Newfoundland and Labrador Hydro
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April 1, 2022

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

Attention: Ms. Cheryl Blundon
Director of Corporate Services & Board Secretary

Dear Ms. Blundon:

Re: Newfoundland and Labrador Hydro's 2021 Annual Return

Please find enclosed Newfoundland and Labrador Hydro's ("Hydro") 2021 Annual Return filed pursuant to Section 59(2) of the *Public Utilities Act*.

Hydro's 2021 Annual Return is confidential pending its presentation in the House of Assembly of Newfoundland and Labrador. Once that presentation has occurred, Hydro will provide the documents to the required parties.

Should you have any questions, 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

2021 Annual Return

(Return 20 pursuant to Section 59(2) of the *Public Utilities Act)*

April 1, 2022

A report to the Board of Commissioners of Public Utilities

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NEWFOUNDLAND AND LABRADOR HYDRO
NON-CONSOLIDATED FINANCIAL STATEMENTS
December 31, 2021

Deloitte.

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Independent Auditor's Report

To the Directors of Newfoundland and Labrador Hydro

Opinion
We have audited the non-consolidated financial statements of Newfoundland and Labrador Hydro (the "Company"), which comprise the non-consolidated statement of financial position as at December 31, 2021, and the non-consolidated statements of profit and comprehensive income, changes in equity and cash flows for the year then ended, and notes to the financial statements, including a summary of significant accounting policies (collectively referred to as the "financial statements").

In our opinion, the accompanying non-consolidated financial statements present fairly, in all material respects, the financial position of the Company as at December 31, 2021, and the results of its financial performance and its cash flows for the year then ended in accordance with the financial reporting provisions of Section 59 of the Public Utilities Act.

Basis for Opinion
We conducted our audit in accordance with Canadian generally accepted auditing standards ("Canadian GAAS"). Our responsibilities under those standards are further described in the *Auditor's Responsibilities for the Audit of the Financial Statements* section of our report. We are independent of the Company in accordance with the ethical requirements that are relevant to our audit of the financial statements in Canada, and we have fulfilled our other ethical responsibilities in accordance with these requirements. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

Emphasis of Matter - Basis of Accounting
We draw attention to Note 2 to the non-consolidated financial statements, which describes the basis of accounting. The non-consolidated financial statements are prepared to assist the Company in complying with the financial reporting provisions of Section 59 of the Public Utilities Act. As a result, the non-consolidated financial statements may not be suitable for another purpose.

Other Matter
Newfoundland and Labrador Hydro has prepared separate consolidated financial statements for the year ended December 31, 2021 in accordance with International Financial Reporting Standards on which we issued an unmodified auditor's report to the Lieutenant-Governor in Council, Province of Newfoundland and Labrador dated March 17, 2022.

Responsibilities of Management and Those Charged with Governance for the Financial Statements
Management is responsible for the preparation and fair presentation of the financial statements in accordance with the financial reporting provisions of Section 59 of the Public Utilities Act, and for such internal control as management determines is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the financial statements, management is responsible for assessing the Company's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless management either intends to liquidate the Company or to cease operations, or has no realistic alternative but to do so.

Those charged with governance are responsible for overseeing the Company's financial reporting process.

Auditor's Responsibilities for the Audit of the Financial Statements
Our objectives are to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with Canadian GAAS will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these financial statements.

As part of an audit in accordance with Canadian GAAS, we exercise professional judgment and maintain professional skepticism throughout the audit. We also:

- Identify and assess the risks of material misstatement of the financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.
- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Company's internal control.
- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by management.
- Conclude on the appropriateness of management's use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Company's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditor's report to the related disclosures in the financial statements or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditor's report. However, future events or conditions may cause the Company to cease to continue as a going concern.
- Evaluate the overall presentation, structure and content of the financial statements, including the disclosures, and whether the financial statements represent the underlying transactions and events in a manner that achieves fair presentation.

We communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

Deloitte LLP

Chartered Professional Accountants
March 21, 2022

NEWFOUNDLAND AND LABRADOR HYDRO
NON-CONSOLIDATED STATEMENT OF FINANCIAL POSITION

As at December 31 (millions of Canadian dollars)	Notes	**2021**	2020
ASSETS			
Current assets			
Cash		**42**	28
Trade and other receivables	5	**123**	97
Inventories	6	**84**	92
Prepayments		**7**	8
Deferred asset	7	**56**	23
Related party loan receivable	24	**53**	-
Total current assets		**365**	248
Non-current assets			
Property, plant and equipment	8	**2,230**	2,206
Intangible assets	9	**6**	7
Right-of-use assets		**2**	2
Sinking fund investments	10	**192**	183
Investments in joint arrangements	11	**654**	610
Total assets		**3,449**	3,256
Regulatory deferrals	12	**184**	172
Total assets and regulatory deferrals		**3,633**	3,428
LIABILITIES AND EQUITY			
Current liabilities			
Short-term borrowings	14	**55**	262
Trade and other payables	13	**106**	119
Contract payable	24	**18**	-
Current portion of long-term debt	14	**7**	7
Derivative liability	23	**56**	23
Other current liabilities		**6**	2
Total current liabilities		**248**	413
Non-current liabilities			
Long-term debt	14	**2,041**	1,765
Deferred contributions	15	**25**	21
Decommissioning liabilities	16	**13**	15
Employee future benefits	18	**98**	107
Other long-term liabilities		**4**	4
Total liabilities		**2,429**	2,325
Shareholder's equity			
Share capital	19	**23**	23
Contributed capital	19	**145**	146
Reserves		**(6)**	(22)
Retained earnings		**1,015**	939
Total equity		**1,177**	1,086
Total liabilities and equity		**3,606**	3,411
Regulatory deferrals	12	**27**	17
Total liabilities, equity and regulatory deferrals		**3,633**	3,428

Commitments and contingencies (Note 25)

See accompanying notes

On behalf of the Board

DIRECTOR

DIRECTOR

NEWFOUNDLAND AND LABRADOR HYDRO
NON-CONSOLIDATED STATEMENT OF PROFIT AND COMPREHENSIVE INCOME

For the year ended December 31 (millions of Canadian dollars)	Notes	**2021**	2020
Energy sales		**589**	611
Other revenue		**37**	26
Revenue		**626**	637
Fuels		**122**	158
Power purchased		**170**	122
Operating costs	20	**130**	136
Transmission rental		**21**	21
Depreciation and amortization		**84**	79
Net finance expense	21	**91**	90
Other expense	22	**2**	4
Expenses		**620**	610
Profit for the year from operations		**6**	27
Share of profit of joint arrangement	11	**41**	25
Preferred dividends		**11**	8
Profit before regulatory adjustments		**58**	60
Regulatory adjustments	12	**(33)**	(15)
Profit for the year		**91**	75
Other comprehensive income			
Items that may or have been reclassified to profit or loss			
Items related to employee future benefits		**13**	(1)
Total items that may be reclassified subsequently to profit or loss		**13**	(1)
Items that will not be reclassified subsequently to profit or loss			
Share of other comprehensive income of joint arrangement		**3**	1
Total items that will not be reclassified subsequently to profit or loss		**3**	1
Other comprehensive income for the year		**16**	-
Total comprehensive income for the year		**107**	75

See accompanying notes

NEWFOUNDLAND AND LABRADOR HYDRO
NON-CONSOLIDATED STATEMENT OF CHANGES IN EQUITY

(millions of Canadian dollars)	Note	Share Capital	Contributed Capital	Reserves	Retained Earnings	Total
Balance at January 1, 2021		**23**	**146**	**(22)**	**939**	**1,086**
Profit for the year		**-**	**-**	**-**	**91**	**91**
Other comprehensive income for the year		**-**	**-**	**16**	**-**	**16**
Total comprehensive income for the year		**-**	**-**	**16**	**91**	**107**
Regulatory adjustment	**19**	**-**	**(1)**	**-**	**-**	**(1)**
Dividends	**19**	**-**	**-**	**-**	**(15)**	**(15)**
Balance at December 31, 2021		**23**	**145**	**(6)**	**1,015**	**1,177**
Balance at January 1, 2020		23	147	(22)	877	1,025
Profit for the year		-	-	-	75	75
Total comprehensive income for the year		-	-	-	75	75
Regulatory adjustment	19	-	(1)	-	-	(1)
Dividends	19	-	-	-	(13)	(13)
Balance at December 31, 2020		23	146	(22)	939	1,086

See accompanying notes

NEWFOUNDLAND AND LABRADOR HYDRO
NON-CONSOLIDATED STATEMENT OF CASH FLOWS

For the year ended December 31 (millions of Canadian dollars)	Notes	**2021**	2020
Operating activities			
Profit for the year		**91**	75
Adjustments to reconcile profit to cash provided from operating activities:			
Depreciation and amortization		**84**	79
Regulatory adjustments	12	**(33)**	(15)
Amortization of rate stabilization plan fuel credit		**33**	24
Share of profit of joint arrangement	11	**(41)**	(25)
Finance income	21	**(14)**	(13)
Finance expense	21	**105**	103
Other		**10**	6
		235	234
Changes in non-cash working capital balances	28	**(12)**	21
Interest received		**2**	1
Interest paid		**(107)**	(103)
Net cash provided from operating activities		**118**	153
Investing activities			
Additions to property, plant and equipment	8	**(112)**	(88)
Additions to intangible assets		**(1)**	-
Contributions to sinking funds	10	**(7)**	(7)
Increase in related party loan receivable	24	**(53)**	-
Changes in non-cash working capital balances	28	**2**	(2)
Net cash used in investing activities		**(171)**	(97)
Financing activities			
Proceeds from long-term debt	14	**287**	-
Dividends paid	19	**(15)**	(13)
(Decrease) increase in short-term borrowings		**(207)**	29
Rate stabilization plan fuel credit		**(3)**	(55)
Other		**5**	3
Net cash provided from (used in) financing activities		**67**	(36)
Net increase in cash		**14**	20
Cash, beginning of the year		**28**	8
Cash, end of the year		**42**	28

See accompanying notes

1. DESCRIPTION OF BUSINESS

Newfoundland and Labrador Hydro (Hydro or the Company) is incorporated under a special act of the Legislature of the Province of Newfoundland and Labrador (the Province). The principal activity of Hydro is the generation, transmission and sale of electricity. Hydro's operations include both regulated and non-regulated activities. Hydro is a 100% owned subsidiary of Nalcor Energy (Nalcor). Hydro's head office is located at 500 Columbus Drive in St. John's, Newfoundland and Labrador, A1B 0C9, Canada.

Hydro holds interests in the following entities:

A 65.8% interest in Churchill Falls (Labrador) Corporation Limited (Churchill Falls). Churchill Falls is incorporated under the laws of Canada and owns and operates a hydroelectric generating plant and related transmission facilities situated in Labrador which has a rated capacity of 5,428 megawatts (MW).

A 51.0% interest in Lower Churchill Development Corporation (LCDC), an inactive subsidiary. LCDC is incorporated under the laws of Newfoundland and Labrador and was established with the objective of developing all or part of the hydroelectric potential of the Lower Churchill River.

2. SIGNIFICANT ACCOUNTING POLICIES

2.1 Statement of Compliance and Basis of Measurement

These annual audited non-consolidated financial statements (financial statements) have been prepared in accordance with International Financial Reporting Standards (IFRS), as issued by the International Accounting Standards Board (IASB) with the exception of Hydro's investments in joint arrangements and related disclosures. These statements are non-consolidated as the investments in joint arrangements have been accounted for using the equity method of accounting, as described in Note 2.8. Consolidated statements for the same period have been prepared for presentation to the Lieutenant Governor in Council of the Province.

These financial statements have been prepared on a historical cost basis, except for financial instruments at fair value through profit or loss (FVTPL) which have been measured at fair value. The financial statements are presented in Canadian Dollars (CAD) and all values rounded to the nearest million, except when otherwise noted. The financial statements were approved by Hydro's Board of Directors (the Board) on March 4, 2022.

2.2 Cash and Cash Equivalents and Short-Term Investments

Cash and cash equivalents consist of amounts on deposit with Schedule 1 Canadian Chartered banks, as well as highly liquid investments with maturities of three months or less. Investments with maturities greater than three months and less than twelve months are classified as short-term investments.

2.3 Inventories

Inventories are carried at the lower of cost and net realizable value. Cost is determined on a weighted average basis and includes expenditures incurred in acquiring inventories and bringing them to their existing condition and location. Net realizable value represents the estimated selling price for inventories less all estimated costs of completion and costs necessary to make the sale.

2.4 Property, Plant and Equipment

Items of property, plant and equipment are recognized at cost less accumulated depreciation and accumulated impairment losses. Cost includes materials, labour, contracted services, professional fees and, for qualifying assets, borrowing costs capitalized in accordance with Hydro's accounting policy outlined in Note 2.6. Costs capitalized with the related asset include all those costs directly attributable to bringing the asset into operation.

When significant parts of property, plant and equipment are required to be replaced at intervals, Hydro recognizes such parts as individual assets with specific useful lives and depreciation rates. Likewise, when a major inspection is performed, its cost is recognized in the carrying amount of the asset as a replacement if the recognition criteria are satisfied. All other repairs and maintenance costs are recognized in profit or loss as incurred.

Depreciation commences when the assets are ready for their intended use. Residual values and useful lives are reviewed at the end of each year and adjusted prospectively, if appropriate. As per Board Order P.U. 30 (2019), Hydro was approved to recover gains and losses through accumulated amortization and to record removal costs through depreciation. To comply with International Accounting Standard (IAS) - 16, the adjustments related to the recovery of gains and losses through accumulated amortization and removal depreciation are presented as a regulatory adjustment in Note 12. The depreciation rates used are as follows:

Generation plant	
Hydroelectric	25 to 110 years
Thermal	20 to 70 years
Diesel	3 to 70 years
Transmission	
Lines	26 to 65 years
Terminal stations	20 to 60 years
Distribution system	20 to 60 years
Other assets	3 to 70 years

Hydroelectric generation plant includes the powerhouse, turbines, governors and generators, as well as water conveying and control structures, including dams, dikes, tailraces, penstocks and intake structures. Thermal generation plant is comprised of the powerhouse, turbines and generators, boilers, oil storage tanks, stacks, and auxiliary systems. Diesel generation plant includes the buildings, engines, generators, switchgear, fuel storage and transfer systems, dikes and liners and cooling systems.

Transmission lines include the support structures, foundations and insulators associated with lines at voltages of 230, 138 and 69 kilovolt (kV). Terminal station assets are used to step up voltages of electricity for transmission and to step down voltages for distribution. Distribution system assets include poles, transformers, insulators, and conductors.

Other assets include telecontrol, buildings, vehicles, furniture, tools and equipment.

The carrying amount of a replaced asset is derecognized when replaced. Gains and losses on disposal of an item of property, plant and equipment are determined by comparing the proceeds from disposal with the carrying amount of property, plant and equipment and are recorded in other expense. Pursuant to Board Order No. P.U. 30 (2019), the gains and losses are deferred on retirement of property, plant and equipment. The deferral will be recovered through future depreciation expense.

2.5 Intangible Assets

Intangible assets that are expected to generate future economic benefit and are measurable, including computer software costs and feasibility studies, are capitalized as intangible assets in accordance with IAS 38.

Intangible assets with finite useful lives are carried at cost less accumulated amortization and accumulated impairment losses. The estimated useful life and amortization method are reviewed at the end of each year with the effect of any changes in estimate being accounted for on a prospective basis. Intangible assets with indefinite useful lives are carried at cost less accumulated impairment losses.

Amortization is calculated on a straight-line basis over the estimated useful lives of the assets as follows:

Feasibility studies	22 years
Computer software	7 years

2.6 Borrowing Costs

Borrowing costs directly attributable to the acquisition, construction or production of qualifying assets, which are assets that take a substantial period of time to get ready for their intended use or sale, are added to the cost of those assets, until such time as the assets are substantially ready for their intended use or sale. Investment income earned on the temporary investment of specific borrowings pending their expenditure on qualifying assets is deducted from the borrowing costs eligible for capitalization. All other borrowing costs are recognized in the Non-Consolidated Statement of Profit and Comprehensive Income in the period in which they are incurred.

2.7 Impairment of Non-Financial Assets

Property, plant and equipment and other non-financial assets are reviewed for impairment losses whenever events or changes in circumstances indicate that the carrying amount may not be recoverable. Where it is not possible to estimate the recoverable amount of an individual asset, Hydro estimates the recoverable amount of the cash generating unit (CGU) to which the asset belongs. The recoverable amount is the higher of fair value less costs of disposal and value in use. Value in use is generally computed by reference to the present value of future cash flows expected to be derived from non-financial assets. In assessing value in use, the estimated future cash flows are discounted to their present value using a discount rate that reflects current market assessments of the time value of money and the risks specific to the asset for which the estimates of future cash flows have not been adjusted.

If the recoverable amount of an asset or CGU is estimated to be less than its carrying amount, the carrying amount of the asset or CGU is reduced to its recoverable amount and an impairment loss is recognized immediately in the Non-Consolidated Statement of Profit and Comprehensive Income.

2.8 Investments in Joint Arrangements

A joint arrangement is an arrangement in which two or more parties involved have joint control. Control exists when Hydro has the power, directly or indirectly, to govern the financial and operating policies of another entity, so as to obtain benefits from its activities. A joint arrangement is either classified as a joint operation or a joint venture based on the rights of the parties involved. Hydro's investment in Churchill Falls is classified as a joint operation.

Hydro's investment in Churchill Falls is recorded using the equity method of accounting. Under the equity method, the interest in the investment is carried in the Non-Consolidated Statement of Financial Position at cost plus post acquisition changes in Hydro's share of net assets of the investment. The Non-Consolidated Statement of Profit and Comprehensive Income reflects the share of the profit or loss of the joint operation.

2.9 Employee Future Benefits

(i) Pension Plan

Employees participate in the Province's Public Service Pension Plan (Plan), a multi-employer defined benefit plan. Contributions by Hydro to this Plan are recognized as an expense when employees have rendered service entitling them to the contributions. Liabilities associated with this Plan are held with the Province.

(ii) Other Benefits

Hydro provides group life insurance and health care benefits on a cost-shared basis to retired employees, in addition to a retirement allowance.

The cost of providing these benefits is determined using the projected unit credit method, with actuarial valuations being completed on an annual basis, based on service and Management's best estimate of salary escalation, retirement ages of employees and expected health care costs.

Actuarial gains and losses on Hydro's defined benefit obligation are recognized in reserves in the period in which they occur. Past service costs are recognized in operating costs as incurred. Pursuant to Board Order No. P.U. 36 (2015), Hydro recognizes the amortization of employee future benefit actuarial gains and losses in the Non-Consolidated Statement of Profit and Comprehensive Income as a regulatory adjustment.

The retirement benefit obligation recognized in the Non-Consolidated Statement of Financial Position represents the present value of the defined benefit obligation.

2.10 Provisions

A provision is a liability of uncertain timing or amount. A provision is recognized if Hydro has a present legal obligation or constructive obligation as a result of past events, it is probable that an outflow of resources will be required to settle the obligation and the amount can be reliably estimated. Provisions are not recognized for future operating losses. The provision is measured at the present value of the best estimate of the expenditures expected to be required to settle the obligation using a discount rate that reflects the current market assessments of the time value of money and the risks specific to the obligation. Provisions are re-measured at each Non-Consolidated Statement of Financial Position date using the current discount rate.

2.11 Decommissioning, Restoration and Environmental Liabilities

Legal and constructive obligations associated with the retirement of property, plant and equipment are recorded as liabilities when those obligations are incurred and are measured as the present value of the expected costs to settle the liability, discounted at a rate specific to the liability. The liability is accreted up to the date the liability will be incurred with a corresponding charge to net finance expense. The carrying amount of decommissioning, restoration and environmental liabilities is reviewed annually with changes in the estimates of timing or amount of cash flows added to or deducted from the cost of the related asset or expensed in the Non-Consolidated Statement of Profit and Comprehensive Income if the liability is short-term in nature.

2.12 Revenue from Contracts with Customers

Hydro recognizes revenue from contracts with customers related to the sale of electricity to regulated Provincial industrial, utility and direct customers in rural Newfoundland and Labrador and to non-regulated industrial, utility and external market customers.

Revenue is measured based on the consideration specified in a contract with a customer and excludes amounts collected on behalf of third parties. Hydro recognizes revenue when it transfers control of a product or service to a customer.

Revenue from the sale of energy is recognized when Hydro satisfies its performance obligation by transferring energy to the customer. Sales within the Province are primarily at rates approved by the Newfoundland and Labrador Board of Commissioners of Public Utilities (PUB), whereas export sales and sales to other certain major industrial customers are either at rates under the terms of the applicable contracts, or at market rates. Hydro recognizes revenue at the amount to which it has the right to invoice, which corresponds directly to the value of Hydro's performance to date.

2.13 Leasing

Lessee Accounting

Hydro assesses whether a contract is or contains a lease, at inception of a contract. Hydro recognizes a right-of-use asset and a corresponding lease liability with respect to all lease agreements in which it is the lessee, except for short-term leases (defined as leases with a lease term of 12 months or less) and leases of low-value assets. For these leases, Hydro recognizes the lease payments as an operating expense on a straight-line basis over the term of the lease unless another systematic basis is more representative of the time pattern in which economic benefits from the leased asset are consumed.

The lease liability is initially measured at the present value of the lease payments that are not paid at the commencement date, discounted by using the rate implicit in the lease. If this rate cannot be readily determined, Hydro uses its incremental borrowing rate.

Lease payments included in the measurement of the lease liability comprise:

- Fixed (and in-substance) lease payments less any lease incentives;
- variable lease payments that depend on an index or rate; and
- payments expected under residual value guarantees and payments relating to purchase options and renewal option periods that are reasonably certain to be exercised (or periods subject to termination options that are not reasonably certain to be exercised).

The lease liability is subsequently measured at amortized cost using the effective interest rate method. Lease liabilities are remeasured, with a corresponding adjustment to the related right-of-use assets, when there is a change in variable lease payments arising from a change in an index or rate, or when Hydro changes its assessment of whether purchase, renewal or termination options will be exercised. Hydro did not make any such adjustments during the periods presented.

The right-of-use assets comprise the initial measurement of the corresponding lease liability, lease payments made at or before the commencement day and any initial direct costs. They are subsequently measured at cost less accumulated depreciation and accumulated impairment losses.

Whenever Hydro incurs an obligation for costs to dismantle and remove a leased asset, restore the site on which it is located or restore the underlying asset to the condition required by the terms and conditions of the lease, a provision is recognized and measured under *IAS 37 – Provisions, Contingent Liabilities and Contingent Assets*. The costs are included in the related right-of-use asset.

Right-of-use assets are depreciated over the shorter period of the lease term and useful life of the underlying asset. If a lease transfers ownership of the underlying asset or the cost of the right-of-use asset reflects that Hydro expects to exercise a purchase option, the related right-of-use asset is depreciated over the useful life of the underlying asset. Depreciation starts at the commencement date of the lease.

Variable rents that do not depend on an index or rate are not included in the measurement of the lease liability and the right-of-use asset. The related payments are recognized as an expense in operating costs in the period in which the event or condition that triggers those payments occurs.

As a practical expedient, IFRS 16 permits a lessee not to separate non-lease components, and instead account for any lease and associated non-lease components as a single arrangement. Hydro has elected to apply this practical expedient.

2.14 Foreign Currencies

Transactions in currencies other than Hydro's functional currency (foreign currencies) are recognized using the exchange rate in effect at the date of transaction, approximated by the prior month end close rate. At the end of each reporting period, monetary items denominated in foreign currencies are translated at the rates of exchange in effect at the period end date. Foreign exchange gains and losses not included in regulatory deferrals are recorded in the Non-Consolidated Statement of Profit and Comprehensive Income as other expense.

2.15 Income Taxes

Hydro is exempt from paying income taxes under Section 149(1) (d.2) of the Income Tax Act.

2.16 Financial Instruments

Classification and Initial Measurement
Financial assets and financial liabilities are recognized in the Non-Consolidated Statement of Financial Position when Hydro becomes a party to the contractual provisions of the instrument and are initially measured at fair value.

Financial assets are classified at amortized cost, fair value through other comprehensive income (FVTOCI), FVTPL or as derivatives designated as hedging instruments in an effective hedge. Financial liabilities are classified at FVTPL, amortized cost or as derivatives designated as hedging instruments in an effective hedge. Transaction costs that are directly attributable to the acquisition or issue of financial assets and financial liabilities (other than financial assets and financial liabilities at FVTPL) are added to or deducted from the fair value of the financial assets or financial liabilities, as appropriate, on initial recognition. Transaction costs directly attributable to the acquisition of financial assets or financial liabilities at FVTPL are recognized immediately in profit or loss.

Financial Assets at Amortized Cost
Financial assets with contractual cash flows arising on specified dates, consisting solely of principal and interest, and that are held within a business model whose objective is to collect the contractual cash flows are subsequently measured at amortized cost using the effective interest rate method and are subject to impairment. Gains and losses are recognized in profit or loss when the asset is derecognized, modified or impaired.

Hydro's financial assets at amortized cost include cash, trade and other receivables, related party loan receivable and sinking fund investments.

Financial Assets at FVTPL
Financial assets that do not meet the criteria for being measured at amortized cost or FVTOCI are measured at FVTPL. Financial assets at FVTPL are measured at fair value at the end of each reporting period, with any fair value gains or losses recognized in profit or loss to the extent they are not a part of a designated hedging relationship. Currently, Hydro has no financial assets measured at FVTPL.

Financial Liabilities at Amortized Cost
Hydro subsequently measures all financial liabilities at amortized cost using the effective interest method. Gains and losses are recognized in profit or loss when the liability is derecognized.

Hydro's financial liabilities at amortized cost include trade and other payables, short-term borrowings, contract payable and long-term debt.

Financial Liabilities at FVTPL
Financial liabilities that do not meet the criteria for being measured at amortized cost or FVTOCI are measured at FVTPL. Financial liabilities at FVTPL are measured at fair value at the end of each reporting period, with any fair value gains or losses recognized in profit or loss to the extent they are not part of a designated hedging relationship.

Hydro's financial liabilities measured at FVTPL include derivative instruments not part of a designated hedging relationship.

Derecognition of Financial Instruments
Hydro derecognizes a financial asset when the contractual rights to the cash flows from the asset expire, or when it transfers the financial asset and substantially all the risks and rewards of ownership of the asset to another party.

Hydro derecognizes financial liabilities when, and only when, its obligations are discharged, cancelled or have expired. The difference between the carrying amount of the financial liability derecognized and the consideration paid and payable is recognized in profit or loss.

Impairment of Financial Assets

Hydro recognizes a loss allowance for expected credit losses (ECL) on investments in debt instruments that are measured at amortized cost or at FVTOCI. The amount of ECL is updated at each reporting date to reflect changes in credit risk since initial recognition of the respective financial instrument.

Hydro always recognizes lifetime ECL for trade and other receivables. The ECL on these financial assets are estimated based on Hydro's historical credit loss experience, adjusted for factors that are specific to the debtors, general economic conditions and an assessment of both the current as well as the forecast direction of conditions at the reporting date, including time value of money where appropriate. Hydro also records 12-month ECL for those financial assets which have low credit risk and where the low credit risk exemption has been applied. The classes of financial assets that have been identified to have low credit risk are cash and sinking funds.

For all other financial instruments, Hydro recognizes lifetime ECL when there has been a significant increase in credit risk since initial recognition. If, on the other hand, the credit risk on the financial instrument has not increased significantly since initial recognition, Hydro measures the loss allowance for that financial instrument at an amount equal to 12-month ECL. The assessment of whether lifetime ECL should be recognized is based on significant increases in the likelihood or risk of a default occurring since initial recognition instead of on evidence of a financial asset being credit-impaired at the reporting date or an actual default occurring.

Lifetime ECL represents the ECL that will result from all possible default events over the expected life of a financial instrument. In contrast, 12-month ECL represents the portion of lifetime ECL that is expected to result from default events on a financial instrument that are possible within 12 months after the reporting date.

2.17 Government Grants

Government grants are recognized when there is reasonable assurance that Hydro will comply with the associated conditions and that the grants will be received.

Government grants are recognized in profit or loss on a systematic basis over the periods in which Hydro recognizes as expenses the related costs for which the grants are intended to compensate. Specifically, government grants whose primary condition is that Hydro should purchase, construct or otherwise acquire non-current assets are recognized as deferred revenue in the Non-Consolidated Statement of Financial Position and transferred to the Non-Consolidated Statement of Profit and Comprehensive Income on a systematic and rational basis over the useful lives of the related assets.

Government grants that are receivable as compensation for expenses or losses already incurred or for the purpose of giving immediate financial support to Hydro with no future related costs are recognized in the Non-Consolidated Statement of Profit and Comprehensive Income in the period in which they become receivable.

2.18 Regulatory Deferrals

Hydro's revenues from its electrical sales to most customers within the Province are subject to rate regulation by the PUB. Hydro's borrowing and capital expenditure programs are also subject to review and approval by the PUB. Rates are set through periodic general rate applications utilizing a cost of service methodology. Hydro's allowed rate of return on rate base based upon Board Order No. P.U. 30 (2019) is 5.4% in 2021 and 5.4% in 2020. Hydro applies various regulator approved accounting policies that differ from enterprises that do not operate in a rate regulated environment. Generally, these policies result in the deferral and amortization of costs or credits which are expected to be recovered or refunded in future rates. In the absence of rate regulation, these amounts would be included in the determination of profit or loss in the year the amounts are incurred. The effects of rate regulation on the financial statements are disclosed in Note 12.

3. SIGNIFICANT ACCOUNTING JUDGMENTS AND ESTIMATES

The preparation of the financial statements in conformity with IFRS requires Management to make judgments, estimates and assumptions that affect the application of accounting policies and the reported amounts of assets, liabilities, revenues and expenses. Actual results may differ materially from these estimates, including changes as a result of future decisions made by the PUB. The estimates and underlying assumptions are reviewed on an on-going basis. Revisions to accounting estimates are recognized in the period in which the estimate is reviewed if the revision affects only that period or future periods.

In 2020, the outbreak of the Coronavirus disease (COVID-19) has resulted in governments worldwide enacting emergency measures to combat the spread of the virus. For the year ended December 31, 2021, COVID-19 did not have a significant financial impact on the Company's results of operations, financial position or cash flow. There continues to be uncertainty around the duration and magnitude of the pandemic and therefore the extent of any future effect on the Company is unknown at this time. Management will continue to assess the impact of COVID-19 on the Company's operations and financial results.

3.1 Use of Judgments

(i) Property, Plant and Equipment

Hydro's accounting policy relating to property, plant and equipment is described in Note 2.4. In applying this policy, judgment is used in determining whether certain costs are additions to the carrying amount of the property, plant and equipment as opposed to repairs and maintenance. If an asset has been developed, judgment is required to identify the point at which the asset is capable of being used as intended and to identify the directly attributable borrowing costs to be included in the carrying value of the development asset. Judgment is also used in determining the appropriate componentization structure for Hydro's property, plant and equipment.

(ii) Revenue

Management exercises judgment in estimating the value of electricity consumed by retail customers in the period, but billed subsequent to the end of the reporting period. Specifically, this involves an estimate of consumption for each retail customer, based on the customer's past consumption history.

When recognizing deferrals and related amortization of costs or credits, Management assumes that such costs or credits will be recovered or refunded through customer rates in future years. Recovery of some of these deferrals is subject to a future PUB order. As such, there is a risk that some or all of the regulatory deferrals will not be approved by the PUB which could have a material impact on Hydro's profit or loss in the year the order is received.

(iii) Determination of CGUs

Hydro's accounting policy relating to impairment of non-financial assets is described in Note 2.7. In applying this policy, Hydro groups assets into the smallest identifiable group for which cash flows are largely independent of the cash flows from other assets or groups of assets. Judgment is used in determining the level at which cash flows are largely independent of other assets or groups of assets.

(iv) Discount Rates

Certain of Hydro's financial liabilities are discounted using discount rates that are subject to Management's judgment.

(v) Leases

Definition of a lease

At inception of a contract, Hydro assesses whether a contract is, or contains, a lease. A contract is, or contains, a lease if the contract conveys the right to control the use of an identified asset for a period of time in exchange for consideration. To assess whether a contract conveys the right to control the use of an identified asset, Hydro assesses whether the contract involves the use of an identified asset, Hydro has the right to obtain substantially all of the economic benefits from use of the asset throughout the period of use and Hydro has the right to direct the use of the asset.

Lease extension and termination options

In determining the lease term, Hydro considers all facts and circumstances that create an economic incentive to exercise an extension option, or not to exercise a termination option. The assessment is reviewed if a significant event or a significant change in circumstances occurs within its control. The assessment requires the consideration of facts and circumstances such as contractual terms and conditions for option periods, significant leasehold improvements undertaken, costs to terminate the lease, the importance of the asset to the lessee's operations and past practice.

(vi) Regulatory adjustments

Regulatory assets and liabilities recorded in Hydro arise due to the rate setting process for regulated utilities governed by the PUB. The amounts relate to costs or credits which Management believes will be recovered or settled through customer rates in future periods, pursuant to the proceedings and outcomes of future PUB orders. Certain estimates are necessary since the regulatory environment often requires amounts to be recognized at estimated values until these amounts are finalized pursuant to regulatory decisions or other regulatory proceedings. The final amounts approved by the PUB for deferral as regulatory assets and liabilities and the approved recovery or settlement periods may differ from those originally expected. Any resulting adjustments to original estimates could have a material impact and are recognized in profit or loss in the period in which they become known.

3.2 Use of Estimates

(i) Property, Plant and Equipment

Amounts recorded for depreciation are based on the useful lives of Hydro's assets. The useful lives of property, plant and equipment are determined by independent specialists and reviewed annually by Hydro. These useful lives are Management's best estimate of the service lives of these assets. Changes to these lives could materially affect the amount of depreciation recorded.

(ii) Decommissioning Liabilities

Hydro recognizes a liability for the fair value of the future expenditures required to settle obligations associated with the retirement of property, plant and equipment. Decommissioning liabilities are recorded as a liability at fair value, with a corresponding increase to property, plant and equipment. Accretion of decommissioning liabilities is included in the Non-Consolidated Statement of Profit and Comprehensive Income through net finance expense. Differences between the recorded decommissioning liabilities and the actual decommissioning costs incurred are recorded as a gain or loss in the settlement period.

(iii) Employee Future Benefits

Hydro provides group life insurance and health care benefits on a cost-shared basis to retired employees, in addition to a severance payment upon retirement. The expected cost of providing these other employee benefits is accounted for on an accrual basis, and has been actuarially determined using the projected unit credit method prorated on service, and Management's best estimate of salary escalation, retirement ages of employees and expected health care costs.

(iv) Leases incremental borrowing rate

Hydro uses its incremental borrowing rates in measuring its lease liabilities. The incremental borrowing rate is the rate of interest that a lessee would have to pay to borrow over a similar term, and with a similar security, the funds necessary to obtain an asset of a similar value to the right-of-use asset in a similar economic environment. The determination of the incremental borrowing rate requires the consideration of different components, all of which are to incorporate a number of important lease characteristics.

(v) Deferred Assets and Derivative Liabilities

Effective October 1, 2015, Hydro entered into a power purchase agreement (PPA) with Nalcor Energy Marketing Corporation (Energy Marketing) which allows for the purchase of available Recapture energy from Hydro for resale by Energy Marketing in export markets or through agreements with counterparties. Additionally, the PPA allows for the use of Hydro's transmission service rights by Energy Marketing to deliver electricity, through rights which are provided to Hydro pursuant to a Transmission Service Agreement with Hydro-Québec dated April 1, 2009. The current terms of the PPA require a 60 day termination notice by either party. Management's assumption is that the term of the PPA at December 31, 2021, will continue for at least the next 12 months.

Fair values relating to Hydro's financial instruments and derivatives that have been classified as Level 3 have been determined using inputs for the assets or liabilities that are not readily observable. Certain of these fair values are classified as Level 3 as the transactions do not occur in an active market, or the terms extend beyond the period for which a quoted price is available.

Hydro's PPA with Energy Marketing is accounted for as a derivative instrument, where Hydro determines that the fair value at initial recognition differs from the transaction price and the fair value is evidenced neither by a quoted price in an active market for an identical asset or liability nor based on a valuation technique that uses only data from observable markets. These derivative transactions are initially measured at fair value and the expected difference is deferred. Subsequently, the deferred difference is recognized in other comprehensive income (loss) on an appropriate basis over the life of the related derivative instrument but not later than when the valuation is wholly supported by observable market data or the transaction has occurred.

Hydro has elected to defer the difference between the fair value of the power purchase derivative liability upon initial recognition and the transaction price of the power purchase derivative liability and to amortize the deferred asset on a straight-line basis over its effective term (Note 7). These methods, when compared with alternatives, were determined by Management to most accurately reflect the nature and substance of the transactions.

4. CURRENT AND FUTURE CHANGES IN ACCOUNTING POLICIES

The following is a list of standards/interpretations that have been issued and are effective for accounting periods commencing on or after January 1, 2021, as specified.

- *IFRS 16 – Leases – COVID-19 Related Rent Concessions beyond June 30, 2021 (Amendment to IFRS 16)*[1]
- *IAS 37 – Provisions, Contingent Liabilities and Contingent Assets – Onerous Contracts – Costs of Fulfilling a Contract (Amendments to IAS 37)*[2]
- *IAS 1 – Presentation of Financial Statements – Classification of Liabilities as Current or Non-Current (Amendments to IAS 1)*[3]
- *IAS 1 – Presentation of Financial Statements– Disclosure of Accounting Policies (Amendments to IAS 1)*[3]
- *IAS 8 – Accounting Policies, Changes in Accounting Estimates and Errors – Definition of Accounting Estimates (Amendments to IAS 8)*[3]

[1] Effective for annual periods beginning on or after April 1, 2021
[2] Effective for annual periods beginning on or after January 1, 2022, with earlier application permitted.
[3] Effective for annual periods beginning on or after January 1, 2023, with earlier application permitted.

4.1 IFRS 16 – Leases – COVID-19-Related Rent Concessions beyond June 30, 2021 (Amendment to IFRS 16)

The IASB issued an extension to the practical expedient available to lessees that permits a lessee to elect not to assess whether a COVID-19 related rent concession is a lease modification. The extension allows the application of the practical expedient to reductions in lease payments originally due on or before June 30, 2022. Since Hydro does not have any COVID-19 related rent concessions, the application of this amendment does not have an impact on Hydro's financial statements.

4.2 IAS 37 – Provisions, Contingent Liabilities and Contingent Assets – Onerous Contracts – Costs of Fulfilling a Contract (Amendments to IAS 37)

The amendments to IAS 37 specify that the cost of fulfilling a contract comprises the costs that relate directly to the contract. Costs that relate directly to a contract can either be incremental costs of fulfilling that contract, such as direct labour and materials, or an allocation of other costs that relate directly to fulfilling contracts, such as the allocation of the depreciation charge for an item of property, plant and equipment used in fulfilling the contract. These amendments apply to contracts for which the entity has not yet fulfilled all its obligations at the beginning of the annual reporting period in which the entity first applies the amendments and are currently not applicable to Hydro, however, may apply to future transactions.

4.3 IAS 1 – Presentation of Financial Statements – Classification of Liabilities as Current or Non-Current (Amendments to IAS 1)

The IASB issued amendments to IAS 1 to promote consistency in applying the requirements by helping companies determine whether, in the Statement of Financial Position, debt and other liabilities with an uncertain settlement date should be classified as current (due or potentially due to be settled within one year) or non-current. The classification is based on rights that are in existence at the end of the reporting period and specify that classification is unaffected by expectations about whether an entity will exercise its right to defer settlement of a liability. The amendments are applied retrospectively upon adoption. Management is currently assessing the amendments and any potential impact on Hydro's financial statements.

4.4 IAS 1 – Presentation of Financial Statements– Disclosure of Accounting Policies (Amendments to IAS 1)

The IASB issued amendments to IAS 1, which change the requirements with regard to the disclosure of accounting policies. The amendments replace all instances of the term 'significant accounting policies' with 'material accounting policy information'. Accounting policy information is material if, when considered together with other information included in an entity's financial statements, it can reasonably be expected to influence decisions that the primary users of general purpose financial statements make on the basis of those financial statements. The application of these amendments is not expected to have an impact on Hydro's financial statements.

4.5 IAS 8 – Accounting Policies, Changes in Accounting Estimates and Errors – Definition of Accounting Estimates (Amendments to IAS 8)

The IASB issued amendments to IAS 8 to clarify the distinction between changes in accounting estimates and changes in accounting policies and the correction of errors. The amendments are intended to improve the understanding of the existing requirements and therefore are not expected to have an impact on Hydro's financial statements.

5. TRADE AND OTHER RECEIVABLES

As at December 31 (millions of Canadian dollars)	**2021**	2020
Trade receivables	**121**	97
Other receivables	**13**	10
Due from related parties	**6**	7
Loss allowance	**(17)**	(17)
	123	97

As at December 31 (millions of Canadian dollars)	**2021**	2020
0-60 days	**120**	95
60+ days	**3**	2
	123	97

As at December 31 (millions of Canadian dollars)	**2021**	2020
Loss allowance, beginning of the year	**(17)**	(14)
Change in balance during the year	**-**	(3)
Loss allowance, end of the year	**(17)**	(17)

6. INVENTORIES

As at December 31 (millions of Canadian dollars)	**2021**	2020
Fuel	**46**	54
Materials and other	**38**	38
	84	92

Fuel inventory includes No. 6 fuel in the amount of $34.8 million (2020 - $43.6 million). The cost of inventories recognized as an expense during the year is $124.8 million (2020 - $160.8 million) and is included in operating costs and fuels.

7. DEFERRED ASSET

The deferred asset related to Hydro's PPA with Nalcor Energy Marketing (Energy Marketing) is amortized into income on a straight-line basis over the assumed nine month term of the contract, which commenced on January 1, 2021. Subsequently in March, August and December 2021, Management reassessed the anticipated contract term and determined that a new deferred asset and derivative liability was required resulting in a deferred asset addition of $3.9 million, $3.2 million, and $55.7 million, respectively. The balances at March and August 2021 were fully amortized at December 31, 2021. The remaining $55.7 million balance is to be amortized into income on a straight-line basis over the assumed twelve month term commencing on January 1, 2022 and expiring December 31, 2022. The components of change are as follows:

As at December 31 (millions of Canadian dollars)	**2021**	2020
Deferred asset, beginning of the year	**23**	9
Additions	**63**	38
Amortization	**(30)**	(24)
Deferred asset, end of the year	**56**	23

In February 2022, an amendment was made to suspend the existing terms of the PPA with Energy Marketing until April 30, 2022.

8. PROPERTY, PLANT AND EQUIPMENT

(millions of Canadian dollars)	Generation Plant	Transmission and Distribution	Other	Assets Under Development	Total
Cost					
Balance at January 1, 2020	1,329	1,141	131	43	2,644
Additions	-	-	-	90	90
Disposals	(6)	(1)	(3)	-	(10)
Transfers	39	56	8	(103)	-
Decommissioning liabilities and revisions	1	-	-	-	1
Other adjustments	-	-	-	(3)	(3)
Balance at December 31, 2020	1,363	1,196	136	27	2,722
Additions	**1**	**-**	**-**	**113**	**114**
Disposals	**(10)**	**(1)**	**(2)**	**-**	**(13)**
Transfers	**68**	**46**	**9**	**(122)**	**1**
Other adjustments	**(1)**	**(2)**	**-**	**-**	**(3)**
Balance at December 31, 2021	**1,421**	**1,239**	**143**	**18**	**2,821**
Depreciation					
Balance at January 1, 2020	256	145	44	-	445
Depreciation	44	27	6	-	77
Disposals	(4)	-	(2)	-	(6)
Balance at December 31, 2020	296	172	48	-	516
Depreciation	**47**	**28**	**7**	**-**	**82**
Disposals	**(5)**	**-**	**(2)**	**-**	**(7)**
Balance at December 31, 2021	**338**	**200**	**53**	**-**	**591**
Carrying value					
Balance at January 1, 2020	1,073	996	87	43	2,199
Balance at December 31, 2020	1,067	1,024	88	27	2,206
Balance at December 31, 2021	**1,083**	**1,039**	**90**	**18**	**2,230**

Capitalized interest for the year ended December 31, 2021 was $1.6 million (2020 - $1.5 million) related to assets under development.

9. INTANGIBLE ASSETS

(millions of Canadian dollars)	Computer Software	Feasibility Studies	Assets Under Development	Total
Cost				
Balance at January 1, 2020	14	2	-	16
Disposals	-	(1)	-	(1)
Transfers	4	-	(4)	-
Other adjustments	-	-	4	4
Balance at December 31, 2020	18	1	-	19
Additions	**-**	**-**	**1**	**1**
Transfers	**1**	**-**	**(1)**	**-**
Balance at December 31, 2021	**19**	**1**	**-**	**20**
Amortization				
Balance at January 1, 2020	10	1	-	11
Amortization	1	1	-	2
Disposals	-	(1)	-	(1)
Balance at December 31, 2020	11	1	-	12
Amortization	**2**	**-**	**-**	**2**
Balance at December 31, 2021	**13**	**1**	**-**	**14**
Carrying value				
Balance at January 1, 2020	4	1	-	5
Balance at December 31, 2020	7	-	-	7
Balance at December 31, 2021	**6**	**-**	**-**	**6**

10. SINKING FUND INVESTMENTS

As at December 31, 2021, sinking funds include $191.7 million (2020 - $182.6 million) related to repayment of Hydro's long-term debt. Sinking fund investments consist of bonds, debentures, short-term borrowings and coupons issued by, or guaranteed by, the Government of Canada, provincial governments or Schedule 1 banks, and have maturity dates ranging from 2022 to 2033.

Hydro debentures, which are intended to be held to maturity, are deducted from debt while all other sinking fund investments are shown separately on the Non-Consolidated Statement of Financial Position as assets. Annual contributions to the various sinking funds are in accordance with bond indenture terms, and are structured to ensure the availability of adequate funds at the time of expected bond redemption. Effective yields range from 1.42% to 6.82% (2020 - 1.52% to 6.82%).

The movement in sinking funds for the year is as follows:

As at December 31 (millions of Canadian dollars)	**2021**	2020
Sinking funds, beginning of the year	**183**	174
Contributions	**7**	7
Change in sinking fund investments in own debentures	**(11)**	(10)
Earnings	**13**	12
Sinking funds, end of the year	**192**	183

Sinking fund instalments due over the next five years are as follows:

(millions of Canadian dollars)	2022	2023	2024	2025	2026
Sinking fund instalments	7	7	7	7	4

11. INVESTMENTS IN JOINT ARRANGEMENTS

As at December 31 (millions of Canadian dollars)	**Ownership Interest**	**2021**	2020
Churchill Falls	65.8%		
Shares, at cost		**167**	167
Equity in retained earnings, beginning of the year		**446**	421
Accumulated other comprehensive loss, beginning of the year		**(3)**	(4)
Other comprehensive gain		**3**	1
Equity in profit for the year		**41**	25
		654	610

12. REGULATORY DEFERRALS

(millions of Canadian dollars)		January 1 2021	Reclass & Disposition	Regulatory Activity	**December 31 2021**	Remaining Recovery Settlement Period (years)
Regulatory asset deferrals						
Rate stabilization plan (RSP)	(a)	40	24	(8)	**56**	n/a
Foreign exchange losses	(b)	46	-	(2)	**44**	20.0
Retirement asset pool	(c)	13	-	6	**19**	n/a
Supply cost variance deferral account	(d)	-	-	18	**18**	n/a
Power purchase expense recognition	(e)	-	-	18	**18**	n/a
Supply deferrals	(f)	59	(55)	8	**12**	n/a
Deferred energy conservation costs	(g)	8	-	-	**8**	n/a
Business system transformation program	(h)	4	-	1	**5**	n/a
Other	(k-t)	2	-	2	**4**	n/a
		172	(31)	43	**184**	
Regulatory liability deferrals						
Removal provision	(i)	(12)	-	(5)	**(17)**	n/a
Insurance amortization and proceeds	(j)	(3)	-	(4)	**(7)**	n/a
Other	(k-t)	(2)	-	(1)	**(3)**	n/a
		(17)	-	(10)	**(27)**	

12.1 Regulatory Adjustments Recorded in the Non-Consolidated Statement of Profit and Comprehensive Income

For the year ended December 31 (millions of Canadian dollars)		**2021**	2020
RSP amortization		**(24)**	(32)
RSP fuel deferral		**33**	57
RSP interest		**(3)**	(2)
Rural rate adjustment		**2**	2
Total RSP activity	(a)	**8**	25
Supply deferral recovery		**4**	11
Supply deferrals		**(12)**	(55)
Total supply deferral activity	(f)	**(8)**	(44)
Supply cost variance deferrals	(d)	**(18)**	-
Power purchase expense recognition	(e)	**(18)**	-
Removal provision	(i)	**5**	4
Other	(b,c,g,h,j-t)	**(2)**	-
		(33)	(15)

The following section describes Hydro's regulatory assets and liabilities which will be, or are expected to be, reflected in customer rates in future periods and have been established through the rate setting process. In the absence of rate regulation, these amounts would be reflected in operating results in the year and profit for 2021 would have decreased by $32.7 million (2020 – $15.1 million).

12.(a) RSP

In 1986, the PUB ordered Hydro to implement the RSP which primarily provides for the deferral of fuel expense variances resulting from changes in fuel prices, hydrology, load and associated interest. Adjustments required in utility rates to cover the amortization of the balance are implemented on July 1 of each year. Similar adjustments required in industrial rates are implemented on January 1 of each year.

During 2021, Hydro recorded a net increase in the RSP balance of $16.6 million (2020 - $23.7 million) resulting in a balance from customers of $56.5 million (2020 - $39.9 million). The increase in the RSP asset is primarily due to the recovery of the 2020 energy supply deferrals as per Board Order No. P.U. 15 (2021) resulting in a net increase to the RSP of $54.9 million (2020 - $19.8 million); and Board Order No. P.U. 6 (2021) which approved a transfer of the remaining balance in the 2017 GRA Cost Recovery Rider to the Island Industrial Customer RSP Current Plan resulting in a net increase to the RSP of $0.3 million; partially offset by adjustments related to the one-time fuel price bill credits for utility, rural and industrial customers as per Board Order No.'s P.U. 16 (2020) and P.U. 6 (2021) resulting in a net decrease of $30.9 million (2020 - net increase of $30.8 million) and normal operation of the RSP resulting in a net decrease of $7.7 million (2020 – $25.4 million).

Per Board Order No. P.U. 33 (2021) and Hydro's compliance filing, the RSP was discontinued for purposes of deferring variations in hydraulic production, No. 6 fuel, and load as at October 31, 2021. The Board ordered that the RSP will be maintained to provide timely recovery of the remaining balance resulting in the continuation of amortization and interest charges.

12.(b) Foreign Exchange Losses

In 2002, the PUB ordered Hydro to defer realized foreign exchange losses related to the issuance of Swiss Franc and Japanese Yen denominated debt and amortize the balance over a 40 year period. Accordingly, these costs were recognized as a regulatory asset. During 2021, amortization expense of $2.2 million (2020 - $2.2 million) was recorded.

12.(c) Retirement Asset Pool

As per Board Order No. P.U. 30 (2019), the Board approved Hydro's proposed depreciation methodology which includes the deferral of gains and losses on retirement of assets. The deferral will be recovered through future depreciation expense. In 2021, Hydro deferred $6.1 million (2020 - $2.1 million) of retirement asset activity resulting in a total balance of $19.3 million.

12.(d) Supply Cost Variance Deferral Account

In Board Order No. P.U. 33 (2021), the PUB approved Hydro's proposal to establish an account to defer payments under the Muskrat Falls Project agreements, rate mitigation funding, project cost recovery from customers and supply cost variances. The deferral commenced activity on November 1, 2021. As at December 31, 2021, $18.3 million was deferred for future recovery from customers.

12.(e) Power Purchase Expense Recognition

In Board Order No. P.U. 9 (2021) and Board Order No. P.U. 33 (2021), the PUB approved Hydro's proposal to deviate from IFRS to allow recognition of expenses related to the purchase of energy in accordance with the commercial terms of the Muskrat Falls Power Purchase Agreement. As at December 31, 2021, IFRS power purchase expenses were $14.8 million higher during Muskrat Falls pre-commissioning and $2.8 million higher during post-commissioning than commercial payments which resulted in the deferral of a regulatory asset of $17.6 million.

12.(f) Supply Deferrals

Pursuant to Board Order No. P.U. 22 (2017), the Board approved Supply deferral costs using three specific deferral accounts: the Energy Supply, Holyrood Conversion and Isolated Systems Supply cost deferrals. During 2021, Hydro recorded a net decrease to the supply deferrals of $47.4 million (2020 – net increase $24.3 million) resulting in a balance from customers of $12.3 million (2020 - $59.7 million). The decrease in the supply deferral asset is primarily due to the recovery of the 2020 supply cost deferral of $54.9 million from the RSP as per Board Order No. P.U. 15 (2021); Board Order No. P.U. 21 (2019) approved the recovery from customers of $18.4 million over a 20 month period; of which, in 2021 Hydro recovered $4.5 million (2020 - $10.9 million); Board Order No. P.U. 6 (2021) which approved a transfer of the remaining balance in the 2017 GRA cost recovery Rider to the Island Industrial Customer, which resulted in a net decrease to the supply deferral of $0.3 million (2020 - $nil); and normal operation of the supply deferral, resulting in a net increase of $12.3 million (2020 - $54.9 million), with recovery of the period's activity to be determined through an annual application process.

Per Board Order No. P.U. 33 (2021) and Hydro's compliance application, the Energy Supply and Holyrood Conversion Deferrals were discontinued as at October 31, 2021 with the account maintained to provide for a timely recovery of the remaining balance.

12.(g) Deferred Energy Conservation Costs

In 2021, Hydro deferred $1.1 million (2020 - $0.6 million) in Energy Conservation Costs associated with an electrical conservation demand management program for residential, industrial, and commercial sectors. As per Board Order No. P.U. 22 (2017), Hydro recovered $1.5 million (2020 – $1.5 million) of the balance through a rate rider.

12.(h) Business System Transformation Program

As per Board Order No.'s P.U. 23 (2019) and P.U. 30 (2019), the Board approved the deferral of business system transformation program costs. The recovery of the deferral is subject to a future Board order. During the year, Hydro deferred $1.0 million (2020 – $1.1 million).

12.(i) Removal Provision

As per Board Order No. P.U. 30 (2019), the Board approved Hydro's proposed depreciation methodology which includes the provision for removal costs. Hydro recorded a net increase to the provision relating to 2021 activity of $4.9 million (2020 - $4.1 million) resulting in a total balance of $16.9 million (2020 - $12.0 million). The increase was driven by removal depreciation of $5.2 million (2020 - $5.1 million) which was partially offset by removal costs of $0.3 million (2020 - $1.0 million).

12.(j) Insurance Amortization and Proceeds

Pursuant to Board Order No. P.U. 13 (2012), Hydro records net insurance proceeds against the capital costs and amortizes the balance over the life of the asset. Under IFRS, Hydro is required to recognize the insurance proceeds and corresponding amortization in regulatory liabilities. During 2021, Hydro recorded a net increase of $4.2 million (2020 - $nil) to the regulatory liability. The increase was driven by insurance proceeds of $4.5 million (2020 - $nil) which was partially offset by insurance amortization of $0.3 million (2020 - $nil).

12.(k) Deferred Lease Costs

In Board Order No's. P.U. 17 (2016), P.U. 23 (2016) and No. P.U. 49 (2016) the Board approved amortization of lease costs associated with mobile diesel units at Holyrood Thermal Generating Station (HTGS) over a period of five years. In 2021, Hydro recorded amortization of $0.1 million (2020 - $0.3 million) of the deferred lease costs.

12.(l) Deferred Foreign Exchange on Fuel

Hydro purchases fuel for HTGS in USD. There are regulatory mechanisms that allow Hydro to defer variances in fuel prices (including foreign exchange fluctuations). During 2021, Hydro recognized an increase to regulatory assets due to foreign exchange losses on fuel purchases of $0.6 million (2020 - $0.2 million gains).

12.(m)Phase Two Hearing Costs

Pursuant to Board Order No. P.U. 13 (2016), Hydro received approval to defer consulting fees and salary related costs relating to Phase Two of the investigation into the reliability and adequacy of power on the Island Interconnected system after the interconnection with the Muskrat Falls generating station. In 2019, Phase Two of the Board's investigation was concluded with recovery to be addressed in a future Board Order. There were no additions in 2021 or 2020. The total deferred balance is $1.4 million (2020 - $1.4 million).

12.(n) Asset Disposal

As per Board Order No. P.U. 49 (2016), the Board ordered that Hydro recognize a regulatory asset of $0.4 million related to the Sunnyside transformer that was disposed of in 2014. Hydro is required to recover the deferred asset in rate base and amortize the asset for 22.4 years commencing in 2015. Hydro is required to exclude the new Sunnyside transformer from rate base until the Sunnyside transformer original asset deferral has been fully amortized.

12.(o) Hydraulic Resources Optimization Deferral Account

In Board Order No. P.U. 49 (2018), a deferral account to capture the revenues and costs associated with the hydraulic optimization activities was approved. For the year ended December 31, 2021, the balance of hydraulic optimization activities is a net gain of $1.3 million (2020 - $1.0 million) recorded as a deferred liability.

12.(p) Deferred Purchased Power Savings

In 1997, the PUB ordered Hydro to defer $1.1 million related to reduced purchased power rates resulting from the interconnection of communities in the area of L'Anse au Clair to Red Bay to the Hydro-Québec system and amortize the balance over a 30 year period. The remaining unamortized savings in the amount of $0.2 million (2020 - $0.2 million) are deferred as a regulatory liability.

12.(q) Non-Customer Contributions in Aid of Construction

Pursuant to Board Order No. P.U. 1 (2017), Hydro recognized amortization of deferred contributions in aid of construction (CIAC) from entities which are non-customer related parties in profit or loss. During 2021, Hydro recorded $1.2 million (2020 - $0.9 million) in non-customer related party CIAC amortization as a regulatory adjustment. In the absence of rate regulation, IFRS requires these non-customer related party CIACs to be recorded as contributed capital with no corresponding amortization. As a result, during 2021 Hydro also recorded an increase of $1.2 million (2020 - $0.9 million) to contributed capital to recognize the amount that was reclassified to profit or loss.

12.(r) Employee Future Benefits Actuarial Loss

Pursuant to Board Order No. P.U. 36 (2015), Hydro has recognized the amortization of employee future benefit actuarial gains and losses in net income. During 2021 Hydro recorded $0.2 million (2020 - $0.1 million) employee future benefits losses as a regulatory adjustment. In the absence of rate regulation, IFRS would require Hydro to include employee future benefits actuarial gains and losses in other comprehensive income. As a result, during 2021 Hydro also recorded a decrease of $0.2 million (2020 - $0.1 million) to other comprehensive income to recognize the amount that was reclassified to profit or loss.

12.(s) Reliability and Resource Adequacy Study

Pursuant to Board Order No. P.U. 29 (2019), the Board approved the deferral of costs associated with the Reliability and Resource Adequacy proceeding. Hydro deferred $1.3 million in 2021 (2020 - $0.6 million) resulting in a regulatory asset of $2.1 million (2020 - $0.8 million). The recovery of the balance is to be determined in a future Board Order.

12.(t) Frequency Converter Revenue Deferral Account

In Board Order No. P.U. 35 (2020), the Board approved the deferral of the cumulative revenue requirement impact associated with the loss on the sale of a frequency converter, commencing December, 2019. The disposition of the cumulative revenue requirement impact included in the deferral account balance will be addressed as part of Hydro's next general rate application. During 2021, Hydro deferred $0.2 million as a regulatory liability (2020 - $0.2 million).

13. TRADE AND OTHER PAYABLES

As at December 31 (millions of Canadian dollars)	**2021**	2020
Trade payables	**51**	72
Accrued interest payable	**25**	25
Due to related parties	**7**	7
Other payables	**23**	15
	106	119

14. DEBT

14.1 Short-term Borrowings

Hydro utilized its $300.0 million government guaranteed promissory note program to fulfil its short-term funding requirements. As at December 31, 2021, there were two promissory notes outstanding for a total of $55.0 million with a maturity date of January 10, 2022 bearing an average interest rate of 0.20% (2020 - $262.0 million bearing an average interest rate of 0.17%). Upon maturity, the promissory notes were reissued.

Hydro's $200.0 million CAD or USD equivalent committed revolving term facility with a maturity date of July 27, 2021 was increased to $500.0 million on April 16, 2021, and extended to reflect a new maturity date of July 31, 2022. As at December 31, 2021, there were no amounts drawn on the facility (2020 - $nil). Borrowings in CAD may take the form of Prime Rate Advances, Bankers' Acceptances (BAs), and letters of credit, with interest calculated at the Prime Rate or BA fee. Borrowings in USD may take the form of Base Rate Advances and letters of credit. The facility also provides coverage for overdrafts on Hydro's bank accounts, with interest calculated at the Prime Rate. Hydro's committed credit facility with its banker of $300.0 million matured during the year and was not renewed.

14.2 Long-term Debt

The following table represents the value of long-term debt measured at amortized cost:

As at December 31 (millions of Canadian dollars)	Face Value	Coupon Rate %	Year of Issue	Year of Maturity	**2021**	2020
Hydro						
Y *	300	8.40	1996	2026	**297**	297
AB *	300	6.65	2001	2031	**304**	304
AD *	125	5.70	2003	2033	**124**	124
AF	500	3.60	2014/2017	2045	**482**	481
1A	600	3.70	2017/2018	2048	**638**	639
2A	300	1.75	2021	2030	**287**	-
Total	2,125				**2,132**	1,845
Less: Sinking fund investments in own debentures					**84**	73
					2,048	1,772
Less: Sinking fund payments due within one year					**7**	7
Total					**2,041**	1,765

*Sinking funds have been established for these issues.

Hydro's promissory notes and debentures are unsecured and unconditionally guaranteed as to principal and interest and, where applicable, sinking fund payments, by the Province, with exception of Series 1A and Series 2A which are borrowed directly from the Province. The Province charges Hydro a guarantee fee of 25 basis points annually on the total debt (net of sinking funds) with a remaining term to maturity of less than or equal to 10 years and 50 basis points annually on total debt (net of sinking funds) with a remaining term to maturity greater than 10 years for debt outstanding as of December 31, 2010. For debt issued subsequent to December 31, 2010, the guarantee rate is 25 basis points annually on the total debt (net of sinking funds) with an original term to maturity of less than or equal to 10 years and 50 basis points annually on total debt (net of sinking funds) with an original term to maturity greater than 10 years. The guarantee fee recorded for the year ended December 31, 2021 was $8.6 million (2020 - $8.6 million).

On April 13, 2021 the Province of Newfoundland and Labrador issued long-term debt with a face value of $300.0 million, specifically on Hydro's behalf. The debt matures on June 2, 2030 with a coupon rate of 1.75% paid semi-annually.

15. DEFERRED CONTRIBUTIONS

Hydro has received contributions in aid of construction of property, plant and equipment. These contributions are deferred and amortized to other revenue over the life of the related property, plant and equipment asset.

As at December 31 (millions of Canadian dollars)	**2021**	2020
Deferred contributions, beginning of the year	**22**	20
Additions	**5**	3
Amortization	**(1)**	(1)
Deferred contributions, end of the year	**26**	22
Less: current portion	**(1)**	(1)
	25	21

16. DECOMMISSIONING LIABILITIES

Hydro has recognized liabilities associated with the retirement of portions of the HTGS and the disposal of Polychlorinated Biphenyls (PCB).

The reconciliation of the beginning and ending carrying amounts of decommissioning liabilities for December 31, 2021 are as follows:

As at December 31 (millions of Canadian dollars)	**2021**	2020
Decommissioning liabilities, beginning of the year	**15**	14
Revisions	**-**	1
Decommissioning liabilities, end of the year	**15**	15
Less: current portion	**(2)**	-
	13	15

The total estimated undiscounted cash flows required to settle the HTGS obligations at December 31, 2021 are $15.2 million (2020 - $15.2 million). Payments to settle the liability are expected to occur between 2022 and 2025. The fair value of the decommissioning liabilities was determined using the present value of future cash flows discounted at Hydro's credit adjusted risk free rate of 1.3% (2020 - 0.5%). Hydro has recorded $14.6 million (2020 - $14.8 million) related to HTGS obligations.

The total estimated undiscounted cash flows required to settle the PCB obligations at December 31, 2021 are $0.2 million (2020 - $0.3 million). Payments to settle the liability are expected to occur between 2022 and 2025. The fair value of the decommissioning liabilities was determined using the present value of future cash flows discounted at Hydro's credit adjusted risk free rate of 1.3% (2020 - 0.5%). Hydro has recorded $0.2 million (2020 - $0.3 million) related to PCB obligations.

Hydro's assets include generation plants, transmission assets and distribution systems. These assets can continue to run indefinitely with ongoing maintenance activities. As it is expected that Hydro's assets will be used for an indefinite period, no removal date can be determined and consequently, a reasonable estimate of the fair value of any related decommissioning liability cannot be determined at this time. If it becomes possible to estimate the fair value of the cost of removing assets that Hydro is required to remove, a decommissioning liability for those assets will be recognized at that time.

17. LEASES

Amounts Recognized in the Non-Consolidated Statement of Profit and Comprehensive Income

For the year ended December 31 (millions of Canadian dollars)		**2021**	2020
Variable lease payments not included in the measurement of leases	(a)	**29**	28

(a) Variable lease payments not included in the measurement of leases include payments made to Nalcor for power generated from assets which are owned by the Province. These variable lease payments are included in power purchased in the Non-Consolidated Statement of Profit and Comprehensive Income.

The total cash outflow for leases for the year ended December 31, 2021 amount to $28.7 million (2020 - $28.3 million).

18. EMPLOYEE FUTURE BENEFITS

18.1 Pension Plan

Employees participate in the Province's Public Service Pension Plan, a multi-employer defined benefit plan. The employer's contributions for the year ended December 31, 2021 of $8.0 million (2020 - $7.8 million) are expensed as incurred.

18.2 Other Benefits

Hydro provides group life insurance and health care benefits on a cost shared basis to retired employees, and in certain cases their surviving spouses, in addition to a retirement allowance. In 2021, cash payments to beneficiaries for its unfunded other employee future benefits were $3.2 million (2020 - $3.1 million). An actuarial valuation was performed as at December 31, 2021.

As at December 31 (millions of Canadian dollars)	**2021**	2020
Accrued benefit obligation, beginning of the year	**107**	101
Current service cost	**4**	4
Interest cost	**3**	3
Benefits paid	**(3)**	(3)
Actuarial (gain) loss	**(13)**	2
Accrued benefit obligation, end of the year	**98**	107

For the year ended December 31 (millions of Canadian dollars)	**2021**	2020
Component of benefit cost		
Current service cost	**4**	4
Interest cost	**3**	3
Total benefit expense for the year	**7**	7

The significant actuarial assumptions used in measuring the accrued benefit obligations and benefit expenses are as follows:

	2021	2020
Discount rate - benefit cost	**2.70%**	3.20%
Discount rate - accrued benefit obligation	**3.35%**	2.70%
Rate of compensation increase	**3.50%**	3.50%

Assumed healthcare trend rates:

	2021	2020
Initial health care expense trend rate	**5.53%**	5.64%
Cost trend decline to	**3.60%**	3.60%

Current rate 5.53%, reducing linearly to 3.6% in 2040 and thereafter.

A 1% change in assumed health care trend rates would have had the following effects:

Increase (millions of Canadian dollars)	**2021**	2020
Current service and interest cost	**2**	2
Accrued benefit obligation	**15**	18

Decrease (millions of Canadian dollars)	**2021**	2020
Current service and interest cost	**(1)**	(1)
Accrued benefit obligation	**(12)**	(13)

19. SHAREHOLDER'S EQUITY

19.1 Share Capital

As at December 31 (millions of Canadian dollars)	**2021**	2020
Common shares of par value of $1 each		
Authorized: 25,000,000		
Issued, paid and outstanding: 22,503,942	**23**	23

19.2 Contributed Capital

As at December 31 (millions of Canadian dollars)	**2021**	2020
Contributed capital, beginning of the year	**146**	147
Amortization	**(1)**	(1)
Contributed capital, end of the year	**145**	146

During 2021, Lower Churchill Management Corporation contributed $0.2 million (2020 - $0.2 million) in additions to property, plant and equipment. Pursuant to Board Order No. P.U. 1 (2017), Hydro recognized $1.2 million (2020 - $0.9 million) in amortization as a regulatory adjustment.

19.3 Dividends

For the year ended December 31 (millions of Canadian dollars)	**2021**	2020
Declared during the year		
Final dividend for prior year: $0.03 per share (2020 - $0.03)	**1**	1
Interim dividend for current year: $0.64 per share (2020 - $0.54)	**14**	12
	15	13

20. OPERATING COSTS

For the year ended December 31 (millions of Canadian dollars)	**2021**	2020
Salaries and benefits	**83**	87
Maintenance and materials	**24**	21
Professional services	**8**	8
Insurance	**4**	4
Travel and transportation	**4**	3
Other operating costs	**7**	13
	130	136

21. NET FINANCE EXPENSE

For the year ended December 31 (millions of Canadian dollars)	**2021**	2020
Finance income		
Interest on sinking fund	**13**	12
Other interest income	**1**	1
	14	13
Finance expense		
Long-term debt	**96**	92
Debt guarantee fee	**9**	9
Other	**2**	4
	107	105
Interest capitalized during construction	**(2)**	(2)
	105	103
Net finance expense	**91**	90

22. OTHER EXPENSE

For the year ended December 31 (millions of Canadian dollars)	**2021**	2020
Loss on disposal of property, plant and equipment	**6**	2
Insurance proceeds	**(5)**	-
Other	**1**	2
Other expense	**2**	4

23. FINANCIAL INSTRUMENTS AND RISK MANAGEMENT

23.1 Fair Value

The estimated fair values of financial instruments as at December 31, 2021 and 2020 are based on relevant market prices and information available at the time. Fair value estimates are based on valuation techniques which are significantly affected by the assumptions used including the amount and timing of future cash flows and discount rates reflecting various degrees of risk. As such, the fair value estimates below are not necessarily indicative of the amounts that Hydro might receive or incur in actual market transactions.

As a significant number of Hydro's assets and liabilities do not meet the definition of a financial instrument, the fair value estimates below do not reflect the fair value of Hydro as a whole.

Establishing Fair Value

Financial instruments recorded at fair value are classified using a fair value hierarchy that reflects the nature of the inputs used in making the measurements. The fair value hierarchy has the following levels:

Level 1 - valuation based on quoted prices (unadjusted) in active markets for identical assets or liabilities.

Level 2 - valuation techniques based on inputs other than quoted prices included in Level 1 that are observable for the asset or liability, either directly (i.e. as prices) or indirectly (i.e. derived from prices).

Level 3 - valuation techniques using inputs for the asset or liability that are not based on observable market data (unobservable inputs).

The fair value hierarchy requires the use of observable market inputs whenever such inputs exist. A financial instrument is classified to the lowest level of the hierarchy for which a significant input has been considered in measuring fair value. For assets and liabilities that are recognized at fair value on a recurring basis, Hydro determines whether transfers have occurred between levels in the hierarchy by reassessing categorization (based on the lowest level input that is significant to the fair value measurement as a whole) at the end of each reporting period. There were no transfers between Level 1, 2 and 3 fair value measurement for the years ended December 31, 2021 and 2020.

	Level	**Carrying Value**	**Fair Value**	Carrying Value	Fair Value
As at (millions of Canadian dollars)		**December 31, 2021**		December 31, 2020	
Financial assets					
Sinking funds - investments in Hydro debt issue	**2**	**84**	**94**	73	88
Sinking funds - other investments	**2**	**192**	**230**	183	234
Financial liabilities					
Derivative liability	**3**	**56**	**56**	23	23
Long-term debt (including amount due within one year before sinking funds)	**2**	**2,132**	**2,508**	1,845	2,394

The fair value of cash, trade and other receivables, related party loan receivable, short-term borrowings and trade and other payables approximates their carrying values due to their short-term maturity.

The fair values of Level 2 financial instruments are determined using quoted prices in active markets, which in some cases are adjusted for factors specific to the asset or liability. Level 2 derivative instruments are valued based on observable commodity future curves, broker quotes or other publicly available data. Level 2 fair values of other risk management assets and liabilities and long-term debt are determined using observable inputs other than unadjusted quoted prices, such as interest rate yield curves and currency rates.

Level 3 financial instruments include the derivative liability relating to the PPA with Energy Marketing and represents the future value provided to Energy Marketing through the contract.

The following table summarizes quantitative information about the valuation techniques and unobservable inputs used in the fair value measurement of Level 3 financial instruments as at December 31, 2021:

(millions of Canadian dollars)	Carrying Value	Valuation Techniques	Significant Unobservable Input(s)	Range
Derivative liability (PPA)	56	Modelled pricing	Volumes (MWh)	27-34% of available generation

The derivative liability arising under the PPA is designated as a Level 3 instrument as certain forward market prices and related volumes are not readily determinable to estimate a portion of the fair value of the derivative liability. Hence, fair value measurement of this instrument is based upon a combination of internal and external pricing and volume estimates. As at December 31, 2021, the effect of using reasonably possible alternative assumptions for volume inputs to valuation techniques may have resulted in a -$0.1 million to +$0.9 million change in the carrying value of the derivative liability.

The components of the change impacting the carrying value of the derivative liability for the years ended December 31, 2021 and 2020 are as follows:

(millions of Canadian dollars)	**(Level 3)**
Balance at January 1, 2021	**(23)**
Purchases	**(63)**
Changes in profit or loss	
Mark-to-market	**(21)**
Settlements	**51**
Total	**30**
Balance at December 31, 2021	**(56)**

(millions of Canadian dollars)	(Level 3)
Balance at January 1, 2020	(9)
Purchases	(38)
Changes in profit or loss	
Mark-to-market	1
Settlements	23
Total	24
Balance at December 31, 2020	(23)

23.2 Risk Management

Hydro is exposed to certain credit, liquidity and market risks through its operating, investing and financing activities. Financial risk is managed in accordance with Hydro's Board approved Financial Risk Management Policy, which outlines the objectives and strategies for the management of financial risk, including the use of derivative contracts. Permitted financial risk management strategies are aimed at minimizing the volatility of Hydro's expected future cash flows.

Credit Risk

Hydro's expected future cash flow is exposed to credit risk through its operating activities, primarily due to the potential for non-performance by its customers, and through its financing and investing activities, based on the risk of non-performance by counterparties to its financial instruments. The degree of exposure to credit risk on cash and derivative assets as well as from the sale of electricity to customers, including the associated accounts receivable, is determined by the financial capacity and stability of those customers and counterparties. The maximum exposure to credit risk on these financial instruments is represented by their carrying values on the Non-Consolidated Statement of Financial Position at the reporting date.

The COVID-19 pandemic has increased the credit risk of the Company, as the potential risk for non-performance of the Company's customers has increased with the current economic slowdown. Hydro had established flexible collection practices during the COVID-19 pandemic for its customers and has since returned to its normal customer collections practices. Hydro is continuing to monitor the risk of non-performance by its customers and as at December 31, 2021 the impact on the Company's expected credit loss allowance is not considered material. As well, Hydro is continuing to monitor the implications of COVID-19, including the risk of credit losses, pronouncements from governments and regulators and, if required, will make adjustments to the expected credit loss allowance in future periods.

Credit risk on cash is minimal, as Hydro's cash deposits are held by a Schedule 1 Canadian Chartered Bank with a rating of A+ (Standard and Poor's).

Credit exposure on Hydro's sinking funds is limited by restricting the holdings to long-term debt instruments issued by the Government of Canada or any province of Canada, Crown corporations and Schedule 1 Canadian Chartered Banks. The following credit risk table provides information on credit exposures according to issuer type and credit rating for the remainder of the sinking funds portfolio:

	Issuer Credit Rating	**Fair Value of Portfolio (%)**	Issuer Credit Rating	Fair Value of Portfolio (%)
	2021		2020	
Provincial Governments	**AA- to AAA**	**16.62%**	AA- to AAA	17.10%
Provincial Governments	**A- to A+**	**26.02%**	A- to A+	26.53%
Provincially owned utilities	**AA- to AAA**	**23.31%**	AA- to AAA	24.03%
Provincially owned utilities	**A- to A+**	**34.05%**	A- to A+	32.34%
		100.00%		100.00%

Hydro's exposure to credit risk on its energy sales and associated accounts receivable is determined by the credit quality of its customers. Hydro's three largest customers account for 82.8% (2020 - 81.3%) of total energy sales and 62.2% (2020 - 64.3%) of accounts receivable. Energy sales for the three largest customers include $448.6 million (2020 - $455.0 million) for Regulated Hydro, as well as $39.3 million (2020 - $41.4 million) for Non-Regulated Hydro.

Liquidity Risk

Hydro is exposed to liquidity risk with respect to its contractual obligations and financial liabilities. Liquidity risk management is aimed at ensuring cash is available to meet those obligations as they become due.

Short-term liquidity is mainly provided through cash on hand, funds from operations and a $300.0 million promissory note program. In addition, Hydro maintains a $500.0 million (2020 - $200.0 million) committed revolving term credit facility with its primary banker. These credit facilities are held with its primary banker in order to meet any requirements beyond those forecasted for a given period. Long-term liquidity risk is managed by the issuance of a portfolio of debentures with maturity dates ranging from 2026 to 2048. Sinking funds have been established for these issues, with the exception of the issues maturing in 2030, 2045 and 2048.

The following are the contractual maturities of Hydro's financial liabilities, including principal and interest, as at December 31, 2021:

(millions of Canadian dollars)	< 1 Year	1-3 Years	3-5 Years	> 5 Years	Total
Trade and other payables	106	-	-	-	106
Short-term borrowings	55	-	-	-	55
Contract payable	18	-	-	-	18
Derivative liability	56	-	-	-	56
Debt guarantee fee	9	17	17	126	169
Long-term debt including sinking funds	7	13	311	1,794	2,125
Interest	98	195	183	998	1,474
	349	225	511	2,918	4,003

Market Risk

In the course of carrying out its operating, financing and investing activities, Hydro is exposed to possible market price movements that could impact expected future cash flow and the carrying value of certain financial assets and liabilities. Market price movements to which Hydro has significant exposure include those relating to prevailing interest rates, foreign exchange rates, most notably the USD/CAD, and current commodity prices, most notably the spot prices for fuel and electricity. These exposures are addressed as part of the Financial Risk Management Policy.

Interest Rates

Changes in prevailing interest rates will impact the fair value of financial assets and liabilities, which includes Hydro's cash and sinking funds. Expected future cash flows associated with those financial instruments can also be impacted. The impact of a 0.5% change in interest rates on net income and other comprehensive income associated with cash and short-term debt was negligible throughout 2021 due to the short time period to maturity. There was no impact on profit and other comprehensive income associated with long-term debt as all of Hydro's long-term debt has fixed interest rates.

Foreign Currency and Commodity Exposure

Hydro's primary exposure to both USD foreign exchange and commodity price risk arises from its purchases of No. 6 fuel for consumption at the HTGS, and these risks are mitigated through the operation of the regulatory mechanisms.

24. RELATED PARTY TRANSACTIONS

Hydro enters into various transactions with its parent and other affiliates. These transactions occur within the normal course of operations and are measured at the exchange amount, which is the amount of consideration agreed to by the related parties. Related parties with which Hydro transacts are as follows:

Related Party	Relationship
Nalcor	100% shareholder of Hydro
The Province	100% shareholder of Nalcor
Churchill Falls	Joint arrangement of Hydro
Twin Falls	Joint venture of Churchill Falls
Energy Marketing	Wholly-owned subsidiary of Nalcor
Lower Churchill Management Corporation (LCMC)	Wholly-owned subsidiary of Nalcor
Labrador-Island Link Operating Corporation (LIL Opco)	Wholly-owned subsidiary of Nalcor
Muskrat Falls Corporation (Muskrat Falls)	Wholly-owned subsidiary of Nalcor
Nalcor Energy – Oil and Gas Inc.	Wholly-owned subsidiary of Nalcor
Board of Commissioners of Public Utilities (PUB)	Agency of the Province

Routine operating transactions with related parties are settled at prevailing market prices under normal trade terms. Outstanding balances due to or from related parties are non-interest bearing with settlement within 30 days, unless otherwise stated.

As at December 31 (millions of Canadian dollars)		**2021**	2020
Amounts owed by related parties:			
Trade and other receivables:			
LCMC		**-**	3
Energy Marketing		**4**	4
Nalcor		**2**	-
Related party loan receivable:			
Muskrat Falls	(a)	**53**	-
Amounts owed to related parties:			
Trade and other payables:			
Churchill Falls		**4**	4
Nalcor		**-**	3
Energy Marketing		**3**	-
Contract payable:			
Muskrat Falls	(b)	**18**	-
Long-term debt:			
The Province		**925**	639
Other liabilities:			
Various related parties		**1**	1

For the year ended December 31 (millions of Canadian dollars)	**2021**	2020
Revenues:		
Energy and transmission sales:		
LCMC	**2**	3
Energy Marketing	**2**	-
Rebate recoveries:		
The Province	**2**	2
Nalcor	**1**	1
Operating contract revenues:		
Nalcor	**25**	26
Expenses:		
Power purchased:		
Churchill Falls	**48**	48
Muskrat Falls	**57**	-
Nalcor	**29**	28
Net operating costs:		
Various related parties	**5**	5
Net finance expense:		
The Province	**31**	31

(a) As at December 31, 2021, Hydro has a related party loan receivable from Muskrat Falls of $53.2 million (2020 - $nil) which includes interest charged on the balance outstanding at a rate of 5.43% as required under the Power Purchase Agreement. The balance is repayable by Muskrat Falls as cash is available while still meeting its debt servicing costs.

(b) Hydro entered into a Power Purchase Agreement with Muskrat Falls for the purchase of energy and capacity from the Muskrat Falls Plant. The contract payable balance represents the timing difference between the value of energy and capacity delivered to Hydro and the contractual payments made under the Power Purchase Agreement in the reporting period.

24.1 Key Management Personnel Compensation

Compensation for key management personnel, which Hydro defines as its executives who have the primary authority and responsibility in planning, directing and controlling the activities of the entity, includes compensation for senior executives. Salaries and employee benefits include base salaries, performance contract payments, vehicle allowances and contributions to employee benefit plans. Post-employment benefits include contributions to the Province's Public Service Pension Plan in the amount of $0.2 million (2020 – $0.2 million).

For the year ended December 31 (millions of Canadian dollars)	**2021**	2020
Salaries and employee benefits	**2**	2

25. COMMITMENTS AND CONTINGENCIES

(a) Hydro is subject to various legal proceedings and claims in the normal course of business. Although the outcomes of such actions cannot be predicted with certainty, Management believes the Company's exposure to such claims and litigation will not materially affect its financial position or results of operations.

(b) Outstanding commitments for capital projects total approximately $24.8 million as at December 31, 2021 (2020 - $21.6 million).

(c) Hydro has entered into a number of long-term power purchase agreements as follows:

Type	**Rating**	**Effective Date**	**Term**
Hydroelectric	6.5 MW	2021	24 years
Hydroelectric	4 MW	1998	25 years
Hydroelectric	300 MW	1998	43 years
Hydroelectric	225 MW	2015	25 years
Cogeneration	15 MW	2003	20 years
Wind	390 kW	2004	Continual
Wind	27 MW	2008	20 years
Wind	27 MW	2009	20 years
Hydroelectric, Solar, Battery	240 kW Hydro 189 kW Solar 334.5 kW Battery	2019. Amended in 2020.	15 years
Biomass	450 kW	2018	1 year post in-service of Muskrat Falls

Estimated payments due in each of the next five years are as follows:

(millions of Canadian dollars)	2022	2023	2024	2025	2026
Power purchases	80.9	70.2	70.4	71.3	72.5

(d) Through a power purchase agreement signed October 1, 2015, with Energy Marketing, Hydro maintains the transmission services contract it entered into with Hydro-Québec TransÉnergie which concludes in 2024.

The transmission rental payments for the next three years are estimated to be as follows:

2022	$19.7 million
2023	$19.9 million
2024	$ 5.0 million

(e) In 2013, Hydro entered into a Power Purchase Agreement with Muskrat Falls for the purchase of energy and capacity from the Muskrat Falls Plant. The supply period under the agreement is 50 years and contractual payments commenced in November 2021 upon commissioning of the Muskrat Falls Plant. Estimated payments for the next five years have not yet been determined as they may be impacted by the Province's rate mitigation plan.

(f) In 2013, Hydro entered into the Transmission Funding Agreement (TFA) with LIL Opco, in which Hydro has committed to make payments which will be sufficient for LIL Opco to recover all costs associated with rent payments under the LIL Lease and payments to cover operating and maintenance costs incurred by LIL Opco. Hydro will be required to begin mandatory payments associated with the TFA upon commissioning of the Labrador-Island Link (LIL) assets. The term of the TFA is anticipated to continue until the service life of the LIL assets has expired.

(g) In 2014, Hydro entered into three Capacity Assistance Agreements, one with Vale Newfoundland & Labrador Limited (Vale) and two with Corner Brook Pulp and Paper Limited (CBPP) for the purchase of relief power during the winter period. In May 2021, Hydro entered into a second revised agreement with CBPP that expires on April 30, 2023. In December 2021, Hydro entered into a revised agreement with Vale that expires in March of 2022. Payment for services will be dependent on the successful provision of capacity assistance for the winter period by Vale and CBPP.

26. CAPITAL MANAGEMENT

Hydro's principal business requires ongoing access to capital in order to maintain assets to ensure the continued delivery of safe and reliable service to its customers. Therefore, Hydro's primary objective when managing capital is to ensure ready access to capital at a reasonable cost, to minimize its cost of capital within the confines of established risk parameters, and to safeguard Hydro's ability to continue as a going concern.

The capital managed by Hydro is comprised of debt (long-term debentures, short-term borrowings, bank credit facilities and bank indebtedness) and equity (share capital, shareholder contributions, reserves and retained earnings).

A summary of the capital structure is outlined below:

(millions of Canadian dollars)	**2021**		2020	
Debt				
Sinking funds	**(192)**		(183)	
Short-term borrowings	**55**		262	
Current portion of long-term debt	**7**		7	
Long-term debt	**2,041**		1,765	
	1,911	**61.9%**	1,851	63.0%
Equity				
Share capital	**23**		23	
Contributed capital	**145**		146	
Reserves	**(6)**		(22)	
Retained earnings	**1,015**		939	
	1,177	**38.1%**	1,086	37.0%
Total Debt and Equity	**3,088**	**100.0%**	2,937	100.0%

Hydro's approach to capital management encompasses various factors including monitoring the percentage of floating rate debt in the total debt portfolio, the weighted average term to maturity of its overall debt portfolio, its percentage of debt to debt plus equity, and its interest coverage.

For the regulated portion of Hydro's operations, Management targets a capital structure comprised of 75% debt and 25% equity, a ratio which Management believes to be optimal with respect to its cost of capital. This capital structure is maintained by a combination of dividend policy, shareholder contributions and debt issuance. The issuance of any new debt with a term greater than one year requires prior approval of the PUB. Hydro's committed operating facility has a covenant requiring Hydro to ensure that its consolidated debt to total capitalization ratio does not exceed 85%. As at December 31, 2021, Hydro was in compliance with this covenant.

Legislation stipulates that the total of the Government guaranteed short-term loans issued by Hydro and outstanding at any time shall not exceed a limit as fixed by the Lieutenant-Governor in Council. Short-term loans are those loans issued with a term not exceeding two years. On February 20, 2020, the Lieutenant-Governor in Council issued Order in Council OC2020-18 to increase the level of short-term borrowings permitted by Hydro from $300 million to $500 million, effective until March 31, 2022. As a result, the current limit is now $500.0 million and $55.0 million is outstanding as at December 31, 2021 (2020 - $262.0 million). The Hydro Corporation Act, 2007 (the Act) limits Hydro's total borrowings outstanding at any point in time, which includes both short-term borrowings and long-term debt. Hydro's total borrowing limit under the Act is $2.6 billion.

Historically, Hydro Regulated addressed longer-term capital funding requirements by issuing government guaranteed long-term debt in the domestic capital markets. Beginning in December 2017, the Province now issues debt in the domestic capital markets, on Hydro Regulated's behalf, and in turn loans the funds to Hydro Regulated on a cost recovery basis. Any additional funding to address long-term capital funding requirements will require approval from the Province and the PUB.

28. SUPPLEMENTARY CASH FLOW INFORMATION

For the year ended December 31 (millions of Canadian dollars)	**2021**	2020
Trade and other receivables	**(26)**	34
Inventories	**8**	11
Prepayments	**1**	(2)
Trade and other payables	**(11)**	(24)
Contract payable	**18**	-
Changes in non-cash working capital balances	**(10)**	19
Related to:		
Operating activities	**(12)**	21
Investing activities	**2**	(2)
	(10)	19

29. SEGMENT INFORMATION

Hydro operates in three business segments. The designation of segments is based on a combination of regulatory status and management accountability.

Hydro Regulated activities encompass sales of electricity to customers within the Province that are regulated by the PUB. Hydro Non-Regulated activities include the sale of energy to mining operations in Labrador West as well as costs of Hydro that are excluded from the determination of customer rates. Energy Marketing includes the sale of electricity and transmission to Energy Marketing.

	Hydro Regulated	Non-Regulated Activities	Energy Marketing	Total
(millions of Canadian dollars)	For the year ended December 31, 2021			
Energy sales	**538**	**47**	**4**	**589**
Other revenue	**16**	**-**	**21**	**37**
Revenue	**554**	**47**	**25**	**626**
Fuels	**122**	**-**	**-**	**122**
Power purchased	**123**	**43**	**4**	**170**
Operating costs	**129**	**1**	**-**	**130**
Transmission rental	**-**	**-**	**21**	**21**
Depreciation and amortization	**84**	**-**	**-**	**84**
Net finance expense	**91**	**-**	**-**	**91**
Other expense	**2**	**-**	**-**	**2**
Expenses	**551**	**44**	**25**	**620**
Profit for the year from operations	**3**	**3**	**-**	**6**
Share of profit of joint arrangement	**-**	**41**	**-**	**41**
Preferred dividends	**-**	**11**	**-**	**11**
Profit before regulatory adjustments	**3**	**55**	**-**	**58**
Regulatory adjustments	**(33)**	**-**	**-**	**(33)**
Profit for the year	**36**	**55**	**-**	**91**
Capital expenditures*	**115**	**-**	**-**	**115**
Total assets	**2,910**	**664**	**59**	**3,633**

***Capital expenditures include non-cash additions of $0.2 million contributed by Lower Churchill Management Corporation and $1.6 million of interest capitalized during construction.**

(millions of Canadian dollars)	Hydro Regulated	Non-Regulated Activities	Energy Marketing	Total
	For the year ended December 31, 2020			
Energy sales	557	50	4	611
Other revenue	6	-	20	26
Revenue	563	50	24	637
Fuels	158	-	-	158
Power purchased	75	43	4	122
Operating costs	135	1	-	136
Transmission rental	1	-	20	21
Depreciation and amortization	79	-	-	79
Net finance expense	90	-	-	90
Other expense	4	-	-	4
Expenses	542	44	24	610
Profit for the year from operations	21	6	-	27
Share of profit of joint arrangement	-	25	-	25
Preferred dividends	-	8	-	8
Profit before regulatory adjustments	21	39	-	60
Regulatory adjustments	(15)	-	-	(15)
Profit for the year	36	39	-	75
Capital expenditures*	90	-	-	90
Total assets	2,780	622	26	3,428

*Capital expenditures include non-cash additions of $0.2 million contributed by Lower Churchill Management Corporation and $1.5 million of interest capitalized during construction.

Newfoundland and Labrador Hydro

Directors[1]

John Green
Chairperson, NL Hydro
Retired Lawyer, McInnes Cooper

Donna Brewer
Retired Deputy Minister of Finance

Chris Loomis
Retired Professor
Memorial University of Newfoundland and Labrador

Jennifer Williams
President and Chief Executive Officer, NL Hydro
President and Interim Chief Executive Officer, Nalcor Energy

Brendan Paddick (on leave of absence)
CEO Columbus Capital Corp.

David Oake
President Invenio Consulting Inc.

Fraser Edison
President and CEO, Rutter Inc.

John Mallam
Retired NL Hydro Executive

Brian Walsh
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Vice President, Regulatory and Stakeholder Relations

Rob Collett
Vice President, Hydro Engineering and NLSO

Lisa Hutchens
Vice President, Chief Financial Officer

Michael Ladha
Vice President, Chief Legal Officer and Corporate Secretary

Gilbert Bennett
Vice President, Power Development

Gerard Dunphy
Vice President, Churchill Falls and Muskrat Falls

Gail Collins
Interim Vice President, People and Corporate Affairs

Scott Crosbie
Vice President, Hydro Operations

James Meaney
Vice President, Finance, Churchill Falls and Muskrat Falls

Walter Parsons
Vice President, LIL and Business Development

Meredith Baker
Assistant Corporate Secretary

[1] Newfoundland and Labrador Hydro Board of Directors as at December 31, 2021.

Newfoundland and Labrador Hydro
Computation of Rate Base
Year Ended December 31, 2021
($000)

	2021	2020
Capital Assets - Return 4	2,816,362	2,708,003
Work in Progress[1]	9,164	24,988
	2,825,526	2,732,991
Deduct:		
Accumulated Depreciation - Return 6[2]	598,649	523,797
Contributions in Aid of Construction - Return 7[1]	51,605	50,680
Total Capital Assets	2,175,272	2,158,514
Deduct Items Excluded from Rate Base:		
Work in Progress[1]	(9,164)	(24,988)
Asset Retirement Obligations (net of amortization)	(352)	(768)
Net Capital Assets	2,165,756	2,132,758
Net Capital Assets, Previous Year	2,132,758	2,115,068
Unadjusted Average Capital Assets	2,149,257	2,123,913
Deduct:		
Average Net Capital Assets Excluded from Rate Base	(8,154)	(8,257)
Average Capital Assets	2,141,103	2,115,656
Cash Working Capital Allowance - Return 8	122	1,409
Fuel Inventory - Return 10	55,803	54,075
Supplies Inventory - Return 10	38,326	38,438
Average Deferred Charges - Return 11	86,402	100,981
Average Rate Base at Year-End - Return 12	**2,321,756**	**2,310,559**

[1] Contributions of $4.4 million (2020 - $1.9 million) related to capital assets not in service have been net in work in progress. In addition, insurance proceeds of $3.6 million (2020 - $ nil) related to capital assets not in service have been net in work in progress.

[2] Accumulated amortization is net of the Retirement Asset Pool and Removal Provision. Please refer to Return 6 for further details.

Newfoundland and Labrador Hydro
Capital Assets - Original Cost
Year Ended December 31, 2021
($000)

	Balance 31-Dec-2020	Adjustments During 2021	Additions During 2021	Retirements During 2021	Balance 31-Dec-2021
Power Generation					
Steam	185,153	(470)	31,022	(5,419)	210,285
Hydro	874,401	(74)	20,717	(657)	894,387
Diesel	111,699	226	11,508	(4,289)	119,144
Gas Turbine	188,079	3	3,290	(39)	191,333
	1,359,332	**(316)**	**66,537**	**(10,404)**	**1,415,149**
Substations	372,499	(5)	23,490	(756)	395,228
Transmission	561,664	5	2,965	(15)	564,619
Distribution	254,472	33	21,671	(313)	275,864
General Plant	82,528	49	4,574	(1,416)	85,735
Telecontrol	53,438	(73)	2,411	(848)	54,929
Total Depreciable Plant	**2,683,934**	**(307)**	**121,648**	**(13,752)**	**2,791,523**
Non-Depreciable Land[1]	5,073	-	-	-	5,073
Plant Investment	2,689,007	(307)	121,648	(13,752)	2,796,596
Intangible	18,996	(13)	831	(49)	19,766
Total - Return 3	**2,708,003**	**(320)**	**122,479**	**(13,801)**	**2,816,362**

[1] Prior year amounts is $5,072. Difference is immaterial.

Newfoundland and Labrador Hydro
Capital Expenditures - Overview
Year Ended December 31, 2021
($000)

	Total Board Approved Expenditures for 2021	Total Actual Expenditures for 2021	Variance from 2021 Budget
Generation	52,251	50,477	1,774
Transmission and Rural Operations	65,903	51,524	14,379
General Properties	9,045	4,630	4,415
Allowance for Unforeseen Events	2,108	4,007	(1,899)
Supplemental Projects	6,902	2,767	4,135
New Projects less than $50,000 Approved by Hydro	95	87	8
Total Capital Budget	**136,304**	**113,492**	**22,812**

2021 Capital Budget Approved by Board Order No. P.U. 2(2021)	107,453
New Project Approved by Board Order No. P.U. 25(2020)	165
New Project Approved by Board Order No. P.U. 26(2020)	216
Top-up Approved by Board Order No. P.U. 17(2021)	108
New Project Approved by Board Order No. P.U. 18(2021)	443
New Project Approved by Board Order No. P.U. 20(2021)	350
New Project Approved by Board Order No. P.U. 27(2021)	3,479
New Project Approved by Board Order No. P.U. 28(2021)	308
New Project Approved by Board Order No. P.U. 30(2021)	1,410
Top-up Approved by Board Order No. P.U. 34(2021)	1,000
2021 New Projects under $50,000 Approved by Hydro	95
Total Approved Capital Budget Before Carryovers	**115,027**
Carryover Projects 2020–2021	21,277
Total Approved Capital Budget	**136,304**

Newfoundland and Labrador Hydro
Accumulated Depreciation
Year Ended December 31, 2021
($000)

	Property, Plant and Equipment	Intangible	Total
Balance, December 31, 2020	512,880	11,966	524,846
Add:			
Depreciation	81,748	1,533	83,281
Deduct:			
Retirements, Transfers and Adjustments	(7,243)	(49)	(7,292)
Accumulated Amortization Balance, December 31, 2021	587,385	13,450	600,835
Retirement Asset Pool			
Balance, December 31, 2020	(13,117)	-	(13,117)
Add:			
Net Loss on Retirement	(6,560)	-	(6,560)
Disposal Proceeds	391	95	487
	(19,286)	95	(19,191)
Removal Provision			
Balance, December 31, 2020	12,068	-	12,068
Add:			
Removal Depreciation	5,275	-	5,275
Less:			
Removal Costs	(338)	-	(338)
	17,005	-	17,005
Total Accumulated Amortization Balance, December 31, 2021	585,103	13,546	598,649

Depreciation Rates - 2021

Depreciation is calculated on a straight-line basis over the estimated useful lives of the assets as follows:

Generation Plant	
Hydroelectric	25 to 110 years
Thermal	20 to 70 years
Diesel	3 to 70 years
Transmission	
Lines	26 to 65 years
Terminal Stations	20 to 60 years
Distribution System	20 to 60 years
Other Assets	3 to 70 years

Newfoundland and Labrador Hydro
Contributions in Aid of Construction
Year Ended December 31, 2021
($000)

	Customers	Government/ Hydro Corporate[1]	Total
Gross Contributions			
December 31, 2020	19,919	39,423	59,341
2021 Additions[2]	2,989	174	3,163
December 31, 2021	22,908	39,597	62,504
Less:			
Accumulated Amortization			(10,899)
Net Balance December 31, 2021 - Return 3			**51,605**

[1] Hydro Corporate includes Hydro's other lines of business, including but not limited to the Lower Churchill Project.
[2] Contributions of $4.4 million (2020 - $1.9 million) related to capital assets not in service have been net in work in progress. In addition, insurance proceeds of $3.6 million (2020 - $ nil) related to capital assets not in service have been net in work in progress.

Newfoundland and Labrador Hydro
Working Capital
Year Ended December 31, 2021
($000)

	2021	2020
Calculation of Cash Working Capital Allowance		
Operating Expenses for the Year - Return 9	126,062	133,514
Add: Power Purchases	105,514	74,689
Add: Transmission Expenses	386	1,429
Total	231,962	209,632
Net Lag %[1]	1.52%	2.41%
Working Capital Allowance	3,526	5,052
Deduct: HST Adjustment	3,404	3,643
Working Capital Allowance - Return 3	122	1,409

[1] Net Lag % is calculated as Net Lag Days (Revenue Lag less Expense Lag) divided by 365 days. In 2021, Hydro's Revenue Lag was 36 days (2020 - 36 days) and the Expense Lag was 30 days (2020 - 27 days) resulting in a Net Lag of 6 days (2020 - 9 days).

Newfoundland and Labrador Hydro
Statement of Operating Costs
Year Ended December 31, 2021
($000)

	2021	2020
Salaries and Benefits	79,000	84,442
System Equipment Maintenance	21,819	20,489
Office Supplies and Expenses	2,082	2,288
Professional Services	7,560	7,330
Insurance	4,412	3,785
Equipment Rentals	2,285	2,739
Travel	1,591	1,500
Miscellaneous Expenses	4,978	4,570
Building Rental and Safety	932	911
Transportation	1,863	1,215
Customer Costs	(703)	2,908
Cost (Recoveries) Charges	243	1,337
Operating Costs - Return 8	**126,062**	**133,514**

Newfoundland and Labrador Hydro
Significant Operating Expense Variance
Year Ended December 31, 2021
($000)

	2021	2020	Increase (Decrease)
Salaries and Benefits Decrease is due to lower salary related costs and increased capital recharge, partially offset by an increase in overtime.	**79,000**	**84,442**	**(5,442)**
System Equipment Maintenance Variance is primarily due to increased contract labour associated with the Reliability and Resource Adequacy Study, which is deferred in the cost recoveries category, as well as variations in maintenance and materials.	**21,819**	**20,489**	**1,330**
Insurance Premium increase in 2021 due to market rate increases.	**4,412**	**3,785**	**627**
Equipment Rentals Decrease is due to variations in equipment rental costs.	**2,285**	**2,739**	**(454)**
Miscellaneous Expenses Increase is due to variations in adustments related to inventory.	**4,978**	**4,570**	**408**
Transportation Higher utilization of aircrafts and increased fuel prices in 2021.	**1,863**	**1,215**	**648**
Customer Costs Higher bad debt expense in 2020 is associated with an allowance for doubtful accounts related to a General Service Customer.	**(703)**	**2,908**	**(3,611)**
Cost (recoveries) Charges Decrease in cost is primarily due to the inclusion of the deferral credit associated with the Reliability and Resource Adequacy Study.	**243**	**1,337**	**(1,094)**

Newfoundland and Labrador Hydro
Inventory
Year Ended December 31, 2021
($000)

	Fuel		Supplies	
	2021	**2020**	**2021**	**2020**
Opening Balance	53,721	65,834	38,622	37,414
January	54,561	55,987	38,707	38,670
February	36,841	47,661	38,685	37,751
March	35,995	51,270	38,949	38,200
April	41,073	50,019	38,793	38,894
May	52,146	43,590	38,765	38,871
June	53,627	58,565	38,202	38,662
July	73,056	57,765	37,958	38,764
August	72,313	57,109	37,879	38,632
September	71,982	56,435	37,847	38,509
October	71,194	51,932	37,858	38,248
November	62,832	53,089	37,917	38,463
December	46,103	53,721	38,051	38,622
13-Month Average - Return 3	**55,803**	**54,075**	**38,326**	**38,438**

Newfoundland and Labrador Hydro
Deferred Charges
Year Ended December 31, 2021
($000)

	Board Order No.	2021	2020
Foreign Exchange Losses	P.U. 7(2002-2003)	43,139	45,296
Foreign Exchange on Fuel	P.U. 30(2019)	(16)	(656)
Conservation Demand Program	P.U. 30(2019)	8,300	8,750
Phase II Hearing Costs	P.U. 13(2016)	1,364	1,364
Asset Disposal	P.U. 13(2016)	292	311
Deferred Lease Costs	P.U. 38(2013)	-	132
Energy Supply Deferral	P.U. 30(2019)	12,323	59,703
Deferred Power Purchases	P.U. 5(1996-1997)	(177)	(213)
2018 Revenue Deficiency	P.U. 30(2019)	(1)	(1)
2019 Revenue Deficiency	P.U. 30(2019)	77	77
Business Systems Transformation Program	P.U. 16(2019)	4,600	3,585
Reliability and Resource Adequacy	P.U. 29(2019)	2,057	765
Hydraulic Resource Optimization	P.U. 49(2018)	(2,548)	(1,268)
Frequency Converter	P.U. 35(2020)	(473)	(244)
Power Purchase Expense Recognition	P.U. 9(2021), P.U. 33(2021)	17,573	-
Deferred Charges		86,510	117,601
Deduct:			
Deferred Charges Excluded From Rate Base[1]		(25,594)	(5,714)
Deferred Charges, End Of Current Year		60,916	111,887
Deferred Charges, End Of Prior Year		111,887	90,075
Average Deferred Charges For Rate Base - Return 3		**86,402**	**100,981**

[1] The calculation of Deferred Charges for Rate Base excludes Phase II Hearing Costs of $1.4 million (2020 - $1.4 million), the Business System Transformation Deferral of $4.6 million (2020 - $3.6 million), as well as Reliability & Resource Adequacy Study of $2.1 million (2020 - $0.8 million). Recovery of these expenditures are subject to approval by the Board. As per Board Order P.U. 9(2021) and P.U. 33(2021), the Power Purchase Expense Recognition of $17.6 million (2020 - $ nil) is not eligible for recovery.

Newfoundland and Labrador Hydro
Return on Rate Base
Year Ended December 31, 2021
($000)

		2021	2020
(a)	Corporate Net Income - Return 1	91,327	74,092
	Deduct: Unregulated Earnings	55,528	38,064
	Regulated Net Income	35,799	36,028
	Add: Compliance Adjustments	-	-
	Add: Cost of Service Exclusions[1]	7,108	7,311
	Add: Regulated Interest - Return 16	83,813	83,143
(b)	Regulated Return	126,720	126,482
(c)	Average Rate Base - Return 3	2,321,756	2,310,559
(d)	Rate of Return on Average Rate Base	5.46%	5.47%
	Lower end of Approved Range - 0.20	5.23%	5.23%
	Higher end of Approved Range + 0.20	5.63%	5.63%

[1] The Cost of Service exclusions are comprised of the disallowed portion of the debt guarantee fee of $6.3 million (2020 - $6.3 million) and depreciation on assets excluded from rate base of $0.8 million (2020 - $1.0 million).

Newfoundland and Labrador Hydro
Return on Regulated Average Retained Earnings
Year Ended December 31, 2021
($000)

			2021		2020
Total Equity - Hydro as per Balance Sheet, Return 1			1,177,109		1,085,560
Add:	Compliance Adjustments		-		-
			1,177,109		1,085,560
Deduct:	Share Capital		22,504		22,504
	Contributed Surplus		145,262		146,243
	Accumulated OCI		(5,759)		(22,073)
Ending Retained Earnings as per Balance Sheet, Return 1			1,015,103		938,886
Deduct: Non-Regulated Retained Earnings					
	Beginning Non-Regulated Retained Earnings	563,078		537,774	
	Non-Regulated Net Income for the Year	55,528		38,064	
	Non-Regulated Dividends for the Year	(15,109)		(12,760)	
	Ending Non-Regulated Retained Earnings		603,497		563,078
Regulated Retained Earnings, end of year			411,606		375,807
Add:					
	Regulated Contributed Surplus		100,000		100,000
	Retained Earnings Cost of Service Exclusions		50,221		43,113
Total Regulated Equity, end of year			561,826		518,920
Regulated Equity, beginning of year			518,920		475,579
Regulated Average Equity			540,373		497,250
Net Income - Return 1			91,327		74,092
Add: Compliance Adjustments			-		-
Deduct: Non-Regulated Net Income			55,528		38,064
Hydro Regulated Earnings			35,799		36,028
Cost of Service Exclusions			7,108		7,311
Regulated Earnings			42,907		43,339
Rate of Return on Regulated Equity			7.94%		8.72%

Newfoundland and Labrador Hydro
Capital Structure
Year Ended December 31, 2021
($000)

	2021		2020		Average	
	Amount	**Percent**	**Amount**	**Percent**	**Amount**	**Percent**
Hydro						
Debt (Return 15)	1,911,328	61.9%	1,851,431	63.0%	1,881,380	62.4%
Equity (Return 13)	1,177,109	38.1%	1,085,560	37.0%	1,131,335	37.6%
	3,088,437	**100.0%**	**2,936,991**	**100.0%**	**3,012,715**	**100.0%**
Hydro Regulated						
Debt (Return 15)[1]	1,896,516	74.1%	1,835,855	74.8%	1,866,185	74.4%
Funded Employee Future Benefits	87,830	3.4%	83,790	3.4%	85,810	3.4%
Funded Asset Retirement Obligation	14,396	0.6%	14,276	0.6%	14,336	0.6%
Equity (Return 13)[1]	561,826	21.9%	518,920	21.2%	540,373	21.6%
	2,560,568	**100.0%**	**2,452,840**	**100.0%**	**2,506,704**	**100.0%**

[1] Non-Regulated Debt Pool for 2020 has been adjusted from prior year Annual Return to reflect late revision to 2020 PUB Quarterly Financial Statements.

Newfoundland and Labrador Hydro
Cost of Debt
Year Ended December 31, 2021
($000)

	2021	2020	Average
Long-Term Debt	2,048,049	1,772,001	1,910,025
Promissory Notes	55,000	262,000	158,500
Sinking Funds	(191,721)	(182,570)	(187,146)
Total Debt	**1,911,328**	**1,851,431**	**1,881,379**
Add back Mark to Market Value	-	-	-
Net Debt	1,911,328	1,851,431	1,881,379
Non-Regulated Debt Pool[1]	(14,812)	(15,576)	(15,194)
Total Regulated Debt - Return 14	**1,896,516**	**1,835,855**	**1,866,185**
Current Year Interest Expense - Return 16			88,560
Cost of Debt			4.75%

[1] Non-Regulated Debt Pool for 2020 has been adjusted from prior year Annual Return to reflect late revision to 2020 PUB Quarterly Financial Statements.

Newfoundland and Labrador Hydro
Interest Expense
Year Ended December 31, 2021
($000)

	2020	2020
Gross Interest		
Long-Term Debt	96,220	92,475
Promissory Notes and Short Term	1,141	2,741
	97,361	95,216
Amortization of Debt Discount and Financing Expenses	885	(156)
Provision for Foreign Exchange	2,157	2,157
Interest Earned	(14,209)	(13,029)
Debt Guarantee Fee - Hydro[1]	8,602	8,624
Other	184	179
	94,980	92,991
(Deduct):		
Cost of Service Exclusions[1]	(6,326)	(6,348)
Non-Regulated Interest	(94)	(87)
Interest for Cost of Debt - Return 15	88,560	86,556
Add:		
Interest Capitalized During Construction	(1,556)	(1,516)
Interest on Supply Cost Variance Deferral Account	9	-
Interest Charged on RSP	(3,200)	(1,897)
Regulated Net Interest - Return 12	83,813	83,143
(Deduct):		
Provision for Foreign Exchange	(2,157)	(2,157)
Add:		
Cost of Service Exclusions[1]	6,326	6,348
Accretion of ARO	77	289
Regulated Interest (PUB Quarterly)	88,059	87,623
(Deduct):		
Interest on Supply Cost Variance Deferral Account	(9)	-
Interest charged on RSP	3,200	1,897
Add:		
Non-Regulated Interest	94	87
Interest - Return 1	91,344	89,607

[1] As per Board Order No. P.U. 49(2016), Hydro has excluded the disallowed portion of the debt guarantee fee.

Newfoundland and Labrador Hydro
Rate Stabilization Plan - Activity
Year Ended December 31, 2021
($000)

	Utility							Industrial					
Month	**Load Variation**	**Allocation Fuel Variation**	**Allocation Rural Rate Alteration**	**Financing Charges**	**Adjustment**	**Transfers**	**Cumulative Net Balance**	**Load Variation**	**Allocation Fuel Variation**	**Financing Charges**	**Adjustment**	**Transfers[1]**	**Cumulative Net Balance**
Opening Balance							13,454						(887)
Adjustment							-					2,748	2,748
Adjusted Opening Balance							13,454						1,861
January	(3,452)	(7,007)	(401)	59	1,180	-	3,834	(263)	(534)	8	(61)	-	1,012
February	(3,151)	(7,671)	(363)	17	1,124	-	(6,210)	(227)	(555)	4	136	(15)	354
March	(2,766)	(6,645)	(365)	(27)	1,118	50,828	35,932	(198)	(477)	2	168	4,146	3,994
April	(3,522)	(3,666)	(316)	159	883	-	29,469	(265)	(282)	18	136	-	3,599
May	(2,916)	(1,248)	(298)	130	765	-	25,902	(225)	(108)	16	161	-	3,443
June	(3,272)	(47)	(269)	114	583	-	23,012	(237)	6	15	140	-	3,367
July	(3,518)	18	(369)	102	(1,886)	-	17,358	(247)	18	15	140	-	3,293
August	(3,992)	(13)	(358)	77	(1,820)	-	11,252	(279)	14	15	126	-	3,168
September	(3,442)	(25)	(342)	50	(1,773)	-	5,719	(242)	6	14	136	-	3,083
October	(4,417)	(435)	(399)	25	(2,435)	-	(1,941)	(325)	(34)	14	114	-	2,851
November	-	-	-	(9)	(2,800)	-	(4,750)	-	-	13	135	-	2,998
December	-	-	-	(21)	(3,788)	-	(8,559)	-	-	13	139	-	3,150
Year-to-Date	**(34,449)**	**(26,741)**	**(3,479)**	**676**	**(8,848)**	**50,828**	**(8,559)**	**(2,509)**	**(1,947)**	**146**	**1,468**	**4,131**	**3,150**
Hydraulic Allocation							16,062						1,170
Total							**7,503**						**4,320**
							To Return 18						To Return 18

[1] Board Order No. P.U. 6(2021) approved a transfer of $271,092 relating to the 2017 GRA Cost Recovery as at December 31, 2020 for Industrial Customers. It also approved a debit transfer of $2,476,684 to Island Industrial Customers RSP Current Plan at December 31, 2020. These transfers resulted in an opening adjustment in 2021 totalling $2,747,776. Additionally, Board Order No. P.U. 6(2021) approved a credit transfer of $15,388.10 to reflect the over collection of the GRA Recovery Rider in February (relating to amount billed in January).

Recovery of the supply deferrals was approved in Board Order No. P.U. 15(2021) which resulted in a transfer to the Island Industrial Customers RSP Current Plan of $4,145,931.

Newfoundland and Labrador Hydro
Rate Stabilization Plan - Balances
Year Ended December 31, 2021
($000)

	Hydraulic				From Return 17		
Month	**Net Hydraulic Production Variation**	**Financing Charges**	**Transfers**	**Cumulative Variance and Financing Charges**	**Utility Balance**	**Industrial Balance**	**Cumulative Net Balance**
Opening Balance	-	-	-	27,294	13,454	(887)	39,861
Adjustment[1]	-	-	-	-	-	2,748	2,748
Adjusted Opening Balance	-	-	-	27,294	13,454	1,861	42,609
January	(5,695)	121	-	21,720	3,834	1,012	26,565
February	(4,091)	96	-	17,724	(6,210)	354	11,868
March	5,740	78	-	23,542	35,932	3,994	63,468
April	18,146	104	-	41,792	29,469	3,599	74,860
May	5,445	185	-	47,422	25,902	3,443	76,767
June	5,405	209	-	53,037	23,012	3,367	79,416
July	3,482	234	-	56,753	17,358	3,293	77,404
August	4,112	251	-	61,115	11,252	3,168	75,535
September	6,434	270	-	67,820	5,719	3,083	76,622
October	(6,719)	300	-	61,400	(1,941)	2,851	62,310
November	-	271	-	61,672	(4,750)	2,998	59,920
December	-	272	-	61,944	(8,559)	3,150	56,535
Year-to-Date	32,260	2,390	-	34,650	(22,013)	1,289	13,926
Hydraulic Allocation	(14,888)	(2,390)	-	(17,279)	16,062	1,170	(48)
Total	**17,372**	**-**	**-**	**44,665**	**7,503**	**4,320**	**56,487**

[1] Board Order No. P.U. 6(2021) approved a transfer of $271,092 relating to the 2017 GRA Cost Recovery as at December 31, 2020 for Industrial Customers. It also approved a debit transfer of $2,476,684 to Island Industrial Customers RSP Current Plan at December 31, 2020. These transfers resulted in an opening adjustment in 2021 totalling $2,747,776. Additionally, Board Order No. P.U. 6(2021) approved a credit transfer of $15,388.10 to reflect the over collection of the GRA Recovery Rider in February (relating to amount billed in January).

Recovery of the supply deferrals was approved in Board Order No. P.U. 15(2021) which resulted in a transfer to the Island Industrial Customers RSP Current Plan of $4,145,931.

Newfoundland and Labrador Hydro
Assessable Revenue
Year Ended December 31, 2021
($000)

	2021	2020
Electricity Sales	607,195	631,064
Rate Stabilization[1]	(23,944)	(31,553)
CDM Rider	1,586	1,489
Energy Supply Deferral & Revenue Deficiency	4,464	9,536
Energy Sales (Return 1)	589,300	610,536
Other Revenue	37,165	25,937
Total Revenue (Return 1)	626,465	636,473
Deduct Regulated Hydro Revenue That Is Not Assessable:		
Input Tax Credits	183	131
Contribution in Aid of Construction	1,016	1,087
Rural Rate Alteration	2,281	2,009
CBPP Frequency Converter Deferral	229	243
Ponding Revenue Deferral	1,390	1,528
Deduct Non-Regulated Revenue:		
Recall/Export	4,266	3,624
Iron Ore Company of Canada	39,248	41,316
Tacora/Wabush Mines	7,717	8,546
Other Revenue	20,632	20,443
	76,962	- 78,927
Assessable Revenue	549,503	557,546

[1] Includes Utility adjustment $8,848 (2020 - ($10,395)) and Industrial adjustment ($1,468) (2020 - $686) from Return 17.

Newfoundland and Labrador Hydro
2021 Annual Report on the Rural Deficit

	2021[1]			
Rural Deficit Areas	**Revenues ($)**	**Cost of Service before Deficit and Revenue Allocation ($)**	**Revenue Credits ($)**	**Deficit ($)**
Island Interconnected	54,254,604	66,289,449	-	(12,034,845)
Island Isolated	1,284,650	9,493,190	-	(8,208,539)
Labrador Isolated	8,672,766	32,992,737	-	(24,319,971)
L'Anse-au-Loup	3,200,809	6,351,787	-	(3,150,977)
Total	67,412,829	115,127,162	-	(47,714,332)

	2021				
Rural Deficit Areas	**Number of Communities[2]**	**Number of Customers**	**Cost per kWh ($)**	**Deficit per Customer ($)**	**Cost Recovery Ratio**
Island Interconnected	146	22,938	0.17	(525)	0.82
Island Isolated	6	652	1.88	(12,590)	0.14
Labrador Isolated	15	2,702	0.87	(9,001)	0.26
L'Anse-au-Loup	8	1,042	0.29	(3,024)	0.50
Total	**175**	**27,334**	**0.23**	**(1,746)**	**0.59**

NOTE: Hydro has not provided forecast deficit figures for 2022–2026 due to the uncertainty regarding post-Muskrat Falls rates.

[1] The 2021 Rural Deficit calculation is based on pro forma Cost of Service studies.

[2] Hydro's definition of community corresponds to the "Town Code" in its Customer Information System. Some smaller communities may be combined if they share a single postal code.

2021 Electrification, Conservation and Demand Management Report

April 1, 2022

A report to the Board of Commissioners of Public Utilities

newfoundland labrador hydro

Contents

List of Appendices

1.0 Introduction

Electrification, Conservation and Demand Management ("ECDM") activities undertaken by Newfoundland and Labrador Hydro ("Hydro") include joint utility programs offered by Newfoundland Power Inc. ("Newfoundland Power") and Hydro (collectively, the "Utilities") through the takeCHARGE partnership, as well as programs specifically targeted to Hydro's customers. This report focuses primarily on the costs and initiatives implemented by Hydro, including Hydro's portion of costs related to the delivery of joint initiatives in 2021.

The ECDM Plan 2021–2025 ("ECDM Plan") was developed in 2020 and an application, requesting approval of the economic test for electrification programming, is currently under review by the Board of Commissioners of Public Utilities ("Board").[1] While the review is underway, the Utilities continue to execute new and existing Conservation and Demand Management ("CDM") programming that meets economic testing requirements approved in Board Order No. P.U. 18(2016).[2] If Hydro's current application is approved, the electrification portion of the programming will be required to meet the proposed economic test before implementation.[3] Similar to CDM programs, the approval of an economic test, rather than specific programs, would provide the Utilities with flexibility to adapt to changing market conditions while ensuring programs remain cost-effective for customers.

In 2021, CDM activities continued to be impacted by the COVID-19 pandemic, along with associated supply chain issues for energy efficient products and appliances. Residential programs saw an overall decrease in home improvement projects compared to 2020, when the Residential Construction Rebates Program offered by the provincial government encouraged home improvement projects. Commercial customers expressed concerns about completing energy efficiency projects during a period of uncertainty, as COVID-19 pandemic public health restrictions and lockdowns continued throughout 2021. Additionally, both residential and commercial programs were impacted by supply chain issues that limited the availability of energy efficient products.

[1] "Application for Approvals Required to Execute Programming Identified in the Electrification, Conservation and Demand Management Plan 2021–2025," Newfoundland and Labrador Hydro, rev. July 8, 2021 (originally filed June 16, 2021).
[2] *Public Utilities Act,* RSNL 1990, c P-47, Board Order No. P.U. 18(2016), Board of Commissioners of Public Utilities, June 8, 2016, p. 50, para. 9.
[3] In the ECDM Plan currently before the Board, electrification program costs are proposed to be evaluated using a modified Total Resource Cost ("mTRC") test. The mTRC test is used to ensure that electrification programs are sufficiently economic to enable customer participation. A net present value analysis is then used as a secondary assessment to ensure that electrification programs are beneficial for all ratepayers.

Throughout 2021, Hydro was required to plan and execute programs while ensuring the safety of employees, the public, and contractors. Program advertising and logistics were adjusted throughout the year to remain consistent with COVID-19 safety protocols. Despite the challenges imposed by the COVID-19 pandemic, Hydro's programs achieved an estimated 1,624 MWh (94% of target)[4] of annual incremental energy savings in 2021 and have accumulated energy savings of 53,355 MWh since 2009.

2.0 Coordination and Context

2.1 Utility Planning

Starting with the initial CDM plan in 2008, the Utilities have designed and implemented a joint utility portfolio of programs for electricity customers in Newfoundland and Labrador.[5] Currently, programs offered through the joint utility model are available for residential, commercial, and industrial customers and provide rebate options to address energy savings for electricity customers. In 2020, the Board recommended the Utilities develop a plan for beneficial electrification to manage future system peak demand and realize rate mitigation benefits. The 2020–2034 Potential Study ("Study") prepared by Dunsky Energy Consulting ("Dunsky") evaluated market potential of various electrification technologies.[6] The Study was used to help form the ECDM Plan. The ECDM Plan was submitted to the Board in 2020,[7] and the two Utilities intend to execute it jointly under takeCHARGE. While review of the current application is underway, the Utilities continue to execute new and existing CDM programming that meets economic testing requirements approved in the Five-Year Conservation Plan: 2016–2020.[8]

CDM activities for 2021 included the continuation of the residential and commercial rebate programs, the Isolated Systems Community Energy Efficiency Program, the custom industrial program, and the delivery of three government-funded programs. The Utilities also developed new CDM programming,

[4] The 2021 energy savings exclude those associated with outreach activities. These savings may be updated if further audit in 2022 indicates adjustments are required.
[5] The Five-Year Energy Conservation Plan: 2008–2012 was filed with the Board on June 27, 2008. The Five-Year Energy Conservation Plan: 2012–2016 was filed with the Board on September 14, 2012.
[6] The market potential study completed by Dunsky is designed to identify the theoretical potential for electrification in the province. The Study is not designed to identify the specific programs that should be implemented by the Utilities.
[7] The five-year ECDM Plan was filed with the Board in "2021 Electrification, Conservation and Demand Management Application," Newfoundland Power Inc., December 16, 2020, vol. 2 and "Application for Approvals Required to Execute Programming Identified in the Electrification, Conservation and Demand Management Plan 2021–2025," Newfoundland and Labrador Hydro, rev. July 8, 2021 (originally filed June 16, 2021), sch. 3. The Board has since combined the two proceedings into a joint proceeding, which is still ongoing as of the time of publishing this report.
[8] *Public Utilities Act,* RSNL 1990, c P-47, Board Order No. P.U. 18(2016), Board of Commissioners of Public Utilities, June 8, 2016.

such as a low-income program and duct insulation program that are anticipated to launch in 2022. The description of the programs offered during 2021 through the joint utility partnership as well as those specific to Hydro's customers are provided in Appendix A to this report.

The Utilities continuously evaluate customer conservation programs and periodically undertake third-party program evaluations to refine program design and support future planning.

2.2 Government Engagement

Hydro continues to have a positive working relationship with both the provincial and federal governments, and remains engaged in dialogue on potential programming, policy, and partnership opportunities. In 2021, Hydro delivered three government-funded programs to customers: the Low Carbon Economy Leadership Fund Program, the Electric Vehicle Rebate Program, and the Oil to Electric Rebate Program. These programs are fully cost recovered.

Hydro continued to deliver the Low Carbon Economy Leadership Fund Program to its oil heated customers on behalf of the federal and provincial governments through insulation and thermostat rebates. 11 insulation rebates and 2 thermostat rebates were approved in areas served by Hydro in 2021.

The Electric Vehicle Rebate Program was launched on September 1, 2021. The program is intended to encourage the purchase of electric vehicles through a $2,500 rebate. The program approved 55 rebate applications in 2021.

Finally, the Oil to Electric Rebate Program was launched on August 30, 2021. This program provides rebates up to $2,500 to help homes, whose sole source of heat is oil, to transition to electricity. The program approved 40 applications in 2021.

3.0 2021 Conservation and Demand Management Program Costs and Energy Savings

3.1 Portfolio Level Program Costs and Energy Savings

Table 1 and Table 2 describe Hydro's total CDM program expenses and energy savings from 2009–2021 across all of Hydro's systems. Further detail and a breakdown of the costs that will be recovered through

the CDM Deferral Account[9] and the associated energy savings are provided in Section 7, Program Energy Savings and Program Costs.

Historically, Hydro has not recovered the CDM costs incurred on the Labrador Interconnected System through customer rates as the CDM initiatives contributed to an increase in available exports of Recapture Energy for which the benefits accrued to Nalcor Energy Marketing. Following the commissioning of the Muskrat Falls Project, it is anticipated that the benefits of exports of Recapture Energy will accrue to Hydro's customers. As such, Hydro proposed modifications to the CDM Cost Deferral Account definition and CDM Cost Recovery Adjustment to permit recovery of Labrador Interconnected System costs from those customers, including their portion of the rural deficit allocation related to CDM investments for Hydro Rural customers.

Table 1: Hydro's CDM Portfolio Spending ($000)[10,11]

	2009–2016	2017	2018	2019	2020	2021
Residential						
Windows	498	-	-	-	-	-
Insulation	746	102	88	198	96	83
Thermostats	238	55	44	75	41	58
Residential Benchmarking	49	45	23	27	9	-
Coupon Program	275	-	-	-	-	-
Block Heater Timer	47	-	-	-	-	-
Heat Recovery Ventilator	40	7	10	11	3	4
Isolated Systems Community(Residential)	3,325	936	981	577	239	776
Instant Rebate	739	159	169	140	47	102
Appliance Retirement Pilot	44	-	-	-	-	-
Isolated Load Control Pilot	164	17	5	17	-	-
Commercial						
Isolated System Community(Commercial)	-	-	-	412	52	349
Commercial Lighting	166	-	-	-	-	-
ISBEP	356	41	99	24	23	43
Business Efficiency Program	503	155	155	118	60	77
Industrial	1,813	41	20	142	-	14
Total	**9,003**	**1,559**	**1,593**	**1,741**	**570**	**1,506**

[9] As per Board Order Nos. P.U. 49(2016), and P.U. 22(2017), Hydro defers costs associated with delivering CDM programs in the CDM Cost Deferral Account (excludes program costs for the Labrador Interconnected System).
[10] Program costs for 2020 were less than previous years due to lower program participation attributed to the COVID-19 pandemic and delayed implementation of the Isolated Systems Community Energy Efficiency Program.
[11] Numbers may not add due to rounding.

Table 2: Hydro's CDM Portfolio Annual Energy Savings (MWh)[12]

	2009–2016	2017	2018	2019	2020	2021	Life-to-Date
Residential							
Windows	441	-	-	-	-	-	441
Insulation	2,061	155	139	80	156	129	2,721
Thermostats	268	59	62	46	60	52	547
Residential Benchmarking	-	131	234	155	-	-	520
Coupon Program	320	-	-	-	-	-	320
Block Heater Timer	288	-	-	-	-	-	288
Heat Recovery Ventilator	16	4	12	5	1	-	38
Isolated Systems Community(Residential)	6,067	1,141	1,064	749	394	606	10,021
Instant Rebate	503	90	300	350	95	120	1,459
Commercial							
Isolated Systems Community(Commercial)	-	-	-	448	75	388	911
Commercial Lighting	637	-	-	-	-	-	637
ISBEP	448	24	205	41	49	103	870
Business Efficiency Program	1,639	908	429	234	120	61	3,391
Industrial	25,772	-	162	5,092	-	165	31,191
Total	**38,461**	**2,513**	**2,608**	**7,200**	**950**	**1,624**	**53,355**

3.2 Residential Programs

Hydro's residential portfolio included four programs offered jointly by the Utilities (insulation, high-performance thermostats, heat recovery ventilators ("HRV"), and instant rebates) and one offered solely by Hydro (the Isolated Systems Community Energy Efficiency Program). Throughout 2021, Hydro continued to promote the takeCHARGE programs and technologies. Local advertising and building partnerships with retailers remains a priority and is an integral factor in the promotion of customer rebate programs.

3.3 Commercial Programs

Hydro's commercial portfolio includes the Business Efficiency Program offered jointly by the Utilities to provide prescriptive and custom rebates for commercial energy efficiency projects. Hydro also offers the Isolated Systems Business Efficiency Program ("ISBEP") to commercial customers in their isolated regions to provide technical support to identify economical energy efficiency opportunities and financial support for capital upgrades. Additionally, Hydro provides direct installs to several commercial customers in isolated communities through the Isolated Systems Community Energy Efficiency Program. Cumulatively, these programs yielded 552 MWh (75% of target) of energy savings in 2021.

[12] Numbers may not add due to rounding.

The COVID-19 pandemic impacted the number of projects completed in 2021 by commercial customers. Customers expressed hesitancy in completing energy efficiency projects during a period of uncertainty where their businesses continued to be impacted by public health restrictions. Additionally, supply chain issues limited the availability of energy efficient products. In 2021, Hydro approved 14 prescriptive business rebates for energy saving upgrades such as Light Emitting Diode ("LED") high bay lighting and LED luminaires. Five custom projects were also completed between the Business Efficiency Program and ISBEP for lighting upgrade projects in Hydro's isolated and interconnected service areas.

3.4 Isolated System Community Energy Efficiency Program

The Isolated Systems Community Energy Efficiency Program targets residential and commercial customers in Hydro's isolated diesel systems. The objective of the program is to provide outreach, education, and energy efficient products free of charge to residential and business customers in the diesel system communities within Newfoundland and Labrador. From 2012–2021, the program installed 144,338 energy efficient products, resulted in total energy savings of almost 11 GWh, and provided employment for over 55 residents of these communities.

The Isolated Systems Community Energy Efficiency Program includes residential and commercial direct installations and focuses on building knowledge and capacity in the communities by hiring and training local representatives. These representatives work within their own communities to promote the program, offer useful information on energy use, and provide direct installation of energy efficient products. In 2021, 329 residential and 59 business customers received direct installations totalling 9,291 products consisting of water saving technologies, LED specialty bulbs, smart power-strips, and weather stripping products. A program evaluation strategy was performed to ensure product savings and validation processes are consistent with best practices and future portfolio evaluations.

In addition to direct installations, three pilots were executed through the Isolated Systems Community Energy Efficiency Program in 2021. These pilots include the installation of smart and programmable thermostats, the installation of shifted energy units, and the installation of ductless mini-split heat pumps. The pilot to install smart and programmable thermostats replaced standard dial and inefficient thermostats with Mysa smart thermostats in select isolated regions. Through this pilot project, 131 thermostats were replaced which yielded energy savings and the potential for demand response programs. The shifted energy pilot involved installing 26 shifted energy units on hot water tanks which

provided consumption savings through timed-use and learning algorithms, as well as demand savings by providing demand response options. Finally, the heat pump pilot involved installing single zone, cold-climate ductless mini-split heat pumps with energy monitors in nine residences in the Labrador Straits area. Collectively, these pilots yielded 112 MWh of annual energy savings in Hydro's isolated communities.

In 2021, the Isolated Systems Community Efficiency Program began to utilize Simp Tek's energy advisor platform, which links existing customer data with utility data. The platform will perform an energy analysis on customers to identify the top 10% energy consumers, who will then be provided with a customized plan to reduce their energy usage. This is a significant change from the previous program delivery, transitioning from a broader approach consisting of lower-cost energy efficient upgrades to a more targeted, data-driven strategy with deeper energy retrofits across the isolated communities.

3.5 Industrial Energy Efficiency Program

Since 2010, Hydro has delivered the Industrial Energy Efficiency Program, which offers support and financial incentives for Hydro's industrial customers based on projects for lighting retrofits, process improvements, equipment changes, loss prevention (e. g., heat, steam energy), and funding for energy audit consultant reports. Promotion of the Industrial Energy Efficiency Program is facilitated through Hydro's Key Account Management framework to support improved project planning, scheduling, and execution. Within this framework, industrial customers are directly engaged with their Key Accounts Specialist to assist with the Industrial Energy Efficiency Program. This also permits Hydro to better understand customer facilities, processes, plans and schedules for potential efficiency improvement projects. In 2021, one industrial energy efficiency project was completed that resulted in annual electrical savings of 165 MWh. Hydro's Key Accounts Specialist remains engaged with industrial customers to assist with future projects.

4.0 Electrification

The ECDM Plan addresses the top customer adoption barriers to electrification identified by Hydro's customers, shown in Table 3. The Study undertaken by Dunsky identified high potential in the electric vehicle ("EV") sector, provided customer adoption barriers were addressed, such as the need for public

EV fast-charging stations and the higher vehicle purchase prices. Hydro received similar feedback from its customer surveys conducted through the Electricity Feedback Panel ("Panel").[13]

Table 3: Most Indicated Reason a Customer Has Not Purchased an EV (2018–2021)

Year	Reason
2018	Vehicle Price[14]
2019	Vehicle Price[15]
2020	Vehicle Price[16]
2021	Availability of Charging Stations[17]

Hydro finished construction on the province's first EV fast-charging network in 2021, which is an important first step to making EVs more accessible in the province. Funding for the charging network was provided by Hydro, the provincial government, and the federal government through Natural Resources Canada's EV and Alternative Fuel Infrastructure Deployment Initiative.

The ECDM Plan proposes new programs to support electrification of the transportation sector along with new programs and strategies to help manage system peak demand. Among the initiatives identified in the ECDM Plan is further investment in expanding the provincial EV fast-charging network. The proposed expansion of the EV charging network will see an additional 19 stations installed in the province, 3 of which will be located in Labrador.[18] Since milestone deadlines for federal funding programs were set to pass before a final decision from the Board was expected, the Board evaluated

[13] Two online surveys conducted by Narrative Research. The first one from November 6–18, 2019. 510 panelists participated out of 638 members of the Panel, resulting in a response rate of 80%. The second survey from May 10–17, 2021. 633 panelists participated out of 933 members of the Panel, resulting in a response rate of 68%. The purpose of the surveys were to understand opinions and perceptions regarding EVs, including: the likelihood of purchasing an EV; motivators/deterrents to purchasing an EV; and, information sources on EVs.
[14] In 2018, availability of charging stations ranked second behind vehicle price.
[15] In 2019, availability of charging stations ranked second behind vehicle price.
[16] In 2020, availability of charging stations ranked second behind vehicle price.
[17] In 2021, vehicle price ranked second behind availability of charging stations.
[18] In the May 2021 Narrative Research survey, more than half of respondents (54%) indicated they would be somewhat or much more likely to purchase or lease an all-EV as a result of increased access to chargers along the Trans-Canada Highway.

and approved the proposal to expand the EV charging network separately from the remainder of the ECDM Plan, in Board Order No. P.U. 30(2021).[19]

In 2021, Hydro was successful in its application to administer, on behalf of the federal government, a province-wide funding program that will assist commercial sites in installing public Level 2 EV chargers. Level 2 chargers are often referred to as 'destination' chargers, because they're designed to charge an EV over a longer period of time, but are also significantly less expensive to install than fast-chargers. The program will help to further support electrification of the transportation sector in the province. The program is expected to launch in the second quarter of 2022.

5.0 Planning and Evaluation

During 2021, the following external evaluations and surveys were completed to measure customer awareness, interest, and uptake in current programs:

- Socket saturation survey - to determine the prevalence of LEDs used for lighting in customers' homes, as a means of informing future program planning;
- Annual marketing survey - to assess home energy use and energy saving practices, as well as awareness of, and participation in, the takeCHARGE programs; and
- Residential thermostat program evaluation – an external review was initiated in 2021 to assess program effectiveness, participation, satisfaction, energy and demand savings.

6.0 Outreach and Support

During 2021, Hydro continued to partner with Newfoundland Power to deliver the takeCHARGE program, which offers customer education and conservation awareness activities, primarily through promotion of its takeCHARGE rebate programs and outreach activities. Residential and business programs were promoted through activities including mass media marketing, targeted promotions, community outreach, school contests, trade ally development and partnerships.

Advertising campaigns included radio, online and social media advertisements. Campaigns run throughout the year for insulation, thermostats, HRVs, instant rebates, heat pump education and the

[19] *Public Utilities Act,* RSNL 1990, c P-47, Board Order No. P.U. 30(2021), Board of Commissioners of Public Utilities, September 29, 2021.

Business Efficiency Program. The media used is chosen based on the time of year that programs are in market and consumer purchasing behaviours. In 2021, new creative ads and promotions were created for the overall brand, insulation, thermostat, HRV, instant rebates, Business Efficiency Program and the oil heat rebates for insulation and thermostats.

The takeCHARGE team is also active on social media through a joint utility Facebook page that has over 15,300 likes, as well as a YouTube channel, Twitter account, and website. The takeCHARGE website continues to be a leading source of information for customers seeking energy efficiency information. In 2021, there were 520,536 page views, of which 82% were new visitors. The top three pages visited were the home page, insulation rebates and thermostat rebates.

The takeCHARGE Town Challenge initiative invites municipalities to submit proposals that will support their efforts to develop or improve energy conservation or energy efficiency projects. In 2021, Hydro awarded the Town of Miles Cove $10,000 for upgrades at their community centre and town office, the main hub for public gatherings, weddings and community groups.

The “Make the Switch” Bulb Giveaway by takeCHARGE provides LED bulbs to selected non-profit organizations and other groups to help reduce operational lighting costs in their facilities or to help their members/residents be more energy efficient. In 2021, Hydro distributed 2,000 bulbs to five groups within Hydro territories.

takeCHARGE offered school contests for students in kindergarten to grade 6 classes and grade 7 to grade 12 classes. These contests aim to support student understanding of why saving energy is important and to demonstrate what they can do to conserve energy. Five groups were awarded prizes, including three grand prizes and two second prizes.

The 12th annual takeCHARGE Energy Efficiency Week was held from October 1–8, 2021 and Business Efficiency Week was held from November 29–December 5, 2021. Both promotional weeks were dedicated to providing customers with information to assist them in saving energy and money through reducing their energy consumption. During each week, a full social media campaign was launched and online webinars were held to engage customers.

In 2021, Hydro, in partnership with Newfoundland Power, held the takeCHARGE Luminary Awards. The awards program provides an opportunity to recognize companies, individuals and communities

contributing to energy efficiency in Newfoundland and Labrador. Due to COVID-19 restrictions, the event was held virtually on October 28, 2021.

For the second year in a row, takeCHARGE received two ENERGY STAR® Canada Awards. In 2021, the awards received were for utility program of the year and promotional campaign of the year. The awards recognize excellence in offering Canadian consumers the most energy-efficient products and technology available on the market.

Table 4 shows Hydro's costs to provide education and outreach, support, and planning for its CDM programs from 2009–2021.

Table 4: Hydro's Support Costs ($000)[20]

	2009–2015	2016	2017	2018	2019	2020	2021
Education	1,227	138	111	63	124	68	67
Support	344	42	40	47	41	46	47
Planning	1,605	250	251	128	178	142	135
Total	**3,176**	**429**	**401**	**238**	**343**	**257**	**249**

[20] Numbers may not add due to rounding.

7.0 Program Energy Savings and Program Costs

Table 5 provides the estimated annual energy savings from programs for which costs are deferred by Hydro in the CDM Cost Deferral Account for future recovery from customers pending approval of the Board.

Table 5: Energy Savings from Island Interconnected and Isolated Systems CDM Program Activities (MWh)[21,22]

	2009–2016	2017	2018	2019	2020	2021	Life-to-Date
Residential							
Windows	197	-	-	-	-	-	197
Insulation	762	111	76	54	117	96	1,216
Thermostats	148	43	46	34	44	38	355
Residential Benchmarking	-	131	234	155	-	-	520
Coupon Program	213	-	-	-	-	-	213
Block Heater Timer	-	-	-	-	-	-	-
Heat Recovery Ventilator	3	-	1	1	-	-	4
Isolated Systems Community(Residential)	6,067	1,141	1,064	749	394	606	10,021
Instant Rebate	172	9	86	153	18	43	482
Commercial							
Isolated Sytem Community(Commercial)	-	-	-	448	75	388	911
Commercial Lighting	207	-	-	-	-	-	207
ISBEP	448	24	205	41	49	103	870
Business Efficiency Program	1,586	601	295	99	97	42	2,719
Industrial	25,772	-	162	-	-	-	25,934
Total	**35,575**	**2,060**	**2,170**	**1,735**	**794**	**1,316**	**43,650**

Table 6 provides a breakdown of annual CDM program costs included in the CDM Cost Deferral Account. Deferred costs associated with the delivery of programs include direct costs for advertising, salaries, rebates and other expenses directly associated with a specific program. The deferred costs are recovered from customers through the CDM Cost Recovery Adjustment and vary depending on the uptake of the program and the number of programs offered.

[21] Hydro's CDM Cost Deferral Account does not capture spending associated with CDM programs offered to customers on the Labrador Interconnected System, therefore Table 5 does not reflect energy savings associated with these programs.
[22] Numbers may not add due to rounding.

Table 6: CDM Program Costs Included in the CDM Cost Deferral Account[23,24,25]($000s)

	2009–2016	2017	2018	2019	2020	2021
Residential						
Windows	438	-	-	-	-	-
Insulation	635	93	80	193	88	76
Thermostats	219	53	43	75	40	57
Residential Benchmarking	49	45	23	27	9	-
Coupon Program	236	-	-	-	-	-
Block Heater Timer	-	-	-	-	-	-
Heat Recovery Ventilator	19	5	5	10	3	4
Isolated Systems Community(Residential)	3,325	936	981	577	239	775
Instant Rebate	549	104	130	108	41	95
Appliance Retirement Pilot	44	-	-	-	-	-
Isolated Load Control Pilot	164	17	5	17	-	-
Commercial						
Isolated Systems Community(Commercial)	-	-	-	412	52	349
Commercial Lighting	104	-	-	-	-	-
ISBEP	357	41	99	24	23	43
Business Efficiency Program	473	138	141	100	60	75
Industrial	1,759	41	20	(30)	-	6
Total	**8,371**	**1,474**	**1,528**	**1,512**	**555**	**1,480**

8.0 Program Participation and Savings

Table 7 provides statistics on participation in each of Hydro's programs. The transaction units are specific to each program. The Residential Energy Star Window, Insulation, Thermostat, and HRV Programs reflect approved rebates. The Coupon Program reflects numbers of coupons redeemed on energy efficient products. The Commercial Lighting and Instant Rebate Programs reflect the number of products rebated through the programs. The Block Heater Timer Program reflects the number of timers determined to be installed through post-giveaway surveys or coupon redemption. The ISBEP, Business Efficiency Program, and Industrial Efficiency Programs reflect the number of completed retrofit projects. The Isolated Systems Community Energy Efficiency Program denotes the number of residential and commercial customer premises that received direct installations. Finally, the Residential Benchmarking Program indicates the number of customers included in the treatment group.

[23] Credits are due to an overstated accrual in a prior year.
[24] Program costs for 2020 were less than previous years due to lower program participation attributed to the COVID-19 pandemic and delayed implementation of the Isolated Systems Community Energy Efficiency Program.
[25] Numbers may not add due to rounding.

Table 7: Life-to-Date Program Participation

	2009–2016	2017	2018	2019	2020	2021	Total
Residential							
Windows	211	-	-	-	-	-	**211**
Insulation	333	39	42	32	57	45	**548**
Thermostats	230	56	66	46	56	47	**501**
Residential Benchmarking	1,000	1,000	1,000	1,000	-	-	**4,000**
Coupon Program	9,010	-	-	-	-	-	**9,010**
Block Heater Timer	629	-	-	-	-	-	**629**
Heat Recovery Ventilator	29	7	21	8	1	-	**66**
Isolated Systems Community(Residential)	4,999	1,007	727	940	633	329	**8,635**
Instant Rebate	38,072	9,764	19,285	23,293	2,863	3,648	**96,925**
Commercial							
Isolated Systems Community(Commercial)	-	-	-	220	87	59	**366**
Commercial Lighting	1,930	-	-	-	-	-	**1,930**
ISBEP	12	3	10	4	2	4	**35**
Business Efficiency Program	39	46	34	13	22	15	**169**
Industrial	6	-	1	2	-	1	**10**
Total	**56,500**	**11,922**	**21,186**	**25,558**	**3,721**	**4,148**	**123,035**

9.0 Levelized Utility Costs

Levelized Utility Cost ("LUC") is a method used to compare costs associated with conservation programs to the value of energy saved. The LUC represents the economic cost to the utility (cents per kWh) to achieve those energy savings. LUC is an industry metric that is calculated by discounting future energy savings resulting from conservation programs to a present value. Table 8 provides the LUC for Hydro's 2021 programs. The energy savings represent the annual savings resulting from individual program participation during 2021.

Table 8: Hydro Program Participation, Savings, and LUC 2021

Program	Participation	Energy Savings (MWh)	Demand Savings (kW)	LUC (¢/kWh)	Life-to-Date LUC (¢/kWh)
Windows	-	-	-	-	-
Insulation	45	129	56	6.4	4.5
Thermostats	47	52	4	12.4	10.4
Residential Benchmarking	-	-	-	-	-
Coupon Program	-	-	-	-	-
Industrial	1	165	19	1.9	1.6
Block Heater Timer	-	-	-	-	-
Isolated Systems Community	590	994	307	25.8	15.3
ISBEP	4	103	25	5.3	9.6
Heat Recovery Ventilator	-	-	-	-	21.0
Business Efficiency Program(Custom and Prescriptive)	15	61	8	19.5	4.7
Instant Rebate	3,648	120	23	14.6	16.9
Total	**4,350**	**1,624**	**306**	**17.2**	**5.7**

10.0 Conclusion

In 2021, Hydro continued to promote energy CDM while also planning for the future of electricity in Newfoundland and Labrador by completing the province's first EV fast charging network across the Island. CDM was encouraged through joint utility programs offered by Hydro and Newfoundland Power through takeCHARGE and through programming specifically targeted to Hydro's isolated and industrial customers. CDM programs have been successful in providing education and fostering the development of a culture of energy conservation in the province. In addition, Hydro continued to work with its customers to understand needs and drivers of electrical consumption to support the achievement of sustainable energy savings through its programming. Additionally, Hydro has worked in partnership with the provincial government on various programs and initiatives to support energy efficiency and a lower carbon economy. Overall, Hydro's efforts supported annual incremental energy savings of 1,624 MWh in 2021 and cumulative energy savings of 53,355 MWh since 2009.

Appendix A

Conservation and Demand Management Program Descriptions

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Residential takeCHARGE Rebate Programs

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

Insulation Rebate Program

The objective of this program is to provide incentives to increase the insulation R-value in residential basements, crawl spaces and attics, thereby increasing the efficiency of the home's building envelope. Eligibility for the programs is limited to electrically heated homes, determined on the basis of annual energy usage. Home retrofit projects are eligible. Customers can receive an incentive of 75% of basement wall and ceiling insulation materials up to $1,000 and 50% of attic insulation material costs up to $1,000.

Thermostat Rebate Program

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

HRV Rebate Program

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

Isolated System Community Energy Efficiency Program – Hydro Program

This program includes both residential and commercial components targeting customers in Isolated Diesel communities and L'Anse-au-Loup. The focus is on residential customers through the direct installation of a kit of technologies, at-cash register coupons on small technologies and mail-in rebates

on energy efficient appliances. Commercial customers also receive a direct installation of a kit of technologies. The kit includes items for water savings, draft proofing, lighting and other measures.

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

Block Heater Timer Program – Hydro Program

This program targeted customers in the Labrador Interconnected System to encourage the purchase of energy saving Block Heater Timers through in-store discounts offered at partnering retailers. The program launched with a giveaway of the technology to create awareness of the product as there was little or no use of the technology before the program. The incentive was offered over two winter seasons (2012–2013 and 2013–2014) and ended in spring 2014.

Small Technologies Program

Instant Rebates

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

Appliances and Electronics

This program encouraged customers to purchase high-efficiency appliances. Participants received incentives of $100 for select energy efficient washers, freezers, and $20 for eligible TVs. All customers were eligible for this program regardless of the age of the home or its heat source. This program ended December 31, 2017.

Residential Benchmarking Program

This program encouraged customers to adopt energy efficient behavioural changes. Participants received Home Energy Reports that provided insight into their homes' electricity use. The reports helped customers understand changes in their usage over time, as well as how they compared to similar homes. They also included practical tips on how to save energy moving forward. The program also included an online component that allowed customers to engage even further through weekly challenges and personalized saving plans. Hydro ended this program in December 2019.

Energy Efficient Loan Program

This program was offered by the Government of Newfoundland and Labrador and takeCHARGE, making it easier to save energy and money. On-bill financing with a 2.5 % interest rate reduction from standard utility financing rates was available for insulation, heat pumps and home energy assessments. Through the Energy Efficient Loan Program, eligible applicants could receive low-interest financing for up to $10,000 over a maximum of five years. This program ended March 31, 2020.

Commercial takeCHARGE Rebate Programs

Business Efficiency Program

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

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

Isolated Systems Business Efficiency Program – Hydro Program

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

Industrial Energy Efficiency Program

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

2021 Report on the Rural Deficit

Summary of Specific Initiatives

March 31, 2022

A report to the Board of Commissioners of Public Utilities

newfoundland labrador hydro

Contents

1.0 Introduction

Newfoundland and Labrador Hydro ("Hydro") provides electrical service to approximately 27,300 customers on the Hydro Rural Interconnected System and Hydro Rural Diesel Systems. As a result of policy set out by the Government of Newfoundland and Labrador, these customers are served at an operating loss ("Rural Deficit") as the electricity rates in these areas do not recover Hydro's full cost of providing service. Additionally, Hydro serves approximately 11,400 rural customers on the Labrador Interconnected System, whose rates recover the cost to serve as well as a contribution to funding a portion of the Rural Deficit. Over 96%[1] of the Rural Deficit funding is provided through the Utility Rate charged to Newfoundland Power Inc. ("Newfoundland Power").

This report provides an overview of Hydro's Rural Deficit, as well as the direct operating and capital initiatives undertaken by Hydro to manage costs associated with serving customers in rural areas, thereby mitigating the Rural Deficit.

2.0 Rural Deficit Overview

Table 1 provides the estimated annual Rural Deficit for 2017–2021, as well as year-over-year variances. The Rural Deficit for 2021 was calculated using actual revenues and expenses allocated to Hydro's Rural Deficit areas based on the 2019 Test Year Cost of Service Study allocations.

Table 1: Hydro Rural Deficit Estimates ($ millions)

	Annual Amounts					Year-over-Year			
	2017	**2018[2]**	**2019**	**2020**	**2021**	**2018/17**	**2019/18**	**2020/19**	**2021/20**
Revenues (A)	58.6	63.6	67.2	68.3	67.4	5.0	3.6	1.1	(0.9)
Costs[3]									
Operating Expenses	43.6	44.0	44.8	44.0	40.8	0.4	0.8	(0.8)	(3.2)
Fuel	27.8	28.1	29.3	21.8	19.5	0.3	1.2	(7.5)	(2.3)
Purchased Power	7.2	8.5	9.1	7.8	10.1	1.3	0.6	(1.3)	2.3
Depreciation	17.3	19.3	19.3	18.7	19.6	2.0	0.0	(0.6)	0.9
Return	23.1	22.9	23.4	25.1	25.1	(0.2)	0.5	1.7	-
Total Costs (B)	**119.0**	**122.8**	**125.9**	**117.4**	**115.1**	**3.8**	**3.1**	**(8.5)**	**(2.3)**
Rural Deficit (B-A)	60.4	59.2	58.7	49.1	47.7	(1.2)	(0.5)	(9.6)	(1.4)

[1] In accordance with the 2019 Test Year Cost of Service Study, allocation is 96.1% for Newfoundland Power and 3.9% for customers on the Hydro Rural Labrador Interconnected System.
[2] 2018 figures were restated in 2019 to reflect the outcome of Hydro's 2017 General Rate Application, Compliance Application (Board Order No. P.U. 30(2019)), consistent with the 2019 Annual Financial Returns.
[3] Table 1 does not include the costs incurred for Conservation Demand Management ("CDM") programs offered in rural communities as they are captured in Hydro's CDM Cost Deferral Account, approved in Board Order Nos. P.U. 49(2016) and P.U. 22(2017).

The $47.7 million Rural Deficit in 2021 represents a decrease of approximately $1.4 million, or 2.9%, from 2020. The primary drivers of the change are as follows:

- Operating expenses decreased as a result of lower salary related costs in 2021 and increased capital recharge, offset by an increase in overtime;
- Fuel costs decreased mainly as a result of an average 0.7 cents per kWh decrease in No. 6 fuel[4] price, a decrease in rural sales, offset by an increase of 1.9 cents per kWh in diesel fuel used to serve isolated customers in 2021 relative to 2020;[5] and
- Purchased power costs increased primarily as a result of the implementation of the Muskrat Falls Purchase Power Agreement effective November 1, 2021.

Chart 1 shows the annual Rural Deficit including and excluding fuel costs, demonstrating that fuel costs are consistently one of the primary cost drivers in Rural Deficit areas.

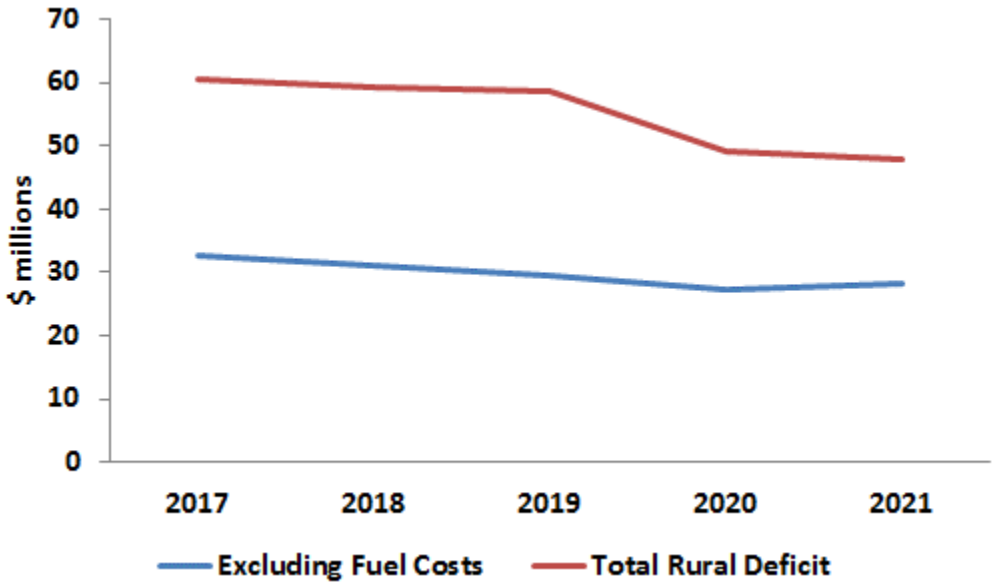

Chart 1: Five-Year Rural Deficit ($ millions)

Chart 1 also demonstrates that, excluding the cost of fuel, Hydro's costs over the period have been stable.

[4] A portion of Holyrood No. 6 fuel costs are allocated to rural customers on the Island Interconnected System.
[5] Changes in the price of diesel directly impact the purchase price that Hydro pays to serve customers on the L'Anse-au-Loup System, and for wind generation purchases supplying Ramea.

Hydro's efforts to identify and implement opportunities to reduce the Rural Deficit continued to be impacted by the COVID-19 pandemic through 2021. Factors such as supply chain impacts, reduced uptake on CDM initiatives,[6] and limitations on travel to remote areas due to changing public health restrictions all affected Hydro's ability to further reduce the Rural Deficit. Despite the challenges imposed by the pandemic, Hydro was able to execute certain initiatives throughout 2021 which contributed to reducing the Rural Deficit, as highlighted in Sections 3.0 and 4.0.

3.0 Operating Initiatives

3.1 Internal Energy Efficiency Initiatives

Hydro continued its internal energy efficiency efforts in 2021 with programs that aim to achieve reductions in energy usage in all facilities within the areas contributing to the Rural Deficit, including diesel plants, offices, and line depots. Since it began in 2008, the program has provided cumulative energy savings of 17,943 MWh.

The primary focus for internal energy efficiency in 2021 was to identify future capital and operating projects that could reduce energy consumption at Hydro's facilities. Initiatives completed in 2021 achieved savings as follows:

- Retrofit of lighting fixtures to more energy efficient versions at various generation sites resulting in annual savings of approximately 68 MWh; and
- Replacement of existing Holyrood Terminal Station lighting with light-emitting diode ("LED") luminaires and wallpacks yielding approximately 60 MWh.

In addition, Hydro continued the following initiatives to support its management of the Rural Deficit:[7]

- Capturing waste heat in several of Hydro's diesel plants to heat Hydro premises;
- Planning the sizes of replacement units at Hydro's diesel generating stations to optimize fuel efficiency;
- Monitoring diesel system fuel efficiency to identify poor performers so that corrective action may be taken; and

[6] Please refer to the 2021 Conservation and Demand Management Report.
[7] Savings achieved through this initiative are primarily through avoided costs or productivity improvements; therefore, Hydro is not able to quantify the exact impact on the Rural Deficit.

- Choosing the most fuel-efficient combination of engines, where possible,[8] to supply community loads.

3.2 Conservation and Demand Management Program Initiatives

The high cost of generation in isolated diesel communities and the increased system load in the L'Anse-au-Loup area continues to support the need for effective delivery of energy-efficiency programs in these areas. In 2012, two programs were launched to offer energy-efficiency incentives for residential and commercial customers located in Hydro's isolated diesel communities. These programs continued through 2021 and are further detailed in the sections that follow.

3.2.1 Isolated Systems Community Energy Efficiency Program

The Isolated Systems Community Energy Efficiency Program is a program specifically targeted to residential and commercial customers in Hydro's Isolated Diesel Systems. The objective of the program is to provide outreach, education, and energy-efficient products and installation free of charge to residential and business customers in the diesel system communities within Newfoundland and Labrador. From 2012–2021, the program installed 144,338 energy-efficient products, saving a total of approximately 11 GWh of electricity (994 MWh[9] in 2021), and also provided employment for over 55 residents of these communities.

The Isolated Systems Community Energy Efficiency Program includes residential and commercial direct installations and focuses on building knowledge and capacity in the communities by hiring and training local representatives. These representatives work within their own communities to promote the program, provide useful information on energy use, and provide direct installation of energy-efficient products, including low-flow showerheads, faucet aerators, LED lamps, specialty size light bulbs, smart power strips, and hot water tank and pipe insulation.

In 2021, 329 residential and 59 business customers received direct installation or kit drop off totalling 9,291 products consisting of water saving technologies and LED specialty bulbs for lighting needs. While this work was ongoing, information was collected about the type of lighting, heating, and appliances in the homes and businesses, which will be used for future program planning.

[8] Completed automatically in some plants.
[9] These savings may be updated if further audit in 2022 indicates adjustments are required.

In addition to direct installations, three pilots projects were executed through the Isolated Systems Community Energy Efficiency Program in 2021 that achieved savings of 112 MWh;

- Installation of Mysa Smart Thermostats replacing standard dial and inefficient thermostats in select areas. Through this program, 131 thermostats were replaced which yielded energy savings and the potential for demand response programs;
- Installation of 26 shifted energy units on hot water tanks that provide both consumption savings through timed-use and learning algorithms, and demand savings by providing demand response options; and
- Installation of ductless mini-split heat pumps, for customers with electric baseboard heating, involved installing single-zone, cold-climate ductless mini-split heat pumps with energy monitors in nine residences in the Labrador Straits area.

Additionally, in 2021, the Isolated Systems Program began to utilize Simptek's Energy Advisor platform, which links existing customer data with utility data. The Energy Advisor platform will perform an energy analysis on customers to identify the top 10% energy consumers, who will then be provided with a customized plan to reduce their energy usage. This is an improvement from the previous program delivery, transitioning from a broader approach consisting of lower-cost energy efficient upgrades to a more targeted, data-driven strategy with deeper energy retrofits across the isolated communities.

3.2.2 Isolated Systems Business Efficiency Program

The Isolated Systems Business Efficiency Program was launched in 2012. The program provides rebates and technical assistance for commercial customers in isolated diesel communities on coastal Newfoundland and Labrador. Hydro's energy efficiency team works one-on-one with customers to create a plan to address their energy efficiency needs and provides ongoing technical support for projects undertaken. This custom approach has encouraged customers to undertake projects to improve the energy efficiency of lighting, refrigeration, motor controls, and other building systems. In 2021, four customers completed projects under this program involving upgrades to insulation and refrigeration systems in Hydro's isolated areas. This program deals primarily with small business customers and has achieved 870 MWh of annual energy savings since 2012, 103 MWh of which were achieved in 2021.[10]

[10] Hydro experienced lower than anticipated uptake for this program in 2021 due to the impact of COVID-19 pandemic on businesses' ability to invest in energy efficiency.

3.3 Hydro-Québec Power Purchase Contract Renewal

Hydro executed a new Power Purchase Agreement with Hydro-Quebec for the L'Anse-au-Loup System effective September 1, 2021.[11] This agreement enables Hydro to continue to purchase surplus hydroelectric energy from Hydro-Quebec's Lac Robertson Plant to supply Hydro's customers in the L'Anse-au-Loup area. The terms and conditions of the new agreement are similar to the original and will continue to enable Hydro to supply the majority of customer load in L'Anse-au-Loup with deliveries from Hydro-Quebec at a much lower cost than diesel generation. The approximate savings in 2021[12] were $4.1 million.

3.4 Net Metering

Net metering initiatives are undertaken by customers, not by Hydro directly; however, there is an impact on Hydro's system as a result of net metering activity.[13] Hydro currently has one net metering customer in an isolated diesel community under Hydro's net metering service option. In 2021, this customer's net metering resulted in the displacement of approximately 29 MWh of diesel generation.

3.5 Mary's Harbour Mini Hydro Facility

The Mary's Harbour mini hydro facility began operations in September 2019. The photovoltaic and battery energy storage facility began operations in November 2021. Together they generated approximately 725 MWh in 2021, displacing diesel fuel generation. The purchase of energy from this facility resulted in net savings of approximately $17,000 in 2021.

3.6 Cost Effective Renewables

Hydro is actively engaged with Indigenous groups and stakeholders, with a particular focus on communities served primarily by diesel powered generation, to foster development of cost-effective renewables. The standard model for such developments involve a third party developing and operating the renewables, with Hydro purchasing the output at a cost below that which would be incurred to generate equivalent energy in Hydro's diesel generating stations. To date, there are three communities where such developments have been completed (Makkovik, Mary's Harbour and Ramea), but discussions are ongoing in other areas in relation to specific projects.

[11] The previous agreement expired August 31, 2021.
[12] Compared to supplying the service area with diesel generators.
[13] The customer is located in Makkovik, Labrador and has a 48 kW solar energy generator.

3.7 Long-Term Supply for Southern Labrador

Currently, southern Labrador communities are served by four separate, isolated diesel systems (13 engines total) serving each community individually (Charlottetown and Pinsent's Arm, Mary's Harbour, Port Hope Simpson, and St. Lewis ("Southern Labrador Communities").

The communities of Charlottetown and Pinsent's Arm were previously served by the Charlottetown Diesel Generating Station until a fire occurred in 2019. Since the fire a temporary configuration was completed to serve as an interim solution.

Hydro has been exploring a long-term solution to address reliability, safety, and environmental concerns associated with the long-term use of mobile generation as a primary source of power. In Hydro's Long-Term Supply for Southern Labrador Application,[14] Hydro proposed the construction of a regional diesel generating station in Port Hope Simpson with four diesel gensets and the construction of 50 kilometres of 25 kV distribution line to connect the existing Charlottetown distribution system. The proposed centralized plant will provide a stable, reliable source of supply for the region.

Hydro is also exploring the potential role of renewable energy resources in its isolated systems. The proposed interconnection of southern Labrador communities will result in eight fewer diesel units (i.e., a reduction from 13 units to 5) and three fewer diesel plants (i.e., individual plants in each of the four communities vs. one regional plant). This reduction in diesel units and plants will result in more efficient operations and is anticipated to reduce fuel consumption by approximately 600,000 litres annually and contribute to a projected reduction of approximately $152.7 million in the Rural Deficit over the 50-year planning horizon of Hydro's analysis. It would also increase the potential for renewable integration by 15% when compared to the current opportunity for the four isolated systems (i.e., 9.7 GWh to 11.2 GWh).

3.8 Other Cost Management Initiatives

During 2021, Hydro continued to manage its operating costs in an effort to minimize its impact on the Rural Deficit. Examples of such initiatives are as follows:

- Utilizing cost-effective commercial air flights during regular work hours, where practical, rather than helicopter use;

[14] "Long-Term Supply for Southern Labrador – Phase 1," Newfoundland and Labrador Hydro, July 16, 2021.

- Having running maintenance (e.g., oil changes) completed by diesel system representatives rather than deploying maintenance crews to diesel communities;
- Participating in the Off-Grid Utility Association to work with other utilities with diesel plants for comparison of operating procedures and new technology to enhance efficiency in operations and maintenance; and
- Focusing on identifying planning and scheduling efficiencies, including a significant coordination effort to ensure that delays and duplicate asset outages are minimized.

4.0 Capital Initiatives

4.1 Replace Metering System

Through its 2022 Capital Budget Application, Hydro received Board approval[15] for replacement of approximately 31,000[16] manually-read meters and TS1 AMI[17] meters by the end of 2024. Completion of this project is projected to result in average annual Rural Deficit savings of approximately $765,000 when compared to continuing with manually-read meters.

4.2 Diesel Asset Management Strategy

Hydro has continued to evolve its asset management strategy, resulting in isolated system cost savings. Hydro has changed its approach to its diesel unit overhauls for 1,200 RPM units,[18] running for the units for 30,000 hours between overhauls and replacing them at 120,000 hours instead of 100,000 hours, thereby extending the useful life of the units.

Hydro has also continued to replace engines rather than overhaul them when it is cost effective to do so and when engines are available. As prices fluctuate from year-to-year, this approach will continue to be evaluated on a case-by-case basis to ensure that Hydro is availing of the least-cost alternative in the provision of reliable service.

[15] *Public Utilities Act,* RSNL 1990, c P-47, Board Order No. P.U. 37(2021), Board of Commissioners of Public Utilities, December 20, 2021.
[16] 28,056 energy-only meters and 3,131 demand and energy meters.
[17] Automated Metering Infrastructure ("AMI").
[18] Hydro has seven 1,200 RPM units.

4.3 Diesel Unit Sizes

In response to increasing loads in certain isolated diesel communities, Hydro has been replacing some of its 1,800 RPM diesel units with larger, slower turning 1,200 RPM units. This has resulted in lower operating costs in Rural Deficit areas as a result of material reductions in labour costs and travel associated with corrective maintenance,[19] as well as increased reliability.

4.4 LED Street Lights

The Nain LED street light pilot project,[20] implemented in 2015, provided direct cost savings as a result of the displacement of fuel costs. As a result, Hydro converted the street lights in the community of Ramea to LED street lights in 2018 and submitted a two-year capital proposal in its 2019 Capital Budget Application to convert street lights to LED in the remaining diesel systems. The proposal was approved and execution began in 2019 with the conversion of street lights in the community of Cartwright. In 2020, all remaining isolated Labrador communities' street lights were converted to LED. This project produces annual energy savings of approximately 120 MWh. LED street lights may also contribute to lower operating and maintenance costs than high-pressure sodium ("HPS") street lights due to the elimination of relamping requirements and longer life.

Hydro submitted a capital proposal in its 2021 Capital Budget Application to replace all HPS street lights by 2026 for both the Island and Labrador. In 2021, an estimated 689 HPS street lights were replaced resulting in approximate annual savings of 179 MWh.

4.5 Diesel Plant Communication Upgrades

In 2021, Hydro completed an upgrade in the communications technology at three additional diesel plants (Nain, Cartwright, and Rigolet) through a conversion from service provided from copper cables to fibre optic technology. The copper cables were prone to frequent communications outages. Fibre optic services are less prone to electrical interference and are more reliable which will result in reduced maintenance costs. Additional conversions to fibre optic technology are planned for the St. Lewis Diesel Plant in 2022. The upgraded communications with diesel plants will improve the ability to monitor

[19] Savings achieved through this initiative are primarily through avoided costs or productivity improvements; therefore, Hydro is not able to quantify the exact impact on the Rural Deficit.

[20] Hydro initiated a pilot LED street light replacement project for the Town of Nain with a total of 125 HPS street light fixtures replaced with LED street light fixtures. The street light retrofit yields savings of approximately 45 MWh annually, which offsets approximately 12,000 litres of fuel consumption.

plants loads and may provide opportunities to implement demand management initiatives in diesel areas that can contribute to deferral of capacity additions on isolated diesel systems.

Additional upgrades completed at L'Anse-au-Loup Diesel Plant will result in improved communications in managing secondary energy purchases from Hydro-Quebec. This, in turn, permits Hydro to operate the diesel plant more efficiently and provide savings through reduced diesel fuel consumption. This upgrade will also result in annual network cost savings of $44,000.

5.0 Conclusion

Hydro continues to pursue initiatives and activities to manage the Rural Deficit, including cost reduction and energy conservation initiatives. Management of the Rural Deficit is challenging as it is impacted by social policy initiatives resulting in energy pricing in diesel areas that can be lower than the energy pricing on the Island Interconnected System (i.e., as a result of the Northern Strategic Plan Billing Credit provided in Labrador diesel communities), as directed by government. These pricing signals can promote load growth and result in higher fuel usage and capacity requirements that can lead to additional capital investments and higher cost to provide service.

Variability in the Rural Deficit over recent years has primarily been the result of diesel fuel price variability. Hydro's other costs have been stable over the period 2016–2021, demonstrating Hydro's ongoing effort to limit growth in the Rural Deficit.

Affidavit

newfoundland labrador hydro

IN THE MATTER OF the *Public Utilities Act*, ("*Act*"); and

IN THE MATTER OF Newfoundland and Labrador Hydro's Annual Return for 2021 filed in pursuant to Section 59(2) of the *Act*.

AFFIDAVIT

I, Carol Ann Lutz, Certified Professional Accountant, of St. John's in the Province of Newfoundland and Labrador, make oath and say as follows:

1. I am the Controller for Newfoundland and Labrador Hydro, and as such I either have personal knowledge of, or I have been so informed and verily believe, the matters and things contained within the Newfoundland and Labrador Hydro 2021 Annual Return.
2. I have read the contents of the within 2021 Annual Return and they are true to the best of my knowledge, information, and belief.

SWORN at St. John's in the)
Province of Newfoundland and)
Labrador this 1st day of)
April 2022 before me:)

Barrister – Newfoundland and Labrador

Carol Anne Lutz, CMA, CPA, MBA