outage Summary

A summary of the status of Hydro's generating units for the fourth quarter is provided as Appendix A. It classifies which units were available or unavailable and any associated deratings. Further information is provided in Hydro's daily Supply and Demand Status reports filed with the Board.[24]

4.0 Customer Service

4.1 Customer Transactional Surveys

Survey results for the fourth quarter indicate that approximately 85% of customers were satisfied with the service they received when they reached out to Hydro's customer service department for assistance and 86% of customers felt their concern was resolved with the first call. A summary of these results is provided in Table 6.

[24] Hydro's daily Supply and Demand Status reports can be accessed at <http://www.pub.nl.ca/applications/IslandInterconnectedSystem/DemandStatusReports.htm>.

Table 6: Customer Service Transactional Survey Data

Measure	Q4 2022	Q4 2021
Overall Satisfaction	85%	86%
First Call Resolution	86%	86%
Number of Surveys Completed	688	281

4.2 Customer Statistics

A summary of the number of Hydro customers in each customer class is provided in Table 7.

Table 7: Customer Statistics

Customer Class	2022 Actual	2021 Actual	2022 Budget
Rural	39,101	38,634	39,007
Industrial	5	5	5
Labrador Industrial Transmission[25]	2	2	2
Utility	1	1	1
Average Monthly Reading Days	30.1	30.2	N/A

4.3 Net Metering Program

Hydro did not receive any new net metering applications during the fourth quarter. Hydro's total number of net metering customers remains at three, with a total net metering capacity of 71.6 kW.

5.0 Operations

5.1 Energy Supply

5.1.1 Energy Supply for the Island Interconnected System

A summary of the sources of energy supply (Hydro-owned and purchased) used to meet Hydro's Island Interconnected customer load requirements is provided in Table 8.

[25] Iron Ore Company of Canada and Tacora Resources.

Table 8: Hydro Island Interconnected System Produced and Delivered (GWh)[26]

	2022 Actual	2021 Actual	2022 Annual Forecast
Production (net)			
Hydro	4,643.6	4,495.0	4,604.3
Thermal	745.5	710.6	91.4
Gas Turbines	(3.9)	16.7	2.7
Diesels	(0.1)	(0.2)	0.4
Subtotal Production	**5,385.2**	**5,222.0**	**4,698.8**
Energy Deliveries			
Non-Utility Generators ("NUGs")			
Rattle Brook	15.0	14.4	14.4
CBPP[27] Co-generation	46.1	50.1	57.6
St. Lawrence Wind	98.3	100.7	99.4
Fermeuse Wind	85.9	85.0	96.3
New World Dairies	3.3	3.4	2.6
Subtotal NUGs	**248.5**	**253.7**	**270.3**
Secondary and Others			
CBPP Secondary[28]	41.0	24.5	0.0
CBPP Capacity Assistance	0.0	0.6	0.0
Vale[29] Capacity Assistance	0.0	0.0	0.0
Hydro Request for Newfoundland Power Standby	0.0	0.2	0.0
Nalcor Energy[30]	716.8	713.0	756.9
Labrador-Island Link	1,305.5	581.8	1,190.5
Maritime Link Imports	2.0	12.0	0.0
Subtotal Secondary and Other	**2,065.3**	**1,332.0**	**1,947.4**
Subtotal Energy Deliveries	**2,313.8**	**1,585.7**	**2,217.7**
Total Hydro System Produced and Delivered	**7,699.1**	**6,807.7**	**6,916.6**
Less: Maritime Link Exports[31]	1,119.0	231.5	0.0
Less: Energy Supplied to CBPP via Temporary Energy Exchange Agreement	0.0	51.9	0.0
Total Island Interconnected System Consumption	**6,580.1**	**6,524.4**	**6,916.6**

[26] Totals may not add due to rounding.
[27] Corner Brook Pulp and Paper Limited ("CBPP").
[28] Includes repayment of 14.5 GWh of energy previously supplied to CBPP by Energy Marketing via the Temporary Energy Exchange Agreement.
[29] Vale Newfoundland and Labrador Limited ("Vale").
[30] Nalcor Energy includes Star Lake, Grand Falls, and Bishop's Falls generation.
[31] Includes repayment of 14.5 GWh of energy previously supplied to CBPP by Energy Marketing via the Temporary Energy Exchange Agreement.

The total energy consumed on the Island Interconnected System was 55.7 GWh (0.9%) higher in 2022 as compared to 2021. The increase in energy consumption was due to an increase in utility load of 88.6 GWh, attributed to colder weather conditions in the first quarter, and, to a lesser degree, improving economic conditions. A portion of the increase in energy consumption this year may be attributable to the lesser impacts of the COVID-19 pandemic when compared to last year; however, those impacts cannot be reliably quantified at this time. The increase in utility load was partially offset by a reduction in Industrial load of 34.5 GWh. Maritime Link exports were 887.5 GWh higher this year when compared to the same last year, associated with increased exports by Energy Marketing of energy being produced at the Muskrat Falls Hydroelectric Generating Facility.

Hydroelectric production was 148.7 GWh (3.3 %) higher in 2022 when compared to 2021. This was primarily due to higher customer energy requirements supported by higher reservoir inflows during the year.

Total energy purchases were 728.3 GWh (45.9%) higher this year when compared to last year. This was primarily due to higher deliveries over the Labrador-Island Link.

Energy production at the Holyrood Thermal Generating Station ("Holyrood TGS") was 34.9 GWh (4.9%) higher this year when compared to last year. Production at the Holyrood TGS was higher in 2022 for two reasons: i) increased in energy consumption (57 GWh) mainly due to colder temperatures in November in 2022 versus 2021 and ii) in 2021, Holyrood generation was limited by unit availability.

Standby generation in 2022 was lower than 2021 as there were less requirements to run standby generation this year due to system conditions.

The energy supply for the Island Interconnected System is provided in Chart 4.

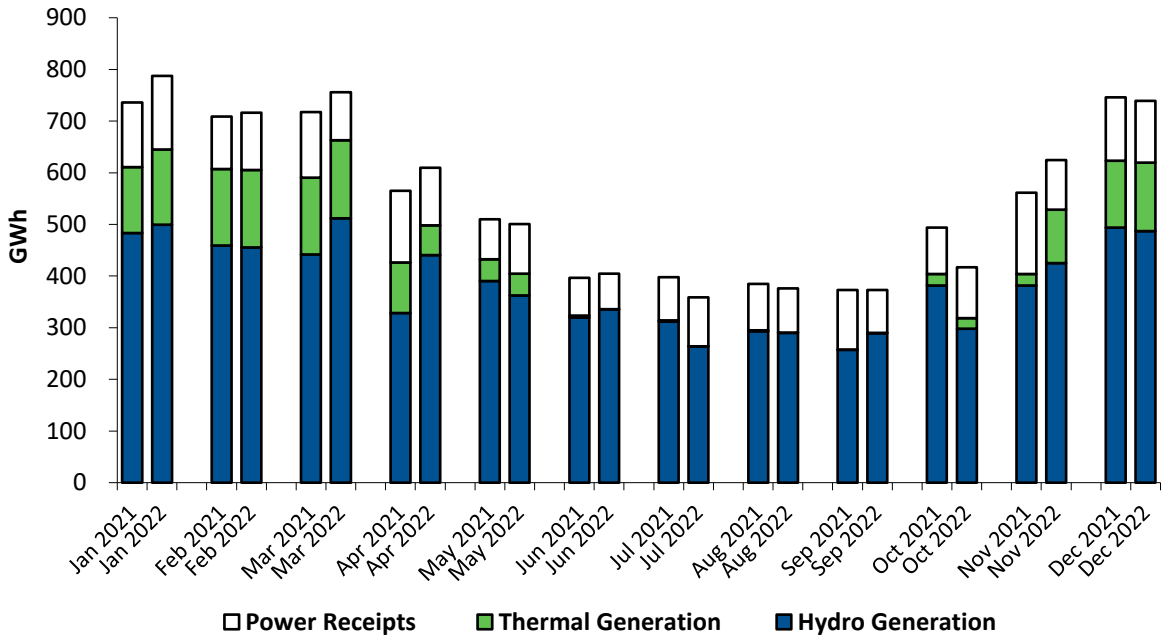


Chart 4: Island Interconnected System Energy Supply

5.1.2 Energy Supply for the Labrador Interconnected System

The purchased and produced energy on the Labrador Interconnected System provided in Table 9 shows consistency year-to-date this year when compared to the same period last year.

Table 9: Labrador Interconnected System Production (GWh)[32]

	2022 Actual	2021 Actual	2022 Annual Forecast
Production (net)			
Gas Turbines	(0.7)	(0.0)	0.6
Diesels	(0.2)	(0.1)	0.1
Subtotal Production	**(0.9)**	**(0.1)**	**0.7**
Purchases[33]	2,882.6	2,842.4	3,049.7
Total Produced and Purchased	**2,881.7**	**2,842.2**	**3,050.4**

[32] Totals may not add due to rounding.

[33] Power Purchases reflect energy purchases from Churchill Falls (Labrador) Corporation including recall energy and the former Twin Falls Power Corporation Limited Block energy plus purchases of Muskrat Falls energy supplied by Muskrat Falls Hydroelectric Generating Facility. During the first quarter of this year, Hydro began to supply Labrador customers with energy from the Muskrat Falls Hydroelectric Generating Facility to enable additional export of recall energy. This optimization of energy usage in Labrador to enable increased export activity resulted in a net benefit to Island customers through net revenues credited to Hydro's Supply Cost Variance Deferral Account without impacting costs for Labrador customers.

5.1.3 Energy Supply for Isolated Systems

Total isolated energy supply increased by 3.0 GWh (4.1%) year-to-date this year when compared to the same period last year. While higher sales were experienced across all systems, L'Anse-au-Loup accounted for approximately 27% of the increase from levels observed last year. Colder weather conditions experienced this year when compared to last year in the area where there is a high reliance on electric heating is a contributing factor to the change in consumption. Total produced and purchased energy for the isolated systems for this year is below what was forecast for the same period.

A summary of isolated system production and purchases as well as the associated costs is provided in Table 10. The average cost of power purchased from Hydro-Québec is based on Montreal rack fuel prices, which were significantly higher during 2022 as compared to 2021. The prices were approximately $209 per MWh in 2022 compared to $122 per MWh in 2021. The cost of power purchased from non-utility generators ("NUGs") in Hydro's isolated systems also increased to $380 per MWh in 2022 from $213 per MWh in 2021. The average cost of power is determined based on the diesel fuel price in the respective areas.

Table 10: Isolated Systems Production and Purchased[34]

	2022		2021		2022 Annual Forecast	
	(GWh)	($000)	(GWh)	($000)	(GWh)	($000)
Production (Diesels)						
Gross	50.9	23,898.8	48.2	13,027.4	55.1	16,037.3
Net	48.3		45.7		52.2	
Purchased[35]						
NUGs[36]	1.1	428.4	1.0	216.4	1.6	363.9
Hydro-Québec	25.1	5,263.2	25.0	3,048.9	25.8	3,334.1
Subtotal Purchased	**26.3**	**5,691.6**	**26.0**	**3,265.3**	**27.3**	**3,698.0**
Total Produced (Net) and Purchased	**74.6**	**29,590.4**	**71.7**	**16,292.7**	**79.5**	**19,735.3**

[34] Totals may not add due to rounding.
[35] Purchases before taxes.
[36] NUGs includes Frontier Power in Ramea and St. Mary's River Energy Limited Partnership.

5.2 System Hydrology for the Island Interconnected System

Inflows to the end of the fourth quarter of 2022 were 25% above the historical average. The aggregate reservoir storage level was 2,095 GWh, which is 15% below the seasonal maximum operating level and 52% above the minimum storage level of 1,382 GWh.[37] The aggregate reservoir storage level for the same quarter in 2021 was 1,723 GWh.

A summary of the aggregate reservoir storage levels is provided in Table 11 and the daily aggregate reservoir storage levels for the current and previous year are illustrated in Chart 5.

Table 11: Hydrology Storage Levels (GWh)

2022	2021	Minimum Limit 2022	20-Year Average
2,095	1,723	1,382	1,946

[37] Minimum storage targets are developed annually to provide guidance in the reliable operation of Hydro's major reservoirs—Victoria, Meelpaeg, Long Pond, Cat Arm, and Hinds Lake. The minimum storage target is designed to show the minimum level of aggregate storage required such that if there was a repeat of Hydro's critical dry sequence, or other less severe sequence, Hydro's load can still be met through the use of the available hydraulic storage, maximized generation at the Holyrood TGS, and firm delivery of Muskrat Falls generation on the Labrador-Island Link. Hydro's long-term critical dry sequence is defined as January 1959 to March 1962 (39 months). Other dry periods are also examined during the derivation to ensure that no other shorter-term historic dry sequence could result in insufficient storage.

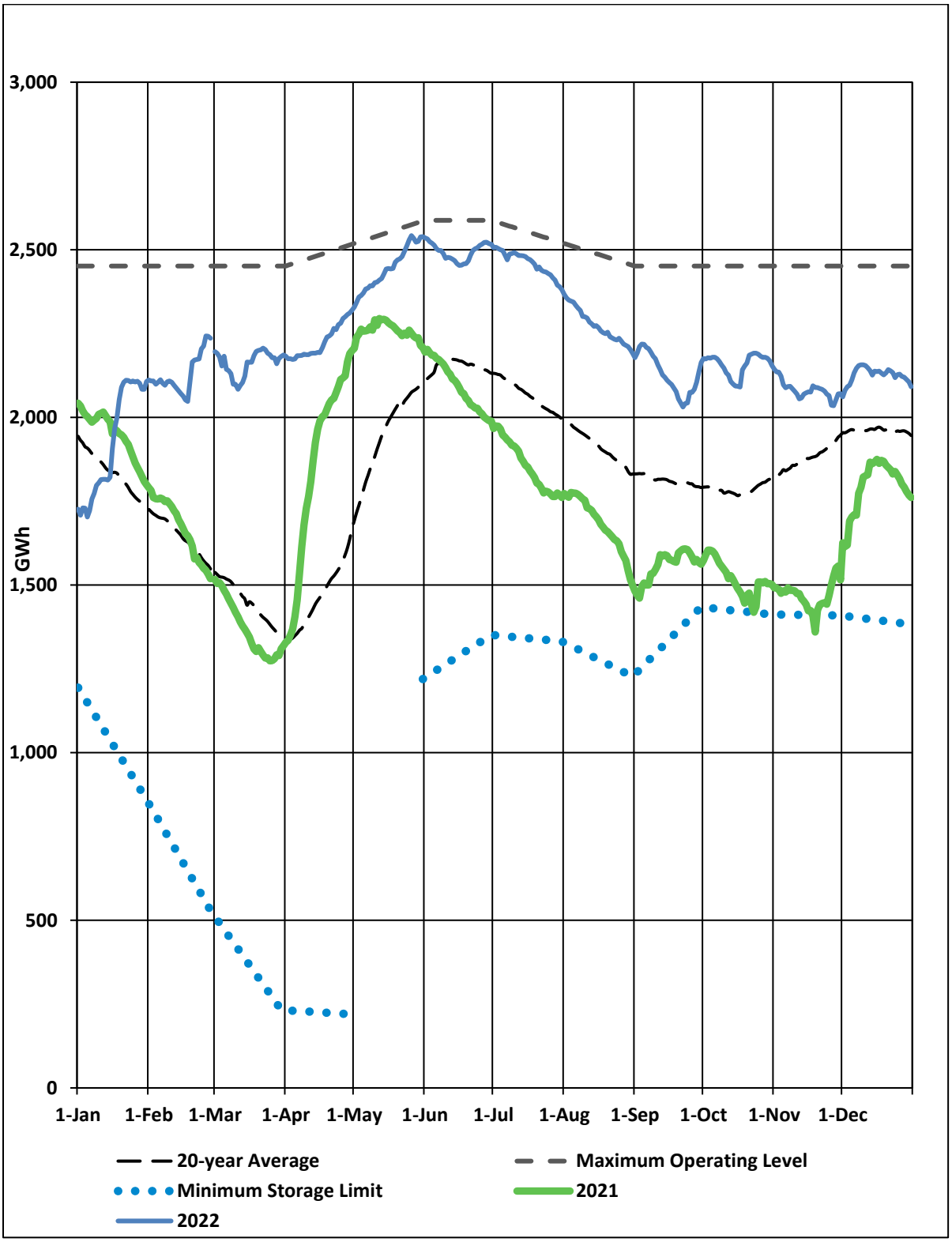


Chart 5: Total System Energy Storage

5.3 Fuel Prices

During the fourth quarter, market prices for No. 6 fuel oil reached a high of $143 per barrel early in October and a low of $105 per barrel early in December. The ending inventory cost was $133 per barrel. This compares to the fuel price of $105.90 per barrel that was reflected in Newfoundland Power's base rates during the current quarter.[38]

During the fourth quarter, there was one shipment of No. 6 fuel oil on December 18, 2023. Hydro purchased 203,391 barrels at a cost of approximately $114 per barrel. No. 6 fuel oil inventory at the end of 2022 was 319,003 barrels.

A comparison of No. 6 fuel oil prices through 2022 as compared to 2020 and 2021, as well as the fuel oil price reflected in the wholesale rate to Newfoundland Power are provided in Chart 6.[39]

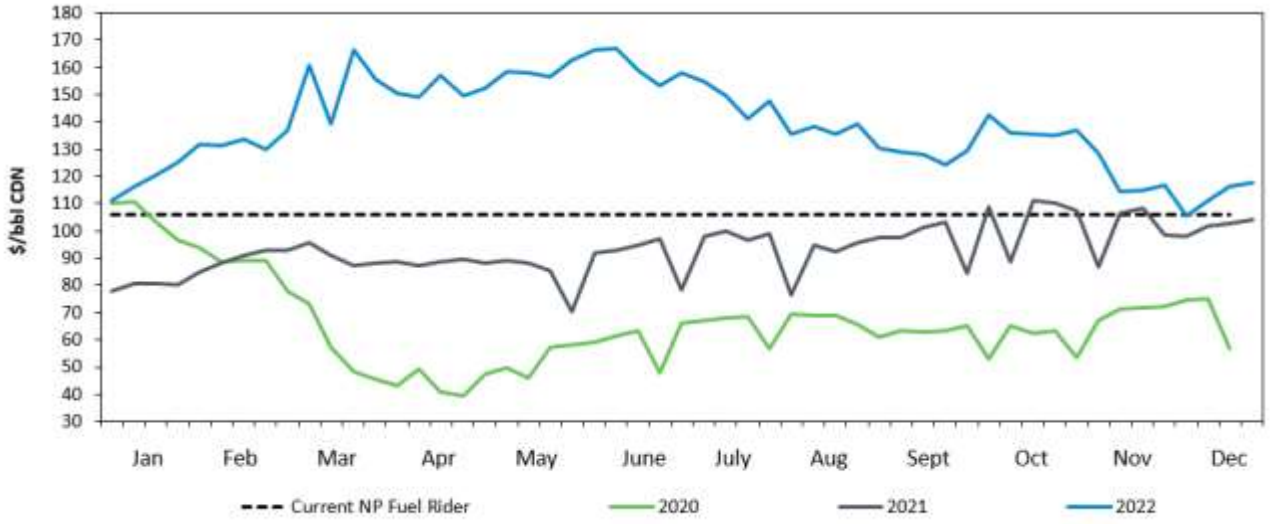


Chart 6: No. 6 Fuel Oil Average Weekly New York Spot Price[40]

[38] The price of $105.90 per barrel is reflected in Newfoundland Power's base rates effective October 1, 2019, as per *Public Utilities Act*, RSNL 1990, c P-47, Board Order No. P.U. 30(2019), Board of Commissioners of Public Utilities, September 11, 2019.
[39] As per *Public Utilities Act*, RSNL 1990, c P-47, Board Order No. P.U. 4(2022), Board of Commissioners of Public Utilities, February 21, 2022, variations in No. 6 fuel oil price and quantity are captured within the Supply Cost Variance Deferral Account and disposition of the balance in the account will be subject to future order of the Board. As such, the RSP Rules for Balance Disposition reflect the discontinuance of the fuel rider.
[40] In January 2022, Platts stopped reporting No. 6 0.7% fuel oil in response to changing markets for that fuel product. As a result, Hydro is now using an interpolated pricing model for No. 6 fuel oil that incorporates No. 6 0.5% (pricing at 40% of daily value) and 97% of NYH Atlantic Coast Barge (pricing at 60% of daily value).

1 The monthly forecast price of No. 6 fuel oil (0.7% sulphur) is provided in Table 12.[41]

Table 12: No. 6 Fuel Oil Forecast Prices ($CDN/bbl)

Month	Price
January 2023	100.10
February 2023	106.70
March 2023	103.40
April 2023	94.00
May 2023	103.60
June 2023	106.00
July 2023	110.70
August 2023	112.90
September 2023	118.30
October 2023	113.10
November 2023	111.70
December 2023	113.70

2 A comparison of the Ultra Low Sulphur Diesel No. 1 (used in diesel generation) fuel oil prices is provided

3 in Chart 7.

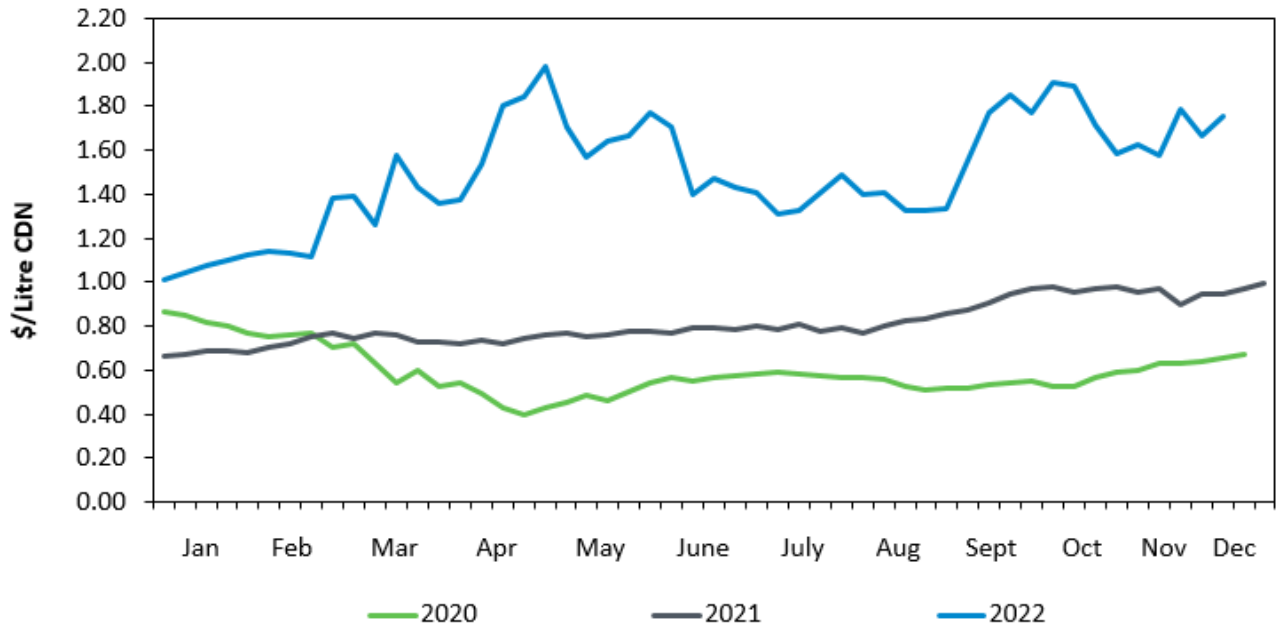


Chart 7: Ultra Low Sulphur Diesel Weekly Montreal Rack Price

[41] The 2023 price forecast is based on Platts Analytics fuel price outlook, January 2023 World Oil Market Forecast and includes the premium for the No. 6 fuel oil.

5.4 Fourth Quarter Transfers to Supply Cost Deferral Accounts

5.4.1 Supply Cost Variance Deferral Account Overview

In Order No. P.U. 4(2022),[42] the Board approved the following in relation to the Supply Cost Variance Deferral Account:

- The Supply Cost Variance Deferral Account to become effective November 1, 2021, reflecting the month the payments under the Muskrat Falls Power Purchase Agreement were implemented.
- Rules for the balance disposition in the Revised Energy Supply Variance Deferral Account and the Holyrood Conversion Rate Deferral Account with an effective date of November 1, 2021, that included filing an application for the disposition of the October 31, 2021 balances in these accounts no later than March 31, 2022. Disposition will be inclusive of a Cost Variance Threshold equal to +/- $500,000.
- The removal of the Isolated Systems Supply Cost Variance component from the Supply Cost Variance Deferral Account definition. This account will be maintained separately from the Supply Cost Variance Deferral Account.

On March 31, 2022, Hydro filed its application for the Recovery of Deferred Supply Costs that included the recovery of the October 31, 2021 balances in the Revised Energy Supply Cost Variance Deferral Account and the Holyrood Conversion Rate Deferral Account, as well as the December 31, 2021 balance in the Isolated Systems Cost Variance Deferral Account.[43] In Order No. P.U. 16(2022),[44] the Board approved the recovery of these balances.

The balances accumulated in the Supply Cost Variance Deferral Account as at December 31, 2022 are reported in Attachment 2. The 2022 activity in the account increased the balance by $173.5 million, primarily due to payments made under the Muskrat Falls Power Purchase Agreement ($237.7 million) offset by fuel savings at the Holyrood TGS ($37.0 million) and revenue from exports and tariffs ($42.5 million). The total balance in the account as at December 31, 2022 is $190.4 million.[45]

[42] *Public Utilities Act*, RSNL 1990, c P-47, Board Order No. P.U. 4(2022), Board of Commissioners of Public Utilities, February 21, 2022.
[43] "Application for the Recovery of Deferred 2021 Supply Costs," Newfoundland and Labrador Hydro, March 31, 2022.
[44] *Public Utilities Act*, RSNL 1990, c P-47, Board Order No. P.U. 16(2022), Board of Commissioners of Public Utilities, May 6, 2022.
[45] The December 31, 2022 balance of $190.4 million is unaudited.

5.4.2 Isolated Systems Cost Variance Deferral Account

Hydro accumulated $9.0 million[46] in the Isolated Systems Cost Variance Deferral Account as at December 31, 2022. The current year's actual unit cost of diesel fuel was approximately 16 cents per kWh more than the 2019 Test Year unit cost of fuel, which is the primary driver of the year-to-date transfer of fuel oil costs to this account this year.

The current year transfers to the Isolated Systems Cost Variance Deferral Account are provided in Table 13.[47]

Table 13: Isolated Systems Cost Variance Deferral Account Transfers[48] ($ Millions)

2022 Actual	2021 Actual	Variance
9.0	(2.6)	11.6

In accordance with the currently approved account definitions, Hydro will file its application for recovery of the Isolated Systems Cost Variance Deferral Account on or before March 31, 2023. This application will include the final transfer amounts as well as detailed information as to the drivers of the transfers.

5.5 Ponding/Spill Activities

In Order No. P.U. 49(2018),[49] the Board approved Hydro's application for approval of a Pilot Agreement for the Optimization of Hydraulic Resources ("Pilot Agreement").[50] The intent of the Pilot Agreement is to optimize Hydro's hydraulic resources through the strategic use of its storage capabilities, taking advantage of the variability of energy pricing in external markets over time. Ponding is the purchase and import of low-cost energy from off-island sources to serve Hydro's customers and the export and sale of an offsetting amount of energy at another time when market prices are higher relative to when the import occurred.

[46] The December 31, 2022 Isolated System Cost Variance Deferral balance of $9.0 million is unaudited.
[47] *Public Utilities Act*, RSNL 1990, c P-47, Board Order No. P.U. 30(2019), Board of Commissioners of Public Utilities, September 11, 2019.
[48] Net of deadbands.
[49] *Public Utilities Act*, RSNL 1990, c P-47, Board Order No. P.U. 49(2018), Board of Commissioners of Public Utilities, December 18, 2018.
[50] The Third Amended and Restated Pilot Agreement for the Optimization of Hydraulic Resources was approved in *Public Utilities Act*, RSNL 1990, c P-47, Board Order No. P.U. 35(2022), Board of Commissioners of Public Utilities, December 16, 2022.

5.5.1 Ponding Activity

There were no ponding exports in the fourth quarter of 2022. Ponding imports were on hold throughout the quarter while reservoir levels across the Island system remained high. The ponded balance has remained at -9,805 MWh since August 2022.

5.5.2 Spill Activity

There were no spill releases in the fourth quarter of 2022. Aggregate reservoir storage remained high throughout the fourth quarter but levels remained within normal operating limits. There were no significant weather events that put the reservoirs at risk of spilling water.

5.6 Statement of Energy Sold

A summary of Hydro's energy sales year-to-date compared to that of other reporting periods is provided in Table 14.

Table 14: Statement of Energy Sold (GWh)

	2022 Actual	2021 Actual	2022 Budget
Island Interconnected			
Newfoundland Power	5,509	5,432	5,577
Island Industrials	387	422	526
Export and Other	835	47	-
Rural			
Domestic	240	227	241
General Service	176	169	171
Street Lighting	3	3	3
Subtotal Rural	**419**	**399**	**415**
Subtotal Island Interconnected	**7,150**	**6,300**	**6,518**
Island Isolated			
Domestic	4	4	4
General Service	2	1	2
Street Lighting	-	-	-
Subtotal Island Isolated	**6**	**5**	**6**
Labrador Interconnected			
Domestic	315	286	315
General Service	389	340	397
Street Lighting	2	1	2
Subtotal Labrador Interconnected	**706**	**627**	**714**
Labrador Isolated			
Domestic	19	22	25
General Service	18	16	19
Street Lighting	-	-	-
Subtotal Labrador Isolated	**37**	**38**	**44**
L'Anse-au-Loup			
Domestic	15	14	16
General Service	9	8	9
Street Lighting	-	-	-
Subtotal L'Anse-au-Loup	**24**	**22**	**25**
Total Energy Sold (Before Rural Accrual)	**7,923**	**6,992**	**7,307**
Rural Accrual	(1)	27	N/A
Total Energy Sold	**7,922**	**7,019**	**7,307**
Non-Regulated Customers[51]			
Labrador Industrials	1,961	1,902[52]	2,050

[51] Does not include non-regulated sales for export.
[52] Restated to include imbalance energy of 37.7 GWh.

6.0 Asset Management and Investment

6.1 2022 Capital Budget

Hydro's 2022 Capital Budget was approved by the Board in Order No. P.U. 37(2021).[53] In addition to approval for an investment of $84 million in capital projects, Hydro carried forward $34 million from its 2021 capital program. As a result, Hydro's opening capital budget for 2022 was $118 million. Additionally, supplemental capital of $20 million has been approved for 2022. Hydro's revised Board-approved 2022 capital budget as at December 31, 2022 was $138 million.

In addition, there were contributions in aid of construction ("CIAC") carried forward from the 2021 capital program and supplemental CIACs approved by the Board totalling $15 million. The 2022 capital budget as at December 31, 2022, net of CIACs, was $123 million.

6.2 Fourth Quarter 2022 Capital Projects

Hydro's approved, planned capital projects continue to advance through stages of planning, design, procurement, and construction. Additionally, throughout the year, certain unplanned capital work arises that must be addressed ("break-in work"). The planned and break-in construction activities completed during the fourth quarter are provided herein.

6.2.1 Hydraulic Generation

Planned Work

- The turbine and generator were overhauled for Unit 4 at the Bay d'Espoir Hydroelectric Generating Facility;
- New bearing cover seals were installed for Unit 3 at the Bay d'Espoir Hydroelectric Generating Facility;
- The frazil ice monitoring system was upgraded at the Hinds Lake Hydroelectric Generating Station;
- The diesel generator system was upgraded at the Burnt Dam Spillway; and
- Gate 3 was refurbished and the monorail and hoist were upgraded at the Ebbegunbaeg Control Structure.

[53] *Public Utilities Act*, RSNL 1990, c P-47, Board Order No. P.U. 37(2021), Board of Commissioners of Public Utilities, December 20, 2021.

Break-In Work

- The vibration monitoring system was refurbished at the Bay d'Espoir Hydroelectric Generating Facility;
- The fire water jockey pump in Powerhouse 2 was replaced at the Bay d'Espoir Hydroelectric Generating Facility;
- The diesel day tank was replaced at the Ebbegunbaeg Control Structure; and
- The accommodations septic tank was replaced at the Upper Salmon Hydroelectric Generating Station.

6.2.2 Thermal Generation

Planned Work

- Condition assessment and miscellaneous upgrades were completed for the Unit 2 boiler at the Holyrood TGS;
- The Unit 3 turbine valves were overhauled at the Holyrood TGS;
- The Unit 1 west cooling water pump was overhauled at the Holyrood TGS;
- The waste water treatment plant variable frequency drives were upgraded at the Holyrood TGS; and
- The waste water basin building was upgraded at the Holyrood TGS.

Break-In Work

- Fuel oil set heater tubes were replaced for Units 1, 2 and 3 at the Holyrood TGS;
- The reheat attemperator control and block valves were overhauled for Units 1, 2 and 3 at the Holyrood TGS;
- The Unit 3 fuel oil accumulator was overhauled at the Holyrood TGS;
- The Unit 3 coupling plates were replaced at the Holyrood TGS;
- The Unit 1 boiler feed pump motor was overhauled at the Holyrood TGS;
- The fuel piping cross-over stairs and platforms at Tanks 2, 3 and 4 were replaced at the Holyrood TGS;

- The marine terminal boardwalk was refurbished and the jetty bumper timbers were replaced at the Holyrood TGS; and
- Powerhouse roof drains and two roof access hatches were replaced at the Holyrood TGS.

6.2.3 Gas Turbine Generation

Planned Work

- The fuel oil, lube oil and glycol pumps and motors were replaced at the Happy Valley Gas Turbine; and
- A lube oil cooler hood and spill containment system was installed at the Holyrood Gas Turbine.

6.2.4 Terminal Stations

Planned Work

- Refurbishment of transformers was completed at the Holyrood and Grand Falls Frequency Converter Terminal Stations;
- Oil was refurbished for a transformer at the Grand Falls Frequency Converter Terminal Station;
- Transformer online gas monitoring systems were installed at the Hardwoods and Western Avalon Terminal Stations;
- Controls upgrades were completed for paralleling of transformers at the Hardwoods Terminal Station;
- Circuit breakers were replaced at the Stony Brook and Happy Valley Terminal Stations;
- Disconnect switches were replaced at the Oxen Pond, Stony Brook and Sunnyside Terminal Stations;
- The data alarm system was upgraded at the Oxen Pond Terminal Station;
- Protective relays were replaced at the Massey Drive, Springdale, Deer Lake, Stony Brook and Western Avalon Terminal Stations;
- Breaker failure protection was installed at the Deer Lake Terminal Station;
- Equipment foundations were upgraded at the Barachoix and Linton Lake Terminal Stations;
- Grounding system upgrades were completed at the Oxen Pond, Peter's Barren, Rocky Harbour, Sally's Cove, St. Anthony Airport, and St. Anthony Diesel Plant Terminal Stations;

- A new power transformer and new grounding transformer was installed at the Happy Valley Terminal Station;
- The battery banks were replaced at the English Harbour West and St. Anthony Diesel Plant Terminal Stations; and
- The yard was extended at the Wabush Substation.

Break-In Work

- Oil was refurbished for a transformer at the Holyrood Terminal Station;
- Transformer protective devices were replaced at various terminal stations; and
- A spare bearing was overhauled for the Wabush Synchronous Condensers 1 and 2.

6.2.5 Transmission and Distribution

Planned Work

- Wood pole line refurbishment was completed for transmission lines TL201, TL222, TL234, TL241, TL250, TL259, and TL260;
- Distribution feeder upgrades were completed at Farewell Head; and
- Recloser remote control was installed at Hampden.

6.2.6 Rural Generation

Planned Work

- A generating unit was overhauled at the Postville Diesel Generating Station;
- Automation upgrades were completed at the St. Anthony and Cartwright Diesel Generating Stations; and
- The powerhouse roof was replaced at the St. Anthony Diesel Generating Station.

Break-In Work

- A generating unit was winterized at the Charlottetown Diesel Generating Station.

6.2.7 Transportation

Planned Work

- Electric vehicle charging stations were installed in Woody Point, Cow Head, Port Aux Choix, Flowers Cove, St. Anthony, Roddickton and Churchill Falls; and

- Nineteen snowmobiles were procured.

6.2.8 Information Systems

Planned Work

- Core information and operations technology infrastructure was upgraded, including upgrade of servers, enhancement of the tape back up system, and implementation of firewall monitoring software;
- Cybersecurity defense hardware and industrial firewalls were implemented; and
- Various software applications were upgraded or enhanced.

6.2.9 Telecontrol

Planned Work

- Remote terminal units were replaced for telecommunications systems at the Stony Brook Terminal Station and Upper Salmon Hydroelectric Generating Station;
- Battery banks and chargers were replaced for the telecommunications systems at the Hinds Lake Control Structure, Hinds Lake Intake Structure, and Hinds Lake Spillway Structure; and
- Various mobile devices were replaced.

6.3 Integrated Annual Work Plan

Hydro has an Integrated Annual Work Plan consisting of capital and maintenance work for its generation, transmission and distribution, and other associated assets. Hydro's 2022 Integrated Annual Work Plan completion target is 90%. Results for Annual Work Plan activities are provided in Table 15.

Table 15: Annual Work Plan Activity

	2022 Actual	
Planned	**Completed**	**%**
6,523	6,389	98

7.0 Financial

7.1 Statement of Income

Financial data for the year ended December 31, 2022 will follow when audited financial information becomes available.

7.2 Greenhouse Gas Credits

In 2016, the federal government announced plans to implement carbon pricing to help Canada meet its greenhouse gas emission targets and, in October 2018, the provincial government released its approach to carbon pricing. The plan came into effect on January 1, 2019 and provides for Hydro to receive performance credits as the Holyrood TGS uses less fuel and decreases greenhouse gas emissions. Under the *Management of Greenhouse Gas Act*,[54] Hydro may sell these performance credits to other regulated facilities in the province, of which there are 14, excluding the Holyrood TGS. 2022 was the third year that Hydro was able to sell its performance credits. The qualifications and other specifics of how the performance credits are earned, how they can be sold, etc. are contained within the Management of Greenhouse Gas Reporting Regulations.[55]

In 2022, Hydro carried forward 281,078 performance credits from the previous year and earned 462,545 credits as a result of the Holyrood TGS using less fuel and decreasing greenhouse gas emissions in comparison to a baseline forecast for reporting year 2021. Hydro sold 248,015 performance credits in 2022 for a total revenue of $8.54 million. Hydro used 1,708 credits for compliance obligations with respect to the Holyrood Gas Turbine. Hydro is carrying forward 493,900 performance credits to apply to future compliance requirements or to be sold in future years. Credits expire seven years after creation. Table 16 provides a summary of Hydro's greenhouse gas credit activity since 2020.

Table 16: Summary of Greenhouse Gas Credit Activity

Year	Opening Balance	Credits Earned	Credits Used	Credits Sold	Closing Balance
2020	-	169,734	303	55,000	114,431
2021	114,431	292,676	923[56]	125,106	281,078[57]
2022	281,078	462,545	1,708	248,015	493,900

[54] *Management of Greenhouse Gas Act*, SNL 2016, c M-1.001.
[55] NLR 14/17.
[56] Previously reported as 919 due to a typographical error.
[57] Previously reported as 281,082 due to a typographical error.

The revenues from the sale of the greenhouse gas performance credits are credited to the Supply Cost Variance Deferral Account.[58]

7.3 Capital Expenditures

Capital expenditures for the year ended December 31, 2022 will be provided in Hydro's annual Capital Expenditures and Carry-Over report, due to be filed with the Board on April 1, 2023.

8.0 Environment and Conservation

8.1 takeCHARGE Partnership

Energy efficiency initiatives contribute to lower energy consumption and demand on the electricity system. Energy efficiency initiatives provide customers with bill savings, reduce Hydro's operating costs, and reduce emissions from thermal generating stations. Hydro and Newfoundland Power partner to deliver the takeCHARGE Program, offering rebate programs to assist residential and commercial customers in reducing their electricity usage. The takeCHARGE Program combines the expertise and customer reach of both utilities while delivering energy efficiency awareness and rebate programs to customers.

8.2 Hydro's 2022 Conservation and Demand Management Targets

Hydro's activities in the takeCHARGE Program for residential and commercial customers target annual energy savings of 1,539 MWh for this year. Hydro exceeded this target by almost 12%, achieving energy savings of 1,718 MWh in 2022. Hydro works one-on-one with its Industrial customers to determine opportunities for energy savings within their operations as well as their interest in pursuing such programs. As such, Hydro does not establish targets for Industrial customer energy efficiency. As of the end of 2022, Industrial programs achieved 294 MWh of energy savings.

A summary of Hydro's customer conservation and demand management ("CDM") results are provided in Table 17.

[58] As per *Public Utilities Act*, RSNL 1990, c P-47, Board Order No. P.U. 33(2021), Board of Commissioners of Public Utilities, December 8, 2021.

Table 17: Customer Conservation and Demand Management

Measurement	2022 Actual[59]	2022 Target	2021 Actual
Achievement of EMS[60] Targets[61]	98%	95%	100%
Annual Energy Savings from Residential and Commercial CDM Programs	1,718 MWh	1,539 MWh	1,624 MWh

8.3 Joint Residential Programs

Hydro's residential portfolio includes five programs offered jointly by Hydro and Newfoundland Power. The energy savings achieved by each program are provided in Table 18.

In addition to the rebate programs, the joint utility partnership provides customer education and support activities that included outreach events, the takeCHARGE website, social media, and retailer partnerships.

Table 18: Energy Savings from Hydro's Residential Programs for the Current Quarter (MWh)[62]

Program	2022 Actual	2022 Target
Insulation	111	130
Thermostats	12	25
Heat Recovery Ventilators	1	1
Instant Rebates (Fall 2022)	76	110
Energy Savers Kit[63]	203	414
Total	**403**	**680**

8.4 Isolated Systems Community Energy Efficiency Program

The Isolated Systems Community Energy Efficiency Program is a direct installation program available to residential and commercial customers in Hydro's isolated diesel systems and has been in operation since 2012. The objective of the program is to help customers conserve energy by providing outreach,

[59] Actual year-to-date energy savings reported are unaudited. Audited energy savings will be provided in Hydro's annual CDM Report.
[60] Environmental Management System ("EMS").
[61] An EMS target is an initiative undertaken to improve environmental performance.
[62] Data is applicable to interconnected systems only. Certain program targets are heavily weighted towards the fourth quarter of the year. Hydro actively monitors all programs throughout the year and makes adjustments in response to low uptake.
[63] This was a new program launched in 2022 and offers a free box of energy saving products for income-qualified customers. Initial program uptake has been limited due to income testing requirements. These requirements were adjusted late in 2022 with a view towards increasing customer uptake going forward.

education, and energy-efficient products free of charge to residential and business customers in isolated communities. It also focuses on building knowledge and capacity in the communities by hiring and training local representatives that work within their communities to promote the program, provide useful information on energy use, and provide direct installation of energy efficient products. The 2022 energy savings target for this program (residential and commercial combined) is 719 MWh. Hydro exceeded its target by almost 5%, achieving savings of 753 MWh in 2022. Based upon the average marginal production cost of 39.7 cents/kWh across Hydro's diesel systems,[64] this program reduced production costs by nearly $300,000 in 2022.

8.5 Oil Heat Rebates

takeCHARGE is partnering with the Government of Newfoundland and Labrador under the Low Carbon Leadership Funding Agreement with the Government of Canada to extend takeCHARGE's current insulation and thermostat rebate program to customers who rely on oil heat. As Hydro and Newfoundland Power have the necessary procedures in place to deliver this program in a cost-effective manner, they administer the program. A total of three insulation rebates were approved by Hydro in the fourth quarter, totalling seven insulation rebates year-to-date.

Costs associated with this program are not transferred to Hydro's customers.

8.6 Electric Vehicle Rebate

The Electric Vehicle Rebate Program makes electric vehicles more affordable for Newfoundlanders and Labradorians. An increased number of electric vehicles on provincial roads are powered by clean, renewable energy reduces carbon emissions and helps to slow the pace of climate change in the province. This is an initiative of the Government of Newfoundland of Labrador and is delivered by Hydro. Year one of the program launched on September 1, 2021 and ended on March 31, 2022.

The Electric Vehicle Rebate Program was extended for a second year (April 1, 2022–March 15, 2023). There is $875,000 available for the Electric Vehicle Rebate Program, which will help encourage the purchase of electric vehicles through a battery-electric vehicle rebate of $2,500 and an addition of a $1,500 rebate for plug-in hybrid electric vehicles. To date, applications were approved for 238 battery-electric vehicles and 79 plug-in hybrid electric vehicles.

[64] Isolated Systems Supply Cost Variance Deferral Account, 2022 Actual Costs.

Hydro is closely monitoring the growth in electric vehicles under this program and expects this information to inform future demand response offerings. Costs associated with this program are not transferred to Hydro's customers.

8.7 Oil to Electric Rebate

The Oil to Electric Rebate Program helps Newfoundlanders and Labradorians wanting to transition their homes to an electricity-based heat source from an oil-based heat source by making the conversion more affordable. This is an initiative of the Government of Newfoundland of Labrador and is delivered by Hydro. Year one of the program launched on August 30, 2021 and ended on March 31, 2022 and provided rebates to 100 customers.

The Oil to Electric Rebate Program was extended for a second year (April 1, 2022–March 15, 2023). In the second year, the rebate was increased to $5,000 per applicant. Customer interest in the program has been materially higher in the second year. To date, 962 applications have been approved and 447 have been pre-approved and given 90 days to complete their project.

Hydro is closely monitoring the heating technology choices customers are selecting under this program and expect this information to inform future demand response offerings. Costs associated with this program are not transferred to Hydro's customers.

8.8 Hydro Commercial Program

Hydro's commercial portfolio includes the Business Efficiency and Isolated Business Efficiency Programs, which are available to business customers in Hydro's interconnected system and isolated diesel service areas. The business programs include a prescriptive component that offers rebates on many energy-efficient lighting technologies and heating and lighting controls. The custom component of the business program offers incentives based on economical energy-saving improvement projects specific to individual customer facilities. The custom program also provides technical support to help commercial customers identify economical energy efficiency opportunities and provide financial support for capital upgrades. The aim is to engage customers in business efficiency programs by facilitating opportunity identification, technical analysis, and project completion. Hydro's energy savings target for the current year for its commercial program is 140 MWh. Hydro achieved 227 MWh of energy savings in 2022, surpassing the annual target by approximately 62%.

9.0 People and Community

9.1 Diversity and Inclusion

9.1.1 Diversity and Inclusion Day Recognizes the Importance of Inclusion

Hydro hosted its fifth annual Diversity and Inclusion Day on October 25, 2022. Hydro is committed to inclusion and recognizes that all employees can benefit from an inclusive work environment. To emphasize this commitment, this year's theme focused on the importance of inclusion and included a discussion with Hydro's Vice President of People and Corporate Affairs regarding Hydro's equity, diversity, and inclusion ("EDI") journey; a guest speaker (Dr. Amy Warren) who spoke about the importance of accessibility in the workplace and how EDI initiatives can be used to better attract, hire, and retain employees with disabilities; and a session delivered by a Hydro employee who spoke about her personal experience coming out as transgender, some of the challenges transgender people face in the workplace, and how employers can support transgender employees.

9.1.2 Purple Ribbon Campaign

Hydro recognizes the Purple Ribbon Campaign annually. This campaign aims to create public awareness, positively change attitudes, and inspire renewed commitment to ending gender-based violence. This year, a purple ribbon flag was raised at Hydro Place as a visual demonstration of Hydro's commitment to the campaign. Employees were provided learning resources and were encouraged to learn more about the Purple Ribbon campaign and how to recognize and help prevent gender-based violence.

9.1.3 International Day for Persons with Disabilities

On December 3, 2022, Hydro recognized International Day for Persons with Disabilities, which had the theme of "Transformative solutions for inclusive development: the role of innovation and fueling an accessible and equitable world." Hydro shared resources related to learning disabilities and other materials about the day to help employees learn more on this subject matter.

9.1.4 Gender Equity Targets

Hydro has corporate gender equity targets as part of its strategy on diversity and inclusion. In 2022, Hydro continued proactive efforts to attract and retain women in leadership, operations, and

engineering positions, while supporting their advancement. Table 19 shows regulated Hydro's progress towards its gender equity targets.

Table 19: Gender Equity Statistics

	2022			2021[65]			Target
	Total	Female	% Female	Total	Female	% Female	% Female
Executive	9	3	33%	11	3	27%	30%
Management	115	38	33%	102	32	31%	35%
Engineers and Engineers in Training	133	33	25%	131	31	24%	30%
Technicians and Technologists	289	26	9%	284	25	9%	10%
Field Supervisors	84	4	5%	87	5	6%	6%
Skilled Trades and Apprentices	290	17	6%	275	17	6%	10%
Manual Workers	80	15	19%	75	13	17%	20%

9.2 Community Initiatives

Hydro regularly supports organizations throughout the province in communities where employees and our customers live and work. During the final quarter of 2022, Hydro continued to work closely with its community partners while also introducing an updated community program.

9.2.1 Energy from the Heart Community Program

In November, Hydro launched the Energy from the Heart Community Program. The change in name from Community Investment Program was an important one as it better encompasses all facets of the program – employee volunteering, scholarships, sponsorships and partnerships. Launched on Giving Tuesday, the first phase of the program also included a revamped employee matching program, which helps Hydro employees increase employees' impact at charitable organizations they regularly support through fundraising and volunteering.

[65] Gender equity targets reflective of total company.

9.2.2 Helping New Canadians be Prepared for Emergencies

Also in November, Hydro partnered with the Canadian Red Cross and the Association for New Canadians to deliver a pilot program aimed at helping new Canadians understand and be prepared for emergencies and outages in Newfoundland and Labrador. Presenters from the Red Cross and Hydro focused on the importance of emergency preparedness as well as how to deal with a number of common situations – storms, power outages, downed electrical lines, house fires, etc. This information was especially timely as many participants face their first winter in the province. The success of the pilot project was overwhelming with more than 100 new Canadians attending; plans are underway for future sessions.

9.2.3 Hydro Helps Home Again Furniture Bank Year-End Campaign

Hydro continued its support of Home Again Furniture Bank and its mission to eradicate furniture insecurity by matching donations up to $10,000 during its year-end fundraising campaign. With more than $31,000 raised in December, it was Home Again's most profitable year-end campaign to date.

9.2.4 Supporting Ronald McDonald House Families in Newfoundland and Labrador

In support of Hydro's long-time partnership with Ronald McDonald House Charites Newfoundland and Labrador, employees throughout the province participated in the annual Sock It for Sick Kids and Their Families campaign. By purchasing the traditional striped socks, toques and mittens, Hydro employees raised more than $3,000 to help fund programs at Ronald McDonald House. On Sock It day, Hydro employees wore the items in support of the children and families from Newfoundland and Labrador province who call Ronald McDonald House home while undergoing medical treatment.

9.2.5 Recognizing Women in Trades and Technology Fields through Scholarship Offerings

Hydro's continued partnership with Women in Resource Development Canada is a key part of Hydro's community program as well as its commitment to diversity and inclusion. Each year, Hydro funds six $1,500 scholarships for women studying in trades and technology programs throughout the province. This year's recipients are based in St. John's, Placentia, Corner Brook and Happy Valley-Goose Bay and are studying in programs including Heavy Duty Equipment Technician, Construction/Industrial Electrician, Carpentry and Electronic Systems Engineering Technology.

10.0 Other

10.1 Ramea Update

In accordance with Board Order No. P.U. 31(2007), Hydro is required to provide updates on the Ramea Wind-Hydrogen-Diesel project as part of its quarterly report to the Board.[66]

As detailed in its "Quarterly Regulatory Report for the Quarter Ended March 31, 2019,"[67] Hydro decided to consider other alternatives for the assets, including possible partnership opportunities with independent power producers, rather than continue with Phase II of the Ramea Wind-Hydrogen-Diesel project.

Hydro is continuing to consider alternatives for the wind assets; however, Hydro has made the determination to decommission the hydrogen assets. Hydro will make an application for decommissioning of these assets in the first quarter of 2023.

10.1.1 Capital Costs

There will be no future capital expenditures incurred for the Ramea Wind-Hydrogen-Diesel project. Planning for the decommissioning of the hydrogen components of the project is underway. The cost of this work will be a non-regulated expense.

10.1.2 Operating Costs

The operating costs shown in Table 20 relate to work performed on the three wind turbines. These costs are not recovered from Hydro's customers.

[66] *Public Utilities Act*, RSNL 1990, c P-47, Board Order No. P.U. 31(2007), Board of Commissioners of Public Utilities, November 30, 2007, p. 3/35–38.
[67] "Quarterly Regulatory Report for the Quarter Ended March 31, 2019," Newfoundland and Labrador Hydro, May 15, 2019.

Table 20: Operating Costs for the Year Ended December 31, 2022 ($)

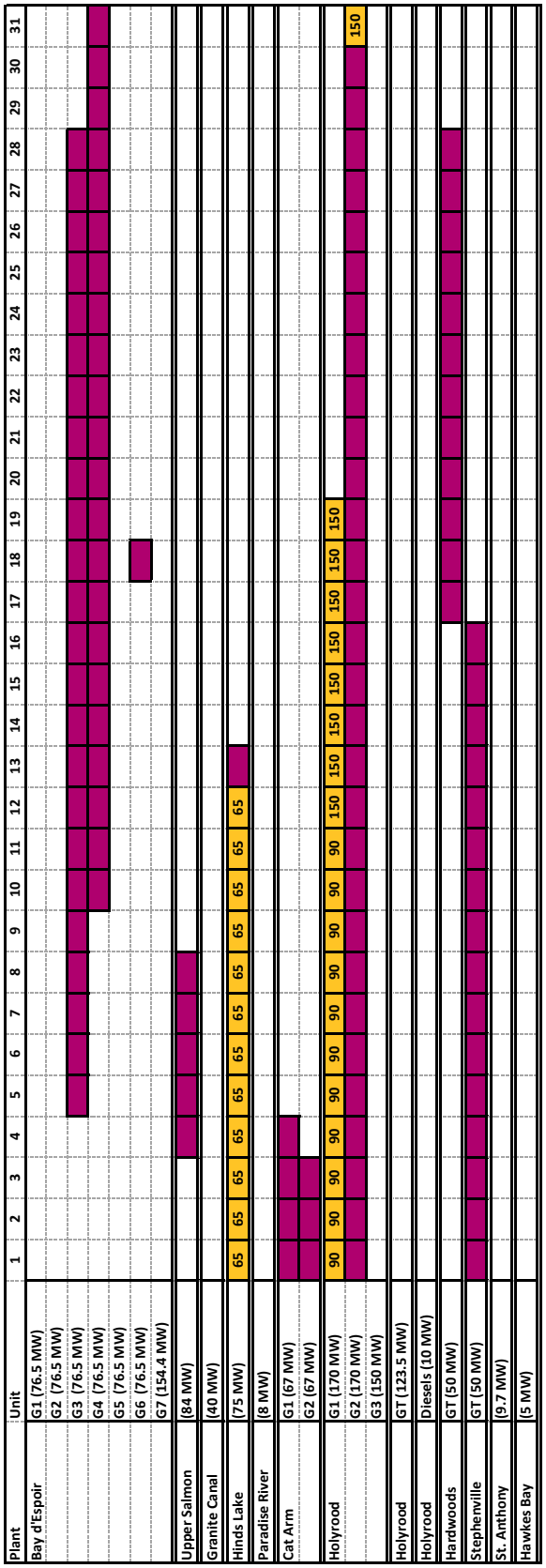
Approved 2022 Budget	Actual Amount to December 31, 2022	Total Commitments
42,954	6,584	6,584

10.1.3 Reliability and Safety Issues

The wind turbines were not operational during the fourth quarter and there are no safety issues to report.

Appendix A

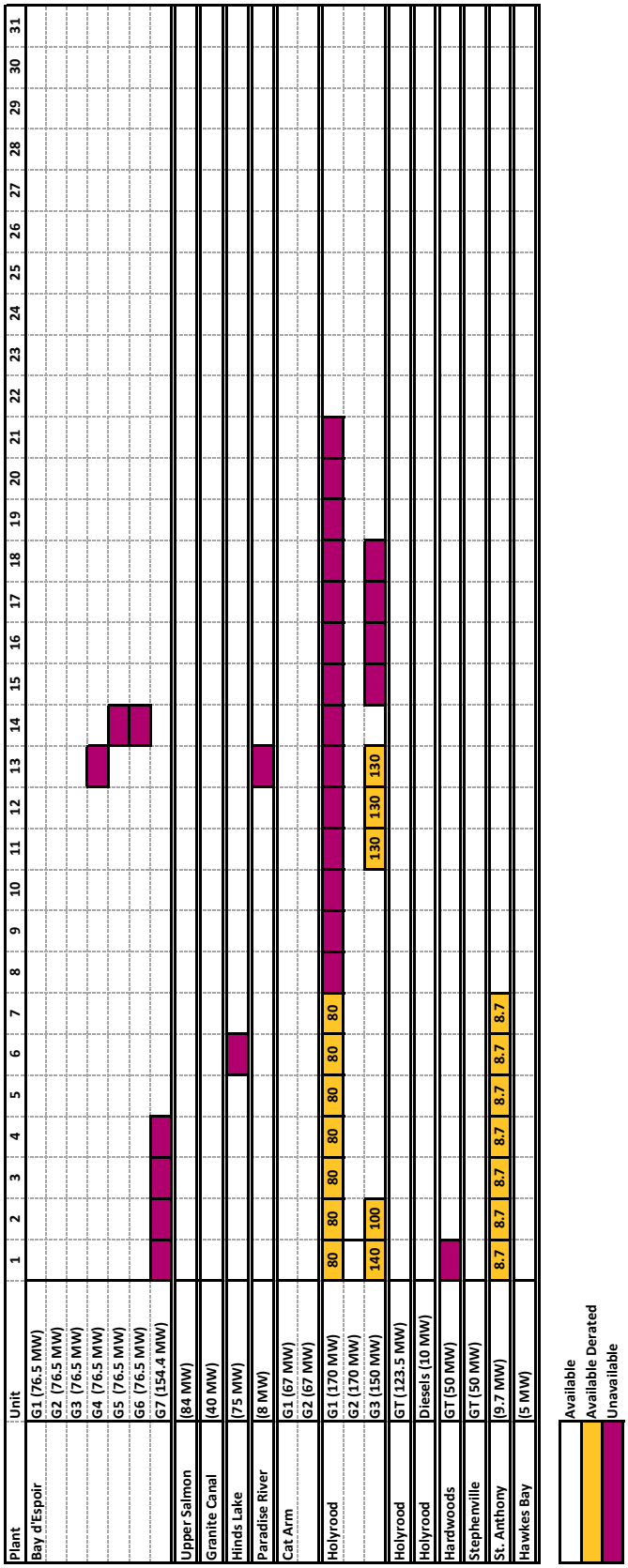
Generation Unit Outages


October 2022
Plant
Unit
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31
Bay d'Espoir
G1 (76.5 MW)
G2 (76.5 MW)
G3 (76.5 MW)
G4 (76.5 MW)
G5 (76.5 MW)
G6 (76.5 MW)
G7 (154.4 MW)
Upper Salmon
(84 MW)
Granite Canal
(40 MW)
Hinds Lake
(75 MW)
65 65 65 65 65 65 65 65 65 65 65 65
Paradise River
(8 MW)
Cat Arm
G1 (67 MW)
G2 (67 MW)
Holyrood
G1 (170 MW)
G2 (170 MW)
G3 (150 MW)
90 90 90 90 90 90 90 90 90 90 90 150 150 150 150 150 150 150 150 150
Holyrood
GT (123.5 MW)
Holyrood
Diesels (10 MW)
Hardwoods
GT (50 MW)
Stephenville
GT (50 MW)
St. Anthony
(9.7 MW)
Hawkes Bay
(5 MW)
Available
Available Derated
Unavailable

November 2022

Plant	Unit	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
Bay d'Espoir	G1 (76.5 MW)																														
	G2 (76.5 MW)																														
	G3 (76.5 MW)																														
	G4 (76.5 MW)																														
	G5 (76.5 MW)																														
	G6 (76.5 MW)																														
	G7 (154.4 MW)																														
Upper Salmon	(84 MW)																														
Granite Canal	(40 MW)																														
Hinds Lake	(75 MW)																														
Paradise River	(8 MW)																														
Cat Arm	G1 (67 MW)																														
	G2 (67 MW)																														
Holyrood	G1 (170 MW)																80	80	80	80	80					80	80	80	80	80	80
	G2 (170 MW)	150	150	150	150	150	150	150	150																						
	G3 (150 MW)																		75	75	75	75	75	75	120	120	120	120	120	120	140
Holyrood	GT (123.5 MW)																														
Holyrood	Diesels (10 MW)																														
Hardwoods	GT (50 MW)																														
Stephenville	GT (50 MW)																														
St. Anthony	(9.7 MW)										8.7	8.7	8.7	8.7	8.7	8.7	8.7	8.7	8.7	8.7	8.7	8.7	8.7	8.7	8.7	8.7	8.7	8.7	8.7	8.7	8.7
Hawkes Bay	(5 MW)			2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5																				

Available
Available Derated
Unavailable


December 2022
Plant
Unit
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31
Bay d'Espoir
G1 (76.5 MW)
G2 (76.5 MW)
G3 (76.5 MW)
G4 (76.5 MW)
G5 (76.5 MW)
G6 (76.5 MW)
G7 (154.4 MW)
Upper Salmon
(84 MW)
Granite Canal
(40 MW)
Hinds Lake
(75 MW)
Paradise River
(8 MW)
Cat Arm
G1 (67 MW)
G2 (67 MW)
Holyrood
G1 (170 MW)
G2 (170 MW)
G3 (150 MW)
Holyrood
GT (123.5 MW)
Holyrood
Diesels (10 MW)
Hardwoods
GT (50 MW)
Stephenville
GT (50 MW)
St. Anthony
(9.7 MW)
Hawkes Bay
(5 MW)
80 80 80 80 80 80 80
140 100
130 130 130
8.7 8.7 8.7 8.7 8.7 8.7 8.7
Available
Available Derated
Unavailable

Appendix B

Financial Schedules

(To be provided when audited financial information becomes available)

Attachment 1

Rate Stabilization Plan Report

Quarter Ended December 31, 2022

Newfoundland and Labrador Hydro
Rate Stabilization Plan Report
December 31, 2022

Summary of Key Facts

The Rate Stabilization Plan ("RSP") of Newfoundland and Labrador Hydro ("Hydro") was established for Hydro's Utility customer, Newfoundland Power Inc. ("Newfoundland Power") and Island Industrial customers to smooth rate impacts for variations between actual results and Test Year Cost of Service estimates for:

- Hydraulic production;
- No. 6 Fuel cost at Hydro's Holyrood Thermal Generating Station;
- Customer load (Utility and Island Industrial); and
- Rural rates.

In Board Order No. P.U. 33(2021), the Board of Commissioners of Public Utilities (“Board”) approved the Supply Cost Variance Deferral Account to deal with future supply cost variances on the Island Interconnected System beginning in the month in which Hydro was required to begin payments under the Muskrat Falls Purchase Power Agreement (i.e., November 2021). The approval of the Supply Cost Variance Deferral Account discontinued transfers to the RSP, effective as of the implementation of the Supply Cost Variance Deferral Account, resulting from variations in future costs associated with the test year cost of service estimates for the above-listed items. However, the Board directed that the RSP balances be maintained for the transparent and timely recovery of historical balances. The rules provide for the disposition of historical balances in accordance with the RSP Rules previously approved by the Board in Board Order No. P.U. 4(2022).

Finance charges are calculated on the balances using the test year weighted average cost of capital, which is currently 5.43% per annum.

The RSP has not been not been audited. Final balances associated with RSP are provided in Hydro's Quarterly Regulatory Report for the fourth quarter of 2022 upon the release of Hydro's final financial information.

Rate Stabilization Plan
Net Hydraulic Production Variation
December 31, 2022

	A Cost of Service Net Hydraulic Production (kWh)	B1 Actual Net Hydraulic Production (kWh)	B2 Net Ponded Energy (kWh)	B3 Spill Exports (kWh)	B Net Hydraulic Production for Variance Calculation (kWh)	C Monthly Net Hydraulic Production Variance (kWh)	D Cost of Service No. 6 Fuel Cost ($CDN/bbl)	E Net Hydraulic Production Variation ($)	F Financing Charges ($)	G Transfers	H Cumulative Variation and Financing Charges ($)
					(B1 + B2 - B3)	(A - B)		(C / O[1] X D)			(E + F) (to page 5)
Opening Balance											44,665,085
Adjustment											-
Adjusted Opening Balance											**44,665,085**
January	-	-	-	-	-	-	105.90	-	197,247	-	44,862,332
February	-	-	-	-	-	-	105.90	-	198,118	-	45,060,450
March	-	-	-	-	-	-	105.90	-	198,993	-	45,259,443
April	-	-	-	-	-	-	105.90	-	199,872	-	45,459,315
May	-	-	-	-	-	-	105.90	-	200,755	-	45,660,070
June	-	-	-	-	-	-	105.90	-	201,641	-	45,861,711
July	-	-	-	-	-	-	105.90	-	202,532	-	46,064,243
August	-	-	-	-	-	-	105.90	-	203,426	-	46,267,669
September	-	-	-	-	-	-	105.90	-	204,325	-	46,471,994
October	-	-	-	-	-	-	105.90	-	205,227	-	46,677,221
November	-	-	-	-	-	-	105.90	-	206,133	-	46,883,354
December	-	-	-	-	-	-	105.90	-	207,044	-	47,090,398
Year-to-Date	**-**	**-**	**-**	**-**	**-**	**-**		**-**	**2,425,313**	**-**	**47,090,398**
Hydraulic Allocation								(14,888,362.00)	(2,425,313)		(17,313,675)
Hydraulic Variation at Year End[2]								**(14,888,362.00)**	**-**	**-**	**29,776,723**

[1] O is the Holyrood Operating Efficiency of 583 kWh/barrel, reference Board Order No. P.U. 16(2019) at p. 19.

[2] At year end 25% of the hydraulic variation balance as of October 31, 2021, excluding financing charges and 100% of the annual financing charges, are allocated to customers as follows:

	Approved kWh	% of kWh to total	Allocation	Reallocate Rural	Net (to pages 3 & 4)
Utility	5,399,356,095	86.2%	(14,920,363)	(1,173,718)	(16,094,081)
Industrial	424,107,383	6.8%	(1,171,961)	-	(1,171,961)
Rural	441,980,531	7.0%	(1,221,351)	1,221,351	-
Total	**6,265,444,009**	**100.0%**	**(17,313,675)**	**47,633**	**(17,266,042)**
Labrador Interconnected (write-off to income)				(47,633)	(47,633)
				-	**(17,313,675)**

Rate Stabilization Plan
Summary of Utility Customer
December 31, 2022

	A	B	C	D	E	F	G	H
	Load Variation ($)	Allocation Fuel Variance ($)	Allocation Rural Rate Alteration ($)	Subtotal Monthly Variances ($)	Financing Charges ($)	Adjustment[1] ($)	Transfers[2] ($)	Cumulative Net Balance ($)
				(A + B + C)				
								(to page 5)
Opening Balance								7,503,079
Adjustment								-
Adjusted Opening Balance								**7,503,079**
January	-	-	-	-	33,135	(3,977,964)	-	3,558,250
February	-	-	-	-	15,714	(3,600,083)	-	(26,119)
March	-	-	-	-	(115)	(3,789,852)	11,442,880	7,626,794
April	-	-	-	-	33,681	(2,994,593)	-	4,665,882
May	-	-	-	-	20,605	(2,443,197)	-	2,243,290
June	-	-	-	-	9,907	(1,942,410)	-	310,787
July	-	-	-	-	1,372	67,077	-	379,236
August	-	-	-	-	1,675	68,587	-	449,498
September	-	-	-	-	1,985	67,835	-	519,318
October	-	-	-	-	2,293	78,657	-	600,268
November	-	-	-	-	2,651	120,420	-	723,339
December	-	-	-	-	3,194	143,374	-	869,907
Year-to-Date	**-**	**-**	**-**	**-**	**126,097**	**(18,202,149)**	**11,442,880**	**(6,633,172)**
Hydraulic Allocation **(from page 2)**								16,094,081
Total	**-**	**-**	**-**	**-**	**126,097**	**(18,202,149)**	**11,442,880**	**16,963,988**

[1] Effective July 1, 2022, the RSP Adjustment Rate is (0.023) cents per kWh as per Board Order No. P.U. 19(2022).

[2] Recovery of the supply deferrals was approved in Board Order No. P.U. 16(2022).

Rate Stabilization Plan
Summary of Industrial Customers
December 31, 2022

	A	B	C	D	E	F	G
	Load Variation ($)	Allocation Fuel Variance ($)	Subtotal Monthly Variances ($)	Financing Charges ($)	Adjustment[1] ($)	Transfers[2] ($)	Cumulative Net Balance ($)
			(A + B)				(to page 5)
Opening Balance							4,319,655
Adjustment							-
Adjusted Opening Balance							**4,319,655**
January	-	-	-	19,076	145,221	-	4,483,952
February	-	-	-	19,802	(138,769)	-	4,364,985
March	-	-	-	19,276	(142,501)	1,009,037	5,250,797
April	-	-	-	23,188	(109,897)	-	5,164,088
May	-	-	-	22,805	(135,910)	-	5,050,983
June	-	-	-	22,306	(135,971)	-	4,937,318
July	-	-	-	21,804	(110,730)	-	4,848,392
August	-	-	-	21,411	(125,605)	-	4,744,198
September	-	-	-	20,951	(113,639)	-	4,651,510
October	-	-	-	20,542	(85,376)	-	4,586,676
November	-	-	-	20,255	(123,340)	-	4,483,591
December	-	-	-	19,800	(125,625)	-	4,377,766
Year-to-Date	**-**	**-**	**-**	**251,216**	**(1,202,142)**	**1,009,037**	**58,111**
Hydraulic Allocation **(from page 2)**							1,171,961
Total	**-**	**-**	**-**	**251,216**	**(1,202,142)**	**1,009,037**	**5,549,727**

[1] Effective February 1, 2022, the RSP Adjustment rate is 0.385 cents per kWh as per Board Order No. P.U. 5(2022).

[2] Recovery of the supply deferrals was approved in Board Order No. P.U. 16(2022).

Rate Stabilization Plan
Overall Summary
December 31, 2022

	A Hydraulic Balance ($) (from page 2)	B Utility Balance ($) (from page 3)	C Industrial Balance ($) (from page 4)	D Total To Date ($) (A + B + C)
Opening Balance	44,665,085	7,503,079	4,319,655	56,487,819
Adjustments	-	-	-	-
Adjusted Opening Balance	**44,665,085**	**7,503,079**	**4,319,655**	**56,487,819**
January	44,862,332	3,558,250	4,483,952	52,904,534
February	45,060,450	(26,119)	4,364,985	49,399,316
March	45,259,443	7,626,794	5,250,797	58,137,033
April	45,459,315	4,665,882	5,164,088	55,289,285
May	45,660,070	2,243,290	5,050,983	52,954,343
June	45,861,711	310,787	4,937,318	51,109,816
July	46,064,243	379,236	4,848,392	51,291,871
August	46,267,669	449,498	4,744,198	51,461,365
September	46,471,994	519,318	4,651,510	51,642,822
October	46,677,221	600,268	4,586,676	51,864,165
November	46,883,354	723,339	4,483,591	52,090,284
December	29,776,723	16,963,988	5,549,727	52,290,438

Attachment 2

Supply Cost Variance Deferral Account Report

Quarter Ended December 31, 2022

Newfoundland and Labrador Hydro
Supply Cost Variance Deferral Account
December 31, 2022

Summary of Key Facts

As per Board Order No's. P.U. 33(2021) and P.U. 4(2022), the Board of Commissioners of Public Utilities ("Board") approved:

a) The Supply Cost Variance Deferral Account to become effective November 1, 2021 reflecting the month the payments under the Muskrat Falls Power Purchase Agreement ("Muskrat Falls PPA") were implemented.

b) The Isolated Systems Supply Cost Variance Deferral Account is removed from the Supply Cost Variance Deferral Account definition.

c) The balances in the Revised Energy Supply Cost Variance Deferral Account and the Holyrood Conversion Rate Deferral Account will be maintained with the balance as of October 31, 2021. Newfoundland and Labrador Hydro ("Hydro") will file an application with the Board for disposition of the balance by March 31, 2022. Disposition will be inclusive of a Cost Variance Threshold equal to +/- $500,000.

d) The Cost Variance Threshold of +/- $500,000 on the Other Island Interconnected System Supply Cost Variance component will commence January 1, 2022. This will avoid duplication of the Cost Variance Threshold already applied to the Revised Energy Supply Cost Variance Deferral Account as of October 31, 2022.

e) For the period January to November, the interest rate applied to the deferral account balance was 1.84% based on the prior year-end rate. In December, the interest expense was trued-up for the year based on the short-term interest rate for 2022 of 4.32%. In the calculation of the interest rate to be applied to the account balance for 2022 only a portion of the fixed fees were included due to the lower than anticipated promissory note balances.

Supply Cost Variance Deferral Account
Summary
December 31, 2022

	Suppy Cost Variance Deferral Account Balance[1,2] ($) (from page 3)	Utility Balance ($) (from page 4)	Industrial Balance ($) (from page 5)	Total to Date ($)
Opening Balance	18,989,681	(729,396)	-	**18,260,285**
Adjustment[1,3]	(1,263,179)	(123,374)	-	**(1,386,553)**
Adjusted Opening Balance	**17,726,502**	**(852,770)**	**-**	**16,873,732**
January	34,259,161	(1,703,067)	-	**32,556,094**
February	56,309,399	(2,433,486)	-	**53,875,913**
March	78,810,697	(3,240,286)	-	**75,570,411**
April	76,182,112	(3,784,567)	-	**72,397,545**
May	102,265,091	(4,152,419)	-	**98,112,672**
June	123,274,718	(4,309,654)	-	**118,965,064**
July	136,722,125	(4,344,604)	-	**132,377,521**
August	155,244,173	(4,495,624)	-	**150,748,549**
September	170,009,759	(5,384,218)	-	**164,625,541**
October	189,273,151	(4,602,990)	-	**184,670,161**
November	198,891,673	(5,145,040)	-	**193,746,633**
December	196,185,156	(5,784,457)	-	**190,400,699**

[1] In August 2021, Nalcor Energy ("Nalcor") commenced delivery of the Nova Scotia Block that, combined with limited Labrador-Island Link ("LIL") capacity, meant Hydro could not be delivered as much energy from the Muskrat Falls Hydroelectric Generating Facility as it would otherwise. Nalcor committed to indemnify Hydro for any damages suffered as a result of this reduction in deliveries including compensating Hydro for incremental costs of fuel and/or imports over the Maritime Link. The opening adjustment and 2022 balances reflect adjustments to the calculation to eliminate incremental costs incurred by Hydro as a result of reduced deliveries.

[2] Prior monthly balances may reflect immaterial adjustments.

[3] There was a correction to the volume calculation for November and December 2021 Rural Rate Alteration, which is reflected as an adjustment to the opening balance for 2022, totalling $0.1 million.

Supply Cost Variance Deferral Account
Section A: Summary
December 31, 2022

	Muskrat Falls Project Cost Variance ($)	Rate Mitigation Fund ($)	Project Cost Recovery		Holyrood TGS[2] Fuel Cost Variance[3] ($)	Other IIS[4] Supply Cost Variance[3] ($)	Net Revenue From Exports Variance ($)	Transmission Tariff Revenue Variance ($)	Load Variation		Greenhouse Gas Credit Revenue Variance[5] ($)	Subtotal Monthly Variances ($)	Financing Charges		Transfers ($)	Cumulative Net Balance ($)
			Utility[1] ($)	Industrial ($)					Utility Variance ($)	Industrial Variance ($)			Utility[6] ($)	Other[6] ($)		
	(from page 6)				(from page 7)	(from page 8)	(from page 9)	(from page 10)	(from page 11)	(from page 12)	(from page 14)					
Opening Balance	39,876,511	-	-	-	(26,879,560)	(3,220,124)	-	(700,298)	10,532,226	2,485,599	(3,096,317)	18,998,037	-	(8,356)	-	18,989,681
Adjustment[3]	-	-	-	-	(1,391,304)	129,804	-	-	-	-	-	(1,261,500)	-	(1,679)	-	(1,263,179)
Adjusted Opening Balance	**39,876,511**	**-**	**-**	**-**	**(28,270,864)**	**(3,090,320)**	**-**	**(700,298)**	**10,532,226**	**2,485,599**	**(3,096,317)**	**17,736,537**	**-**	**(10,035)**	**-**	**17,726,502**
January	32,631,191	-	-	-	(23,368,762)	(2,237,243)	-	(818,277)	9,116,758	1,182,038	-	16,505,705	-	26,954	-	34,259,161
February	32,657,316	-	-	-	(13,691,346)	(3,683,542)	(1,733,737)	(970,188)	8,443,002	976,640	-	21,998,145	-	52,093	-	56,309,399
March[7]	17,324,542	-	-	-	11,036,359	(6,506,569)	(2,523,522)	(303,488)	2,224,383	1,163,972	-	22,415,677	-	85,621	-	78,810,697
April[8]	(9,535,425)	-	-	-	2,145,366	(539,404)	(327,464)	(842,928)	4,892,177	1,459,257	-	(2,748,421)	-	119,836	-	76,182,112
May	21,568,529	-	-	-	3,510,574	(1,066,766)	(807,072)	(851,265)	2,386,638	1,226,502	-	25,967,140	-	115,839	-	102,265,091
June	20,977,982	-	-	-	(3,108,712)	(1,100,062)	(232,147)	(518,174)	3,702,433	1,132,808	-	20,854,128	-	155,499	-	123,274,718
July	21,035,577	-	(2,327,264)	-	176	(393,345)	(185,919)	(852,559)	2,954,154	1,489,533	(8,460,392)	13,259,961	-	187,446	-	136,722,125
August	19,910,418	-	(2,379,670)	-	(14,910)	(253,971)	(182,394)	(495,364)	417,022	1,327,304	(14,280)	18,314,155	(3,539)	211,432	-	155,244,173
September	19,983,949	-	(2,353,581)	-	(6,042,470)	(1,193,840)	(195,675)	(616,942)	3,553,998	1,394,090	-	14,529,529	(7,157)	243,214	-	170,009,759
October	20,209,764	-	(2,729,057)	-	(8,676,820)	(2,627,749)	(285,773)	(1,094,839)	13,026,657	1,807,710	(625,010)	19,004,883	(10,736)	269,245	-	189,273,151
November	20,300,032	-	(4,178,061)	-	631,826	(1,895,235)	(524,097)	(1,174,686)	(5,098,281)	1,269,224	-	9,330,722	(14,886)	302,686	-	198,891,673
December[9]	20,606,745	-	(4,974,454)	-	547,310	(3,526,739)	(26,077,910)	(874,152)	7,399,478	1,380,211	(216,518)	(5,736,029)	(97,323)	3,126,835	-	196,185,156
Year-to-Date	**237,670,620**	**-**	**(18,942,087)**	**-**	**(37,031,409)**	**(25,024,465)**	**(33,075,710)**	**(9,412,862)**	**53,018,419**	**15,809,289**	**(9,316,200)**	**173,695,595**	**(133,641)**	**4,896,700**	**-**	**178,458,654**
Total	**277,547,131**	**-**	**(18,942,087)**	**-**	**(65,302,273)**	**(28,114,785)**	**(33,075,710)**	**(10,113,160)**	**63,550,645**	**18,294,888**	**(12,412,517)**	**191,432,132**	**(133,641)**	**4,886,665**	**-**	**196,185,156**

[1] As per Board Order No. P.U. 19(2022), the Board approved a Project Cost Recovery Rider of 0.798 cents per kWh which became effective as of July 1, 2022.

[2] Holyrood Thermal Generating Station ("Holyrood TGS").

[3] In August 2021, Nalcor commenced delivery of the Nova Scotia Block that, combined with limited LIL capacity, meant Hydro could not be delivered as much energy from the Muskrat Falls Hydroelectric Generating Facility as it would otherwise. Nalcor committed to indemnify Hydro for any damages suffered as a result of this reduction in deliveries including compensating Hydro for incremental costs of fuel and/or imports over the Maritime Link. The opening adjustment and 2022 balances reflect adjustments to the calculation to eliminate incremental costs incurred by Hydro as a result of reduced deliveries.

[4] Island Interconnected System ("IIS").

[5] In July 2022, Hydro sold 230,000 Greenhouse Gas Performance Credits within the province through request for bids ($7.9 million). As well, Hydro sold 406,412 Renewable Energy Certificates associated with the St. Lawrence Wind and Fermeuse Wind projects and the Granite Canal Hydroelectric Generating Station to external markets through the Energy Marketing Corporation ($0.6 million).

[6] For the period January to November, the interest rate applied to the deferral account balance was 1.84% based on the prior year-end rate. In December, the interest expense was trued-up for the year based on the short-term interest rate for 2022 of 4.32%. In the calculation of the interest rate to be applied to the account balance for 2022 only a portion of the fixed fees were included due to the lower than anticipated promissory note balances. See page 15 for a detailed calculation of the short-term interest rate and further information.

[7] In March 2022, the payments for the Muskrat Falls PPA were adjusted to reflect the financial restructuring of the project resulting in a revised amount to be transferred to the deferral account of approximately $20.7 million. The amount for March was further reduced by $3.4 million primarily due to the adjustment of billed operating costs to actual from November 23, 2021 to March 31, 2022 resulting in a total transfer to the deferral account of $17.3 million in March.

[8] In April 2022, Hydro received a credit for $30.4 million adjusting the payments made under the agreement from November 23, 2021 to February 28, 2022. The credit was applied against the April invoices which totalled $20.9 million, this resulted in a credit of $9.5 million for the month.

[9] In December, the account is credited with an estimate of net export sales that occurred during the year but the actual settlement value will not be finalized until the first quarter of 2023.

Supply Cost Variance Deferral Account
Section B: Utility Customer Balance
December 31, 2022

	Allocation Rural Rate Alteration[1] ($)	Financing Charges[2] ($)	Transfers ($)	Cumulative Net Balance ($)
	(from page 13)			
Opening Balance	(729,046)	(350)	-	(729,396)
Adjustments	(123,374)	-	-	(123,374)
Adjusted Opening Balance[3]	**(852,420)**	**(350)**	**-**	**(852,770)**
January	(849,000)	(1,297)	-	(1,703,067)
February	(727,829)	(2,590)	-	(2,433,486)
March	(803,100)	(3,700)	-	(3,240,286)
April	(539,354)	(4,927)	-	(3,784,567)
May	(362,097)	(5,755)	-	(4,152,419)
June	(150,921)	(6,314)	-	(4,309,654)
July	(28,397)	(6,553)	-	(4,344,604)
August	(144,414)	(6,606)	-	(4,495,624)
September	(881,758)	(6,836)	-	(5,384,218)
October[4]	789,415	(8,187)	-	(4,602,990)
November	(535,051)	(6,999)	-	(5,145,040)
December	(540,862)	(98,555)	-	(5,784,457)
Year-to-Date	**(4,773,368)**	**(158,319)**	**-**	**(4,931,687)**
Total	**(5,625,788)**	**(158,669)**	**-**	**(5,784,457)**

[1] The Rural Rate Alteration is allocated between Utility and Labrador Interconnected customers in the same proportion that the rural deficit was allocated in the approved 2019 Cost of Service Study, which is 96.1% and 3.9%, respectively. The Labrador Interconnected amount is then removed from the plan and written off to net income (loss).

Monthly balances reflect immaterial adjustments.

The only transactions posted to the Utility's Customer Balance is Newfoundland Power's allocation of Rural Rate Alteration and associated interest until further approval is obtained from the Board.

[2] For the period January to November, the interest rate applied to the deferral account balance was 1.84% based on the prior year-end rate. In December, the interest expense was trued-up for the year based on the short-term interest rate for 2022 of 4.32%. In the calculation of the interest rate to be applied to the account balance for 2022 only a portion of the fixed fees were included due to the lower than anticipated promissory note balances. See page 15 for a detailed calculation of the short-term interest rate and further information.

[3] There was a correction to the volume calculation for November and December 2021 Rural Rate Alteration that is reflected as an adjustment to the opening balance for 2022.

[4] October activity includes an adjustment to the volume variation for September of $0.8 million related to a correction to the rural revenue accrual.

Supply Cost Variance Deferral Account
Section B: Industrial Customers Balance[1]
December 31, 2022

	Financing Charges ($)	Transfers ($)	Cumulative Net Balance ($)
Opening Balance	-	-	-
January	-	-	-
February	-	-	-
March	-	-	-
April	-	-	-
May	-	-	-
June	-	-	-
July	-	-	-
August	-	-	-
September	-	-	-
October	-	-	-
November	-	-	-
December	-	-	-
Year-to-Date	-	-	-
Total	-	-	-

[1] No transactions will be applied to this balance until further approval is obtained from the Board.

Supply Cost Deferral Account
Muskrat Falls Project Cost Variances
December 31, 2022

	Muskrat Falls PPA Charges Actual ($) (A)	Muskrat Falls PPA Charges Test Year ($) ($A_T$)	TFA[1] Charges Actual ($) (B)	TFA Charges Test Year ($) ($B_T$)	Total Variation ($) $(A - A_T) + (B - B_T)$
January	32,631,191	-	-	-	**32,631,191**
February	32,657,316	-	-	-	**32,657,316**
March[2]	17,324,542	-	-	-	**17,324,542**
April[3]	(9,535,425)	-	-	-	**(9,535,425)**
May	21,568,529	-	-	-	**21,568,529**
June	20,977,982	-	-	-	**20,977,982**
July	21,035,577	-	-	-	**21,035,577**
August	19,910,418	-	-	-	**19,910,418**
September	19,983,949	-	-	-	**19,983,949**
October	20,209,764	-	-	-	**20,209,764**
November	20,300,032	-	-	-	**20,300,032**
December	20,606,745	-	-	-	**20,606,745**
Total	**237,670,620**	**-**	**-**	**-**	**237,670,620**

[1] Transmission Funding Agreement ("TFA").

[2] In March 2022, the payments for the Muskrat Falls PPA were adjusted to reflect the financial restructuring of the project resulting in a revised amount to be transferred to the deferral account of approximately $20.7 million. The amount for March was further reduced by $3.4 million primarily due to the adjustment of billed operating costs to actual from November 23, 2021 to March 31, 2022 resulting in a total transfer to the deferral account of $17.3 million in March .

[3] In April 2022, Hydro received a credit for $30.4 million adjusting the payments made under the agreement from November 23, 2021 to February 28, 2022. The credit was applied against the April invoices which totalled $20.9 million, this resulted in a credit of $9.5 million for the month.

Supply Cost Deferral Account
Holyrood TGS Fuel Cost Variance
December 31, 2022

	Actual Quantity No. 6 Fuel (bbl.)	Actual Quantity No. 6 Fuel for Non-Firm Sales[1] (bbl.)	Net Quantity No. 6 Fuel (bbl.)	Actual Average No. 6 Fuel Cost ($Can./bbl)	Actual[2] ($) C	Yest Year Quantity No. 6 Fuel (bbl.)	Test Year No. 6 Fuel Cost ($Can./bbl)	Test Year ($) C_T	Total Variation ($) (C - C_T)
January	239,201	14,257	224,944	94.37	21,229,117	421,132	105.90	44,597,879	**(23,368,762)**
February	238,924	18,729	220,195	112.44	24,759,568	363,087	105.90	38,450,913	**(13,691,346)**
March	245,612	1,094	244,518	122.51	29,956,665	178,662	105.90	18,920,306	**11,036,359**
April	97,124	2,549	94,575	140.13	13,253,111	104,889	105.90	11,107,745	**2,145,366**
May	71,675	1,826	69,849	147.00	10,267,842	63,808	105.90	6,757,267	**3,510,574**
June	-	42	(42)	147.00	(6,159)	29,297	105.90	3,102,552	**(3,108,712)**
July	253	252	1	150.16	176	-	105.90	-	**176**
August	-	99	(99)	150.16	(14,910)	-	105.90	-	**(14,910)**
September	3,311	2	3,309	150.16	496,855	61,750	105.90	6,539,325	**(6,042,470)**
October	33,676	1,466	32,210	150.19	4,837,714	127,616	105.90	13,514,534	**(8,676,820)**
November	164,554	3,897	160,657	150.19	24,129,659	221,887	105.90	23,497,833	**631,826**
December	205,763	4,219	201,544	140.82	28,383,337	262,852	105.90	27,836,027	**547,310**
Total	**1,300,093**	**48,433**	**1,251,660**	**125.67**	**157,292,973**	**1,834,980**	**105.90**	**194,324,382**	**(37,031,409)**

[1] Includes non-firm sales to Island Industrial Customers, supply of emergency energy to Nova Scotia and the reimbursement of fuel costs by Nalcor under the Indemnity Agreement.

[2] In August 2021, Nalcor commenced delivery of the Nova Scotia Block that, combined with limited LIL capacity, meant Hydro could not be delivered as much energy from the Muskrat Falls Hydroelectric Generating Facility as it would otherwise. Nalcor committed to indemnify Hydro for any damages suffered as a result of this reduction in deliveries including compensating Hydro for incremental costs of fuel and/or imports over the Maritime Link. The 2022 balances reflect adjustments to the calculation to eliminate incremental costs incurred by Hydro as a result of reduced deliveries.

Supply Cost Deferral Account
Other IIS Supply Cost Variance Summary
December 31, 2022

	Thermal Variation[1,2] ($)	Off-Island Power Purchase Variation[1] ($)	On-Island Power Purchase Variation[1] ($)	CBPP[3] Firm Energy Variation[1] ($)	Current Month Variation ($)	Year-to-Date Variation ($)	Cost Variance Threshold[4] ($)	Other IIS Supply Cost Variance ($)
	(D)	(E)	(F)	(G)	(D + E + F + G)			
January	(1,369,365)	(476,047)	(891,831)	-	(2,737,243)	(2,737,243)	(500,000)	(2,237,243)
February	(934,927)	(2,610,139)	(138,476)	-	(3,683,542)	(6,420,785)	(500,000)	(5,920,785)
March	(754,117)	(5,919,829)	167,377	-	(6,506,569)	(12,927,354)	(500,000)	(12,427,354)
April	(306,750)	(146,318)	(86,336)	-	(539,404)	(13,466,758)	(500,000)	(12,966,758)
May	(118,191)	-	(948,575)	-	(1,066,766)	(14,533,524)	(500,000)	(14,033,524)
June	(491,019)	-	(609,043)	-	(1,100,062)	(15,633,586)	(500,000)	(15,133,586)
July	(103,440)	-	(289,905)	-	(393,345)	(16,026,931)	(500,000)	(15,526,931)
August	76,979	-	(330,950)	-	(253,971)	(16,280,902)	(500,000)	(15,780,902)
September	53,330	-	(1,247,170)	-	(1,193,840)	(17,474,742)	(500,000)	(16,974,742)
October	(180,218)	(1,277,219)	(1,170,312)	-	(2,627,749)	(20,102,491)	(500,000)	(19,602,491)
November	(184,016)	(1,694,628)	(16,591)	-	(1,895,235)	(21,997,726)	(500,000)	(21,497,726)
December	(1,129,098)	(2,164,775)	(232,866)	-	(3,526,739)	(25,524,465)	(500,000)	(25,024,465)
Total	**(5,440,832)**	**(14,288,955)**	**(5,794,678)**	**-**	**(25,524,465)**			

[1] The calculation of the variation by source is provided in Appendix A.

[2] In August 2021, Nalcor commenced delivery of the Nova Scotia Block that, combined with limited LIL capacity, meant Hydro could not be delivered as much energy from the Muskrat Falls Hydroelectric Generating Facility as it would otherwise. Nalcor committed to indemnify Hydro for any damages suffered as a result of this reduction in deliveries including compensating Hydro for incremental costs of fuel and/or imports over the Maritime Link. The 2022 balances reflect adjustments to the calculation to eliminate incremental costs incurred by Hydro as a result of reduced deliveries.

[3] Corner Brook Pulp and Paper Ltd. ("CBPP").

[4] In the "Supply Cost Accounting Compliance Application," Newfoundland and Labrador Hydro, January 21, 2022, it was proposed the cost variance threshold would commence on January 1, 2022 and the cost variance of +/- $500,000 would apply to the Revised Energy Supply Cost Variance Deferral Account balance of of October 31, 2021.

Supply Cost Deferral Account
Net Revenue from Exports Variance
December 31, 2022

	Test Year ($) ($H_T$)	Actual[1] ($) (H)	Total Variation ($) ($H_T$ - H)	Non-Firm Sales Revenue[2]
January	-	-	-	-
February	-	1,733,737	**(1,733,737)**	-
March	-	2,523,522	**(2,523,522)**	-
April	-	327,464	**(327,464)**	-
May	-	807,072	**(807,072)**	-
June	-	232,147	**(232,147)**	-
July	-	185,919	**(185,919)**	-
August	-	182,394	**(182,394)**	-
September	-	195,675	**(195,675)**	-
October	-	285,773	**(285,773)**	-
November	-	524,097	**(524,097)**	-
December[3]	-	26,077,910	**(26,077,910)**	-
Total	**-**	**33,075,710**	**(33,075,710)**	**-**

[1] Muskrat Falls and Hydro entered into a Purchase Power Agreement for the purchase and sale of residual block energy. Under this Agreement, Labrador Rural and Industrial customer load, previously serviced with Recapture Energy from Churchill Falls, is now serviced with energy from the Muskrat Falls Hydroelectric Generating Facility. Entering into this Agreement has allowed additional Recapture Energy exports to external markets helping to ensure maximum value from the organization's hydrological resources.

[2] Non-firm sales supplied from hydraulic sources for 2022 were not separately identified. Any non-firm sales were charged to customers at the cost of fuel and credited to the appropriate fuel account. Tracking of sales from hydraulic sources will begin in 2023 pending approval of market rates for non-firm sales.

[3] In December, the account is credited with an estimate of net export sales that occurred during the year but the actual settlement value will not be finalized until the first quarter of 2023.

Supply Cost Deferral Account
Tariff Revenue
December 31, 2022

	Test Year ($) ($I_T$)	Actual ($) (I)	Total Variation ($) ($I_T$ - I)
January	-	818,277	**(818,277)**
February	-	970,188	**(970,188)**
March	-	303,488	**(303,488)**
April	-	842,928	**(842,928)**
May	-	851,265	**(851,265)**
June	-	518,174	**(518,174)**
July	-	852,559	**(852,559)**
August	-	495,364	**(495,364)**
September	-	616,942	**(616,942)**
October	-	1,094,839	**(1,094,839)**
November	-	1,174,686	**(1,174,686)**
December	-	874,152	**(874,152)**
Total	**-**	**9,412,862**	**(9,412,862)**

Supply Cost Deferral Account
Load Variation - Utility
December 31, 2022

	Test Year Cost of Service Firm Sales (kWh) (J_T)	Actual Firm Sales (kWh) (J_A)	Sales Variance (kWh) ($J_T - J_A$)	Firm Energy Rate ($/kWh) ($K_R$)	Load Variation ($) ($J_T - J_A$) x K_R
January	715,400,000	665,211,407	50,188,593	0.18165	9,116,758
February	648,500,000	602,020,498	46,479,502	0.18165	8,443,002
March	646,000,000	633,754,566	12,245,434	0.18165	2,224,383
April	527,700,000	500,768,117	26,931,883	0.18165	4,892,177
May	421,700,000	408,561,340	13,138,660	0.18165	2,386,638
June	345,200,000	324,817,766	20,382,234	0.18165	3,702,433
July	307,900,000	291,637,109	16,262,891	0.18165	2,954,154
August	300,500,000	298,204,258	2,295,742	0.18165	417,022
September	314,500,000	294,934,911	19,565,089	0.18165	3,553,998
October	413,700,000	341,987,054	71,712,946	0.18165	13,026,657
November	495,500,000	523,566,509	(28,066,509)	0.18165	(5,098,281)
December	664,100,000	623,365,189	40,734,811	0.18165	7,399,478
Total	**5,800,700,000**	**5,508,828,724**	**291,871,276**		**53,018,419**

Supply Cost Deferral Account
Load Variation - Industrial
December 31, 2022

	Test Year Cost of Service Firm Sales (kWh) (J_T)	Actual Firm Sales (kWh) (J_A)	Sales Variance (kWh) ($J_T - J_A$)	Firm Energy Rate ($/kWh) ($K_R$)	Load Variation ($) ($J_T - J_A$) x K_R
January	63,000,000	36,305,368	26,694,632	0.04428	1,182,038
February	58,100,000	36,043,982	22,056,018	0.04428	976,640
March	63,300,000	37,013,366	26,286,635	0.04428	1,163,972
April	61,500,000	28,544,773	32,955,227	0.04428	1,459,257
May	63,000,000	35,301,226	27,698,774	0.04428	1,226,502
June	60,900,000	35,317,163	25,582,837	0.04428	1,132,808
July	62,400,000	28,761,039	33,638,961	0.04428	1,489,533
August	62,600,000	32,624,743	29,975,257	0.04428	1,327,304
September	61,000,000	29,516,496	31,483,504	0.04428	1,394,090
October	63,000,000	22,175,475	40,824,525	0.04428	1,807,710
November	60,700,000	32,036,414	28,663,586	0.04428	1,269,224
December	63,800,000	32,629,922	31,170,078	0.04428	1,380,211
Total	**743,300,000**	**386,269,966**	**357,030,034**		**15,809,289**

Supply Cost Deferral Account
Rural Rate Alteration
December 31, 2022

	Price ($)	Volume ($)	Total[1] ($)	Utility Allocation[1] ($) (to page 4)	Labrador Interconnected Allocation[1] ($)	Balance ($)
January	(589,851)	(293,604)	(883,455)	(849,000)	(34,455)	-
February	(533,501)	(223,865)	(757,366)	(727,829)	(29,537)	-
March	(467,125)	(368,567)	(835,692)	(803,100)	(32,592)	-
April	(402,790)	(158,452)	(561,242)	(539,354)	(21,888)	-
May	(380,174)	3,382	(376,792)	(362,097)	(14,695)	-
June	(340,576)	183,530	(157,046)	(150,921)	(6,125)	-
July	(320,509)	290,960	(29,549)	(28,397)	(1,152)	-
August	(313,421)	163,146	(150,275)	(144,414)	(5,861)	-
September	(303,118)	(614,424)	(917,542)	(881,758)	(35,784)	-
October	(355,755)	1,177,207	821,452	789,415	32,037	-
November	(405,190)	(151,575)	(556,765)	(535,051)	(21,714)	-
December	(496,616)	(66,196)	(562,812)	(540,862)	(21,950)	-
Total	**(4,908,626)**	**(58,458)**	**(4,967,084)**	**(4,773,368)**	**(193,716)**	**-**

[1] The Rural Rate Alteration is allocated between Utility and Labrador Interconnected customers in the same proportion that the Rural Deficit was allocated in the approved 2019 Cost of Service Study, which is 96.1% and 3.9%, respectively. The Labrador Interconnected amount is then removed from the plan and written off to net income (loss).

Supply Cost Deferral Account
Greenhouse Gas Credits
December 31, 2022

	Test Year ($) ($T_T$)	Actual ($) (T)	Total Variation ($) ($T_T$ - T)
January	-	-	-
February	-	-	-
March	-	-	-
April	-	-	-
May	-	-	-
June	-	-	-
July[1]	-	8,460,392	**(8,460,392)**
August	-	14,280	**(14,280)**
September	-	-	-
October	-	625,010	**(625,010)**
November	-	-	-
December	-	216,518	**(216,518)**
Total	**-**	**9,316,200**	**(9,316,200)**

[1] In July 2022, Hydro sold 230,000 Greenhouse gas performance credits within the province through request for bids ($7.9 million). As well, Hydro sold 406,412 Renewable Energy Certificates associated with St. Lawrence Wind and Fermeuse Wind Projects, and Granite Canal Hydroelectric Generating Station to external markets through the Energy Marketing Corporation ($0.6 million).

2022 Short-Term Interest Calculation

	($000's)
Promissory Note Interest	1,442
Operating Line Interest	-
Standby and Upfront Fee[1]	444
Brokerage Fee	45
Debt Guarantee Fee – Recoverable Portion Only	69
Total Short-Term Borrowing Costs	**2,000**
Weighted Average Short-Term Debt Balance[2]	**46,260**
Short-Term Cost of Borrowing 2022	**4.32%**

[1] The interest rate calculation for 2022 was modified from the approved methodology due to the lower than anticipated weighted average short-term debt balance and a higher Supply Cost Variance Deferral Account Balance. The inclusion of the full standby and up front fee of $0.7 million would have resulted in a short-term cost of borrowing rate of 4.88% and an additional $0.6 million interest charge. As a result, the standby and upfront fee was reduced on a prorated basis in comparison to the 2021 debt ($46,260M / $73,118M = 63% * $701K = $444K). Hydro's short-term cost of borrowing calculation will be monitored in 2023 and if a methodology modification is required then Hydro will make a proposal for approval to the Board.

[2] The weighted average of the short-term debt balance is calculated using the 365-day average of the credit facility debt and the promissory note debt balances.

Appendix A

Other Island Interconnected System

Supply Cost Variance Summary

Other Island Interconnected System Supply Cost Variance
Thermal Generation Cost Variance
December 31, 2022

Holyrood Combustion Turbine	Actual Cost ($) (A)	Fuel for Non-Firm Sales ($)[1,2] (B)	Net Cost ($) (C = A - B)	Test Year Cost ($) (D)	Thermal Variation ($) (C - D)
January	41,637	23,416	18,221	1,258,888	**(1,240,667)**
February	(1,650)	46,539	(48,189)	767,288	**(815,477)**
March	127,835	145,085	(17,250)	661,531	**(678,781)**
April	36,675	20,324	16,351	392,558	**(376,207)**
May	40,426	13,906	26,520	123,373	**(96,853)**
June	1,071	60,975	(59,904)	431,643	**(491,547)**
July	31,905	(193)	32,098	33,744	**(1,646)**
August	72,184	-	72,184	33,744	**38,440**
September	171,674	14,674	156,999	33,744	**123,255**
October	23,736	(50)	23,786	209,033	**(185,247)**
November	72,879	-	72,879	185,808	**(112,929)**
December	801	27,800	(26,998)	851,255	**(878,253)**
Subtotal	**619,173**	**352,475**	**266,697**	**4,982,609**	**(4,715,912)**

[1] All non-firm sales are credited under Holyrood Combustion Turbines since the non-firm sales were not distinguished between Holyrood, Hardwoods or Stephenville.

[2] Includes non-firm sales to Island Industrial Customers, supply of emergency energy to Nova Scotia and the reimbursement of fuel costs by Nalcor under the Indemnity Agreement.

Other Island Interconnected System Supply Cost Variance
Thermal Generation Cost Variance
December 31, 2022

Hardwoods Gas Turbine	Actual Cost ($) (A)	Fuel for Non-Firm Sales ($) (B)	Net Cost ($) (C = A - B)	Test Year Cost ($) (D)	Thermal Variation ($) (C - D)
January	9,044	-	9,044	122,478	**(113,434)**
February	42,109	-	42,109	123,884	**(81,775)**
March	9,316	-	9,316	117,271	**(107,955)**
April	111,229	-	111,229	83,554	**27,675**
May	10,414	-	10,414	57,170	**(46,756)**
June	92,240	-	92,240	46,909	**45,331**
July	1,108	-	1,108	71,469	**(70,361)**
August	55,979	-	55,979	14,587	**41,392**
September	47,480	-	47,480	90,430	**(42,950)**
October	7,577	-	7,577	20,417	**(12,840)**
November	1,125	-	1,125	59,755	**(58,630)**
December	545	-	545	179,920	**(179,375)**
Subtotal	**388,168**	**-**	**388,168**	**987,844**	**(599,678)**

Other Island Interconnected System Supply Cost Variance
Thermal Generation Cost Variance
December 31, 2022

Stephenville Gas Turbine	**Actual Cost ($)** (A)	**Fuel for Non-Firm Sales ($)** (B)	**Net Cost ($)** (C = A - B)	**Test Year Cost ($)** (D)	**Thermal Variation ($)** (C - D)
January	20,734	-	20,734	68,116	**(47,382)**
February	13,280	-	13,280	46,923	**(33,643)**
March	10,585	-	10,585	40,867	**(30,282)**
April	69,132	-	69,132	56,006	**13,126**
May	49,141	-	49,141	25,733	**23,408**
June	46,321	-	46,321	86,278	**(39,957)**
July	5,412	-	5,412	31,788	**(26,376)**
August	13,593	-	13,593	15,138	**(1,545)**
September	8,766	-	8,766	34,816	**(26,050)**
October	10,540	-	10,540	15,138	**(4,598)**
November	1,391	-	1,391	25,733	**(24,342)**
December	13,524	-	13,524	84,827	**(71,303)**
Subtotal	**262,419**	**-**	**262,419**	**531,363**	**(268,944)**

Other Island Interconnected System Supply Cost Variance
Thermal Generation Cost Variance
December 31, 2022

St. Anthony Diesel Generating Station	Actual Cost ($) (A)	Fuel for Non-Firm Sales ($) (B)	Net Cost ($) (C = A - B)	Test Year Cost ($) (D)	Thermal Variation ($) (C - D)
January	21,589	-	21,589	3,147	**18,442**
February	254	-	254	3,089	**(2,835)**
March	66,761	-	66,761	3,299	**63,462**
April	29,069	-	29,069	3,547	**25,522**
May	7,330	-	7,330	3,662	**3,668**
June	562	-	562	3,604	**(3,042)**
July	286	-	286	3,642	**(3,356)**
August	3,954	-	3,954	3,642	**312**
September	4,651	-	4,651	3,814	**837**
October	23,030	-	23,030	3,986	**19,044**
November	8,009	-	8,009	4,272	**3,737**
December	262	-	262	-	**262**
Subtotal	**165,759**	**-**	**165,759**	**39,704**	**126,053**

Other Island Interconnected System Supply Cost Variance
Thermal Generation Cost Variance
December 31, 2022

Hawkes Bay Diesel Generating Station	Actual Cost ($) (A)	Fuel for Non-Firm Sales ($) (B)	Net Cost ($) (C = A - B)	Test Year Cost ($) (D)	Thermal Variation ($) (C - D)
January	15,251	-	15,251	1,575	**13,676**
February	350	-	350	1,547	**(1,197)**
March	1,091	-	1,091	1,652	**(561)**
April	4,910	-	4,910	1,776	**3,134**
May	175	-	175	1,833	**(1,658)**
June	-	-	-	1,804	**(1,804)**
July	122	-	122	1,823	**(1,701)**
August	203	-	203	1,823	**(1,620)**
September	147	-	147	1,909	**(1,762)**
October	5,418	-	5,418	1,995	**3,423**
November	10,286	-	10,286	2,138	**8,148**
December	(429)	-	(429)	-	**(429)**
Subtotal	**37,523**	**-**	**37,523**	**19,875**	**17,649**
Total					**(5,440,832)**

Supply Cost Variance Deferral Account
Off-Island Power Purchase
December 31, 2022

Maritime Link	Actual Cost ($) (A)	Test Year Cost ($) (B)	Off-Island Power Purchase Variation ($) (A - B)
January	987	325,148	(324,161)
February	-	2,548,040	(2,548,040)
March	-	5,799,459	(5,799,459)
April	-	-	-
May	-	-	-
June	-	-	-
July	-	-	-
August	-	-	-
September	-	-	-
October	-	1,245,520	(1,245,520)
November	-	1,522,118	(1,522,118)
December	-	2,052,451	(2,052,451)
Subtotal	**987**	**13,492,735**	**(13,491,749)**

Supply Cost Variance Deferral Account
Off-Island Power Purchase
December 31, 2022

Labrador-Island Link	Actual Cost ($) (A)	Test Year Cost ($) (B)	Off-Island Power Purchase Variation ($) (A - B)
January	-	151,886	(151,886)
February	-	62,099	(62,099)
March	-	120,370	(120,370)
April	-	146,318	(146,318)
May	-	-	-
June	-	-	-
July	-	-	-
August	-	-	-
September	-	-	-
October	-	31,699	(31,699)
November	-	172,510	(172,510)
December	-	112,324	(112,324)
Subtotal	**-**	**797,206**	**(797,206)**
Total			**(14,288,955)**

Supply Cost Deferral Account
On-Island Purchases Variation
December 31, 2022

Nalcor Exploits	Actual Production (kWh) (A)	Cost of Service Production (kWh) (B)	Monthly Production Variance (kWh) (C) = (A - B)	Cost of Service Cost (¢/kWh) (D)	Power Purchase Variation ($) (E) = (C x D)
January	46,020,897	54,196,680	(8,175,783)	0.0400	(327,031)
February	51,922,395	48,703,200	3,219,195	0.0400	128,768
March	62,350,738	53,794,920	8,555,818	0.0400	342,233
April	57,907,087	55,911,600	1,995,487	0.0400	79,819
May	49,287,755	58,649,520	(9,361,765)	0.0400	(374,471)
June	46,826,591	48,618,000	(1,791,409)	0.0400	(71,656)
July	48,868,536	53,988,360	(5,119,824)	0.0400	(204,793)
August	47,765,277	54,851,400	(7,086,123)	0.0400	(283,445)
September	27,390,477	48,124,800	(20,734,323)	0.0400	(829,373)
October	46,231,920	38,442,480	7,789,440	0.0400	311,578
November	43,599,511	45,032,400	(1,432,889)	0.0400	(57,316)
December	56,427,942	54,684,000	1,743,942	0.0400	69,758
Subtotal	**584,599,126**	**614,997,360**	**(30,398,234)**		**(1,215,929)**

Supply Cost Deferral Account
On-Island Purchases Variation
December 31, 2022

Star Lake	Actual Production (kWh) (A)	Cost of Service Production (kWh) (B)	Monthly Production Variance (kWh) (C) = (A - B)	Cost of Service Cost (¢/kWh) (D)	Power Purchase Variation ($) (E) = (C x D)
January	11,028,213	12,391,320	(1,363,107)	0.0400	(54,524)
February	10,644,810	11,245,920	(601,110)	0.0400	(24,044)
March	10,996,503	12,395,040	(1,398,537)	0.0400	(55,941)
April	11,932,941	12,308,400	(375,460)	0.0400	(15,018)
May	12,296,327	12,636,840	(340,513)	0.0400	(13,621)
June	11,816,832	11,970,000	(153,168)	0.0400	(6,127)
July	12,247,806	12,990,240	(742,434)	0.0400	(29,697)
August	12,173,663	12,915,840	(742,177)	0.0400	(29,687)
September	11,561,896	6,512,400	5,049,496	0.0400	201,980
October	9,163,597	12,997,680	(3,834,083)	0.0400	(153,363)
November	5,705,032	11,541,600	(5,836,568)	0.0400	(233,463)
December	12,614,297	11,844,480	769,817	0.0400	30,793
Subtotal	**132,181,916**	**141,749,760**	**(9,567,844)**		**(382,712)**

Supply Cost Deferral Account
On-Island Purchases Variation
December 31, 2022

Rattle Brook	Actual Production (kWh) (A)	Cost of Service Production (kWh) (B)	Monthly Production Variance (kWh) (C) = (A - B)	Cost of Service Cost (¢/kWh) (D)	Power Purchase Variation ($) (E) = (C x D)
January	1,351,874	680,000	671,874	0.0851	57,185
February	605,583	470,000	135,583	0.0851	11,540
March	791,782	630,000	161,782	0.0851	13,770
April	1,617,993	1,600,000	17,993	0.0851	1,531
May	2,601,505	2,590,000	11,505	0.0851	979
June	2,006,439	1,630,000	376,439	0.0851	32,039
July	1,381,463	810,000	571,463	0.0851	48,638
August	906,875	800,000	106,875	0.0851	9,096
September	1,122,824	1,170,000	(47,176)	0.0851	(4,015)
October	686,314	1,570,000	(883,686)	0.0851	(75,212)
November	681,614	1,770,000	(1,088,386)	0.0851	(92,635)
December	1,232,781	1,120,000	112,781	0.0851	9,599
Subtotal	**14,987,047**	**14,840,000**	**147,047**		**12,515**

Supply Cost Deferral Account
On-Island Purchases Variation
December 31, 2022

CBPP Co-Generation	Actual Production (kWh) (A)	Cost of Service Production (kWh) (B)	Monthly Production Variance (kWh) (C) = (A - B)	Cost of Service Cost (¢/kWh) (D)	Power Purchase Variation ($) (E) = (C x D)
January	4,095,096	6,320,000	(2,224,904)	0.1884	(419,172)
February	4,430,668	4,980,000	(549,332)	0.1884	(103,494)
March	5,325,397	5,840,000	(514,603)	0.1884	(96,951)
April	4,863,489	5,550,000	(686,511)	0.1884	(129,339)
May	4,574,094	5,740,000	(1,165,906)	0.1884	(219,657)
June	2,749,036	6,070,000	(3,320,964)	0.1884	(625,670)
July	4,216,822	5,580,000	(1,363,178)	0.1884	(256,823)
August	4,311,034	4,230,000	81,034	0.1884	15,267
September	2,293,630	6,240,000	(3,946,370)	0.1884	(743,496)
October	1,925	5,440,000	(5,438,075)	0.1884	(1,024,533)
November	4,417,248	4,290,000	127,248	0.1884	23,974
December	4,774,878	6,250,000	(1,475,122)	0.1884	(277,913)
Subtotal	**46,053,317**	**66,530,000**	**(20,476,683)**		**(3,857,807)**

Supply Cost Deferral Account
On-Island Purchases Variation
December 31, 2022

St. Lawrence Wind	Actual Production (kWh) (A)	Cost of Service Production (kWh) (B)	Monthly Production Variance (kWh) (C) = (A - B)	Cost of Service Cost (¢/kWh) (D)	Power Purchase Variation ($) (E) = (C x D)
January	9,671,081	11,200,000	(1,528,919)	0.0722	(110,388)
February	10,430,491	11,200,000	(769,509)	0.0722	(55,559)
March	9,983,932	10,570,000	(586,068)	0.0722	(42,314)
April	9,046,162	9,420,000	(373,838)	0.0722	(26,991)
May	5,431,757	7,860,000	(2,428,243)	0.0722	(175,319)
June	5,584,935	6,070,000	(485,065)	0.0722	(35,022)
July	5,424,038	5,760,000	(335,962)	0.0722	(24,256)
August	5,110,303	5,970,000	(859,697)	0.0722	(62,070)
September	8,508,708	7,750,000	758,708	0.0722	54,779
October	6,750,815	8,480,000	(1,729,185)	0.0722	(124,847)
November	12,021,483	9,740,000	2,281,483	0.0722	164,723
December	10,366,475	10,780,000	(413,525)	0.0722	(29,857)
Subtotal	**98,330,180**	**104,800,000**	**(6,469,820)**		**(467,121)**

Supply Cost Deferral Account
On-Island Purchases Variation
December 31, 2022

Fermeuse Wind	Actual Production (kWh) (A)	Cost of Service Production (kWh) (B)	Monthly Production Variance (kWh) (C) = (A - B)	Cost of Service Cost (¢/kWh) (D)	Power Purchase Variation ($) (E) = (C x D)
January	8,528,860	9,020,000	(491,140)	0.07717	(37,901)
February	7,780,054	9,020,000	(1,239,946)	0.07717	(95,687)
March	8,595,268	8,510,000	85,268	0.07717	6,580
April	7,637,450	7,590,000	47,450	0.07717	3,662
May	4,172,604	6,330,000	(2,157,396)	0.07717	(166,486)
June	6,152,054	4,890,000	1,262,054	0.07717	97,393
July	6,933,979	4,640,000	2,293,979		177,026
August	5,067,731	4,810,000	257,731		19,889
September	7,185,382	6,240,000	945,382		72,955
October	5,483,163	6,830,000	(1,346,837)		(103,935)
November	10,148,231	7,840,000	2,308,231		178,126
December	8,233,269	8,690,000	(456,731)		(35,246)
Subtotal	**85,918,045**	**84,410,000**	**1,508,045**		**116,376**
Total					**(5,794,678)**

Indemnity Agreement
Fuel Costs Reimbursed by Nalcor[1]
December 31, 2022

	Actual Production No. 6 Fuel (kWh)	Actual Cost No. 6 Fuel[2] ($)	Actual Production Gas Turbine Fuel (kWh)	Actual Cost Gas Turbine Fuel[2] ($)	Actual Costs Reimbursed[2] ($)
January	4,542,000	735,259	74,000	21,415	756,674
February	10,811,000	2,085,118	158,000	46,539	2,131,656
March	344,000	72,288	-	-	72,288
April	1,447,000	347,815	68,000	20,040	367,855
May	979,000	246,845	37,000	10,929	257,774
June	-	-	205,000	60,764	60,764
July	-	-	-	(295)	(295)
August	-	-	-	-	-
September	-	-	50,000	14,674	14,674
October	-	-	-	(50)	(50)
November	1,885,000	485,614	-	-	485,614
December	1,395,000	336,962	-	-	336,962
	21,403,000	**4,309,901**	**592,000**	**174,015**	**4,483,916**

[1] In August 2021, Nalcor commenced delivery of the Nova Scotia Block that, combined with limited LIL capacity, meant Hydro could not be delivered as much energy from the Muskrat Falls Hydroelectric Generating Facility as it would otherwise.

Fuel costs that were reimbursed by Nalcor for November and December 2021 are detailed below:

	Actual Production No. 6 Fuel (kWh)	Actual Cost No. 6 Fuel ($)	Actual Production Gas Turbine Fuel (kWh)	Actual Cost Gas Turbine Fuel ($)	Actual Costs Reimbursed ($)
November	12,753,000	1,899,304	86,000	23,825	1,923,129
December	6,641,000	989,044	438,000	127,633	1,116,677
	19,394,000	**2,888,348**	**524,000**	**151,458**	**3,039,806**

[2] These costs have been eliminated as referenced on Holyrood TGS Fuel Cost Variance (page 7) and Thermal Generation Cost Variance (Appendix A).

Tab 2

2022 Annual Report on Key Performance Indicators

Contents

List of Appendices

1.0 Introduction

In Order No. P.U. 14(2004), the Board of Commissioners of Public Utilities ("Board") required Newfoundland and Labrador Hydro ("Hydro") to file appropriate historic, current, and forecast comparisons of reliability, operating, financial, and other key performance indicators ("KPI"). These were ordered to be filed with Hydro's annual financial report, commencing in 2004.[1]

In accordance with Board Order No. P.U. 14(2004), Hydro has 14 KPIs, which fall into four categories: reliability, operating, financial, and customer related.

KPI data is reported on a historic basis. Where appropriate, KPIs are subcategorized based on whether they relate to generation, transmission, distribution, or overall corporate activity. For most of the reliability KPIs, data from Electricity Canada ("EC")[2] is provided in this report to compare Hydro's performance with broader industry performance.[3] The KPIs used to measure performance in operations relate to two specific facilities within Hydro's system: Bay d'Espoir Hydroelectric Generating Facility ("Bay d'Espoir") and Holyrood Thermal Generating Station ("Holyrood TGS"). Performance is measured based on the efficiency of the two facilities and is compared on a year-over-year basis.

2.0 Overview of Key Performance Indicator Results

EC defines Significant Events as "events that exceed reasonable design and/or operational limits of the electrical power system." As electrical systems are neither constructed nor expected to fully withstand extreme weather conditions such as hurricanes and ice storms, the impacts of such extreme conditions have been removed from the data used in the calculation of each of the electrical system reliability performance indicators in this report. Appendix A contains a summary of Significant Events from 2017 to 2022, including the associated impact the Significant Events would have had on performance indicators.

There were five power outages reported to the Board during the fourth quarter of 2022. Information on each of these outages is provided in Appendix B.

[1] *Public Utilities Act*, RSNL 1990, c P-47, Board Order No. P.U. 14(2004), Board of Commissioners of Public Utilities, May 4, 2004.
[2] Formerly known as the Canadian Electricity Association.
[3] EC data is unavailable for Under Frequency Load Shedding ("UFLS").

Outages result from such causes as:

- Adverse environment;
- Adverse weather;
- Defective equipment;
- Foreign interference;
- Human error;
- Loss of supply;
- Lightning;
- Planned outages;
- Tree contact; and
- Unknown/other causes.

Hydro monitors reliability performance with ten separate metrics. These metrics have been divided into subcategories: generation, transmission, distribution, and other.

Table 1 summarizes Hydro's KPI performance in 2022. The rationale for the 2022 targets is included as Appendix C of this report.

Table 1: Hydro's KPI Performance for 2022

Category	KPI	Units	2022 Target	2022 Results
Reliability[4]	WCF[5]	%	80.1[6]	84.2
	DAFOR[7]	%	5.88	3.12
	T-SAIDI[8,9]	Minutes/Point	395.09	258.12
	T-SAIFI[10,11]	Number/Point	2.60	1.92
	T-SARI[12,13]	Minutes/Outage	N/A	135.14[14]
	Distribution SAIDI[15,16]	Hours/Customer	18.86	17.49
	Distribution SAIFI[17,18]	Number/Customer	5.56	4.93
	End-Consumer SAIDI	Hours/Customer	2.84	2.44
	End-Consumer SAIFI	Number/Customer	1.16	1.08
	UFLS	# of events	6	2
Operating	Hydraulic Conversion Factor	GWh/MCM[19]	0.433	0.427
	Thermal Conversion Factor	kWh/bbl[20]	583	573
Financial	Controllable Unit Cost	$/MWh	N/A[21]	N/A[22]
Other	Customer Satisfaction (Residential)	Max=100%	85%	89%

[4] Transmission and distribution reliability performance is measured on combined planned and forced outages.
[5] Weighted capability factor ("WCF").
[6] The Weighted Capability Factor target is based on planned annual maintenance outages, an allowance for other short duration maintenance outages and targeted forced outage durations.
[7] Derated Adjusted Forced Outage Rate ("DAFOR").
[8] Transmission–System Average Interruption Duration Index ("T-SAIDI").
[9] T-SAIDI is a reliability key performance indicator for bulk transmission assets, measuring the average duration of outages in minutes per delivery point.
[10] Transmission–System Average Interruption Frequency Index ("T-SAIFI").
[11] T-SAIFI is a reliability key performance indicator for bulk transmission assets, measuring the average frequency of outages per delivery point.
[12] Transmission–System Average Restoration Index ("T-SARI").
[13] T-SARI is a reliability key performance indicator for bulk transmission assets which measures the average duration per transmission interruption. T-SARI is calculated by dividing T-SAIDI by T-SAIFI.
[14] T-SARI does not equate exactly to T-SAIDI/T-SAIFI due to rounding.
[15] System Average Interruption Duration Index ("SAIDI").
[16] SAIDI is the average interruption duration per customer. It is calculated by dividing the number of customer-outage-hours (e.g., a two-hour outage affecting 50 customers equals 100 customer outage hours) by the total number of customers in an area.
[17] System Average Interruption Frequency Index ("SAIFI").
[18] SAIFI is a reliability key performance indicator for distribution service, measuring the average cumulative number of sustained interruptions per customer per year. SAIFI is calculated by dividing the number of customers that have experienced an outage by the total number of customers in an area.
[19] Million cubic metres ("MCM").
[20] Barrel ("bbl").
[21] Hydro does not set a target for Controllable Unit Cost.
[22] Financial information will follow when audited financial results are available.

3.0 Performance Indicators

The following defines and describes detailed KPI data within four general categories – reliability, operating, financial, and customer-related.

3.1 Reliability Performance Indicators

3.1.1 Reliability Key Performance Indicator: Generation

Weighted Capability Factor

Table 2 summarizes Hydro's WCF performance in 2022 compared to 2021 performance and the 2022 target. Calculation details for weighted capability, as well as a list of factors that can impact KPI performance, are included in Appendix D of this report.

Hydro maintained sufficient generation to meet customer requirements at all times in 2022. Hydro plans capital outages and schedules maintenance outages to ensure supply is available as required.

Table 2: WCF Performance

	2022 Annual	2021 Annual	2022 Annual Target[23]
Overall WCF	84.20	79.2	80.1
Thermal WCF	68.41	52.0	56.9
Hydraulic WCF	89.22	88.3	89.0
Gas Turbine WCF	94.51	97.1	90.3

Chart 1 details previous years' performance. Hydro's overall weighted WCF for the period of 2017 to 2021 is 82.13%, which is slightly better than the equivalently weighted national average of 81.57% for the same period.

[23] Includes the time that units are unavailable due to maintenance. Therefore, capability is affected by planned maintenance and capital work.

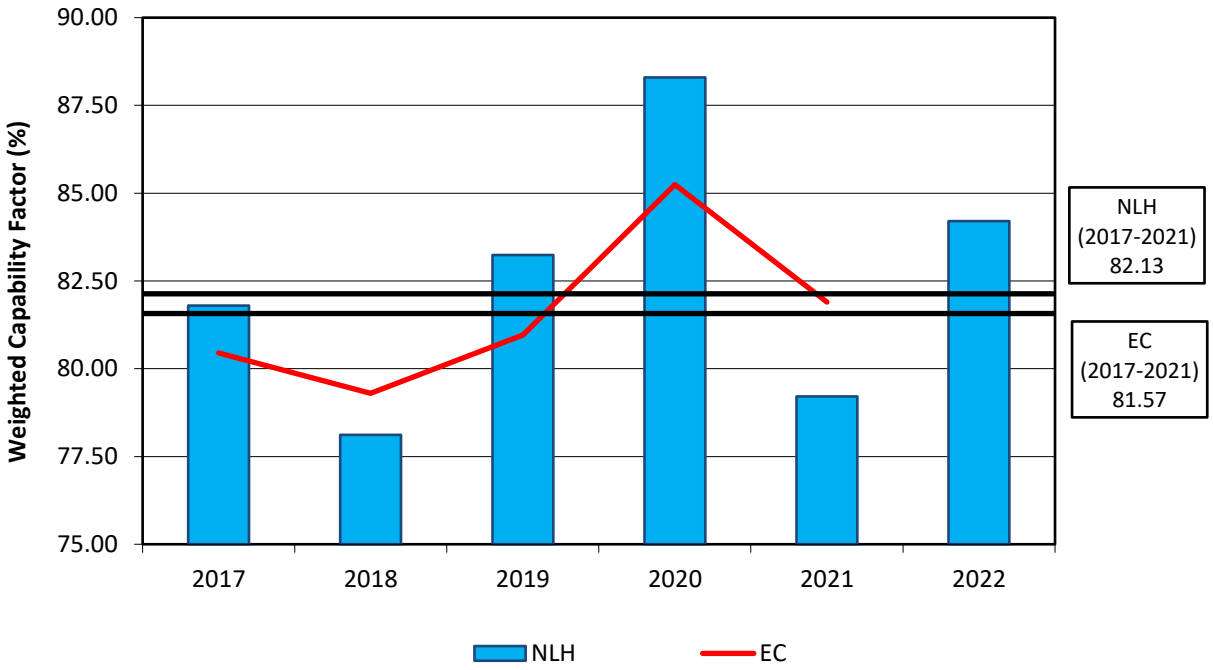


Chart 1: Weighted Capability Factor[24]

Thermal Weighted Capability Factor

Thermal unit WCF was 68.41% in 2022, compared to 52.0% in 2021, and the 2022 target of 56.9%. Holyrood Unit 1 had a capability factor of 64.48%, Unit 2 had a capability factor of 71.31%, and Unit 3 had a capability factor of 69.83%.

Hydraulic Weighted Capability Factor

Hydro's 2022 hydraulic unit WCF performance was 89.22%, compared to 88.3% in 2021, and the 2022 target of 89.0%.

Gas Turbine Weighted Capability Factor

Gas turbine WCF was 94.51% in 2022, compared to 97.1% in 2021, and the 2022 gas turbine WCF target of 90.3%. The main contributors to the better than average WCF performance in 2022 were the low forced outage rates and lack of extended duration planned outages in the annual work plan.

[24] EC comparable data hasn't been received yet for 2022.

Weighted Derated Adjusted Forced Outage Rate

Table 3 summarizes Hydro's DAFOR performance in 2022 compared to 2021 performance and the 2022 target.

Table 3: DAFOR Performance

	2022 Annual	2021 Annual	2022 Annual Target
Overall DAFOR	3.12	11.66	5.88
Thermal DAFOR	7.14	33.72	15.00
Hydraulic DAFOR	2.01	3.09	2.24

Chart 2 details previous years' performance. Hydro's overall weighted DAFOR for the period of 2017 to 2021 is 5.97%, which is better than the equivalently weighted national average of 7.91% for the same period.

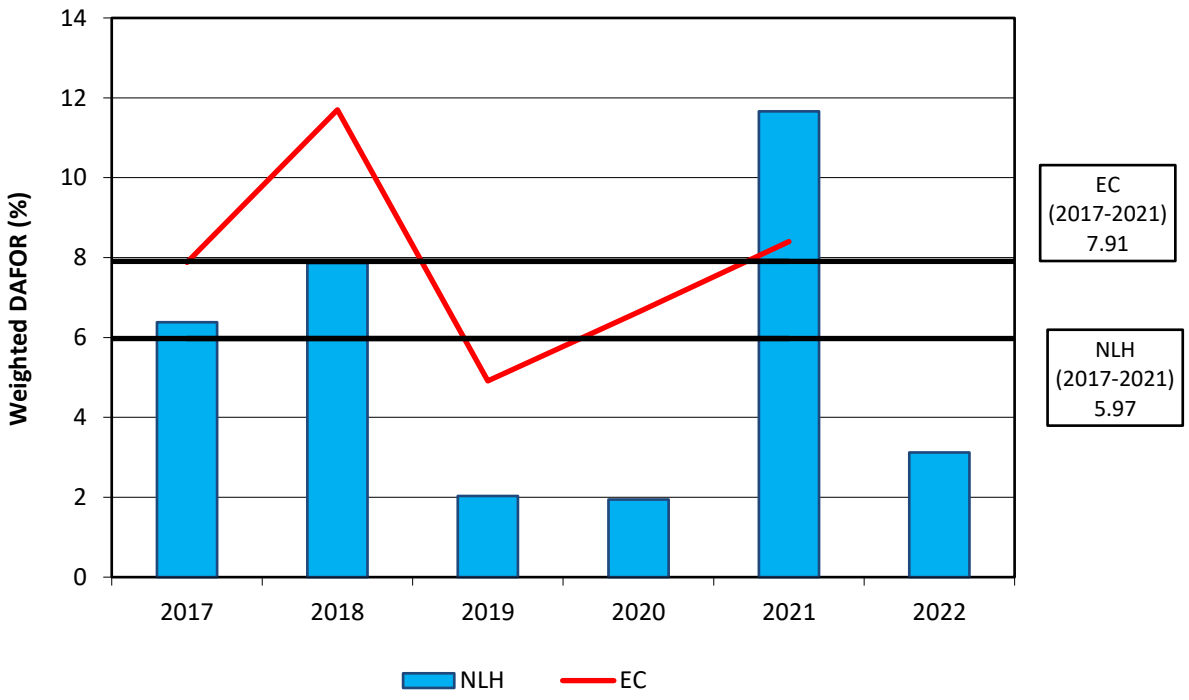


Chart 2: Weighted DAFOR[25]

[25] EC comparable data hasn't been received yet for 2022.

Generation Equipment Performance

Table 3 provides the various performance indices for Hydro's generation facilities. Indices for 2022, 2021, and for the latest five-year EC, national average (2017–2021) are included for comparison.

Table 3: Generation Performance Indicators

Index		Hydraulic	Thermal	Gas Turbine
Fail Rate (Forced outages per 8,760 operating hours)	Hydro 2022	2.06	3.94	50.37
	Hydro 2021	1.77	12.21	21.41
	EC 2017 to 2021	2.02	10.93	113.00
Incapability Factor (Percent of Time)	Hydro 2022	10.78	31.59	5.49
	Hydro 2021	11.73	48.00	2.90
	EC 2017 to 2021	13.32	31.13	12.55
DAFOR[26] (Percent of Time)	Hydro 2022	2.01	7.09	N/A
	Hydro 2021	3.09	33.72	N/A
	EC 2017 to 2021	5.82	18.50	N/A
UFOP[27] (Percent of Time)	Hydro 2022	N/A	N/A	4.40
	Hydro 2021	N/A	N/A	0.31
	EC 2017 to 2021	N/A	N/A	12.76
DAUFOP[28,29] (Percent of Time)	Hydro 2022	N/A	N/A	4.69
	Hydro 2021	N/A	N/A	0.93
	EC 2017 to 2021	N/A	N/A	15.30

Hydraulic Unit Performance

Hydraulic unit performance for fail rate declined in 2022 when compared to 2021, this slight decline in fail rate performance is the result of more generating unit trips occurring in 2022 than had in 2021. The outage count in 2021 was 16, whereas in 2022 a total of 20 trips were experienced. Hydro performed slightly below the national five-year average. Conversely, DAFOR and incapability factor performance improved when compared to 2021. The improvement in both DAFOR and Incapability Factor performance is attributed to the reduced forced outage duration experienced across the fleet of generating units in 2022. Total forced outage duration in 2022 was 1,811 hours when compared to 2,405

[26] Hydro does not use DAFOR to measure gas turbine performance. Gas turbine performance is measured by Utilization Forced Outage Probability ("UFOP").
[27] Hydro does not use UFOP to measure hydraulic or thermal performance. Hydraulic and thermal performance is measured by DAFOR.
[28] Derated Adjusted Utilization Forced Outage Probability ("DAUFOP").
[29] Hydro does not use DAUFOP to measure hydraulic or thermal performance. Hydraulic and thermal performance is measured by DAFOR.

hours in 2021. Hydro's performance in these two measures in 2022 remains at levels better than the national five-year averages.

Thermal Unit Performance

Thermal unit performance improved in 2022 in all areas when compared to 2021. This improvement is the result of a reduction in forced outages in 2022 as well as a reduction in duration of forced outage hours when compared to 2021. Performance in fail rate and DAFOR 2022 is better than the national five-year averages; however, 2022 incapability factor is slightly below than the national-five year average. This can be attributed to lengthy planned outages to the three units in Holyrood.

Gas Turbine Unit Performance

The performance of Hydro's gas turbines declined in 2022 in all areas when compared to 2021. The decline can attributed to the forced outage duration of 463 hours experienced on the gas turbine assets in 2022 when compared to only 3.1 hours experienced in 2021. Performance in all areas is significantly better than the national five-year averages.

3.1.2 End-Consumer Service-Continuity Performance

The End-Consumer Service-Continuity Performance Index was developed to measure reliability of service to all end consumers of electricity in the province, who are supplied Hydro, other than Hydro's Industrial customers. The measure is a combination of Hydro's service continuity data and Newfoundland Power Inc.'s ("Newfoundland Power") service continuity data for outages related to loss of supply due to events on Hydro's transmission system. Therefore, the SAIDI (hours/customer) and SAIFI (interruptions/customer) data provided in Table 4 are measures of the duration and frequency of service interruptions experienced as a result of Hydro system events. Table 4 shows End-Consumer Service Continuity Performance data for the fourth quarter of 2022 and 2021, annual 2022, annual 2021, and the 2022 annual target.

Table 4: End-Consumer Service-Continuity Performance

	Q4[30] 2022	Q4 2021	2022 Annual	2021 Annual	2022 Annual Target (2017–2021 Average)
SAIDI	0.44	1.03	2.44	3.03	2.84
SAIFI	0.31	0.45	1.08	1.45	1.16

[30] Fourth quarter ("Q4").

Hydro used the average of its End-Consumer Service Continuity Indices performances for the period 2017 to 2021 for its 2022 annual targets.

Chart 3 and Chart 4 compare the fourth quarter performance for the past six years. Chart 5 and Chart 6 compare the annual performance for the past six years.

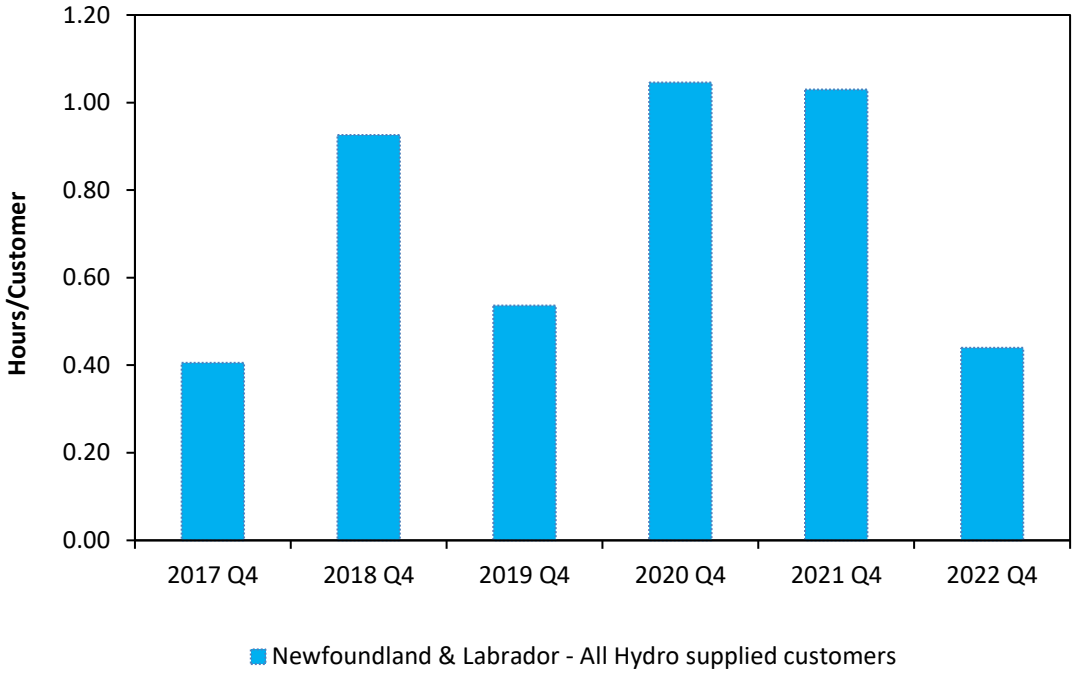


Chart 3: End-Consumer SAIDI Q4 2017 to 2022

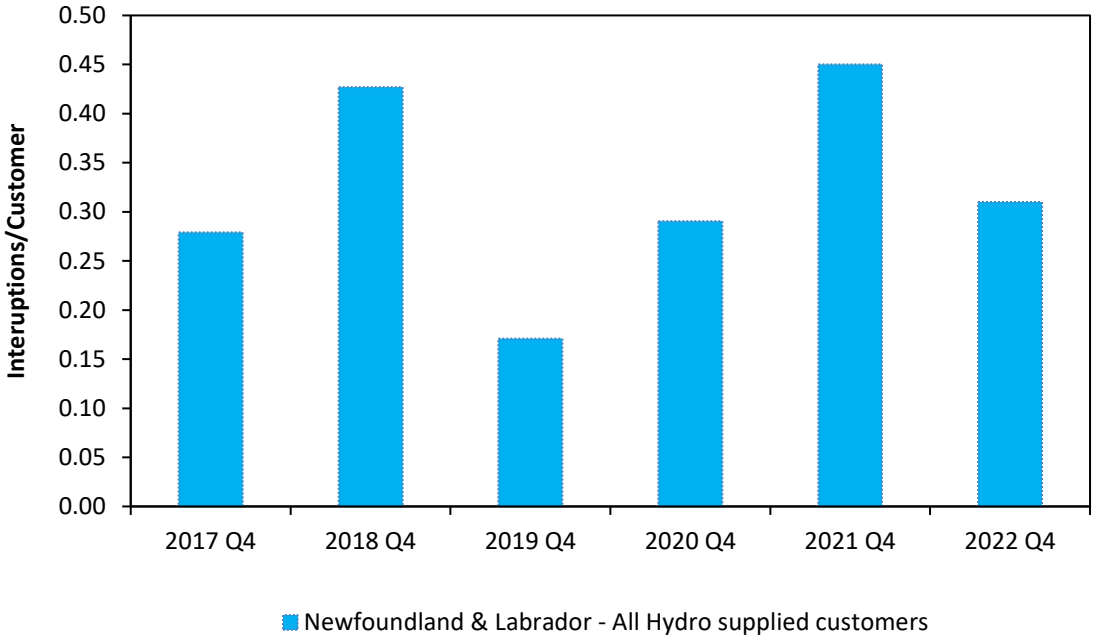


Chart 4: End-Consumer SAIFI Q4 2017 to 2022

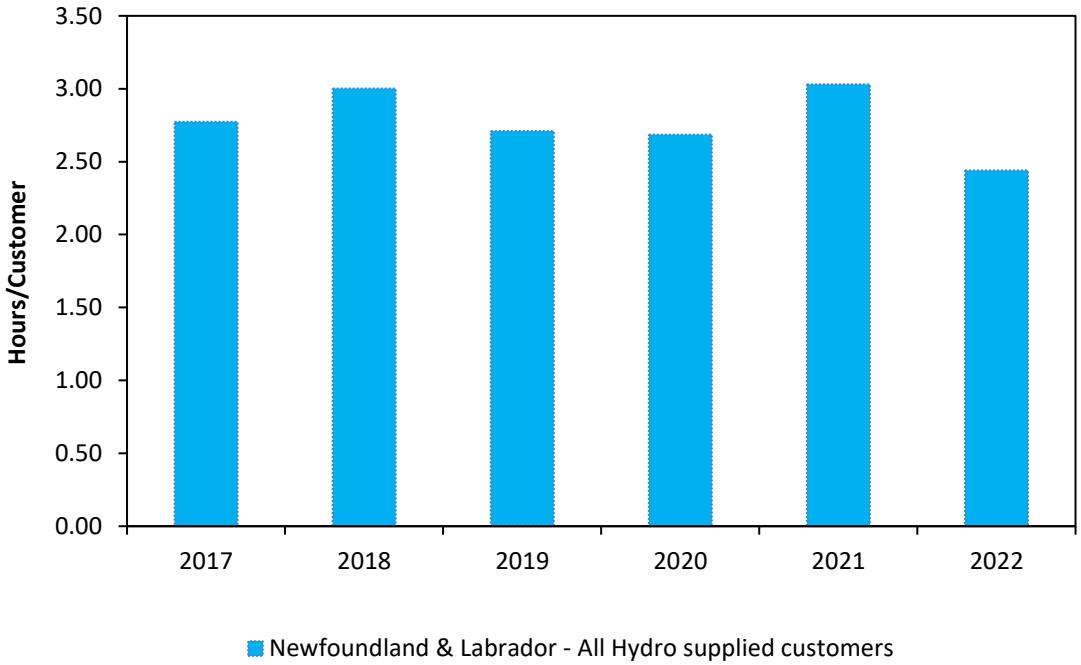


Chart 5: End-Consumer SAIDI Annual 2017 to 2022

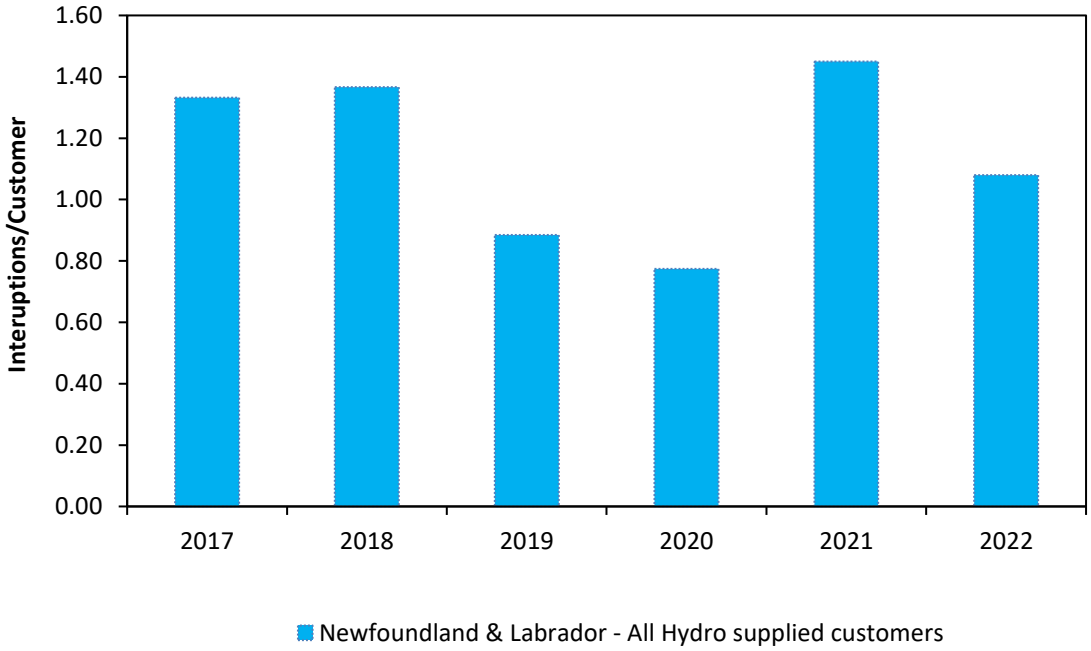


Chart 6: End-Consumer SAIFI Annual 2017 to 2022

3.1.3 Reliability Key Performance Indicator: Transmission

Transmission—System Average Interruption Duration Index

Table 5 shows the T-SAIDI data for the fourth quarter of 2022 and 2021, annual 2022, annual 2021, and the 2022 annual target.

Table 5: T-SAIDI (Outage Minutes per Delivery Point)[31]

	Q4 2022	Q4 2021	2022 Annual	2021 Annual	2022 Annual Target
T-SAIDI – Planned	26	42	139	149	N/A
T-SAIDI – Unplanned	8	46	119	98	N/A
T-SAIDI – (Planned and Unplanned)	**34**	**87**	**258**	**247**	**395**

[31] Numbers may not add due to rounding.

Hydro uses the average of its T-SAIDI performance for the period 2017 to 2021 to calculate its 2022 annual T-SAIDI target. Chart 7 shows the annual T-SAIDI performances from 2017 to 2022 and EC 2017 to 2021 annual T-SAIDI performances. EC only publishes annual indicators.

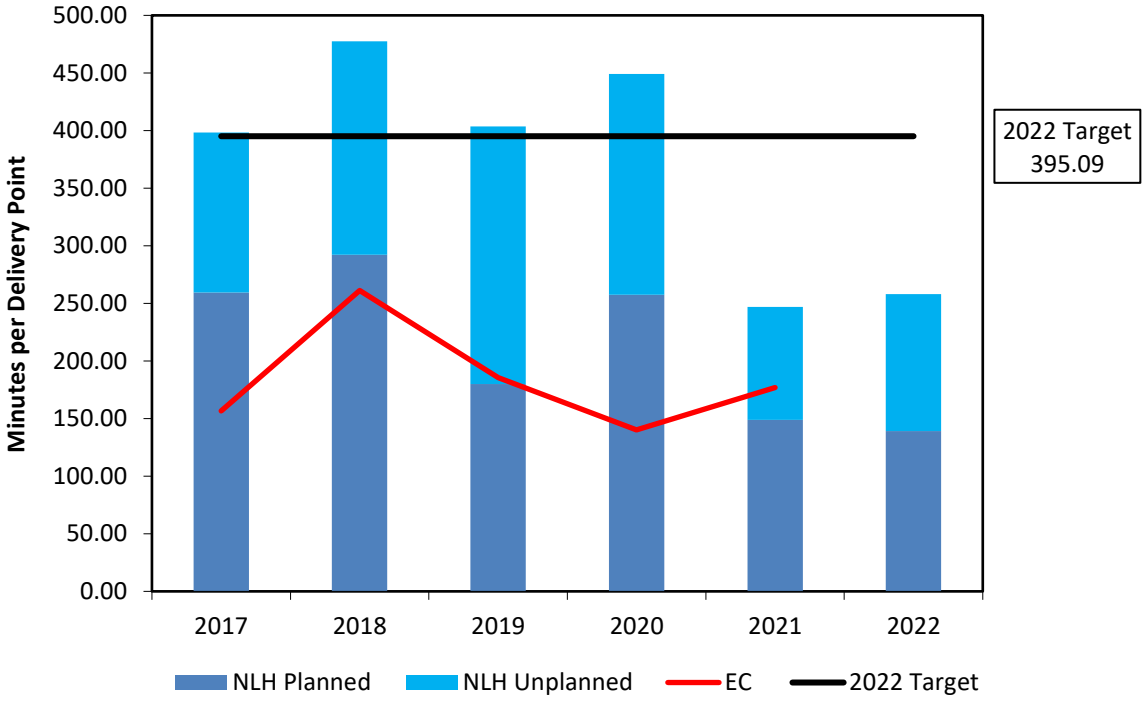


Chart 7: T-SAIDI[32]

Transmission—System Average Interruption Frequency Index

Table 6 shows the T-SAIFI for planned and unplanned outages for the fourth quarter of 2022 and 2021, annual 2022, annual 2021, and the 2022 annual target.

Table 6: T-SAIFI (Outages per Delivery Point)[33]

	Q4 2022	Q4 2021	2022 Annual	2021 Annual	2022 Annual Target
T-SAIFI– Planned	0.26	0.32	0.68	0.67	N/A
T-SAIFI – Unplanned	0.05	0.37	1.23	1.22	N/A
T-SAIFI (Planned and Unplanned)	**0.32**	**0.68**	**1.92**	**1.88**	**2.60**

[32] EC comparable data hasn't been received yet for 2022.
[33] Numbers may not add due to rounding.

Hydro uses the average of its T-SAIFI performance for the period of 2017 to 2021 to calculate its 2022 annual T-SAIDI target. Chart 8 shows the annual T-SAIFI performances from 2017 to 2022 and EC 2017 to 2021 annual T-SAIFI performances.

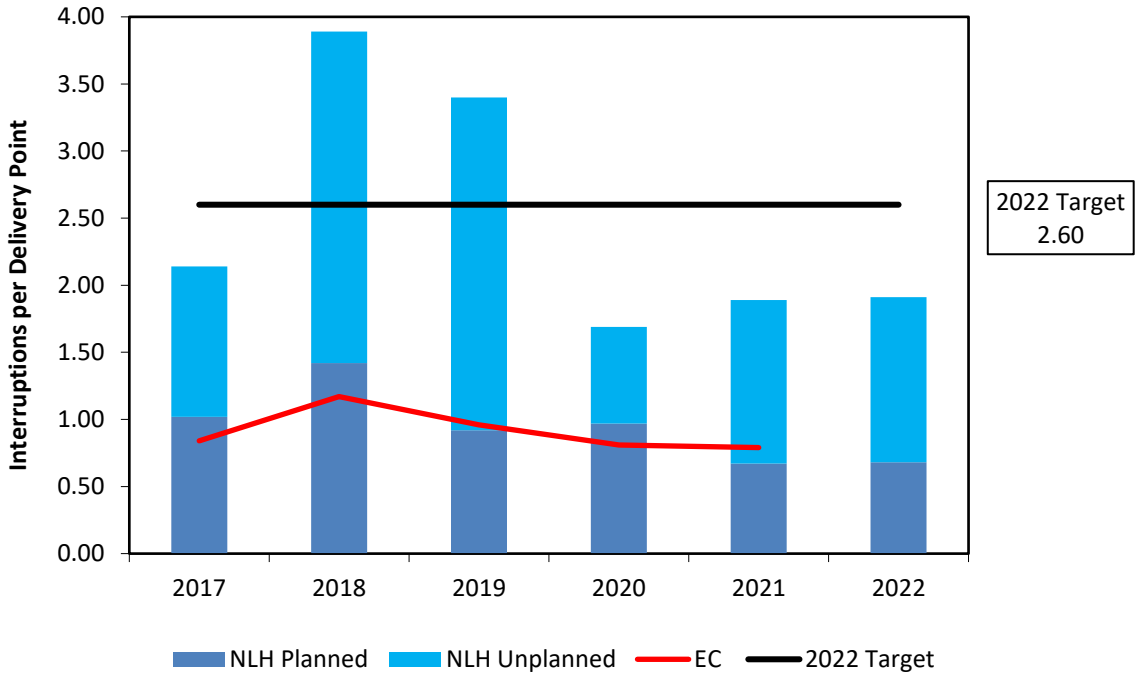


Chart 8: T-SAIFI

Transmission—System Average Restoration Index

Hydro's 2022 annual T-SARI was 135 minutes per interruption compared to 131 minutes per interruption for annual 2021. Hydro does not establish a restoration index target. Chart 9 shows the annual T-SARI performance from 2017 to 2021 and the EC 2017 to 2021 annual T-SARI performances.

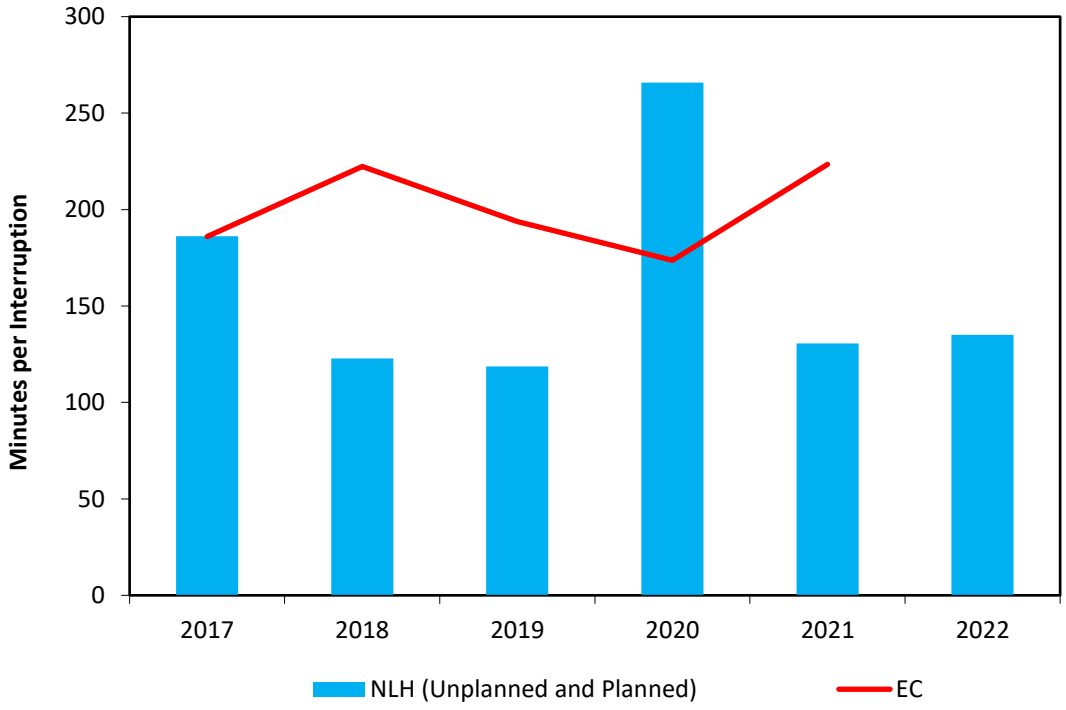


Chart 9: T-SARI[34]

3.1.4 Reliability Key Performance Indicator: Service Continuity Performance

Service-Continuity System Average Interruption Duration Index

Table 7 shows the SAIDI performances for the fourth quarter of 2022 and 2021, annual 2022 and 2021, and the 2022 Annual Target.

Table 7: Service-Continuity SAIDI (Hours per Customer)[35]

	Q4 2022	Q4 2021	2022 Annual	2021 Annual	2022 Annual Target
SAIDI – Planned	0.60	1.87	1.78	6.61	N/A
SAIDI – Unplanned	2.51	5.64	15.71	14.65	N/A
SAIDI – (Planned and Unplanned)	**3.11**	**7.51**	**17.49**	**21.27**	**18.86**

Hydro uses the average of its Service-Continuity SAIDI performances for the period 2017 to 2021 as its 2022 annual target for this index.

[34] EC comparable data hasn't been received yet for 2022.
[35] Numbers may not add due to rounding. SAIDI – Planned numbers only include distribution planned outages.

Chart 10 shows EC 2017 to 2021 annual SAIDI performances and Hydro's 2017 to 2022 annual SAIDI performances.

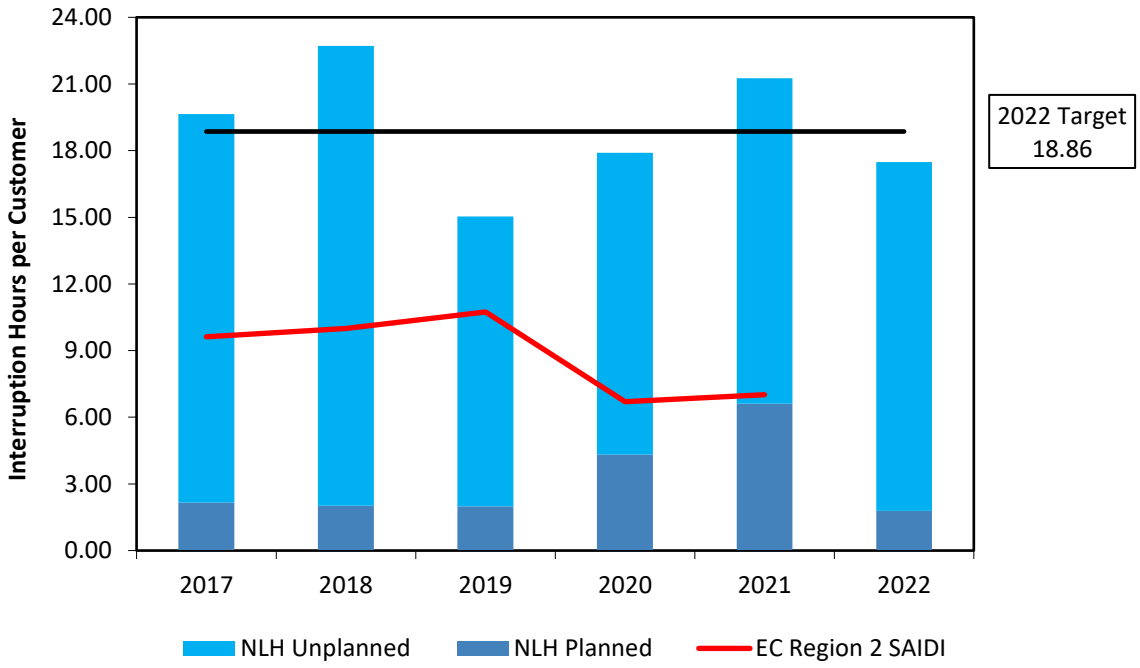


Chart 10: Service-Continuity SAIDI[36]

Service-Continuity System Average Interruption Frequency Index

Table 8 shows the SAIFI for the fourth quarter of 2022 and 2021, annual 2022 and 2021, and the 2022 annual target.

Table 8: Service-Continuity SAIFI (Interruptions per Customer)[37]

	Q4 2022	Q4 2021	Annual 2022	Annual 2021	2022 Annual Target
SAIFI – Planned	0.22	0.55	0.63	1.34	N/A
SAIFI – Unplanned	0.56	1.73	4.30	4.68	N/A
SAIFI – (Planned and Unplanned)	**0.78**	**2.28**	**4.93**	**6.02**	**5.56**

[36] EC comparable data hasn't been received yet for 2022.
[37] Numbers may not add due to rounding. SAIFI – Planned numbers only include distribution planned outages.

Hydro uses the average of its Service Continuity SAIFI Index Performances for the period 2017 to 2021 as its 2022 annual target for this index.

Chart 11 shows EC 2017 to 2021 annual SAIFI performances and Hydro's 2017 to 2022 annual SAIFI performances.

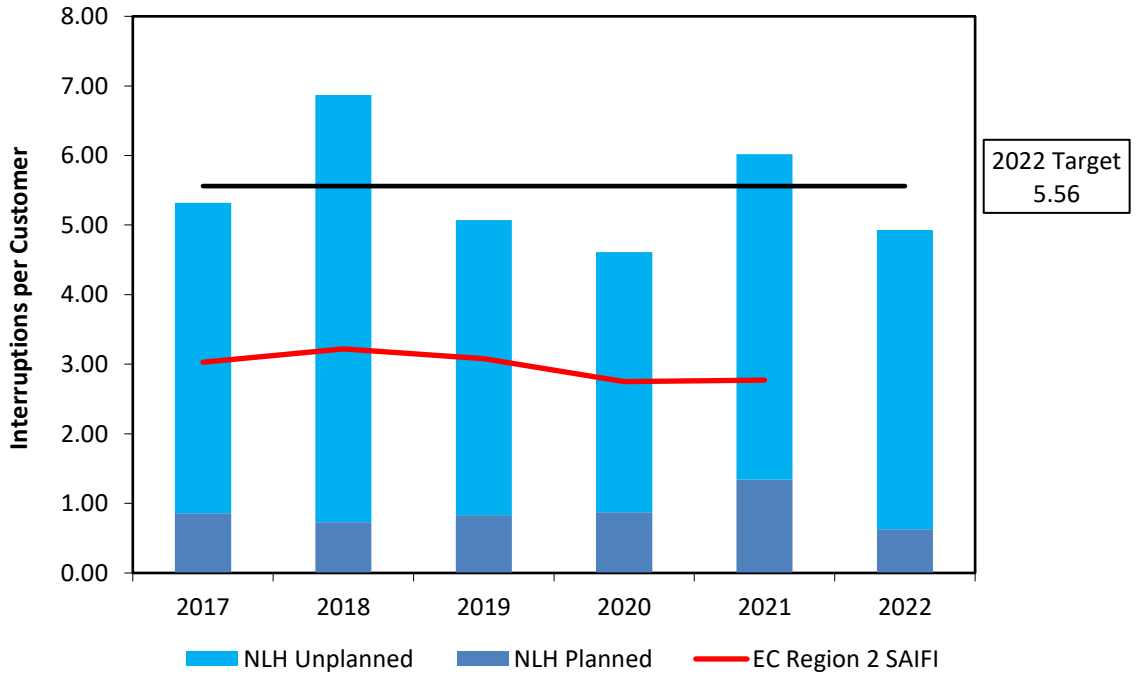


Chart 11: Service-Continuity SAIFI[38]

Additional Information

Service-Continuity Performance by Area

Table 9 and Table 10 show, for the fourth quarter of 2022 and 2021, the Service-Continuity SAIDI and SAIFI performances, respectively, broken down by geographical area. The tables also show the 12 months-to-date SAIDI and SAIFI performances and the SAIDI and SAIFI average performances for the period from 2017 to 2021. The area performance indicators are calculated using the respective area customer count. The all areas performance indicators are calculated using all of Hydro customers. Therefore, the area performances cannot be summed to provide the all areas performances.

[38] EC comparable data hasn't been received yet for 2022.

Table 9: Service-Continuity SAIDI (Hours per Period)

Area	Q4 2022	Q4 2021	12 Months-to-Date 2022	12 Months-to-Date 2021	5-Year Average
Central					
Interconnected	3.30	5.39	19.74	15.13	20.43
Isolated	0.19	0.63	9.04	2.08	3.18
Northern					
Interconnected	1.23	5.45	8.55	9.94	27.12
Isolated	3.11	1.96	11.74	2.74	10.75
Labrador					
Interconnected	5.00	13.95	24.56	43.99	11.94
Isolated	1.19	2.28	15.00	12.16	9.03
Totals	**3.11**	**7.51**	**17.49**	**21.27**	**18.86**

Table 10: Service-Continuity SAIFI (Number per Period)

Area	Q4 2022	Q4 2021	12 Months-to-Date 2022	12 Months-to-Date 2021	5-Year Average
Central					
Interconnected	0.98	1.92	5.19	4.54	5.07
Isolated	0.25	1.07	2.33	4.44	3.33
Northern					
Interconnected	0.51	2.51	4.55	5.56	7.57
Isolated	0.40	2.21	2.31	2.72	5.20
Labrador					
Interconnected	0.71	2.73	5.33	8.92	4.26
Isolated	1.76	1.42	6.23	5.15	4.97
Totals	**0.78**	**2.28**	**4.93**	**6.02**	**5.56**

Service-Continuity Performance by Origin

Table 11 and Table 12 show the service continuity SAIDI and SAIFI values, respectively, for the fourth quarter of 2022 and 2021 broken down by origin. They also show the 12 months-to-date and the SAIDI and SAIFI average performances for the period from 2017 to 2021.

Table 11: Service-Continuity SAIDI (Hours per Period)[39,40]

Area	Q4 2022	Q4 2021	12 Months-to-Date 2022	12 Months-to-Date 2021	5-Year Average
Loss of Supply: Transmission	1.25	4.56	9.21	10.66	10.67
Distribution	1.86	2.95	8.28	10.61	8.16
Totals	**3.11**	**7.51**	**17.49**	**21.27**	**18.86**

Table 12: Service-Continuity SAIFI (Number per Period)[41,42]

Area	Q4 2022	Q4 2021	12 Months-to-Date 2022	12 Months-to-Date 2021	5-Year Average
Loss of Supply: Transmission	0.25	0.89	2.21	2.27	3.13
Distribution	0.53	1.39	2.72	3.75	2.43
Totals	**0.78**	**2.28**	**4.93**	**6.02**	**5.56**

Service Continuity Performance by Type for the Fourth Quarter of 2022 Only

Table 13 shows the Service-Continuity SAIDI (hours per customer) and SAIFI (interruptions per customer) values for the fourth quarter of 2022 broken down by geographical area and interruption type. The area performance indicators are calculated using the area customer count. The all areas performance indicators are for all Hydro customers. Therefore the area performances cannot be summed to provide the all areas performances.

[39] Numbers may not add due to rounding.
[40] Hydro is updating some reliability tracking processes and is currently unable to provide segmented loss of supply statistics for the Newfoundland Power, Isolated, and L'Anse-au-Loup systems. Reporting will resume when available.
[41] Numbers may not add due to rounding.
[42] Hydro is updating some reliability tracking processes and is currently unable to provide segmented loss of supply statistics for the Newfoundland Power, Isolated, and L'Anse-au-Loup systems. Reporting will resume when available.

Table 13: Interruptions by Type[43,44]

Area	Scheduled		Unscheduled		Total	
	Distribution SAIFI	Distribution SAIDI	Distribution SAIFI	Distribution SAIDI	Distribution SAIFI	Distribution SAIDI
Central						
Interconnected	0.40	1.16	0.58	2.14	0.98	3.30
Isolated	0.00	0.00	0.25	0.19	0.25	0.19
Labrador						
Interconnected	0.06	0.41	0.64	4.59	0.71	5.00
Isolated	0.23	0.65	1.53	0.55	1.76	1.19
Northern						
Interconnected	0.14	0.12	0.37	1.11	0.51	1.23
Isolated	0.33	0.49	0.08	2.62	0.40	3.11
All Areas	**0.22**	**0.60**	**0.56**	**2.51**	**0.78**	**3.11**

Service Continuity Customer Interruptions by Cause

Table 14 shows the Service-Continuity interruptions for the fourth quarter of 2022 and annual 2022 grouped by cause.

Table 14: Interruptions by Cause[45]

Cause	Q4 2022		2022 Annual	
	Number of Customer Interruptions	Distribution SAIDI	Number of Customer Interruptions	Distribution SAIDI
Adverse Environment	145	0.12	551	0.17
Adverse Weather	2,153	0.13	14,671	1.57
Defective Equipment	1,250	0.12	12,149	1.17
Environment: Corrosion	801	0.02	2,899	0.17
Environment: Salt Spray	26	0.00	1,266	0.27
Foreign Interference	0	0.00	7	0.00
Foreign Interference: Object	2	0.00	6,876	0.34
Foreign Interference: Vehicle	807	0.03	865	0.04
Human Error	519	0.00	806	0.04
Loss of Supply[46]	9,975	1.25	86,012	9.21
Lightning	1	0.01	5,555	0.03
Scheduled Outage: Planned[46]	8,468	0.60	24,509	1.78
Tree Contacts	2,407	0.52	7,245	1.16
Undetermined/Other	3,665	0.31	27,971	1.53
Total	**30,219**	**3.11**	**191,382**	**17.49**

[43] Scheduled numbers only include distribution planned outages.
[44] Totals may not add due to rounding.
[45] Distribution SAIDI totals do not add due to rounding.
[46] A total of 14,089 customer interruptions and a SAIDI of 4.28 were re-categorized from Scheduled Outage: Planned to Loss of Supply.

3.1.5 Reliability Key Performance Indicators: Other

Under Frequency Load Shedding

UFLS is the reliability KPI that measures the number of events in which shedding of customer load is required to counteract loss of generation capacity. During a UFLS event, customers are removed from the electrical system. The quantity of customers removed is linearly proportional to the amount of generation lost.

Table 15 shows, by customer breakdown, the UFLS events for the fourth quarter of 2022 and 2021, 12 months-to-date for 2022 and 2021, 2022 annual target, and 2017–2021 average. Table 16 shows, by customer breakdown, the UFLS undersupplied energy for the fourth quarter of 2022 and 2021, 12 months-to-date for 2022 and 2021, and 2017–2021 average. As individual UFLS events can affect customer types differently, total events may not be the sum of the customer types.

The annual UFLS target has historically been set at six events. Hydro does not establish a UFLS event target or UFLS undersupplied energy targets.

Chart 12 compares the number of UFLS events for the past six years.

Table 15: Customer Breakdown of UFLS Events

	Fourth Quarter		12 Months-to-Date		2022 Annual	2017–2021
Customers	**2022**	**2021**	**2022**	**2021**	**Target**	**Average**
Newfoundland Power	2	2	2	2	N/A	3.4
Industrials	3	1	3	1	N/A	2.8
Hydro Rural	0	0	0	0	N/A	0.6
Total Events	**2**	**2**	**2**	**2**	**6**	**3.4**

Table 16: Customer Breakdown of UFLS Undersupplied Energy (MW-min)

	Fourth Quarter		12 Months-to-Date		2017–2021
Customers	**2022**	**2021**	**2022**	**2021**	**Average**
Newfoundland Power	9,090	2,266	9,090	2,266	3,497
Industrials	695	240	695	240	360
Hydro Rural	0	0	0	0	19
Total Undersupplied Energy	**9,785**	**2,506**	**9,785**	**2,506**	**2,704**

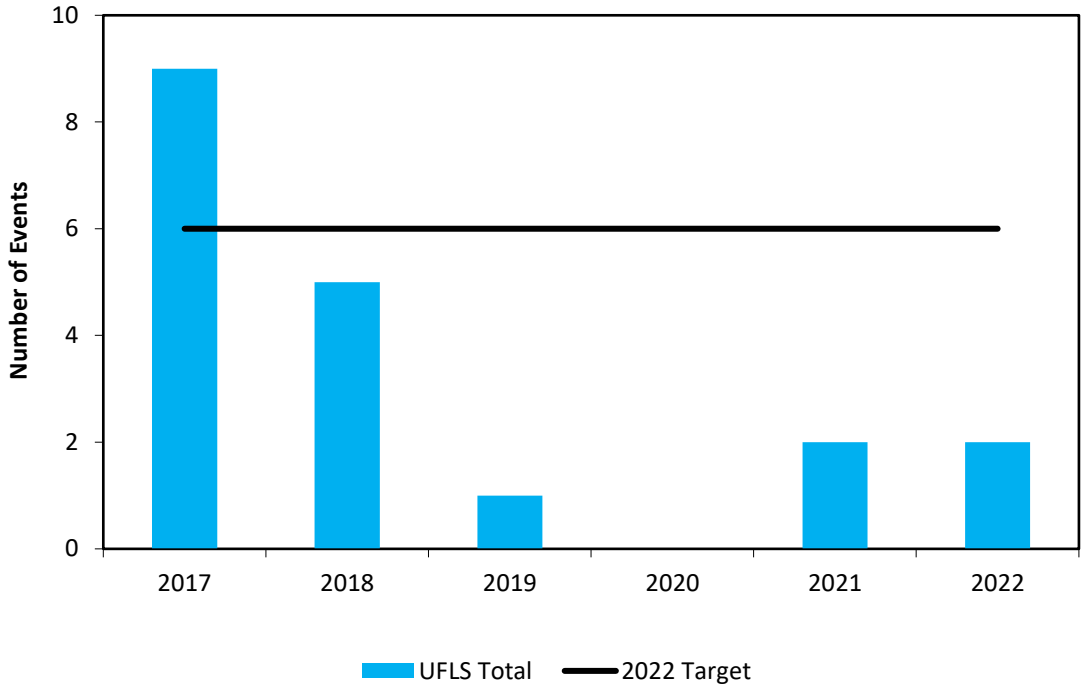


Chart 12: UFLS Events

3.2 Operating Performance Indicators

This section presents information on two indicators of operating performance, both of which are associated with generation.

3.2.1 Operating Key Performance Indicator: Generation

Hydraulic Conversion Factor

In 2022, the hydraulic conversion factor for Bay d'Espoir was 0.4270 GWh/MCM, similar to the 2021 performance of 0.4274 GWh/MCM.

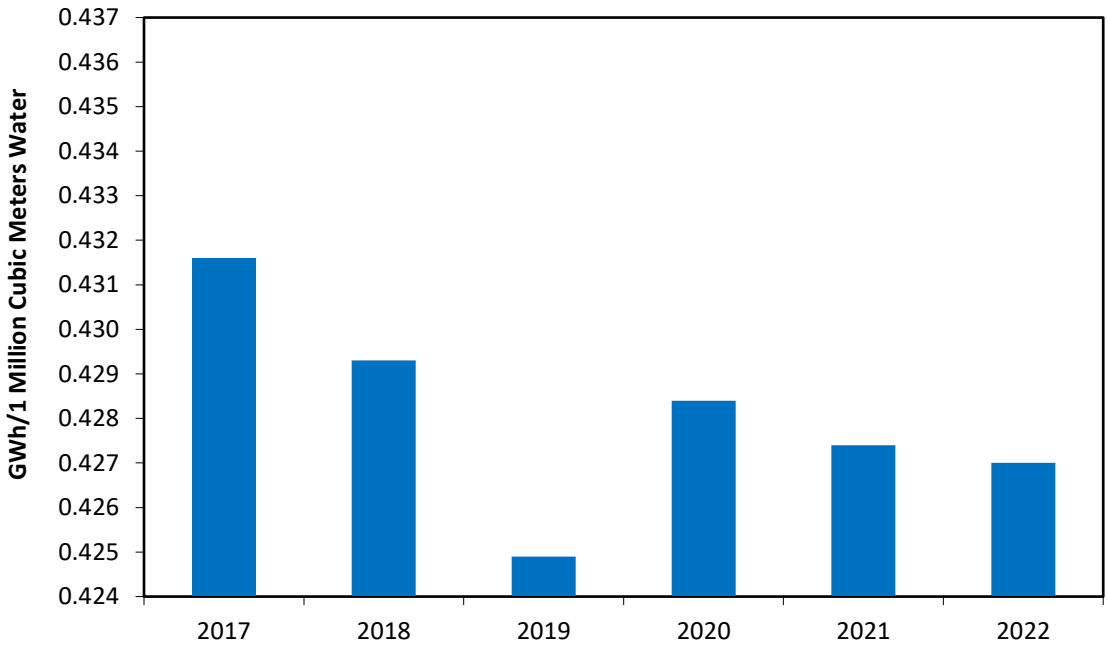


Chart 13: Hydraulic Conversion Factor (Bay d'Espoir)

In 2022, inflows to the Bay d'Espoir System as a whole were approximately 28% above average. Throughout winter 2022, a series of mild temperatures in combination with precipitation events and subsequent snowmelt triggered multiple high inflow events in the Bay d'Espoir System, significantly increasing the total system energy in storage. During the first quarter of 2022, bypass of the Upper Salmon Hydroelectric Generating Station ("Upper Salmon") was required at times in February and March to maintain the Upper Salmon Reservoir and Meelpaeg Reservoir water levels below their respective maximum operating level ("MOL"). In addition, due to the noted rain and snowmelt events, there was a requirement to bypass energy from the Granite bypass structure at times in January, February, and March. Lastly, spill occurred at the Burnt Pond Reservoir and the Burnt Pond Spillway at times in January, February, and March to manage the Victoria Lake MOL.

Multiple rain events over the southwest coast of the Island in mid-to late June 2022 resulted in recurring high inflows to the Victoria, Burnt Pond, and Granite Lake reservoirs in the Bay d'Espoir system. During the second quarter of 2022, bypass of Upper Salmon was required to maintain the Meelpaeg and Upper Salmon reservoirs below their respective MOLs. In addition, there was a requirement to bypass energy from the Granite bypass structure in April, and June into July 2022 to maintain the Victoria and Granite Lake reservoirs as well as the Granite Canal Intake below their respective MOLs. Spill at the Burnt Pond

reservoir occurred in April and May in addition to spill via the Burnt Dam Spillway from the Victoria Control Structure to manage the Victoria Lake reservoir level.

System inflows for most of the third quarter were below average due to warm and dry weather across the province. However, inflows in September were above average again due to heavy rainfall attributable to Post-Tropical Cyclone Fiona and additional precipitation events. Above average inflows into the Bay d'Espoir System due to multiple significant rainfall events and exasperated by snowmelt lead to the exceedance of reservoir storage in the Bay d'Espoir system on multiple occasions during the first half of 2022. While generation remained maximized to the extent possible, the multiple spill events resulted in lost energy and therefore a reduction in the Bay d'Espoir KPI from the target level of 0.433 GWh/MCM.

Thermal Conversion Factor

The thermal conversion factor for the Holyrood TGS is proportional to the output level of the three units, with higher averages and sustained loadings resulting in higher conversion factors. The output level at Holyrood TGS will vary depending on hydraulic production on the Island, quantity of power purchases, customer energy requirements, system security requirements, and customer demand. The thermal conversion factor is also impacted by the heating content in the No. 6 fuel consumed at the plant, measured in BTU[47]/bbl.

In 2022, Hydro's net thermal conversion factor was 573 kWh per barrel. The conversion factor is lower than the 2019 Test Year approved conversion factor of 583 kWh per barrel. The efficiency at the Holyrood TGS showed a slight increase in performance with a net heat rate performance of 11,016 BTU/kWh in 2022 compared to 11,065 BTU/kWh in 2021.

In 2022, the units were dispatched as required for system reliability support and system peak load considerations, in consideration of unit availability. The average net unit load, while operating, was 68.9 MW, a decrease of 2.6% from 70.7 MW in 2021.

Energy production from the Holyrood TGS for 2022 was 745 GWh, a 5% increase from 2021 production levels of 711 GWh. The slight increase in energy production from the Holyrood TGS can be attributable

[47] British thermal unit ("BTU").

to variation in deliveries received via the Labrador-Island Link between 2021 and 2022, combined with the unavailability of the Holyrood TGS units during the fall of 2021.

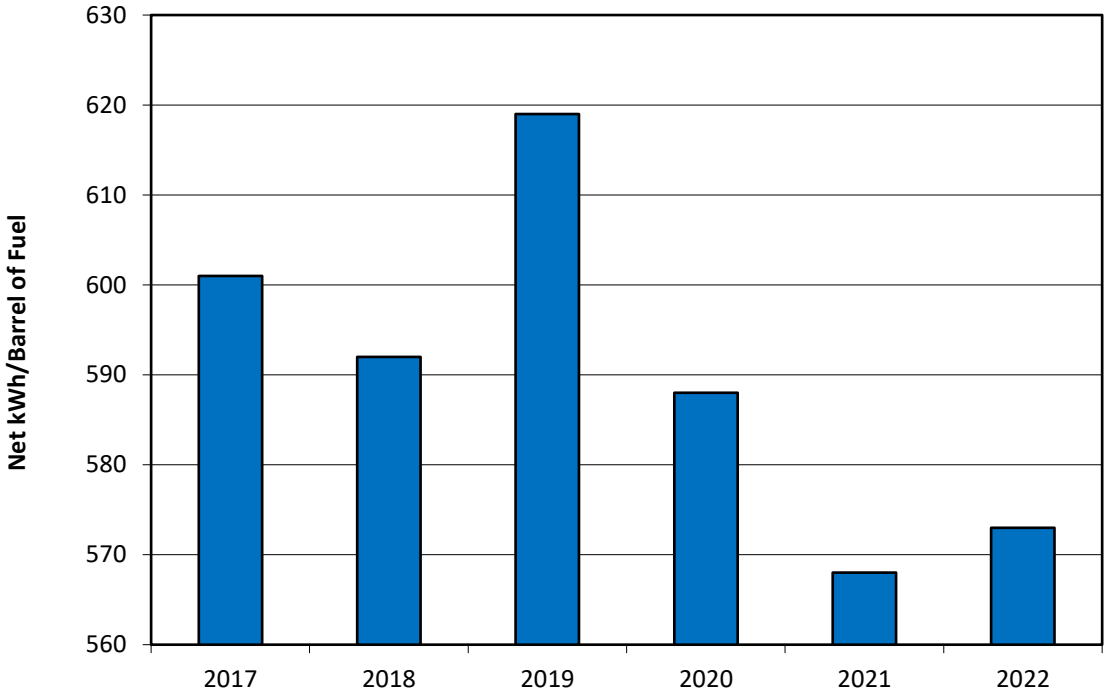


Chart 14: Thermal Conversion Factor (Holyrood TGS)

3.3 Financial Performance Indicators

Financial data will follow when audited financial results are available.

3.4 Customer–Related Performance Indicators

The 2022 residential customer satisfaction survey[48] showed that 89% of customers are either very satisfied or somewhat satisfied with Hydro.

[48] Residential customer satisfaction is an indicator of Hydro's residential customers overall satisfaction level with service, which is tracked by the Percent Satisfied Customers KPI. [Note: As of 2009, the Customer Satisfaction Index ("CSI") is no longer being calculated as a Customer-Related Performance Indicator.] The Percent Satisfied Customers measure is also a corporate performance KPI that tracks the satisfaction of rural residential customers with Hydro's performance. The Percent Satisfied Customers measure is produced via regular surveys of Hydro's residential customers.

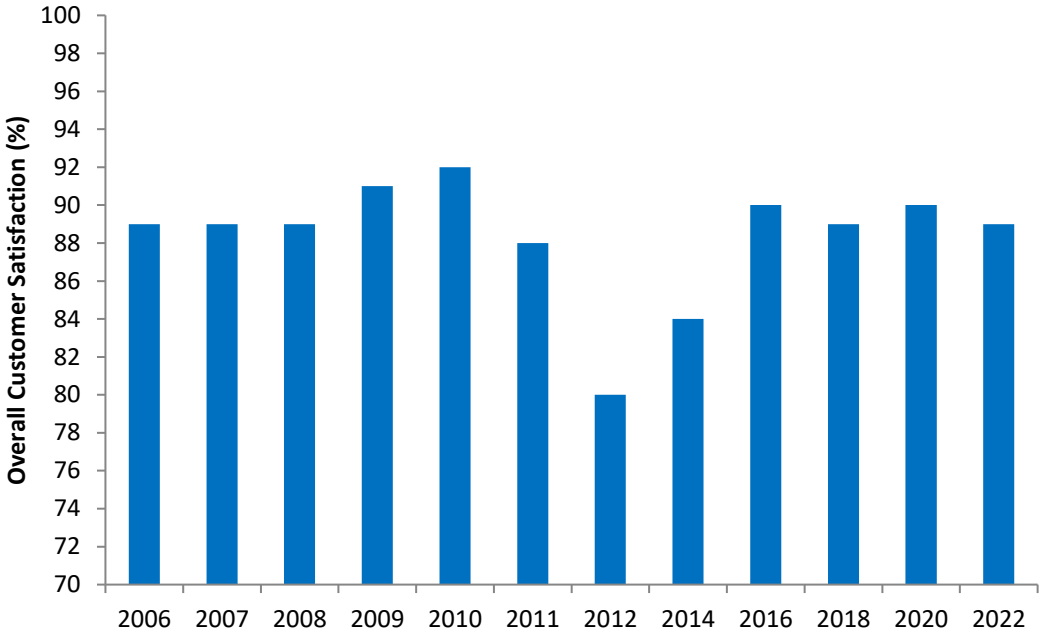


Chart 15: Residential Customer Satisfaction

Appendix A

Significant Events Excluded From Performance Index Tables

Significant Events

Table A-1: Significant Events Excluded From Performance Index Tables[1]

Year	Event Description	End Customer		Service Continuity		Transmission	
		SAIDI	SAIFI	SAIDI	SAIFI	T-SAIDI	T-SAIFI
2022	TL214 outage due to extreme winds	0.26	0.03	0.00	0.00	35.67	0.03
	Great Northern Peninsula outage	0.38	0.03	2.93	0.20	91.92	0.23
	Connaigre Peninsula outage due to freezing rain	0.24	0.01	1.81	0.06	0.00	0.00
2021	No significant events	N/A	N/A	N/A	N/A	N/A	N/A
2020	Winter storm affecting Change Islands/Fogo	0.09	0.01	0.71	0.09	0.00	0.00
2019	No significant events	N/A	N/A	N/A	N/A	N/A	N/A
2018	Windstorm affecting TL214 on the southwest coast of Newfoundland	0.17	0.00	0.00	0.00	11.89	0.00
	Landslide affecting the Glenburnie System on the Great Northern Peninsula	0.06	0.00	3.55	0.22	25.50	0.11
2017	March windstorm affecting eastern Newfoundland	0.98	0.33	0.00	0.00	114.56	0.11

[1] Data for 2017–2022 reflects significant events experienced through the year.

Appendix B

Power Outages Reported to the Board of Commissioners of Public Utilities

Power Outages

Table B-1: Power Outages Reported to the Board in 2022

Date	Area Affected	Cause	Customers Affected	Duration
08-Jan-2022	Change Islands	Downed conductor and failed insulators	239	28 hours, 30 minutes
15-Jan-2022	Hawke's Bay	Line slapping and downed primary conductor. Blizzard conditions delayed restoration	971	Up to 18 hours, 13 minutes
18-Jan-2022	Port aux Basques, Codroy Valley, and Grand Bay	Open jumper	3,488	17 hours, 50 minutes
29-Jan-2022	Northern Peninsula	Tree contact on TL239	5,761	Up to 17 hours, 30 minutes
30-Jan-2022	Labrador Straits	Broken conductor	1,015	Up to 16 hours, 27 minutes
02-Feb-2022	Burgeo, La Poile, and Grand Bruit	Ice buildup on insulators	908	6 hours, 20 minutes
05-Feb-2022	South East Bight	Broken conductor	60	34 hours
05-Feb-2022	Harbour Brenton	Downed conductor	813	7 hours, 10 minutes
05-Feb-2022	Hermitage, Seal Cove, Sandyville, Pass Island, and Gaultois	Downed conductor	563	32 hours, 50 minutes
05-Feb-2022	English Harbour West	Broken pole and downed conductors	797	Up to 63 hours, 20 minutes
13-Mar-2022	Rigolet	Blown fuse in switchgear	187	40 hours, 45 minutes
14-Mar-2022	Labrador West	Pole fire	2,560	2 hours, 34 minutes
23-Mar-2022	Cartwright	Downed distribution line	330	Up to 27 hours, 34 minutes
11-Apr-2022	Happy Valley-Goose Bay	Conductor down on L8. Inadvertent protection trip.	5,421	Up to 2 hours, 41 minutes
20-Apr-2022	Northern Peninsula	Eyebolt failure on TL259.	7,433	Up to 5 hours, 51 minutes
22-Apr-2022	Happy Valley-Goose Bay	Failed sectionalizer on Line 16. Inadvertent protection trip.	5,421	Up to 3 hours, 43 minutes
09-Jun-2022	Fogo/Change Islands	Animal contact.	1,807	4 hours, 1 minute
16-Jun-2022	White Bay	Failed insulator on TL252.	768	Up to 9 hours, 48 minutes
31-Jul-2022	Rocky Harbour	Bird contact	2,078	Up to 10 hours, 39 minutes
23-Aug-2022	Labrador West	Two direct current grounds	6,209	1 hour, 20 minutes
27-Aug-2022	Stephenville	Overvoltage condition as part of runback testing on the Maritime Link and the Labrador-Island Link	10,690	9 minutes
01-Sept-2022	Baie Verte Peninsula	Lightning and breaker trouble	2,225	14 hours, 29 minutes
24-Sept-2022	Harbour Brenton	Adverse weather	813	7 hours, 4 minutes
28-Oct-2022	HVY-L7	Tree Contact	937	12 hours, 10 minutes
15-Nov-2022	Newfoundland Power Customers	Maritime Link condition	57,298	18 minutes
24-Nov-2022	Newfoundland Power Customers	Software issue during Labrador-Island Link high power testing	57,967	25 minutes
27-Nov-2022	Bottom Waters	Lightning and breaker trouble	451	12 hours, 25 minutes
09-Dec-2022	Red Bay	Defective Equipment during ice storm	135	50 hours, 45 minutes

Appendix C

Rationale for Hydro's 2022 Key Performance Indicators Targets

Key Performance Indicators	Comment on Key Performance Indicators 2022 Target
Reliability	Hydro has adopted a target setting approach wherein the five-year outage performance is used for distribution and transmission targets.
Weighted Capability Factor	The 2022 target is set using the expected annual generation unit outage schedule combined with performance improvements relative to recent history.
Weighted DAFOR	The 2022 target is set using the expected annual generation unit outage schedule combined with performance improvements relative to recent history.
Transmission SAIDI, SAIFI, and SARI	The 2022 targets for outage performance were based on the five year average performance.
Distribution SAIDI and SAIFI	The 2022 targets for outage performance were based on the five year average performance.
UFLS	The 2022 target is based upon previous history of performance.
Operating	
Hydraulic Conversion Factor	Held at the previous target value.
Thermal Conversion Factor	2022 target was 583 kWh/bbl based on the 2019 Test Year.

Appendix D

Computation of Weighted Capability Factor and Factors Impacting Performance

Weighted Capability Factor is calculated using the following formula:

$$1 - \frac{\sum_{all\ units}\left(\frac{unit\ total\ equivalent outage time \times unit\ MCR}{unit\ hours}\right)}{\sum_{all\ units} unit\ MCR}$$

Where:

MCR = Maximum Continuous Rating, the gross maximum electrical output, measured in megawatts, for which a generating unit has been designed and/or has been shown capable of producing continuously. MCR would only change if the generating capability of a unit is permanently altered by virtue of equipment age, regulation, or capital modifications. Such changes to MCR are infrequent and have not actually taken place within Hydro since the 1980's when two units at Holyrood were uprated due to modifications made to these units.

Unit hours = the sum of hours that a unit is in commercial service. This measure includes time that a unit is operating, shut down, on maintenance, or operating under some form of derating. Unit hours will only be altered in the infrequent event that a unit is removed from commercial service for an extended period of time.

Unit total equivalent outage time = the period of time a unit is wholly or partially unavailable to generate at its MCR. For the purposes of calculating outage time, the degree to which a unit is derated is converted to an outage equivalency. Thus, a unit that is able to generate at 75% load for four days would have an equivalent outage time of one full day out of four. Factors that can affect unit total equivalent outage time are classified by EC under nine categories, which are outlined on page D-2 to this report. Hydro tracks the time that each unit spends in each of these nine states and calculates the weighted capability accordingly.

Unit total equivalent outage time is the measure that is most likely to impact Weighted Capability Factor on a year-to-year basis, since MCR and unit hours are unlikely to change.

Factors that Affect Unit Total Equivalent Outage Time:

1) **Sudden Forced Outage.** An occurrence wherein a unit trips or becomes immediately unavailable.
2) **Immediately Deferrable Forced Outage**. An occurrence wherein a unit must be made unavailable within a very short time (ten minutes).
3) **Deferrable Forced Outage**. An occurrence or condition wherein a unit must be made unavailable within the next week.
4) **Starting Failure**. A condition wherein a unit is unable to start.
5) **Planned Outage**. A condition where a unit is unavailable because it is on its annual inspection and maintenance.
6) **Maintenance Outage**. A condition where a unit is unavailable due to repair work. Maintenance outage time covers outages that can be deferred longer than a week, but cannot wait until the next annual planned maintenance period.
7) **Forced Derating**. A condition that limits the usable capacity of a unit to something less than MCR. The derating is forced in nature, typically because of the breakdown of a subsystem on the unit.
8) **Scheduled Derating**. A condition that limits the usable capacity of a unit to something less than MCR, but is done by virtue of the decision of the unit operator. Scheduled deratings are less common than forced deratings, but can arise, for example, when a unit at Holyrood is de-rated to remove a pump from service.
9) **Common Mode Outages**. Common mode outages are rare, and arise when an event causes multiple units to become unavailable. An example might be the operation of multiple circuit breakers in a switchyard at Holyrood due to a lightning strike, rendering up to three units unavailable.

Note: There are hundreds of EC equipment codes for generator subsystems that track the cause for the time spent in each of the above categories

Tab 3

Contribution in Aid of Construction

Quarter Ended December 31, 2022

Table 1 summarizes the contribution in aid of construction ("CIAC")[1] activity for the current quarter. It also provides an overview of the following:

- The type of service for which a CIAC has been calculated, either domestic or general service;
- The number of CIACs quoted during the quarter, as well as the number of CIAC quotes that remain outstanding as of the end of the quarter. This format facilitates a reconciliation of the total number of CIACs that were active during the quarter; and
- Information as to the disposition of the total CIACs quoted. A CIAC is considered accepted when a customer indicates that it wishes to proceed with the construction of the extension and has agreed to pay any charge that may be applicable. A CIAC is considered to expire after six months have elapsed and the customer has not indicated its intention to proceed with the extension. A quoted CIAC is outstanding if it is neither accepted nor expired.

Table 1: CIAC Report for the Current Quarter

Type of Service	CIACs Quoted	CIACs Outstanding from Last Quarter	Total CIACs Quoted	CIACs Accepted	CIACs Expired	CIACs Outstanding
Domestic						
Within Plan Boundary	0	2	2	0	1	1
Outside Plan Boundary	3	11	14	2	3	9
Subtotal	**3**	**13**	**16**	**2**	**4**	**10**
General Service	3	8	11	3	2	6
Total	**6**	**21**	**27**	**5**	**6**	**16**

[1] Includes residential, non-residential, and general service CIAC activities for northern, central, and Labrador regions.

The number of CIACs quoted during the current quarter by region is summarized in Table 2, which also identifies the following:

- The service location for the CIAC;
- The CIAC number related to the quote;
- The amount of the CIAC required to be paid by the customer;
- The estimated construction costs to provide the requested service; and
- Whether the CIAC has been accepted by the customer.

Table 2: CIAC Activity Report for the Current Quarter

Date Quoted	Service Location	CIAC Number	CIAC Amount ($)	Estimated Construction Costs ($)	Accepted
Domestic: Within Residential Planning Boundaries					
N/A	N/A	N/A	N/A	N/A	
Domestic: Outside Residential Planning Boundaries					
02-Nov-2022	Furby's Cove	1624948	765	1,890	Yes
09-Nov-2022	South Brook; Green Bay	1623324	4,736	5,861	
12-Dec-2022	South Brook; Green Bay	1631187	2,065	3,190	
General Service					
18-Oct-2022	L'Anse-au-Clair	1613408	65,275	69,100	
23-Nov-2022	Trout River	1577925	14,121	20,085	Yes
05-Dec-2022	Churchill Falls	1629650	1,328	10,340	

Tab 4

Customer Damage Claims

Quarter Ended December 31, 2022

The Customer Damage Claims report contains a summary of all damage claims activity on a quarterly basis. The information contained in the report is broken down by cause as well as by the operating region where the claims originated.

The report provides an overview of the following:

- The number of claims received during the quarter coupled with claims outstanding from the last quarter;
- The number of claims for which Newfoundland and Labrador Hydro ("Hydro") has accepted responsibility and the amount paid to claimants versus the amount originally claimed;
- The number of claims rejected and the dollar value associated with those claims; and
- Those claims that remain outstanding at the end of the quarter and the dollar value associated with such claims.

Definitions of Causes of Damage Claims:

- **System Operations:** Claims arising from system operations (e.g., normal reclosing or switching).
- **Power Interruptions:** Claims arising from the interruption of power supply (e.g., all scheduled or unscheduled interruptions).
- **Improper Workmanship:** Claims arising from the failure of electrical equipment caused by improper workmanship or methods (e.g., improper crimping of connections, insufficient sealing and taping of connections, improper maintenance, and inadequate clearance or improper operation of equipment).
- **Weather Related:** Claims arising from weather conditions (e.g. wind, rain, ice, lightning or corrosion caused by weather).
- **Equipment Failure:** Claims arising from failure of electrical equipment not caused by improper workmanship (e.g., broken neutrals, broken tie wires, transformer failure, insulator failure or broken service wire).
- **Third Party:** Claims arising from equipment failure caused by acts of third parties (e.g., motor vehicle accidents and vandalism).
- **Miscellaneous:** All claims that are not related to electrical service.
- **Waiting Investigation:** Cause to be determined.

Table 1: Customer Property Damage Claims Report by Region for the Current Quarter[1]

				Claims Accepted			Claims Rejected		Claims Outstanding	
Region	# Received	# Outstanding Since Last Quarter	Total	#	Amount Claimed ($)	Amount Paid ($)	#	Amount ($)	#	Amount ($)
Central	5	8	**13**	5	7,661	4,973	2	1,150	6	3,055
Northern	3	5	**8**	0	0	0	2	1,860	6	25,565
Labrador	2	8	**10**	3	3,772	2,586	3	4,750	4	2,864
Total	**10**	**21**	**31**	**8**	**11,434**	**7,559**	7	**7,760**	**16**	**31,484**

Table 2: Customer Property Damage Claims Report by Region for the Same Quarter, Previous Year

				Claims Accepted			Claims Rejected		Claims Outstanding	
Region	# Received	# Outstanding Since Last Quarter	Total	#	Amount Claimed ($)	Amount Paid ($)	#	Amount ($)	#	Amount ($)
Central	7	3	**10**	0	0	0	7	6,816	3	4,818
Northern	7	7	**14**	1	3,978	2,040	6	23,081	7	7,209
Labrador	3	3	**6**	0	0	0	4	7,828	2	3.420
Total	**17**	**13**	**30**	**1**	**3,978**	**2,040**	**17**	**37,725**	**12**	**15,446**

[1] Numbers may not add due to rounding.

Table 3: Customer Property Damage Claims Report by Cause for the Current Quarter[2]

				Claims Accepted			Claims Rejected		Claims Outstanding	
Cause	**# Received**	**# Outstanding Since Last Quarter**	**Total**	**#**	**Amount Claimed ($)**	**Amount Paid ($)**	**#**	**Amount ($)**	**#**	**Amount ($)**
System Operations	1	0	**1**	0	0	0	1	1,900	0	0
Power Interruptions	1	2	**3**	0	0	0	3	2,850	0	0
Improper Workmanship	1	9	**10**	4	7,458	6,272	0	0	6	14,850
Weather Related	0	8	**8**	4	3,975	1,287	2	1,150	2	4,987
Equipment Failure	1	1	**2**	0	0	0	0	0	2	1,336
Third Party	0	1	**1**	0	0	0	1	1,860	0	0
Miscellaneous	0	0	**0**	0	0	0	0	0	0	0
Awaiting Investigation	6	0	**6**	0	0	0	0	0	6	10,311
Total	**10**	**21**	**31**	**8**	**11,433**	**7,559**	**7**	**7,760**	**16**	**31,484**

Table 4: Customer Property Damage Claims Report by Cause for the Same Quarter, Previous Year

				Claims Accepted			Claims Rejected		Claims Outstanding	
Cause	**# Received**	**# Outstanding Since Last Quarter**	**Total**	**#**	**Amount Claimed ($)**	**Amount Paid ($)**	**#**	**Amount ($)**	**#**	**Amount ($)**
System Operations	0	1	**1**	0	0	0	1	3,763	0	0
Power Interruptions	3	1	**4**	0	0	0	3	2,050	1	2,000
Improper Workmanship	1	2	**3**	0	0	0	0	0	3	5,283
Weather Related	10	8	**18**	1	3,978	2,040	9	29,972	8	8,164
Equipment Failure	2	0	**2**	0	0	0	2	1,940	0	0
Third Party	1	0	**1**	0	0	0	1	0	0	0
Miscellaneous	0	1	**1**	0	0	0	1	0	0	0
Awaiting Investigation	0	0	**0**	0	0	0	0	0	0	0
Total	**17**	**13**	**30**	**1**	**3,978**	**2,040**	**17**	**37,725**	**12**	**15,446**

[2] Numbers may not add due to rounding.