Greater Sudbury Hydro Inc

Interrogatory Submission

January 28, 2025

Ontario Energy Board Staff

EB-2024-0026

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1-Staff-1 Updated RRWF and Models

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1-Staff-1

Updated Revenue Requirement Work Form (RRWF) and Models

Upon completing all interrogatories from Ontario Energy Board (OEB) staff and intervenors, please provide an updated RRWF in working Microsoft Excel format with any corrections or adjustments that the Applicant wishes to make to the amounts in the populated version of the RRWF filed in the initial applications. Entries for changes and adjustments should be included in the middle column on sheet 3 Data_Input_Sheet. Sheets 10 (Load Forecast), 11 (Cost Allocation), and 13 (Rate Design) should be updated, as necessary. Please include documentation of the corrections and adjustments, such as a reference to an interrogatory response or an explanatory note. Such notes should be documented on Sheet 14 Tracking Sheet and may also be included on other sheets in the RRWF to assist understanding of changes.

In addition, please file an updated set of models that reflects the interrogatory responses. Please ensure the models used are the latest available models on the OEB's 2025 Electricity Distributor Rate Applications webpage.

Response:

Response to this interrogatory requires 2024 figures. The response will be filed by February 4, 2025.

1-Staff-2 Letters of Comment

Question:

Following publication of the Notice of Application, the OEB received four letter of comment. Section 2.1.7 of the Filing Requirements states that distributors will be expected to file with the OEB their response to the matters raised within any letters of comment sent to the OEB related to the distributor's application. If the applicant has not received a copy of the letters or comments, they may be accessed from the public record for this proceeding.

Please file a response to the matters raised in the letters of comment referenced above. Going forward, please ensure that responses to any matters raised in subsequent comments or letter are filed in this proceeding. All responses must be filed before the argument (submission) phase of this proceeding.

Response:

Please see the responses to the four letters of comment, included as Tab 1, Interrogatory 2, Attachment 1 and filed as a separate document on RESS with this interrogatory submission. As of the date of filing interrogatory responses, GSHi has not received any additional letters of comment.

Attachment 1 (of 1):

1-Staff-2 Attachment 1: Responses to Letters of Comment

-----Original Message-----
From: Ontario Energy Board <webmaster@oeb.ca>
Sent: Friday, November 22, 2024 6:26 PM
To: Office of the Registrar <Registrar@oeb.ca>
Subject: Redacted - Letter of Comment - EB-2024-0026

-- Name --

Agustin Venero

-- Do you reside in the impacted service area? –

Yes

-- Comments --

The proposed increase for service not only discourages new families but also decreases the quality of life for the many who have already settled and have limited options. We are currently facing many challenges and financial constrictions throughout our day to day lives. There are other aspects that this will have an impact on such as new businesses and potential new residents who are considering a relocation to our greater sudbury area. The effect this rate increase will have on many of us will be felt deep in the pockets and in our bank accounts. Most of us will have to readjust our finances in order to maintain our lives and the lives of those who depend on us. Ideally we should see a decrease or a pause in the rates. But since our cities and the demand is growing so will the cost. But at what rate and for how long until it becomes undesirable. Please reconsider before its too late.

Greater Sudbury Hydro du Grand Sudbury
Building Connections for Life

500 Regent Street
P.O. Box 250/C.P. 250
Sudbury ON P3E 4P1

Greater Sudbury 705.675.7536
West Nipissing 705.753.2341
Website sudburyhydro.com

January 28, 2025

VIA RESS

Dear Mr. Venero,

Thank you for sharing your thoughts regarding our rate application (EB-2024-0026) to the Ontario Energy Board. We truly value the time you've taken to voice your concerns and appreciate the perspective you bring to this important discussion.

We recognize the challenges that many individuals and families in our community are facing with rising costs of living, and we understand your concern about how rate increases may affect not only residents but also the attractiveness of the Greater Sudbury area to new families and businesses. Your points about affordability and quality of life resonate with us and are important considerations in our planning process.

The proposed adjustments in distribution rates are necessary to ensure the safe and reliable operation of our electricity distribution system. This portion of your bill, which constitutes approximately 25% of the total charges, is critical for maintaining and upgrading the infrastructure that delivers electricity to homes and businesses. These upgrades are essential for accommodating future growth, maintaining reliability, and ensuring public safety.

While we strive to balance affordability with operational needs, we are also mindful of the potential long-term impact of deferring necessary investments. Delaying such upgrades could lead to higher costs, reduced reliability, and greater challenges in the future.

We also encourage customers facing financial challenges to explore available assistance programs, such as the **Ontario Electricity Support Program (OESP)** and the **Low-Income Energy Assistance Program (LEAP)**, which are designed to provide relief for those who qualify. If you would like guidance on accessing these resources, please contact us at 705-675-7536.

Thank you once again for your thoughtful comments. Your input is a vital part of the regulatory process and helps us remain attentive to the needs of our customers and our community.

Respectfully,

Original Signed By

Frank Kallonen
CEO, Greater Sudbury Hydro Inc.

-----Original Message-----
From: Ontario Energy Board <webmaster@oeb.ca>
Sent: Friday, November 22, 2024 5:05 PM
To: Office of the Registrar <Registrar@oeb.ca>
Subject: Redacted - Letter of Comment - EB-2024-0026

-- Name –

Prince Borutski

-- Do you reside in the impacted service area?

-- Yes

-- Comments –

With all of the cost of living increases that I have felt this year, an increase in the cost of an essential, service feels blatantly disrespectful. I urge you to decline this proposal and seek funding from existing tax dollars.

Greater Sudbury Hydro du Grand Sudbury
Building Connections for Life

500 Regent Street | **Greater Sudbury** | 705.675.7536
P.O. Box 250/C.P. 250 | **West Nipissing** | 705.753.2341
Sudbury ON P3E 4P1 | **Website** | sudburyhydro.com

January 28, 2025

VIA RESS

Dear Mr. Borutski,

Thank you for your letter regarding our rate application (EB-2024-0026) to the Ontario Energy Board. Your feedback is important to us, and we appreciate the opportunity to address your concerns.

We understand that rising costs of living are impacting many households, and we empathize with your concern about the financial burden that increases in essential services can impose. Affordability is an important consideration in our decision-making process, and we aim to balance this with the need to ensure a safe, reliable, and sustainable electricity distribution system.

The portion of your bill impacted by this application is the **distribution charge**, which represents approximately 25% of the total bill. This charge funds the maintenance, operation, and necessary upgrades to our infrastructure to continue delivering reliable electricity service. Unfortunately, the regulatory and financial framework under which we operate does not allow us to offset these costs using tax dollars. Our rates are regulated by the Ontario Energy Board, which ensures that any increases are necessary, fair, and in the public interest.

We acknowledge that even small increases can create challenges for customers. For those experiencing financial difficulty, programs such as the **Ontario Electricity Support Program (OESP)** and the **Low-Income Energy Assistance Program (LEAP)** are available to help reduce electricity-related costs. If you would like more information or assistance accessing these programs, please contact us at 705-675-7536.

Your concerns are important to us, and we remain committed to carefully considering the needs of our customers as part of this application process. Thank you once again for your input.

Respectfully,

Original Signed By

Frank Kallonen
CEO, Greater Sudbury Hydro Inc.

-----Original Message-----
From: Ontario Energy Board <webmaster@oeb.ca>
Sent: Saturday, November 23, 2024 12:44 PM
To: Office of the Registrar <Registrar@oeb.ca>
Subject: Redacted - Letter of Comment - EB-2024-0026

-- Name –

Sarah Carpenter

-- Do you reside in the impacted service area? --

Yes

-- Comments --

With all of the cost of living increases that I have felt this year, an increase in the cost of an essential, service feels
blatantly disrespectful. I urge you to decline this proposal and seek funding from existing tax dollars.

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Sudbury ON P3E 4P1

Greater Sudbury 705.675.7536
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Website sudburyhydro.com

January 28, 2025

VIA RESS

Dear Ms. Carpenter,

Thank you for your letter regarding our rate application (EB-2024-0026) to the Ontario Energy Board. Your feedback is important to us, and we appreciate the opportunity to address your concerns.

We understand that rising costs of living are impacting many households, and we empathize with your concern about the financial burden that increases in essential services can impose. Affordability is an important consideration in our decision-making process, and we aim to balance this with the need to ensure a safe, reliable, and sustainable electricity distribution system.

The portion of your bill impacted by this application is the **distribution charge**, which represents approximately 25% of the total bill. This charge funds the maintenance, operation, and necessary upgrades to our infrastructure to continue delivering reliable electricity service. Unfortunately, the regulatory and financial framework under which we operate does not allow us to offset these costs using tax dollars. Our rates are regulated by the Ontario Energy Board, which ensures that any increases are necessary, fair, and in the public interest.

We acknowledge that even small increases can create challenges for customers. For those experiencing financial difficulty, programs such as the **Ontario Electricity Support Program (OESP)** and the **Low-Income Energy Assistance Program (LEAP)** are available to help reduce electricity-related costs. If you would like more information or assistance accessing these programs, please contact us at 705-675-7536.

Your concerns are important to us, and we remain committed to carefully considering the needs of our customers as part of this application process. Thank you once again for your input.

Respectfully,

Original Signed By

Frank Kallonen
CEO, Greater Sudbury Hydro Inc.

From: Ontario Energy Board <webmaster@oeb.ca>
Sent: Monday, November 25, 2024 10:23 AM
To: Office of the Registrar <Registrar@oeb.ca>
Subject: Redacted - Letter of Comment - EB-2024-0026

-- Name –

MAX BATTISTONI

-- Do you reside in the impacted service area? –

Yes

-- Comments –

As a senior citizen living in Greater Sudbury, and living on a fixed income, my cost of living is increasing dramatically. Over and above the ridiculous annual property tax increases, an increase in my energy bill will mean I have less disposable income to buy groceries and other much needed necessities of life.

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500 Regent Street
P.O. Box 250/C.P. 250
Sudbury ON P3E 4P1

Greater Sudbury 705.675.7536
West Nipissing 705.753.2341
Website sudburyhydro.com

January 28, 2025

VIA RESS

Dear Mr. Battistoni,

Thank you for your letter expressing your concerns regarding our rate application (EB-2024-0026) to the Ontario Energy Board. Your input is greatly valued, and we appreciate the time you have taken to participate in this important regulatory process.

We understand the challenges faced by customers, especially senior citizens living on fixed incomes, in the face of rising costs of living. Your concerns about balancing increasing expenses, including property taxes, utilities, and daily necessities, are both valid and deeply important to us.

The portion of your bill affected by this application is the **distribution charge**, which represents approximately 25% of the total charges on an average customer bill. This charge allows us to maintain, modernize, and upgrade our infrastructure to ensure reliable and safe delivery of electricity to all our customers. Our rate application reflects the costs necessary to continue these efforts while balancing affordability with the need for long-term reliability and system integrity.

We are committed to minimizing financial impacts wherever possible. While increases are unavoidable to ensure the safe and reliable delivery of electricity, we encourage eligible customers to explore the financial assistance programs offered by the province, such as the **Ontario Electricity Support Program (OESP)** and the **Low-Income Energy Assistance Program (LEAP)**, which may help reduce electricity-related costs. If you would like assistance in accessing these programs, our team is available to guide you through the application process. Please feel free to contact us at 705-675-7536.

We deeply value your feedback and assure you that we continue to consider customer impacts as a priority in all decisions. Thank you once again for your engagement in this process.

Respectfully,

Original Signed By

Frank Kallonen
CEO, Greater Sudbury Hydro Inc.

1-Staff-3 2024 Scorecard

Question:

Internal Scorecard
Ref: Exhibit 1/Tab 6/Schedule 1, pp.2,3

Preamble:

At the above reference, Greater Sudbury Hydro provides its 2019-2023 Scorecard metrics.

Questions:

a) If available, please provide the 2024 results of this scorecard. If not available, please provide a summary of the expected results.
b) Does Greater Sudbury Hydro expect the Key Performance Indicators and targets to evolve over time?

Response:

a) GSHi provides the following summary for information that is currently available. Data that is not currently available is also not expected to be available prior to the end of this proceeding. Please note that the First Contact Resolution has been provided based on data to the end of November 2024.

Performance Outcomes	Performance Categories	Measures		2020	2021	2022	2023	2024
Customer Focus Services are provided in a manner that responds to identified customer preferences.	**Service Quality**	New Residential/Small Business Services Connected on Time		99.63%	98.95%	99.49%	99.30%	99.49%
		Scheduled Appointments Met On Time		100.00%	100.00%	100.00%	99.81%	100.00%
		Telephone Calls Answered On Time		67.38%	64.22%	71.07%	71.16%	69.24%
	Customer Satisfaction	First Contact Resolution		87.60%	87.86%	84.86%	93.00%	99.44%
		Billing Accuracy		99.95%	99.97%	99.94%	99.95%	99.95%
		Customer Satisfaction Survey Results		89.00%	93.60%	94.60%	92.83%	94.33%
Operational Effectiveness Continuous improvement in productivity and cost performance is achieved; and distributors deliver on system reliability and quality objectives.	**Safety**	Level of Public Awareness		83.00%	85.00%	85.00%	89.00%	89.00%
		Level of Compliance with Ontario Regulation 22/04		C	C	C	C	N/A
		Serious Electrical Incident Index Number of General Public Incidents		0	0	0	0	N/A
		Serious Electrical Incident Index Rate per 10, 100, 1000 km of line		0	0	0	0	N/A
	System Reliability	Average Number of Hours that Power to a Customer isInterrupted		1.48	1.11	1.15	1.49	0.94
		Average Number of Times that Power to a Customer isInterrupted		0.99	1.16	1.62	1.49	1.04
	Asset Management	Distribution System Plan Implementation Progress		110.00%	90.44%	74.86%	79.31%	113%
	Cost Control	Efficiency Assessment		3	3	3	3	N/A
		Total Cost per Customer		$ 670	$ 679	$ 721	$ 805	N/A
		Total Cost per Km of Line		$ 31,590	$ 31,877	$ 13,572	$ 15,170	N/A
Public Policy Responsiveness Distributors deliver on obligations mandated by government (e.g., in legislation and in regulatory requirements imposed further to Ministerial	**Connection of Renewable Generation**	New Micro-embedded Generation Facilities Connected On Time		100%	100%	100%	100%	100%
Financial Performance Financial viability is maintained; and savings from operational effectiveness are sustainable.	**Financial Ratios**	Liquidity: Current Ratio (Current Assets/Current Liabilities)		1.13	1.3	1.33	1.27	N/A
		Leverage: Total Debt (includes short-term and long-term debt) to Equity Ratio		1.22	1.19	1.13	1.09	N/A
		Profitability: Regulatory Return on Equity	Deemed (included in rates)	8.52%	8.52%	8.52%	8.52%	N/A
			Achieved	2.04%	9.62%	10.52%	8.24%	N/A

b) The targets for the KPIs referenced are established by the OEB; however, GSHi continuously monitors its performance and strives to improve metrics where feasible. Notable areas of recent improvement include customer service and the current ratio, among other key indicators. GSHi remains committed to adapting and enhancing its performance as operational needs and industry standards evolve.

1-Staff-4 APB Variances

Question:

Ref 1: Exhibit 1, Activity and Program Based Benchmarking, pp. 22-31

Ref 2: 2023 Unit Cost Calculations, October 17, 2024

Preamble:

Reference 1 provides a summary of the Activity and Program-Based Benchmarking (APB) unit cost results, highlighting areas where Greater Sudbury Hydro exhibits higher-than-average costs compared to industry benchmarks. OEB staff notes specific variances in Metering O&M, Stations O&M, and Line Transformer CAPEX unit costs, as well as notable year-over-year increases in certain categories. These areas require further clarification and justification to understand the cost drivers, alignment with operational changes, and strategies for cost management.

Questions:

a) For Metering O&M, OEB staff observes that these costs are 25.8% above the industry average. Please explain the factors contributing to Greater Sudbury Hydro's higher-than-average costs and provide supporting details.

   i) OEB staff also notes a notable 10% increase in unit costs in 2023 compared to 2022. Please provide an explanation for this year-over-year increase and how it aligns with Greater Sudbury Hydro's operational changes.

b) For Stations O&M, OEB staff observes that Greater Sudbury Hydro's costs are 63.8% above the industry average. Greater Sudbury Hydro has noted that many substations in its network are well beyond their expected life span and have concerning health indices, with replacement constrained by capital program timelines.

i) Please explain the key factors contributing to Greater Sudbury Hydro's Stations O&M costs being significantly above the industry average. Additionally, describe how Greater Sudbury Hydro prioritizes its monitoring and maintenance efforts to manage the risks associated with these aging assets.

ii) How does Greater Sudbury Hydro ensure that Stations O&M spending remains reasonable and aligned with its long-term capital replacement strategy?

iii) The Stations O&M unit cost for Greater Sudbury Hydro is predicted to increase significantly from $2,471 in the bridge year (2024) to $3,450 in the test year (2025). Given the explanation regarding aging station assets, please explain how these factors specifically contribute to the projected increase during this period. Additionally, what measures are being implemented to ensure these costs remain reasonable and aligned with industry benchmarks while addressing the challenges of maintaining aging assets?

iv) Provide in greater detail how the aging station assets have affected SAIDI and SAIFI values?

c) Greater Sudbury Hydro's Line Transformer CAPEX unit costs are consistently higher than the industry average, with a notable 14.2% year-over-year increase in 2021 compared to 2020. While Greater Sudbury Hydro has indicated that its annual costs for 2019 to 2023 compare favorably with its cohort, OEB staff notes that the average remains 11.2% above the industry benchmark.

i) Please explain the key factors contributing to Greater Sudbury Hydro's consistently higher unit costs relative to the industry benchmark.

ii) What specific drivers led to the 14.2% increase in 2021 compared to 2020?

iii) How does Greater Sudbury Hydro plan to align its Line Transformer CAPEX unit costs with industry benchmarks in the future?

Response:

a) One potential reason GSHi's Metering O&M cost is calculating 25.8% higher than the industry average may be a result of the way costs are interpreted and recorded, which may vary between LDCs. For example, GSHi includes the costs of its sync operator—averaging $107,000 annually from 2020 to 2025—under Metering O&M, whereas other LDCs may record similar costs under Billing. If this is the case, it could lead to apparent differences in metering costs across LDCs.

Another contributing factor is GSHi's relatively low customer growth compared to other LDCs. With fewer new service installations, GSHi has fewer opportunities to capitalize labour costs related to new meter installations. As per the Accounting Procedures Handbook, labour costs for new meter installs only can be capitalized, meaning that an overwhelming majority of GSHi's Meter Technician labour costs are expensed in OM&A. In contrast, LDCs with higher customer growth may capitalize a greater share of these costs, reducing the impact on their OM&A expenses.

i) The increase in costs from 2022 to 2023 is primarily due to the progression of a Meter Technician Apprentice from a 'B' to an 'A' classification, as well as the addition of a summer student. Additionally, there was an increase in overtime in 2023 compared to 2022, which also contributed to higher vehicle charges.

b) i) Similar to Meters O&M, the reason for Stations O&M being significantly higher than the industry average may stem from differences in cost interpretation and recording practices among LDCs. GSHi includes its Technical Services department costs under Stations O&M, which represents a substantial expense and may contribute to the appearance of higher-than-average costs in this area.

Another potential explanation for the higher Stations O&M costs as compared to the industry average may have to do with the fact distributors in the province operate systems and different distribution voltages, and thus have different requirements for substations. As GSHi distributes electricity at 4.16 kV and 12.47 kV, it requires more substations than a system operating at 28 kV, which could translate to higher OM&A costs as compared to the industry average.

ii) GSHi understands the critical importance of maintaining a reasonable and efficient approach to Stations O&M spending. To achieve this, the company prioritizes maintenance activities based on risk assessments and asset criticality. A key component of this strategy involves aligning major maintenance activities with planned capital upgrades to optimize costs and maximize value where possible.

For assets approaching end-of-life or scheduled for replacement or capital upgrades in the near term, GSHi carefully evaluates the trade-offs between O&M spending and long-term capital investments. For example, if a substation asset requires a significant repair, it may be strategically taken out of service prior to a major station rebuild, provided that doing so does not compromise health and safety or customer reliability.

This proactive approach ensures that short-term maintenance decisions support rather than conflict with long-term financial and operational goals. By aligning maintenance efforts with capital upgrade timelines, GSHi minimizes redundant expenditures and improves resource allocation.

iii) In 2024, GSHi engaged Lakeside Power Consulting Inc. to conduct a Substation Condition Assessment. They recognized that:

Many of the GSH substations were constructed in the 1960's and 1970's, resulting in a number of the stations reaching the end of their TUL at the same time. This will require a strategy of replacement of these assets before there is a major impact on system reliability or safety. Strategies may include a surge of capital spending in station assets, increase maintenance and surveillance, and development of contingency plans.

As noted, one of the recommendations was to increase maintenance and surveillance activities, specifically, maintaining older stations more frequently than the 4-year GSHi standard. In addition, Lakeside recommended increasing the frequency of oil sampling when analysis of samples reveals the possibility of asset failure. They also recommended the development of contingency strategies. GSHi has accepted these recommendations, and increased costs in the test year are, in part, a reflection of this fact. Furthermore, as a result of GSHi's substation renewal and 4 kV conversion initiatives, a number of substations that have reached the end of their TUL have been permanently taken out of service, and their respective loads have been transferred to adjacent stations. The decommissioning and remediation of one of these sites is accounted for in the 2025 O&M budget. This work was strategically planned in the test year to compensate for a temporary reduction in capital work within the Substations Department.

Since GSHi began its substation renewal program, it has been focused on upgrading sites using equipment that will reduce the need for ongoing maintenance. As, such the continued capital refurbishment of substations will have the inherent effect of reducing maintenance costs over the long term. The increased maintenance activities that GSHi plans to undertake are in an effort to maintain its current level of reliability which aligns with customer preferences for a balanced approach between reasonable rates and dependable service.

iv) Aging station assets can have a significant impact on System Average Interruption Duration Index (SAIDI) and System Average Interruption Frequency Index (SAIFI) values by increasing both the frequency and duration of outages. As station equipment such as transformers, breakers, and protection systems age and approach the end of their useful life, they become more prone to failure. This can lead to unplanned outages, longer restoration times, and greater service disruptions for customers. Since substations service many customers, outages at the station level have a large impact on both SAIDI and SAIFI metrics as the number of customers affected by an outage impact the numerator of both calculations.

As an example, the Dash T1 power transformer failure in 2023 had a SAIDI contribution of 0.3888, approximately 26% of the annual SAIDI metric, and a SAIFI contribution of 0.2228, which amounts to approximately 22% of the 2023 SAIFI metric.

c) i) GSHi utilizes an ERP system-based unitizing process to allocate the costs of capital projects to key assets for capitalization purposes. Under this method, all project costs are distributed among key assets installed based on their relative value. Since transformers are typically higher-value assets, a larger portion of the project costs is allocated to them. As a result, transformer unit costs may appear higher, while the costs of other assets could be understated.

ii) GSHi applies an average cost method to determine the cost of inventory items used for capital projects. In 2021, the average cost of a transformer rose by almost 10% compared to 2020, contributing to the 14% overall increase. This increase, combined with the broader rise in costs during 2021 and their allocation to transformers through the unitizing process, explains the 14% growth.

iii) GSHi recognizes the importance of aligning its Line Transformer CAPEX unit costs with industry benchmarks; however, it is important to note that variations in cost allocation and accounting practices across utilities make direct comparisons challenging. GSHi remains committed to transparency and continuous improvement but emphasizes that achieving consistent alignment requires broader industry standardization.

2-Staff-5 CEEP Report from previous COS

Question:

City of Greater Sudbury's Energy & Emissions Plan

Ref.1: EB-2019-0037, Decision and Rate Order

Ref. 2: Exhibit 2B, Distribution System Plan, pp. 29-31

Preamble:

As a part of the decision on previous cost of service application (EB-2019-0037), Greater Sudbury Hydro had agreed to consider the aims of the City of Greater Sudbury's Energy & Emissions Plan with a view to pursuing cost efficiencies and include a report on any realized areas of cost-efficiency in its next DSP and Business Plan.

In reference 2, Greater Sudbury Hydro has stated that it has been working closely with the City of Greater Sudbury (CGS) and a multitude of stakeholders to advance the goals of the Community Energy and Emissions Plan (CEEP). Greater Sudbury Hydro has also stated that the Phase 1 of the implementation plan for the CEEP is planned to span between 2021-2025 and it has been actively consulting in several initiatives and working groups to move this important council policy forward.

Question(s):

a) Has Greater Sudbury Hydro developed the report mentioned in reference 1? If yes, please provide the report.

Response:

Greater Sudbury Hydro (GSHi) has actively collaborated with the City of Greater Sudbury as part of its participation in the Community Energy and Emissions Plan

(CEEP) working groups. While GSHi remains committed to supporting the goals of the CEEP, there have been no specific projects initiated to date, nor are any currently planned within the upcoming planning horizon. Consequently, no report on cost efficiencies related to CEEP initiatives is available at this time. For further details please see section 5.2.2.5 of GSHi’s DSP filed with the initial application.

2-Staff-6 SAIDI SAIFI Discrepancy

Question:

Reliability – SAIFI/SAIDI

Ref. 1: Exhibit 2B, Distribution System Plan, p. 15

Ref. 2: Exhibit 2B, Distribution System Plan, p. 64, Figures 18 & 19

Preamble:

In reference 1, Greater Sudbury Hydro states that “Encouragingly, in the period spanning 2019-2023, GSHI has achieved a reduction in both SAIFI and SAIDI as compared with the prior 5-year period 2014-2018. The current 5-year period spanning 2019-2023 saw both SAIDI performance of 1.42 and SAIFI performance of 1.26. These results are both an 8% improvement from the prior results in 2014-2018 of 1.53 (SAIDI) and 1.36 (SAIFI).”

Using the data provided in reference 2, it can be computed that the 5-year average of SAIDI for the period of 2014-2018 is 1.29.

Question(s):

a) Please address the discrepancy in 2014-2018 average SAIDI values between reference 1 and 2.

Response:

The discrepancy in 2014-2018 average SAIDI values between Reference 1 and 2 is that the calculation in Reference 1 is exclusive of Cause 2 data and inclusive of Cause 10 data, whereas the calculation in Reference 2 is exclusive of both Cause 2 and Cause 10 data.

2-Staff-7 Equipment Failures

Question:

Reliability - Equipment Failure Outages

Ref. 1: Exhibit 2B, Distribution System Plan, p. 15

Preamble:

Equipment Failure, as a critical controllable parameter, contributed 37% of system interruption minutes and was responsible for 41% of the total recorded service interruptions over the period spanning 2019-2023. Recent evidence suggests that underlying reliability risk due to this factor is increasing.

Question(s):

a) Does Greater Sudbury Hydro track historical equipment failures? If yes, please provide number of failures for each equipment type.

b) Has Greater Sudbury Hydro used insights from historical equipment failures in the investment plans developed for the forecast period of 2025-2029?

c) Has Greater Sudbury Hydro ever conducted analyses to compare equipment failures with health index information results from Asset Condition Assessment? If yes, is Greater Sudbury Hydro able to share some of the key observations and learnings from such analyses?

Response:

a) Yes, GSHi tracks historical 'Equipment Failure' (Cause 5) outages. However, GSHi does not track the data required to provide the requested breakdown of Equipment Failure by Equipment Type. Rather, the granularity of the data tracking with respect to outages at GSHi is limited to the requirements of the OEB's "Electricity Reporting & Record Keeping Requirements", latest edition.

b) In its Asset Condition Assessment (ACA) methodology, Kinectrics utilizes the Weibull function to model the removal rate of assets. Section 2.2, titled "Condition-Based Flagged for Action Plan," outlines how the Weibull equation is applied to model asset removals based on asset age (Equation 2-6). This condition-based flagged-for-action plan (both optimal and levelized) relies on this asset failure data to inform the development of their respective asset replacement strategies.

The investment plans for the forecast period of 2025 to 2029 are shaped by the findings of the Kinectrics ACA report. All proposed investments are evaluated against three sub-criteria under the Customer Focus Asset Management (AM) objective, with "Paced Asset Replacement" being the sub-criterion most directly tied to the health indexing information derived from the Kinectrics report.

c) GSHi has not conducted analyses to compare equipment failures with health index information results from Kinectrics Asset Condition Assessment.

2-Staff-8 System Renewal - OM&A Savings

Question:

System Renewal – OM&A Savings

Ref. 1: Exhibit 2B, Distribution System Plan, pp. 16, 215-216

Ref. 2: Chapter 2 Appendices, Appendix 2JA – OM&A Summary

Preamble:

In reference 1, Greater Sudbury Hydro states that it anticipates a reduction in future O&M costs as low-HI assets are replaced proactively through a paced System Renewal portfolio of investments.

In reference 2, Greater Sudbury Hydro forecasts O&M costs for test year to be $10.33M, 24% higher than $8.34M in 2020.

Question(s):

a) Has Greater Sudbury Hydro estimated annual O&M savings mentioned in reference 1? If yes, please provide the estimated annual savings.
b) Has Greater Sudbury Hydro accounted for the annual savings estimated in (a) in the O&M forecast presented in reference 2?

Response:

a) No, GSHi has not estimated annual O&M savings mentioned in reference 1.
b) It is not possible to quantitatively determine the impact of capital investments on future O&M expenditures. However, qualitatively, investments in System Renewal in particular are generally expected to result in a decrease in future O&M expenditure, because paced, continuous replacement of older-vintage assets with new assets will help

to reduce upward pressure on O&M expenditures as there will be fewer equipment failures and reduced expenditures as it relates to unplanned emergency repairs.

2-Staff-9 System Renewal - Customer Feedback

Question:

System Renewal – Customer Feedback

Ref. 1: Exhibit 2B, Distribution System Plan, p. 19

Preamble:

Greater Sudbury Hydro states System Renewal-type investments may be either deferred or delayed depending on customer feedback, particularly in the 'Design and Development' stage of detailed engineering.

Question(s):

a) Why is customer feedback on System Renewal-type investments not addressed earlier in the planning process rather than later in the detailed engineering stage?

b) Please provide some examples of System-Renewal type investments that have been deferred or delayed in the 'Design and Development' stage of detailed engineering.

Response:

a) Customer feedback is always welcome and can be used earlier in the development of prospective system renewal-type investments or later as the prospective investment is refined from preliminary concept through to a more accurate estimate of total project costs.

b) Where this is most common is smaller proposed renewal projects where GSHi becomes aware of the potential for a new customer connection, typically a commercial connection, who's connection requirement might alter the design of the proposed renewal investment. A recent example was Hargreaves Ave where GSHi deferred the prospective renewal of the existing single-phase assets to better align with the proposed construction activities with a vacant parcel of property abutting the system. Similarly, GSHi deferred a rebuild of Paul St in Sudbury to align with construction activities of a proposed Starbucks development, which served to ensure that the distribution system rebuild did not conflict with the site plan for the development.

2-Staff-10 Third Party Owned Poles

Question:

Third-Party Owned Poles

Ref. 1: Exhibit 2B, Distribution System Plan, pp. 27, 157-158

Preamble:

Greater Sudbury Hydro states that a number of proposed investments in the forecast period, particularly in the System Service category, propose extensive renewal of existing Bell Canada-owned wood poles. A small number of Hydro One owned poles are also proposed for replacement.

Question(s):

a) Is Greater Sudbury Hydro proposing to replace Bell owned poles with Greater Sudbury Hydro owned poles?
b) Is Greater Sudbury Hydro proposing to replace Hydro One owned poles with Greater Sudbury Hydro owned poles?

Response:

a) No, existing Bell-owned poles that are proposed to be replaced will continue to be owned by Bell Canada at the conclusion of the proposed work.

b) No, existing Hydro One-owned poles that are proposed to be replaced will continue to be owned by Hydro One at the conclusion of the proposed work.

2-Staff-11 2024 Southview Drive Bell Pole Rebuild

Question:

Third-party Owned Poles

Ref 1: Exhibit 2B, Distribution System Plan, p. 208

Preamble:

Greater Sudbury Hydro states that the 2024 investment plan included a rebuild of a Bell owned pole line along Southview Dr at a cost of $455,214.

Question(s):

a) Has this rebuild been completed?
b) Please confirm that Greater Sudbury Hydro performed the rebuild and if Greater Sudbury Hydro is the owner of the new pole line.
c) How much additional cost to perform this work was the result of design ask of Bell Canada?

Response:

a) Yes, this rebuild was completed on December 1, 2024.

b) GSHi performed the rebuild, however Bell Canada remains the owner of the new pole line.

c) As the owner of the existing poles involved in this rebuild project, Bell Canada requested the inclusion of an additional five (5) poles during the detailed design phase—poles that would not have been part of the rebuild had GSHi been the owner. This additional request from Bell Canada resulted in an increase of approximately $41,750 to the project's capital costs.

2-Staff-12 PILC Cable Replacement

Question:

Third-Party Owned Poles

Ref 1: Exhibit 2B, Distribution System Plan, Material sheet for Submersible Backup for 28M5, pp. 306-310

Preamble:

The referenced Material Information sheet covers the replacement of PILC cable past TUL and obtainment of relevant permits and/or permissions to install four (4) x 44kV submersible cables in an area of Ramsey Lake. Greater Sudbury Hydro states that the existing PILC cable traverses the property of a local golf course. The PILC cables are backup feed for the area and the submersible cables will be the new backup feed for the area.

Question(s):

a) Does Greater Sudbury Hydro have an easement for the PILC cable traversing the golf course?
b) Will Bell Canada or Greater Sudbury Hydro be replacing the Bell Canada poles along Kirkwood Dr. and Ramsey Lake Rd at their cost?

Response:

a) No, GSHi does not have an easement for the PILC cable traversing the golf course.

b) GSHi will be replacing the Bell Canada poles along Kirkwood Dr/Ramsey Lake Rd. GSHI is actively communicating with Bell Canada for this project and is working toward Bell Canada participating in at least a portion of the construction activities, as per the Joint Use Agreement between both companies. As the owner of many of the pole assets located along both Ramsey Lake Rd and Kirkwood Dr, Bell Canada will play a role in the successful outcome of this project. As noted in Section 5.2.2.3.1.1 of the DSP, this proposed investment was discussed as part of GSHI's consultations with telecommunications entities.

2-Staff-13 Coordinated Planning with Third Parties

Question:

Coordinated Planning with Third Parties

Ref. 1: Exhibit 2B, Distribution System Plan, p. 28

Preamble:

Greater Sudbury Hydro states that consultations with telecommunications entities did not directly affect Greater Sudbury Hydro's proposed capital plan for the forecast period. For prospective underground renewal investments, Greater Sudbury Hydro will seek to determine the appropriateness of including a telecommunications duct within the scope of the construction activities.

Question(s):

a) Will the inclusion of telecommunications ducts be based on defined needs from telecommunication entities?
b) Is it the expectation that the telecommunication entities will bear the incremental costs of adding additional telecommunication duct during the underground renewal work?
c) Has extra duct already been budgeted for in the prospective underground renewal investments? If so, what is the incremental cost?

Response:

a) Yes, the inclusion of telecommunication ducts will be based on defined needs as communicated to GSHi by the telecommunication entities on a project-by-project basis.

b) Yes, it is the expectation that the telecommunication entities will bear the incremental costs of adding additional telecommunication duct during the proposed underground renewal work.

c) No, an extra telecommunications duct has not been budgeted for in the prospective underground renewal investments.

2-Staff-14 Vegetation Management

Question:

Vegetation Management

Ref. 1: Exhibit 2B, Distribution System Plan, pp. 77, 160

Preamble:

Greater Sudbury Hydro states that the implementation of four-year vegetation management cycles throughout the service territory will likely require to be supplemented with additional work to trim back faster-growing vegetation in specific areas. Greater Sudbury Hydro states that it follows a three-year vegetation inspection cycle.

Question(s):

a) What was the vegetation management cycle prior to this DSP?
b) Is the trim back work for fast growing vegetation tied into the three-year inspection cycle?
c) What were the annual vegetation management costs in the 2019-2024 period and what are the annual forecast vegetation management costs in the 2025-2029 forecast period?
d) What are the minimum clearances that Greater Sudbury Hydro adheres to for vegetation management near overhead lines?
e) Has Greater Sudbury Hydro considered complete overhead clearance to eliminate limb collapse on the circuits below as a way of addressing climate change and more severe weather impacts?

Response:

Response to this interrogatory requires 2024 figures. The response will be filed by February 4, 2025.

2-Staff-15 Wood Pole Replacement

Question:

Wood Pole Replacement

Ref. 1: Exhibit 2B, Distribution System Plan, pp. 80, 143, 158

Preamble:

Greater Sudbury Hydro states that 23% of wood poles (approximately 2,677) are currently assessed to be in “poor” or “very poor” condition. The Levelized Flagged for Action Plan calls for 1342 wood poles to be replaced in years 0-5.

Question(s):

a) How many of these 2677 wood poles is Greater Sudbury Hydro currently planning to replace in the forecast years through System Renewal and System Service projects?

b) How many poles currently in “Fair” condition does Greater Sudbury Hydro expect to deteriorate to the “Poor” or “Very Poor” condition during the 5 forecast years?

Response:

a) Of the 2,677 wood poles, GSHi is planning to address approximately 850 wood poles that are currently assessed to be in either ‘Poor’ or ‘Very Poor’ condition through System Renewal and System Service projects in the forecast years.

b) Assuming no change in operation and maintenance practice, out of the current 1,246 poles that are in “Fair” condition, 347 of them are expected to deteriorate to “Poor” after 5 years (i.e., in year 2029).

2-Staff-16 Customer Outage Costs

Question:

Customer Outage Costs

Ref. 1: Exhibit 2B, Distribution System Plan, pp. 97, 133-134

Preamble:

Greater Sudbury Hydro states with the Customer Focus asset management objective, prospective investments are scored against reliability risk and/or consequence of asset failure as part of the Paced-Asset Replacement sub-criterion. To score highly, an investment needs to focus on renewing assets whose unplanned failure would result in the highest amount of risk to the distribution business. With the Financial Performance Asset Management objective, prospective investments are scored against reliability risk and/or consequence of asset failure as part of the Financial sub criterion. To score highly, an investment needs to focus on addressing distribution system assets whose criticality (risk) collectively yields an unacceptable consequence cost in the event of an unplanned failure.

Question(s):

a) With respect to Customer Focus, are the cost to the customer (Value of Lost Load, etc.) considered as part of the scoring process?
b) If Greater Sudbury Hydro does utilize Value of Lost Load (VoLL), does Greater Sudbury Hydro have a proprietary methodology for VoLL calculations or does it use any publicly available sources?

Response:

a) No, the cost to the customer (Value of Lost Load) is not presently considered as part of the scoring process.

With respect to ‘Value of Lost Load’ GSHi is open to discussing with OEB staff and intervenors a specific approach to this calculation.

b) GSHi does not presently utilize VoLL.

2-Staff-17 Asset Condition Assessment - Recommendations

Question:

Asset Condition Assessment

Ref. 1: Exhibit 2B, Distribution System Plan, pp. 112, 154-155, 160, 162

Ref. 2: Exhibit 2B, Distribution System Plan, Kinectrics Greater Sudbury Hydro Asset Condition Assessment Report

Preamble:

The 2024 Asset Condition Assessment Report by Kinectrics provided a number of recommendations for data improvement to aid in assessing the health index of assets.

Greater Sudbury Hydro states that it began POLUX pole testing in 2016. Tests were done again in 2024. Table 48 – Greater Sudbury Hydro Maintenance Practices indicates that pole condition testing is done on a 3-year cycle. The Kinectrics report indicated that no poles currently have strength tests available.

Question(s):

a) For the recommendations provided on data improvement, please advise of Greater Sudbury Hydro's acceptance or rejection of the individual recommendations and the time frame in which Greater Sudbury Hydro would institute the recommended practices.
b) Was the 3-year pole testing cycle in place between 2016 and 2024? If so, in what additional years were tests performed?
c) What were the results of the 2024 POLUX pole testing?
d) Why were the test results in the 2016 – 2024 period not provided to Kinectrics for their Asset Condition Assessment?

Response:

a) The following were the recommendations provided by Kinectrics with respect to data improvement:

1. *The DAI and data gaps were outlined for each asset category. It is recommended that GSHI make efforts to standardize inspection form for each asset category and to put efforts to close the data gaps in order of priority.*
2. *Since 2019, GSHI has taken efforts to incorporate in its inspection database the inspection-based condition and sub-condition parameters defined and used in 2019 ACA study. It is recommended that GSHI continue improving the process of standardizing such inspection items and records.*
3. *GSHI collects removal data for all asset categories. There was sufficient data to develop life curves for most of the asset groups except for Pad mounted Switchgear, Junction Enclosures and Poles (concrete). GSHI should continue to collect this information to enable development.*
4. *The data used in this assessment was from different locations within GSHI (e.g. numerous spreadsheets or PDF files). For more efficient record keeping and ease of future assessments, GSHI may wish to consider implementing Asset Performance Management (APM) platform that consolidates asset information and condition data (e.g. nameplate information, test results, operational information, inspection records, etc.) and that can perform asset analytics, such as HI calculations and developing FFA plans.*

GSHi accepts the individual recommendations on data improvement provided in the Kinectrics ACA report. For items 1), 2) and 3), these recommendations have already begun to be implemented. For item 4), Section 5.4.2.1.3.5 of the DSP, entitled ‘General Plant – Asset

Management Software', proposes an investment in 2027 wherein this recommendation from Kinectrics is the primary driver.

b) No pole testing was done during this period until Spring/Summer 2024. GSHi was unsatisfied with the original contractor's work that was performed in 2016 wherein there were 'false-positive' results that were discovered after having performed a rebuild of a few smaller line sections from the 1950's with substandard electrical clearances that had also been described as being in poor condition based on the test result(s) but were later determined not to be in the poor condition the test results suggested. In 2024, GSHi became aware that UTS Consultants provided the POLUX pole testing service and were keen to resume the collection of this asset condition data for its wood pole assets.

c) A summary of the test results for the 2024 POLUX pole testing are shown in the Table below:

Condition Score	# of Poles
Green	2,188
Orange	695
Red	128

2024 POLUX Testing – Condition Score

In total, 3,011 poles were tested.

d) Test results in the 2016-2024 period were not provided to Kinectrics because there were no results to provide. After GSHi became aware in

2024 that UTS Consultants were able to provide the POLUX testing service, it was too late to incorporate these results into the Kinectrics assessment (the Kinectrics report was completed in July whereas the POLUX testing was not completed until August). Going forward, GSHi expects to complete the testing of wood poles on the original 3-year timeline to establish a base test result for the asset population and to include this data in future asset condition assessments. At that point, GSHi will re-evaluate if an ongoing 3-year timeline is appropriate for wood pole testing.

2-Staff-18 System Renewal - Dash MS

Question:

System Renewal – Dash MS

Ref 1: Exhibit 2B, Distribution System Plan, Material sheet for 2025 System Renewal – Dash MS19, pp. 217-222

Ref 2: Exhibit 2B, Distribution System Plan, Distribution System Plan, pp. 150, 208

Preamble:

The referenced Material sheet for 2025 System Renewal – Dash MS19 covers the re-wind and re-install the existing power transformer 19T1 located at Dash MS19 and replacement of power transformer 19T2 (currently assessed in "good" condition) which will remain as a system spare. Greater Sudbury Hydro states that rewind and reinstall costs for the 19T1 are covered in 2024 and 2025 investment amounts. 2019-2023 Peak station load has been 24.97MVA.

Question(s):

a) What are the specific activities related to the 19T2 transformer that are covered by the expenditures in 2026 and 2028?
b) Please clarify if Greater Sudbury Hydro's intent is to replace or refurbish 19T2. If intent is to replace, what will be the size of the replacement for the 19T2 transformer?
c) What is the 2025 – 2029 peak load forecast for Dash MS19?

Response:

a) GSHi expects to place an order for a replacement transformer in 2026. Consistent with prior experience, GSHi is expected to be invoiced for 30% of the total cost of the 19T2 power transformer by the manufacturer. In

2028, the remaining 70% of the total cost of the transformer is expected to be invoiced. In addition to this equipment cost, the remaining expected costs in 2028 will be for the installation of the replacement unit and the removal of the existing unit.

b) GSHi's intent is to replace the 19T2. The replacement transformer will be the same size as the original unit to match the 19T1 side (20/26/33MVA) from both a capacity and impedance perspective.

c) The 2025-2029 peak load forecast for Dash MS19 is 26MVA.

2-Staff-19 System Renewal - Line Rebuilds Involving Bell

Question:

System Renewal – Lines

Ref 1: Exhibit 2B, Distribution System Plan, Material sheet for 2025 System Renewal – Lines, pp. 222-229

Ref 2: Exhibit 2B, Distribution System Plan, Material sheet for 2027 System Renewal - Lines, pp. 269-274

Ref 3: Exhibit 2B, Distribution System Plan, Material sheet for 2028 System Renewal - Lines, pp. 293-299

Ref 4: Exhibit 2B, Distribution System Plan, Material sheet for 2029 System Renewal - Lines, pp. 317-323

Preamble:

The referenced Material Information sheets for System Renewal - Lines cover multiple line rebuilds in each of the referenced years. A number of line rebuilds involve Bell Canada owned poles on which Greater Sudbury Hydro lines are attached. Greater Sudbury Hydro states that it will be approaching Bell Canada to fund at least a portion of the construction activities. Greater Sudbury Hydro states that an agreement to provide any partial funding of these projects by Bell Canada would contribute to a reduction in the overall budgetary costs that form part of these prospective investments.

Question(s):

a) Please provide the length of line, number of poles to be replaced and cost for each of the identified line rebuild projects in the referenced Material Information sheets above.

b) Why has Greater Sudbury Hydro budgeted for costs to be borne by Bell Canada in these program budgets?

c) Please provide the number of Bell poles, and associated replacement work cost, in any of the rebuild projects referenced in the Materials Information sheets above.

Response:

a) A table (Tab 1, Interrogatory 19, Attachment 1) showing the length of line replaced, number of poles replaced and cost for each of the projects in Section 5.4.2.1.1.2, 5.4.2.1.2.2, 5.4.2.1.3.2, 5.4.2.1.4.2 and 5.4.2.1.5.2 of the DSP is attached hereto.

b) As an owner of many poles to which GSHi is attached, it is Bell Canada's responsibility to ensure that its poles are maintained in good condition. The condition of the Bell Canada-owned poles in these program budgets have deteriorated to the point where GSHi believes Bell Canada would agree that replacement of the poles is warranted. The cost(s) to replace these poles would be borne by the owner, whereas the joint use attachers (such as GSHi), would be responsible for their own transfer costs. An agreement to provide any funding of these projects by Bell Canada would contribute to a reduction in the overall budgetary costs that form part of these prospective investments.

c) The table below shows the number of Bell Canada poles and the estimated replacement work cost in the Material Information Sheets:

DSP REFERENCE	YEAR	PROJECT NAME	# of Bell Canada Poles to be Replaced	ESTIMATED REPLACEMENT COST ($)
5.4.2.1.1.2	2025	Drummond St	1	7,770
5.4.2.1.3.2	2027	Rear Windsor/Tudor	7	113,213
		Rear Lakeview/Crown	11	101,154
5.4.2.1.4.2	2028	Rear Selkirk/Nicolet	16	209,563
5.4.2.1.5.2	2029	Rear Selkirk/Rio	17	193,224

Attachment 1 (of 1):

2-Staff-19 Attachment 1: Bell Line Rebuilds

DSP REFERENCE	YEAR	PROJECT NAME	LENGTH OF LINE REPLACED (m)	# of Poles to be Replaced	ESTIMATED COST ($)
5.4.2.1.1.2	2025	Blyth/Colby	831	13	289,126
		Catalina Crt	430	9	179,575
		Papineau/Frontenace	390	11	156,227
		Desloges Rd (S8424 to S8444)	1,098	25	315,528
		William Ave (Gemmell to Hawthorne)	315	8	118,199
		Drummond St	250	5	102,825
		Rideau St (Lavoie to Grandview)	250	5	95,916
		Latimer (S689 to S31366)	478	13	210,270
		Peter St @ Church St, Copper Cliff	1,500	20	395,286
		CBC Hill, Kingsway (S30649 to S6128)	830	16	371,241
		Cache Bay Rd	1,000	5	174,871
		Site Restorations	0	0	130,000
5.4.2.1.2.2	2026	Ida St (S9087 to S9122)	220	6	196,916
		Capreol Rd, Rear Lot	0	4	96,559
		Ramsey View Crt (S11129 to S11127)	0	3	106,412
		Kelly Lake @ Copper St	1,300	18	122,202
		Elm St/Clarabelle 44kV Rebuild	2,100	47	1,120,766
		Little Italy/Copper Cliff Phase 1	975	36	451,896
		Site Restorations	0	0	80,000
5.4.2.1.3.2	2027	Diane Ave (S1426 to S1435)	300	10	150,266
		Little Italy/Copper Cliff Phase 2	975	36	451,896
		Portage Ave	350	11	157,327
		Rear Windsor/Tudor	200	10	284,517
		Rear Lakeview/Crown	350	11	243,728
		Site Restorations	0	0	80,000
5.4.2.1.4.2	2028	Dew Drop Rd	2,500	47	665,203
		Rose Marie Ave	700	17	217,546
		Frood Rd	400	11	245,776
		Moonlight Beach/Dube/Navanod	2,022	23	338,877
		Paquette St	360	12	163,221
		Balsam St, Coniston	300	12	179,906
		Dennie St, Capreol	0	3	95,407
		CNR Tracks/Whissell Junction	0	4	331,603
		Regent St (385 to S382)	0	4	134,631
		Rear Selkirk/Nicolet	550	16	389,012
		Site Restorations	0	0	80,000
5.4.2.1.5.2	2029	Pioneer Rd Rebuild	0	17	525,040
		Barrydowne (S2411 to S2408) Pole Replacements	0	4	138,997
		Rear Selkirk/Rio	510	17	391,459
		Briar Ave	410	12	182,969
		Dollard Ave	540	15	216,573
		Robin St/Eastern Ave/Crestmoor Rd	840	20	397,292
		Sherwood Ave/Carling Cres	400	13	189,618
		Stull St (S18827 to S18878)	800	17	257,684
		Site Restorations	0	0	80,000

2-Staff-20 System renewal - Vale Line Rebuild

Question:

System Renewal - Lines

Ref 1: Exhibit 2B, Distribution System Plan, Material sheet for 2026 System Renewal – Lines, pp. 249-257

Preamble:

The referenced Material Information sheet for 2026 System Renewal - Lines covers multiple line rebuilds. Project f) Elm St/Clarabelle requires Greater Sudbury Hydro to work closely with Vale to obtain permission to rebuild these 44kV distribution assets. Vale owns the property over which the existing 28M4/28M5 circuit currently traverses.

Question(s):

a) Does Greater Sudbury Hydro have an existing easement with Vale for the existing 44kV line? If not, as part of the negotiations with Vale, will an easement be obtained for the rebuilt line traversing Vale Property?

Response:

a) No, GSHi does not have an existing registered easement with Vale for the existing 44kV line. Going forward with respect to the proposed rebuild, an easement for the new line will be negotiated with Vale as part of the normal process for construction activities.

2-Staff-21 System Renewal - Underground

Question:

System Renewal – Underground

Ref 1: Exhibit 2B, Distribution System Plan, Material sheet for 2025 System Renewal – Underground, pp. 229-235

Ref 2: Exhibit 2B, Distribution System Plan, Material sheet for 2026 System Renewal - Underground, pp. 255-259

Ref 3: Exhibit 2B, Distribution System Plan, Material sheet for 2027 System Renewal - Underground, pp. 275-279

Ref 4: Exhibit 2B, Distribution System Plan, Material sheet for 2028 System Renewal - Underground, pp. 299-303

Ref 5: Exhibit 2B, Distribution System Plan, Material sheet for 2029 System Renewal - Underground, pp. 323-327

Preamble:

The referenced Material Information sheets for System Renewal - Underground covers multiple underground rebuilds. Greater Sudbury Hydro states that due to the likelihood that the unjacketed concentric neutral will have corroded for many of these cables, it is expected that attempting to remove the cables from their existing conduit(s) will be a fruitless exercise and as such Greater Sudbury Hydro expects to predominantly use directional drilling, rather than open-trenching, to install new conduit in which replacement cables may be installed. Greater Sudbury Hydro will be approaching other interested parties to possibly participate in the projects and to share the costs of the construction activities.

Question(s):

a) Please provide the length of underground conductor (size and voltage) to be replaced, number of padmount transformers to be replaced and cost for each of the identified underground rebuild projects in the referenced Material Information sheets above.

b) Was cable injection considered as an alternative for any of the cable replacement investments in the referenced Material information sheets above?

c) Does Greater Sudbury Hydro intend to abandon existing cable in duct that cannot be removed?

d) Considering Greater Sudbury Hydro intends to use directional drilling, what is the participation expected of other interested parties to share the cost of construction activities (as opposed to open trenching to lay multiple ducts)?

Response:

a) The following tables depict the length of underground conductor (size and voltage) to be replaced, number of padmount transformers to be replaced and cost for each of the identified underground rebuild projects:

Year	Project Name	Length of UG Conductor (m)	Size	Voltage (kV)	# of Padmount Transformers Replaced	Estimated Project Cost ($)
2025	Cambrian College	250	350 mcm cu	12	3	437,349
	MS24 KV Feed	155	350 mcm cu	44	0	78,240
	MS11 T2 44kV Feed	150	350 mcm cu	44	0	146,568
		150	350 mcm cu	12		
	Moonglo Phase 1	1,170 270	3/0 str cu 350 mcm cu	12 12	1	512,815
	675 William Ave (Adanac Village)	1,560	#2 Str cu	12	5	393,784
	Drummond St/ Village Cres	1,300	#2 Str cu	12	2	452,215
	1950 Lasalle Blvd (Place Hurtubise)	450	#2 Str cu	12	1	204,058
	Grenoble Village	900	#2 Str cu	12	5	374,029

Year	Project Name	Length of UG Conductor (m)	Size	Voltage (kV)	# of Padmount Transformers Replaced	Estimated Project Cost ($)
2026	Cambrian College	240	350 mcm cu	12	3	500,000
		420	3/0 str cu			
	MS15 44kV Feed	155	350 mcm cu	44	0	60,342
	Telstar @ Jupiter	750	3/0 str cu	12	2	414,141
	Summerhill Cres Part 1	640	#2 Str cu	12	1	230,403
	Summerhill Cres Part 2	750	#2 Str cu	12	1	239,456

Year	Project Name	Length of UG Conductor (m)	Size	Voltage (kV)	# of Padmount Transformers Replaced	Estimated Project Cost ($)
2027	MS17 T1/T2 44kV Feed	300	350 mcm cu	44	0	131,857
	Galaxy Crt	470	#2 Str cu	12	5	290,236
	Jupiter Crt	500	#2 Str cu	12	0	223,006
	Bruce Ave	1,845	350 mcm cu	12	0	692,009
		325	#2 Str cu			

Year	Project Name	Length of UG Conductor (m)	Size	Voltage (kV)	# of Padmount Transformers Replaced	Estimated Project Cost ($)
2028	MS19 T1 44kV Feed	500	750 mcm cu	44	0	132,048
	Hanna/Beech Cres	2,000	#2 Str cu	4	4	744,538
	Ryan Heights (744 Bruce Ave)	400	#2 Str cu	12	0	165,315
	Colonial Crt	950	#2 Str cu	12	3	299,118
	Skyward Dr	270	#2 Str cu	12	0	211,142

Year	Project Name	Length of UG Conductor (m)	Size	Voltage (kV)	# of Padmount Transformers Replaced	Estimated Project Cost ($)
2029	Attlee/Soloy Dr	340	3/0 Str cu	12	0	212,048
		170	#2 Str Cu			
	Moonrock/Gemini	2,400	3/0 Str cu	12	3	733,332
	Notre Dame @ Jogues	795	350 mcm cu	12	0	281,466
	Notre Dame @ St. Anne's Rd	1,300	350 mcm cu	12	0	342,611

Please note that the proposed underground project costs listed in the Table for the Year 2025 are $2,599,058, which is different than the total cost of $2,638,593 listed in Section 5.4.2.1.1.3 p. 229 of the DSP. There was a small calculation error made and GSHi wishes to correct the record to show the correct amount of $2,599,058 for this proposed work.

b) No, cable injection wasn't considered as an alternative for any of the cable replacement investments. Most of these assets, with a 'Typical Useful Life' (TUL) of 40 years, are due for immediate proactive replacement. Many of these assets belong to the approximately 31% of Underground Cable (12kV) and 36% of Underground Cable (4kV) that are in either "Very Poor" or "Poor" condition, per the 2024 Asset Condition Assessment. With the expectation that the unjacketed concentric neutral will have corroded for many of these > TUL cables, 'cable injection' would not provide a remedy to this condition.

c) Yes, GSHi intends to abandon existing cable in duct that cannot be removed.

d) From the discussions with the other Telecommunication Entities (Bell Canada, Eastlink, Agilis and Vianet) in GSHi's service territory, the only party that showed any substantive interest in possibly participating in the proposed underground renewal projects was Vianet. During detailed engineering for these projects, GSHI will seek to determine the appropriateness of including a telecommunications duct within the scope of the construction activities.

GSHi remains open to continuing the dialogue with these telecommunication entities, however we anticipate that only Vianet might participate in these proposed projects moving forward.

2-Staff-22 System Renewal - Voltage Conversion

Question:

System Renewal – Voltage Conversion

Ref 1: Exhibit 2B, Distribution System Plan, Material sheet for West Nipissing Voltage Conversion, pp. 235-240

Preamble:

The referenced Material Information sheet covers a multi-year expenditure for voltage conversion activities. Greater Sudbury Hydro states that in the Town of Sturgeon Falls voltage conversion area, the project involves the installation of 102 – 4.16kV Overhead distribution transformers. Greater Sudbury Hydro will be approaching Hydro One to fund at least a portion of the construction activities (project 2026-A11).

Question(s):

a) Please confirm that the project involves the removal of 102 - 4.16kV overhead distribution transformers and replacement with 12 kV transformers.
b) Please confirm the number of Hydro One poles expected to be replaced by Hydro One in project 2026-A11 total 19.
c) Please confirm that budget funds in project 2026-A11 are solely for Greater Sudbury Hydro to transfer its plant to new Hydro One installed poles.
d) How does Greater Sudbury Hydro plans to address the situation where Hydro One does not agree to replace the poles in question?

Response:

a) Yes, the project involves the removal of 102 – 4.16kV overhead distribution transformers with the replacement unit(s) being a dual voltage (12/4kV) transformer.

b) Yes, the number of Hydro One poles expected to be replaced by Hydro One in project 2026-A11 total 19.

c) GSHi confirms that budget funds in project 2026-A11 are solely for GSHi to transfer its plant to new Hydro One installed poles.

d) GSHi is actively communicating with both Hydro One and the Town of Sturgeon Falls to move the project forward. Due to the condition of the poles and the existing electrical equipment at these locations, along with the safety concerns inherent, GSHi is confident that Hydro One will agree to replace the poles along Nipissing St in the subject area.

2-Staff-23 System Renewal - Moonlight MS

Question:

System Renewal – Moonlight MS

Ref 1: Exhibit 2B, Distribution System Plan, DSP Material sheet for Moonlight MS18 system renewal, pp. 263-269

Preamble:

The referenced Material Information sheet covers the replacement of power transformer assets at Moonlight MS18 with underground, pad-mounted structures at a new location. Existing SCADA RTUs to be replaced with a new device. Existing power transformer is rated 5/6.7MVA size. Greater Sudbury Hydro states that a significant environmental concern with Upper Coniston MS31 is that in the event of a catastrophic failure of a power transformer, it is possible that a large quantity of transformer oil may be released outside of the station in the surrounding environment.

Question(s).

a) Has the new location been identified and acquired?
b) What will be the rating of the new power transformer?
c) What oil containment will the new underground padmount structure have?
d) What are the specific investments for expenditures identified in 2025, 2026 and 2027?

Response:

a) The new location has not yet been identified/acquired. The footprint of the existing substation is too small for the proposed rebuild of Moonlight MS18. The surrounding geology is challenging due to significant presence of rock adjacent to the existing site. With this rebuild project, GSHI will be approaching the City of Greater Sudbury to work collaboratively on siting the station at a mutually beneficial location nearby the existing 9M4 feeder as well as near the location of the expected economic development(s) along the Kingsway Corridor.

b) The rating of the new power transformer is planned to be 10/13MVA.

c) GSHi intends to implement a cost-effective secondary oil containment system tailored specifically for mineral oil transformers. The proposed solution features self-sealing fabrics that permit the passage of snowmelt and rainwater, while effectively containing mineral oil to prevent environmental contamination.

d) GSHi plans to place an order for a replacement power transformer in 2025. In line with previous experience, GSHi anticipates being invoiced for 30% of the total cost of the 18T1 power transformer by the manufacturer. In 2026, budgeted expenditures will primarily cover activities such as preliminary engineering, environmental screening, geotechnical investigations, grounding, protection studies, and detailed engineering, among others. In 2027, the remaining 70% of the power transformer cost is expected to be invoiced. Additionally, the 2027 budget will include costs for the procurement and installation of both major and minor electrical components, civil and electrical construction, miscellaneous expenses (e.g., fees, permits, insurance), and a 10% project contingency.

2-Staff-24 System Access - Meters

Question:

System Access - Meters

Ref 1: Exhibit 2B, Distribution System Plan, Material sheet for Meter Installations, pp. 333-335

Ref 2: Chapter 2 Appendices, Appendix 2-AA Capital Projects Table

Preamble:

The reference Material Information sheet in reference 1 covers the installation of meters, replacement of damaged meters and reverification of meters at commercial/industrial customers premises. Forecast investments are planned for each of the 2025-2029 forecast years.

Based on the information provided in reference 2, the average meter installations expenditure for 2020-2024 can be calculated as $150k and average forecast expenditure for 2025-2029 can be calculated as $253k.

Question(s):

a) How many new meters forecast to be installed in each of the 2025-2029 forecast years?
b) How many damaged meters that Greater Sudbury Hydro forecast to be replaced over the 2025-2029 period?
c) Are there any meter reverification requirements over the 2025 – 2029 period? If so, does Greater Sudbury Hydro assume that the meter groups will all pass reverification and not require replacement?
d) Please explain the increase in average capital expenditure in the forecast period as compared to historical period.

Response:

a) The table below shows the total number of new meter installs from 2020-2024. Based on this history and the customer connection forecast, GSHi is forecasting approximately 184 new meters to be installed each year of the 2025-2029 forecast period.

Year	Total Number of New Meters
2020	215
2021	184
2022	164
2023	172
2024	183
Average	184

b) GSHi forecasts approximately 800 damaged meters (160 per year) to be replaced over the 2025-2029 period.

c) Yes, GSHi has approximately 48,500 meters that have expiring seals between 2025 – 2029. There are 11 sample groups and approximately 1,800 meters that will need to be changed out that are not in sample groups. This will require the purchase of approximately 600 meters to replace the meters that are sent away for reverification. All of GSHi's past pre-sample and regular sampling of the Sensus and Elster/Honeywell meters have passed with no issues. GSHi expects a similar result with the next round of meter reverifications.

d) During the historical period, particularly the years 2020-2022, GSHi encountered significant challenges in being able to perform its typical meter reverifications due to the COVID-19 pandemic. As the effects of the pandemic have continued to subside, GSHi has been able to resume its normal reverification program.

Based on the projections for customer connection growth (new meters), damaged meters and meters needed for reverification, estimated costs for 2025 are as follows:

New Meters ($119,400)
184 Meters
85% are expected to be '2S' meters; 270 USD each.
15% are expected to be other (9S, 35S, 36S, etc) at an average of $1,500 USD each.
Note: Assume an exchange rate of 0.7 USD = 1.0CAD

Damaged Meters ($61,700)
160 Meters
100% are expected to be '2S' meters; 270 USD each.
Note: Assume an exchange rate of 0.7 USD = 1.0CAD

Meter Reverification ($46,300)
120 Meters
100% are expected to be '2S' meters; 270 USD each.
Note: Assume an exchange rate of 0.7 USD = 1.0CAD

In 2025, additional expected costs include internal labour and vehicle resources to complete the work. In the years 2026-2029, the budget is increased each year by 3.5% to account for items such as, potential growth in inflation and potential change in USD/CAD exchange rate.

2-Staff-25 System Access - Capital Contributions

Question:

System Access – Capital Contribution

Ref. 1: Chapter 2 Appendices, Appendix 2-AA Capital Projects Table

Preamble:

System access capital contribution as a percentage of gross system access expenditures can be calculated from the data provided in reference 1. The calculation is provided in the table below.

	2020	2021	2022	2023	2024 Bridge Year	2025 Test Year
System Access Gross Expenditures	$ 2.40 M	$ 1.82 M	$ 2.41M	$ 1.79 M	$ 2.78 M	$ 2.18 M
System Access Capital Contributions	$ 1.28 M	$ 1.14 M	$ 1.79 M	$ 1.16 M	$ 1.80 M	$ 1.19 M
% System Access Capital Contributions	**53%**	**62%**	**74%**	**65%**	**65%**	**55%**

Question(s):

a) Please explain the reason for lower forecast capital contributions for test year as compared to historical average.

Response:

a) The forecasted capital contributions for the test year are based on expected contribution percentages applied to the specific projects planned for the year. The percentage of system access spending recovered through contributions is anticipated to be lower in 2025 for several reasons. Notably, GSHi has adjusted the 2025 forecast to account for anticipated outcomes from economic evaluations. Additionally, meters, which are included in system access spending, do not typically receive capital contributions. The budgeted spending on meters in 2025 aligns more closely with the spending levels in 2020, and the expected contribution percentage for 2025 is similar to that experienced in 2020. When meter-related expenditures are excluded from system access gross expenditures, the revised percentage of System Access Capital Contributions to System Access Gross Expenditures is 61%.

2-Staff-26 General Plant - Vechicles and Building

Question:

General Plant – Vehicles and Building

Ref 1: Exhibit 2B, Distribution System Plan, Material sheet for Vehicles, pp. 362-365

Ref. 2: Exhibit 2B, Distribution System Plan, Material sheet for Building, pp. 365-367

Preamble:

The referenced Material Information sheet covers the procurement of replacement Fleet vehicles. 8 vehicles have been identified for replacement in the 2025-2029 forecast years.

The referenced Material Information sheet covers refurbishment needs of the Greater Sudbury Hydro head office building over the 2025-2029 forecast period. Building roof, staff parking and heat pumps are some of the refurbishment needs that have been identified.

Question(s):

a) Which specific vehicles, and their associated cost, are to be replaced in each of the 2025-2029 forecast years?

b) Please identify the specific building investment need and its forecast cost in each of the 2025-2029 forecast years.

Response:

a) The table below outlines the planned vehicle replacements for the 2025–2029 forecast period, along with the associated replacement costs. Please note that the cost of a replacement vehicle may be distributed across multiple years, as some vendors require payment for major components (e.g., cab and chassis) at the time of purchase.

Year	Vehicle to be Replaced	Cost of Replacement Vehicle
2025	#838 1996 Int. Telelect RBD	$ 501,213.82
	#877 2011 Freightliner FM2	$ 474,023.68
	#876 2016 Freightliner	$ 273,170.00
2026	#845 2007 Freightliner FM2	$ 531,329.00
	#746 2008 Dodge Pickup 1/2 ton	$ 56,100.00
	#786 2013 Ford Explorer	$ 56,100.00
	#607 1984 Pole Trailer WN	$ 48,780.00
2027	#885 2012 Freightliner FM2	$ 531,329.00
	#736 2017 Chevy SIlverado	$ 57,222.00
	#742 2014 Ford Pickup	$ 57,222.00
	#613 2006 Durabody Utility Trailer	$ 25,000.00
2028	#847 2008 Altec Intl' RBD	$ 531,892.12
	#771 2018 Chevy SIlverado 1500	$ 58,366.44
	#792 2017 Chevy SIlverado	$ 79,590.60
	#775 2012 Dodge Pickup 1/2 ton	$ 58,366.44
2029	#825 2016 Freightliner FM2	$ 690,000.00
	#724 2016 Dodge Ram Pickup	$ 58,366.44

b) Given the age of the facility at over 50 years old, investment is required to refurbish the roof sections. Both of roof sections 5 and 6 are recommended to be addressed in 2028, while roof section 2 has been prioritized for 2029. Additionally, the main staff parking lot requires extensive work to properly grade and resurface the travelled area. Health and Safety hazards have been identified because of the current state of this parking area and this investment is required to alleviate the identified deficiencies and make it safe for everybody to use. Finally, heat pumps are scheduled to be replaced throughout the building on a paced basis throughout the forecast period.

The capital costs which GSHi anticipates incurring from the years 2025 through 2029 are shown in the table below:

Year	Budget
2025	$155,000
2026	$115,000
2027	$137,000
2028	$482,000
2029	$659,000

2-Staff-27 Substation Condition Assessment - Recommendations

Question:

Substation Condition Assessment Report

Ref 1: Exhibit 2B, Distribution System Plan, Appendix B: 2024 Substation Condition Assessment Report

Preamble:

The 2024 Substation Condition Assessment Report by Lakeside Power Consulting Inc. provided a number of recommendations for substation asset management.

Question(s):

a) For the recommendations provided, please advise of Greater Sudbury Hydro's acceptance or rejection of the individual recommendations and the time frame in which Greater Sudbury Hydro would institute the recommended practices.

Response:

Each of the six recommendations from the *Substation Condition Assessment Report* are provided below. GSHi accepts all the recommendations from the report. Comments for each are as follows:

5.1 Maintenance Program

A regular maintenance program is critical to ensuring the safety and reliability of station assets. Regular maintenance coupled with periodic (i.e. monthly) site inspections are commonplace in Ontario LDCs. Municipal substations are typically withdrawn from service for maintenance every three to five years,

depending on the condition of the equipment and the resources available to the utility. GSH may want to consider taking older stations out more frequently.
GSH performs periodic transformer oil testing and monthly substation inspections.

We noted that many of the 2023 oil analysis tests indicated high water content where no previous problem existed in most of the units. We recommend that any transformer that shows new conditions that are potentially indicating failure, tests be repeated as soon as practical. For the Dash T1 transformer, we noted that the transformer has exhibiting signs of trouble for two years prior to its failure.

Many of the stations have inexpensive maintenance issues which affect public and worker safety. Eliminating vegetation from the yard, keeping a level stone layer, and ensuring fence bonding should be attended to more frequently in the future.

Generally, GSHi follows a four-year major maintenance cycle for its municipal substations. However, it is agreed that there may be value in taking older stations off-line more frequently. Similarly, GSHi follows a yearly oil testing cycle for its power transformers. However, it is agreed that any transformer that shows new conditions that are potentially indicating failure, additional testing should be repeated as soon as practicable. Finally, GSHi has corrected the inexpensive maintenance issues, such as elimination of vegetation from the yard, and will continue to do so on an on-going basis.

5.2 Aging Plant

Many of the GSH substations were constructed in the 1960's and 1970's, resulting in a number of the stations reaching the end of their TUL at the same time. This will require a strategy of replacement of these assets before there is a major impact on system reliability or safety. Strategies may include a surge of *capital spending in station assets, increase maintenance and surveillance, and development of contingency plans.*

This applies to the station reclosers, SCADA RTUs, and protective relays. The station reclosers and associated protective relays are vintage 1990's, and the oil reclosers are now 20-30 years old and at, or beyond, their life expectancy. The SCADA RTUs at many of the stations are also vintage 1990's, and are now seriously obsolete, with parts or replacements no longer available.
The on-going, planned replacements of these components should be the priority going forward.

GSHi agrees that on-going, planned replacement of vital substation component should be the priority going forward. Each year of the forecast period 2025-2029, as described in Section 5.4.2.1, contains a substation-related project that is ranked as the #1 investment priority for that particular year.

5.3 Budgeting for Station Upgrades

A long-term forecast should be developed to plan for the budgeting and execution of station upgrades/replacement projects. In conjunction with other distribution projects, the costs and timing of station projects should be coordinated and prioritized to provide a long-term plan for all aspects of the distribution system. Replacing equipment in some stations may require more than like-for-like budgeting. Where the existing plant does not meet current codes for clearances the station structure may need to be modified to meet Code. These stations should be evaluated for the extent of replacements and modifications to be made before scheduling work.

Many of the GSH substations were constructed in a short period of time in the 1960's and 1970's. There was a surge of spending on stations at that time. Given the fact that many of these assets are operating beyond their TUL, it is *understandable that another surge of capital spending will be required to ensure the safety and reliability of GSH stations. Alternately, spending may be tempered with increased maintenance and surveillance of station equipment.*

This is the basis for GSHi's prospective capital investments over the forecast period 2025-2029, which are described in Section 5.4.2.1. These prospective investments deliver value to customers by controlling costs through appropriate optimization, prioritization and pacing of expenditures. Further, the plan keeps pace with technological change and integrates cost-effective innovative projects and traditional planning needs such as load growth, asset condition and reliability performance.

5.4 Transformer Vector Group

GSH has two standard vector arrangements in their substation transformers – DYN1 and DYN11. The DYN1 has been considered the de facto CSA standard arrangement, and DYN11 was the "utility" arrangement. One arrangement has a +30 degrees angular displacement, and the other a -30-degree angular displacement. Without some mitigation, a DYN1 and a DYN11 cannot be connected in parallel.

GSH has addressed the difference in angular displacement with local phasing changes at DYN1 stations. Going forward, we recommend that GSH standardize DYN11 transformers.

GSHi has standardized on DYN11 transformers in its power transformer purchasing specifications.

5.5 Transformer LTC Voltage Regulation Settings

GSH has ten (10) load tap changers with the ability to regulate the voltage at the station or on the feeders. We recommend that GSH review the settings of the *voltage regulation relays.*

Further, we recommend that GSH maintenance staff note the min/max voltages and operation counters monthly, and reset the tap drag hands.

GSHi has implemented this recommendation and retained the services of a contractor to assist with the settings review. Further, GSHi's digital substation inspection platform has been updated to include fields to log the min/max voltages as well as the operation count.

5.6 Transformer Breather Air Dryers

Many GSH substation transformers are free-breathing to the atmosphere. We recommend that GSH retrofit air dryers for these stations. In addition, for those stations that already have air dryers, they need to be maintained in order to prevent unnecessary moisture from entering the transformers.

For substation transformers that are free breathing to the atmosphere, GSHi will retrofit the air dryer at the next available opportunity (i.e., major station maintenance). For stations that already have air dryers, the dryers have been checked and maintained by GSHi staff to prevent moisture from entering the transformers.

2-Staff-28 NWS Incorporated in Planning and DSP

Question:

NWS/CDM in Distribution System Planning

Ref 1: EB-2024-0118, Non-Wires Solutions Guidelines for Electricity Distributors, March 28, 2024

Ref 2: Exhibit 2/ Tab 9/ Schedule 1/ Section 5.3.5, pp. 171

Preamble:

Per the OEB's Non-Wires Solutions Guidelines for Electricity Distributors (NWS Guidelines), electricity distributors are required to incorporate consideration of non-wires solutions (NWSs) into their distribution system planning process by considering whether a distribution rate-funded NWS may be a preferred approach to meeting a system need, thus avoiding or deferring spending on traditional infrastructure. Per the NWS Guidelines, traditional conservation and demand management (CDM) is a potential NWS that electricity distributors may consider. Furthermore, electricity distributors are required to document their consideration of NWSs when making investment decisions on electricity system needs with an expected capital cost of $2 million or more as part of distribution system planning, excluding general plant investments.

Greater Sudbury Hydro is not proposing any rate-funded Conservation and Demand Management (CDM), demand-response, efficiency, or storage activities within the forecast period (2025-2029) for the purpose of deferring investments in distribution infrastructure. Further, Greater Sudbury Hydro noted that it will continue to prudently monitor the market for innovative technologies that show promise in helping to mitigate future operational challenges.

Question(s):

a) Please describe how Greater Sudbury Hydro has addressed or plans to address the requirement in the OEB's NWS Guidelines for distributors to incorporate consideration of NWSs into their distribution system planning process.

Response:

a) On March 28, 2024, the OEB released the "Non-Wires Solutions Guidelines for Electricity Distributors (NWS Guidelines)". In the document, it is stated: "Recognizing that distribution system planning may be at a relatively advanced stage for applications scheduled to be filed in 2024 or 2025, the OEB's expectation is that all rate applications filed in 2026 should be fully consistent with the BCA Framework. Distributors filing rate applications in 2024 or 2025 are strongly encouraged to use the BCA Framework, particularly for applications requesting funding for an NWS."

With its present rate application filed in 2024 (for 2025 rates), GSHi is not proposing any rate-funded Conservation and Demand Management (CDM), demand-response, efficiency, or storage activities within the forecast period (2025-2029) for the purpose of deferring investments in distribution infrastructure. Going forward, GSHi will meet the OEB's expectation that all rate applications filed in 2026 (and beyond) should be fully consistent with the BCA Framework and the NWS Guidelines.

2-Staff-29 Asset Retirement Obligation

Question:

Asset Retirement Obligation

Ref 1: Exhibit 2 / Tab 2 / Schedule 1 / Page 2

Ref 2: Chapter 2 Appendices, Tab 2BA

Preamble

Greater Sudbury Hydro has adjusted its continuity schedule for rate base purposes to account for an asset retirement obligation (ARO) established in 2024 of $273,640, associated with the removal of lead cables at a designated site. The ARO has been recognized in compliance with IFRS and is being amortized over the period leading up to the anticipated cable removal in 2029. Greater Sudbury Hydro has adjusted reference 2, Appendix 2-BA, by adding a row to reflect the removal of the ARO for rate base calculation purposes, and an additional row to reinstate the depreciation expense.

Question(s):

a) Please provide detailed documentation on the nature and origin of the ARO of $273,640 including the specific legal, environmental or other obligation that led to its recognition.
b) Please confirm when the ARO was first recognized and how was the timing determined?
c) Please explain the accounting methodology used to calculate the ARO amount of $273,640 including details of the discount rate and assumptions used in estimating the liability.
d) Has Greater Sudbury Hydro discussed the ARO with its auditor of financial statements and obtained the auditor’s opinion on the recognition of ARO?

If so, please elaborate on the discussion. If not, please provide a plan to obtain the auditor's opinion on this ARO recognition and measurement.

e) Please discuss any risks associated with this ARO and how they are being mitigated.

f) If the ARO changes in future years, how does Greater Sudbury Hydro plan to reflect those changes in rate base and its revenue requirement?

Response:

a) The Asset Retirement Obligation (ARO) of $273,640 recognized in 2024 relates to the planned removal of lead cables at a designated site. This obligation arises from a discussion held with property owners, during which GSHi agreed to remove the cables. The commitment to the removal results in a constructive obligation for GSHi. These cables have reached the end of their useful life and will cease to be operationally necessary once a new alternate supply to the area is established. The existing cables are presently installed on the private property without an easement.

GSHi has confirmed it does not have a legal obligation to remove the cables. The decision to remove the lead cables stems from the fact that over time, if left in the ground, the cable may degrade and contaminate local soils and groundwater. This is of concern as the installation is located adjacent to two bodies of water in the center of the municipality. The decision to recognize the ARO aligns with International Financial Reporting Standards (IFRS), which require the recognition of obligations where a constructive expectation has been established. IAS 37 states that "A provision shall be recognized when: a) an entity has a present obligation (legal or constructive) as a result of a past event;" and goes on to describe "in the case of a constructive obligation, where the event (which may be an action of the entity) creates valid expectations in other parties that the entity will discharge the obligation." GSHi employees met with the property owners in the summer of 2024 and explained that the cables would be removed once the new feed is built. GSHi discussed specifics of the removal project with the property owners, including timing so not to interfere with their operations and expectations regarding rehabilitation.

The amount represents the estimated cost of safely removing and disposing of the lead cables and is being amortized over the period leading to their anticipated removal in 2029.

b) The ARO was first recognized in 2024 during the development of GSHi's DSP. At that time, GSHi evaluated the condition and future use of the lead cables and determined that replacing these assets in situ was not the best course of action. This decision was based on operational and strategic considerations, leading to the conclusion that the cables could be removed from the non GSHi owned property once the new feed was built. The planning and evaluation process of the DSP brought this issue to light and resulted in the recognition of the obligation where it had not been previously discussed and therefore did not result in a constructive obligation for GSHi.

c) The ARO of $273,640 was calculated based on an estimate prepared using current-day pricing, rather than projecting costs in 2029 dollars and discounting them back to present value. This approach ensures transparency and simplicity in reflecting the liability in today's terms. To account for the time value of money and inflation, GSHi will book annual accretion expenses based on the OEB's annual published inflation parameters. Under IFRS, the use of discounting is required when without discounting there would be a material difference in the cash outflows associated with the obligation. In this situation there is no material difference when discounting the cash flows associated with the removal of the lead cable.

The cost estimate itself was developed using time estimates provided by the contractors expected to perform the work.

d) The amount of the liability established has not been audited by KPMG and will be subject to audit as part of year-end 2024. However, GSHi has discussed the ARO with KPMG, its financial statement auditor, who agrees that the requirements of IAS 37 have been met with respect to a constructive obligation giving rise to recognizing an ARO.

Given that the event giving rise to the obligation for GSHi occurred in the summer of 2024 based on discussions with the property owner, GSHi has chosen to recognize the ARO in 2024, contemporaneous with the decision to remove the assets.

e) GSHi has identified some risks associated with the ARO for the removal of lead cables and has taken steps to mitigate them to the extent possible. One significant risk is the potential presence of polychlorinated biphenyls (PCBs) in the lead cables. This concern is a key factor in GSHi's decision to remove the cables, as PCBs and Lead are designated hazardous substances and must be handled and disposed of in compliance with strict environmental regulations. The presence of PCBs could increase the removal costs due to the additional requirements for managing and disposing of hazardous materials. Unfortunately, the only definitive way to confirm the presence of PCBs is to de-energize the cable and remove a section for testing. However, as the cables currently serve as a backup feed for a hospital, GSHi cannot responsibly de-energize them without compromising the hospital's emergency supply, leaving the risk unconfirmed until removal begins.

Another risk is the potential for inaccuracies in the cost estimate. The cables are part of underground infrastructure, and the exact conditions and layout can be difficult to ascertain until work begins. The estimate was prepared using the best information available, including contractor time estimates and GSHi's experience with similar projects. However, there is always uncertainty with underground infrastructure, as unforeseen complications, such as additional obstructions or unexpected conditions, could increase removal costs.

To mitigate these risks, GSHi has incorporated contingency planning into its estimates to account for reasonable uncertainties. Additionally, GSHi will continue to monitor the condition and operational requirements of the cables, ensuring that the removal process is executed efficiently and in compliance with regulatory requirements when the time comes.

f) As GSHi plans to remove the lead cables before its next rebasing, it does not anticipate any changes in the ARO to impact its rate base. However, if the removal plans are delayed beyond 2029 and new information comes to light that significantly affects the cost estimate, any changes to the ARO would be reflected in the asset continuity schedule at that time.

If the removal project proceeds as planned but actual costs differ significantly from the estimate, any resulting gain or loss will be accounted for in accordance with the *Accounting Procedures Handbook*. Such adjustments could influence the financial averages used to prepare GSHi's proposed test year budget in its next rebasing application.

2-Staff-30 ACM Half Year Rule Capital Asset Additions

Question:

Additional Capital Modul (ACM)

Ref 1: Exhibit 2 / Tab 6 / Schedule 1 / pg 1-5

Ref 2: Chapter 2 Appendices, Tab 2BA

Ref 3: Report of the Board New Policy Options for the Funding of Capital Investments: The Advanced Capital Module dated September 18, 2014

Preamble

Greater Sudbury Hydro was approved for an additional capital module (ACM) related to its Cressey Substation rebuild during its last cost of service. A schedule of the ACM capital asset amounts it proposes to incorporate into rate base is included in reference 2. Two additional columns have been added to the continuity schedules, one under the "Cost" section and another under the "Accumulated Depreciation" section. These columns are titled "ACM Cressey Additions." The activity in these columns begins in the 2021 year, where the total amount of additions in that column under the "Cost" section equals $4,750,995.

Greater Sudbury Hydro confirms that it has recorded actual amounts in the appropriate sub-account of account 1508 – Other Regulatory Assets, in accordance with the OEB's Accounting Procedures Handbook, March 15 guidance #13 and #14. Greater Sudbury Hydro is proposing to transfer the balances from the 1508 sub-accounts to the appropriate OEB sub-accounts, which will impact the total rate base, and effectively include the net book value of the Cressey substation in the rate base for rates effective May 1, 2025. Greater Sudbury Hydro confirms that it appropriately used the interest rates prescribed by the OEB for deferral and variance accounts, as published on the OEB's website.

In reference 3, it states that the OEB does not intend to proceed with the elimination of the effect of the half year rule on test year capital additions for the IRM years at this time.

Question(s):

a) Please confirm whether Greater Sudbury Hydro applied the half-year rule to the capital asset additions for its Cressey substation rebuild.
b) If not, please explain why. Please update the evidence as necessary.

Response:

a) Greater Sudbury Hydro (GSHi) confirms that it applied the half-year rule in the 2021 year, which is the year the Cressey substation asset came into service. This can be observed in Appendix 2-BA, under the 2021 year, where the accumulated depreciation for "ACM Cressey Additions" totals $67,962. Each subsequent year in this appendix shows an amortization amount of $135,924, which represents a full year's amortization on the Cressey additions.

b) Not applicable, as the half-year rule was applied appropriately in 2021.

3-Staff-31 Load Forecast with 2024 Data

Question:

Load Forecast

Ref 1: Exhibit 3, pages 7-12

Ref 2: Load Forecast Model, Monthly Data

Preamble:

The load forecast was prepared using historical data from January 2014 to December 2023.

Question(s):

a) Please provide an update to the forecast including as much actual data from 2024 as possible at the time of filing the interrogatory responses.

Response:

a) An updated load forecast is provided with responses to interrogatories. The forecast has been updated with consumption and demand volumes to November 2024 and customer/connection counts to December 2024. The updated load forecast is named as follows: "GSHI_IRR_2025_Load_Forecast_20250128.xlsx"

4-Staff-32 Updated 2024 Appendices 2-JA & J-JC

Question:

General

Ref 1: Chapter 2 Appendices 2-JA/JC

Preamble:

Greater Sudbury Hydro provided Chapter 2 appendices 2-JA and 2-JC in its application.

Question(s):

a) Please update actuals for 2024 in Chapter 2 appendices 2-JA and 2-JC.

Response:

Response to this interrogatory requires 2024 figures. The response will be filed by February 4, 2025.

4-Staff-33 Operation and Maintenance - COVID & Training

Question:

Operations and Maintenance

Ref 1: Chapter 2 Appendices 2-JA

Ref 2: Exhibit 4 – Tab 3 – Schedule 1

Preamble:

In reference 1, Greater Sudbury Hydro has constantly underspent it's 2020 OEB-approved Operations and Maintenance budget between 2020 to 2023. OM&A expenses were lower because more time from engineers was allocated to capital than expected on a substation rebuild project to allow engineers to gain more knowledge on the project. There was also lower training and travel expenses because of COVID and remote work. Greater Sudbury Hydro stated the increase in OM&A expenses in 2025 is attributed to the shift between OM&A and Capital.

Question(s):

a) Please explain the cost savings from changes in Greater Sudbury Hydro's operations due to COVID (i.e., more remote capabilities) and how those savings are considered in the 2025 test year budget.
b) Please explain why Greater Sudbury Hydro allocated training hours for engineers to the capital project.
c) Greater Sudbury Hydro had stated that it intends to invest more in training and development. Please explain if there are more instances where capital project could be higher than expected because of training costs.

Response:

a) During the COVID-19 pandemic, GSHi realized some cost savings due to operational changes necessitated by public health restrictions, the most notable related to Training, Development and Networking costs. With in-person gatherings largely unavailable, GSHi shifted to remote practices for training programs and meetings. This transition to virtual formats allowed the organization to continue its activities while minimizing costs associated with travel, accommodations, and meeting logistics. Additionally, the reliance on virtual platforms during this period created efficiencies in collaboration, further contributing to lower overall expenses.

While some of these cost-saving measures were one-time in nature, GSHi has incorporated certain efficiencies into its ongoing operations. For instance, virtual training and meetings remain part of the company's approach, especially for programs or engagements where virtual formats are cost-effective and operationally practical. However, the 2025 test year budget reflects a return to in-person training programs for activities that are better suited to in-person delivery, such as hands-on technical training or sessions requiring interactive participation. This shift is necessary to maintain the quality of staff development and ensure employees are equipped with the skills needed for operational excellence.

b) Greater Sudbury Hydro (GSHi) allocated engineer hours to the Gemmell substation rebuild project because their contributions provided direct and significant value to the capital project. The primary focus of their involvement was on leveraging their expertise to enhance the project's outcomes. The engineers actively contributed to critical aspects of the design, planning, and execution of the project, ensuring its successful completion. Their technical skills and problem-solving capabilities directly impacted the quality and efficiency of the work performed.

Any training value derived from their involvement, while extremely valuable, was secondary to their direct contributions. The project provided a unique opportunity for engineers to gain hands-on experience with complex substation rebuild activities, but this was not the primary purpose of their allocation. Instead, their participation ensured the project benefited from their active engagement and technical input, aligning with GSHi's commitment to delivering high-quality, cost-effective capital projects.

c) GSHi is committed to investing in training and development to ensure its workforce remains skilled and prepared to meet operational demands. However, GSHi does not anticipate that future training investments will result in capital project costs exceeding expectations.

In the case of the Gemmell substation rebuild project, while the participation of engineers provided valuable hands-on learning opportunities, their contributions primarily added direct value to the project. This approach did not result in a material increase to the project budget. The training benefits were a secondary outcome and not the driving factor in allocating engineering resources to the project.

4-Staff-34 Stations Operations

Question:

Stations Operations

Ref 1: Exhibit 4 – Tab 3 – Schedule 1

Ref 2: Chapter 2 Appendices – 2-AA

Preamble:

Greater Sudbury Hydro stated that the variance between 2025 and 2020 OEB-approved budget for the Stations Operations Program is due to the time spent in OM&A versus capital, given the absence of major station projects in the 2025 Capital Budget. The Stations Operations Program is in the $900k range from 2020 to 2024.

Question(s):

a) Please provide information for the following projects:
   - Martilla Station Project (2024)
   - MS19-Dash Station (2025)
   - Upper Coniston MS31 - Rebuild/Commission New Station Project (2026)
   - MS18-Moonlight Station (2027)
   - Ethel MS36 (2029)

b) Greater Sudbury Hydro seems to imply that the 2025 OM&A budget is higher because there are fewer major station projects. From 2022 and 2023 there doesn't appear to be any major stations projects either but the Stations Operations program is in the $900k range and the total OM&A spend is also well below the 2025 level. Please explain how Greater Sudbury Hydro can justify the correlation between higher OM&A and lower capital spend on major station projects.

c) There appears to be major station projects for 2026, 2027, and 2029 and the total capital budget for those years is also higher than the 2025 test year. Since Greater Sudbury Hydro has stated that there is flexibility to move OM&A budget to capital spending this effectively covers higher capital spending not included in base rates for future years. Please explain how Greater Sudbury Hydro can justify this.

Response:

a) Please see the corresponding attachment for further details about the projects below.

Marttila Station Project (2024)	Tab 1, Interrogatory 34, Att. 1
MS19-Dash Station (2025)	Tab 1, Interrogatory 34, Att. 2
Upper Coniston MS31 - Rebuild/Commission New Station Project (2026)	Tab 1, Interrogatory 34, Att. 3
MS18-Moonlight Station (2027)	Tab 1, Interrogatory 34, Att. 4
Ethel MS36 (2029)	Tab 1, Interrogatory 34, Att. 5

b) Greater Sudbury Hydro's correlation between higher OM&A costs and lower capital spending on major station projects is primarily related to the allocation of labor costs for employees in the Station Operations program. Employees who work primarily in the Station Operations OM&A program - such as Substation Electricians, Protection & Control (P&C) Technologists - spend their time allocated between OM&A and capital projects depending on the capital workload in any given year.

While it may appear that there were no major station projects in 2022 and 2023, these employees were actively engaged in other capital projects during those years, such as the implementation of the new Outage

Management System, relay upgrades, and various station enhancements. These projects caused a more significant portion of their time to be charged to capital in those years.

Additionally, in 2023, one of our Substation Electricians took on supervisory duties in a temporary relief capacity, which impacted how costs were allocated, and one of our P&C Technologists left partway through the year, leading to lower costs in the program. These circumstances were unique to 2023 and are not anticipated to continue into 2025, contributing to the normalized OM&A costs forecasted for 2025.

c) Greater Sudbury Hydro acknowledges that while there is flexibility in allocating employee labor costs between OM&A and capital projects, this flexibility applies differently across various roles and projects. For employees in the Station Operations program—such as Substation Electricians and P&C Technologists—their labor may shift more heavily toward capital during years with significant station projects. However, the inverse is also true for Powerline Electricians, whose labor allocation may shift toward OM&A when fewer line rebuilds or other capital-intensive line projects are undertaken.

In 2025, Powerline Electricians' labor is anticipated to be more heavily allocated to capital projects due to planned rebuilds and other initiatives. In future years, when major station projects are planned and capital budgets are higher, the allocation of Powerline Electrician labor may shift toward OM&A if line rebuilds or other capital work are reduced. This dynamic allocation ensures that Greater Sudbury Hydro is optimizing resources to meet the operational and capital needs of each year while maintaining flexibility to adapt to changing priorities.

The 2025 test year OM&A budget reflects this balance, with specific workloads and labor allocations accounted for based on planned activities. As a result, while there may be shifts in labor allocations across roles in future years, the total capital spending required for major station projects and other initiatives cannot be fully offset by adjustments in OM&A labor costs.

Attachment 1 (of 5):

4-Staff-34 Attachment 1: Marttila Substation

Greater Sudbury Hydro Inc
Hydro du Grand Sudbury Inc
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le pouvoir aux communautés
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Capital Expenditures 2020-2024

Project Title:	2023 System Renewal – Marttila MS8	**Project Number:**	2022 – A2; 2023 – A1
Project Coordinator:	Phil Guido/Kyle England	**Investment Category:**	*System Renewal*
Last Updated:	September 30, 2019	**Investment Driver:**	*Assets/asset systems at end of service life*

A. General Information

Cost (Capital and O&M) 5.4.3.2 A.1	Capital		(O & M)		Total
Year	Budget	Actual	Budget	Actual	
2022	150,000				150,000
2023	2,301,977				2,301,977
Totals	$2,451,977				$2,451,977

Customer Attachments and Load (5.4.3.2 A3)

Marttila MS8 – Rated 5.0/6.7 MVA ; Peak 6.85MVA

a) 8F1

85 customer attachments

b) 8F2

123 customer attachments* - if under "normal" configuration; feeder is permanently disabled

c) 8F3

525 customer attachments

Station	Feeder Designation	Peak Feeder Current (Amperes)	Planning Criteria Loading (Amperes)	% of Planning Criteria Loading
Marttila MS8	8F1	230	300	76.67%
	8F2	121	300	40.33%
	8F3	166	300	55.33%

Start Date (5.4.3.2 A.4)	**January 1, 2022**	**In Service Date (5.4.3.2 A.4)**	**December 31, 2023**

Risk Identification and Mitigation (5.4.3.2 A.5)

Scheduling Risk:
The work execution process considers project dependencies, labour and material constraints as well as externally-driven deadlines. A work execution plan is jointly developed by the Engineering and Operations Departments with input from Stores/Procurement and Control Room personnel. Development of plans and performance of work are completed in accordance with the relevant provisions of the ISO 9001/18001 standards to which GSHI's *Management System* is certified.

Comparative Information on Expenditures for Equivalent Projects/Activities (5.4.3.2 A.6)

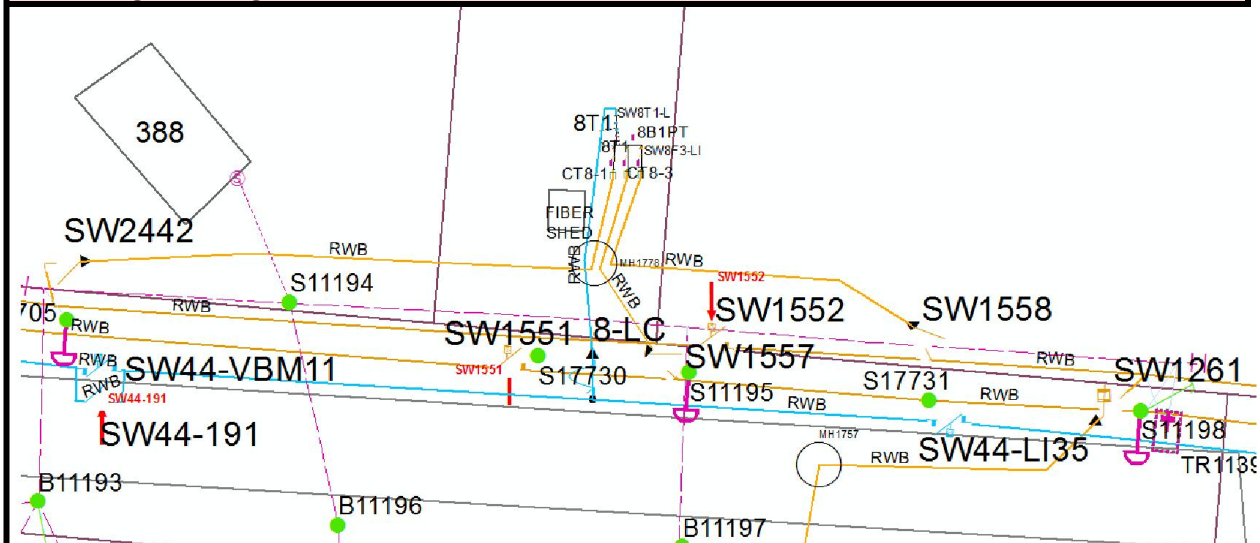
Kathleen Station MS2 (2018): $3,324,676

This investment was part of a larger project (in concert with prospective investments occurring in 2020, 2021 and 2022 belonging to the rebuilding of municipal substation Cressey MS3) that will convert a total of 10,125 customers (26.55 MW of load) from the existing 4.16kV distribution system to a 12.47kV distribution system at locations throughout GSHI's contiguous service territory in the City of Sudbury. The existing 4.16kV system is over 60 years old where the oldest transformer is 64 years old. The distribution system has reached the end of its useful life and the availability of spare parts is an issue.

Renewable Energy Generator (REG) Investment Details, including Capital and OM&A Costs (5.4.3.2 A.7)

This investment is not designed to directly impact REG connection capability. However, the investment will permit construction activities that will strengthen the existing legacy system underlying capability to connect additional REG capacity (1,111kW of present capability/feeder connected to the existing 8T1 power transformer).

Attach Images, Drawings or Other Reference Items



B. Evaluation Criteria and Information Requirements for Each Project/Activity

Efficiency, Customer Value & Reliability – Investment Main/Secondary Drivers (Triggers) (5.4.3.2 B.1a)

Main Driver: System Renewal

This investment is part of a plan that will proactively address the replacement/refurbishment of vital distribution system assets that are owned and operated by GSHI. In 2019, GSHI contracted Kinectrics Inc. to perform an Asset Condition Assessment (ACA) of its core distribution system assets. The consultant's report provided direction on the implementation of a paced investment program and further recommended action on the part of GSHI to address a minimum number of assets on an annual basis to maintain expected electricity delivery service levels. A critical recommendation of the 2019 ACA is that "(GSHI) have an annual program to address a certain percentage of poles every year so as not to create a backlog of assets needing attention". This investment is directly linked to the report's recommendations and will work to strengthen the distribution system's ability to meet expected customer service levels.

Efficiency, Customer Value & Reliability – Demonstrate how investment addresses existing reliability performance concerns and is capable of adapting to future challenges (e.g. grid modernization and climate change) (5.4.3.2 B.1b)

As part of this prospective investment, the existing power transformer 8T1 will be upgraded from its present rating of 5/6.7MVA. The design will be comprised entirely of underground, pad-mounted structures and will be fully weather-protected. The investment will also allow for increasing numbers of connection requests, either from load and/or generation, to the 8F1, 8F2 and 8F3 distribution feeders. The prospective investment is expected to maintain and/or improve SAIDI/SAIDI5; SAIFI/SAIFI5 reliability indices while providing GSHI's Control Room greater operational flexibility to plan for quick restoration of service after an outage event.

Efficiency, Customer Value & Reliability – Priority of the Investment (5.4.3.2 B.1c)

This investment have been assigned the highest priority for the 2023 Capital Budget. As discussed below in **5.4.3.2 B.1d,** based on the information we have today, the project is prioritized correctly. However, these plans may have to be re-visited/re-evaluated and are contingent upon ongoing evaluations of municipal substation Paris MS13 (planned for replacement in 2024).

Efficiency, Customer Value & Reliability – Quantitative/Qualitative Analyses on Design, Scheduling, Funding and/or Ownership Options (5.4.3.2 B.1d)

With the information and internal resources available today, the decision to address the poor condition of assets at municipal substation Marttila MS8 will necessarily delay much needed work over at Paris MS13. Today, one of three distribution feeders located at MS8 is permanently disabled due to availability of spare parts to repair what is now obsolescent recloser technology. Additionally, the existing FaultMaster protection relays are themselves obsolescent and require attention. Over at Paris MS13, extensive damage to the throat caused by a fire in 2019 was temporarily repaired by substation crews but the overall condition of what will be a 57 year old station in 2024 will require continual monitoring for further signs of degradation.

The *Distribution System Plan* attempts to resolve this uncertainty by tabling a paced level of investment in this area that will allow the utility to successfully renew critical infrastructure assets that are vital to the resiliency and reliability of the distribution system. It is conceivable that certain planned investments as stated in section **5.4.3.2 A.1** may need to be re-visited and altered, in both their timing and quantum, as we continue to closely monitor the deteriorating condition of municipal substation Paris MS13.

Safety (5.4.3.2 B.2)

Worker and public safety will be improved by virtue of ensuring distribution system asset replacements/refurbishments are designed/constructed to conform to present CSA C22.3 No.1 standards; Ontario Regulation 22/04, IEEE Std 80 and GSHI Construction Verification Program.

All pad-mounted equipment will specify dead-front bushings, which has the effect of reducing overall electric clearances in the station and also improved worker safety.

In an increasingly complex operational environment, microprocessor-based digital relays can be programmed in a myriad of ways to ensure that the distribution system components, workers and public are properly protected in the event of an abnormal condition on the distribution system that are not possible with conventional electromechanical relays.

Cyber Security, Privacy (5.4.3.2 B.3)

With the introduction of the Ontario Cyber Security Framework (OCSF), GSHI has focused efforts to implement these controls with use of a Written Information Security Program (WISP). The WISP focuses policies that cover all controls of the OCSF. These policies are then put into practice with GSHI's Cyber Security Standardized Operation Procedures (CSOP). All controls in the OCSF are expected to be at Maturity Indicator Level 1 or higher within the next year.

Co-ordination, Interoperability (5.4.3.2 B.4)

To stay current with industry standards, the station protection and control equipment and philosophy needs to be upgraded. Relay replacements are be driven by System Operator requirements for increased distribution system awareness due to the proliferation of renewable energy generation connections and the need for system protective equipment to continue to function dependably and reliably due the presence of these sources.

The investment will allow us replace the old and outdated relay protection technology with modern microcontroller-based technology that is more reliable, faster and safer for the operation and control of both substation transformer and feeders as compared with conventional electro-mechanical relays. These new relays are more capable in detecting faults on the system and isolate them in a few milliseconds to reduce probability of damage to customers' electrical installations. Recording of power systems parameters such as voltage, current, frequency and harmonics through these relays provides a detailed picture of the system demand and power quality. Preventive maintenance on the feeders and transformers will become easier with the yearly records of harmonics and losses.

The replacement of old SCADA RTUs with a new device that runs on the latest secure communication protocol over fiber network will increase the reliability and efficiency in control and operation of the substation network. These new technology relays and SCADA RTUs are IEC-61850 compatible which is a major feature from the point of grid modernization. The investment will facilitate accurate data on load that will allow for increasing numbers of connection requests, either from load and/or generation, to Marttila MS8.

Protection and control schemes programming will be highly flexible to accommodate new additions of the distributed generation in the network and thus help promote green energy generation.

Environmental Benefits (5.4.3.2 B.5)

Not Applicable

Conservation and Demand Management (5.4.3.2 B.6)

Not Applicable

C. Category-Specific Requirements for Each Project/Activity

Asset Performance-related Operational Targets and Asset Lifecycle Optimization Policies and Practices (5.4.3.2 SR–C.1a)

The proposed investment aims to target assets proactively whose condition has deteriorated to the extent that prudent measures must be taken to safeguard the performance of the system and the public welfare.

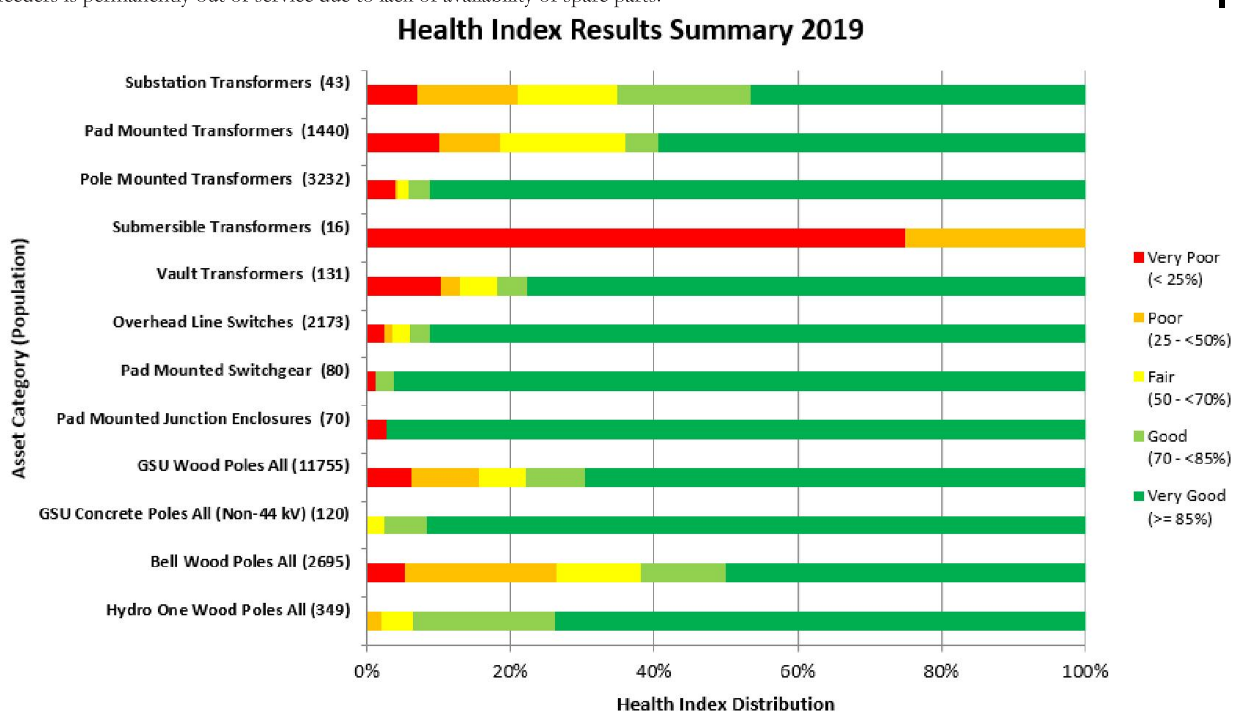
As part of its asset lifecycle policies and practices, GSHI seeks to ensure smooth (paced) investment to address the pool of assets who, as a result of their *effective age,* increases the probability that an unplanned failure of the asset(s) could occur. As part of the levelized replacement plan shown below, wood poles require the most attention in terms of quantities of assets to be addressed.

Flagged for Action Plan - Levelized											
Asset Category	Year										
	0	1	2	3	4	5	6	7	8	9	10

Substation Transformers	5	0	1	0	0	2	0	1	0	0	0
Pad Mounted Transformers	49	49	49	42	42	42	29	29	28	28	28
Pole Mounted Transformers	18	18	18	18	18	18	19	19	19	19	19
Submersible Transformers	2	2	2	1	1	1	1	1	1	1	1
Vault Transformers	4	4	4	5	5	5	6	6	6	6	6
Overhead Line Switches	21	21	21	23	23	23	28	28	27	27	27
Pad Mounted Switchgear	1	0	0	0	0	0	1	1	1	1	1
Pad Mounted Junction Enclosures	1	0	0	0	0	0	0	0	0	0	0
GSU Wood Poles	233	233	233	225	225	225	209	209	187	187	187
GSU Concrete Poles	12	12	12	10	10	10	6	6	5	5	5
Bell Wood Poles	90	90	90	87	87	87	81	81	71	71	71
Hydro One Wood Poles	1	1	1	2	2	2	3	3	4	4	4

Information on the Condition of the Assets Relative to their Typical Life-Cycle and Performance Records (5.4.3.2 SR–C.1b)

At 57 years old, and with a 'Typical Useful Life' (TUL) of 45 years, the existing power transformer asset 8T1 located at Marttila MS8 is due for immediate proactive replacement. With a calculated *Health Index* score of 40.6 ("Poor"), 8T1 is in a three-way tie for 6th worst condition, according to the Kinectrics ACA report. Additionally, the station is replete with obsolescent technology and one of the three distribution feeders is permanently out of service due to lack of availability of spare parts.



Number of Customers (in each customer class) Potentially Affected by the Failure of the Assets (5.4.3.2 SR-C.1c)

Feeder	# of Customers		
	Residential	**Small Commercial**	**Large Commercial**
8F1	65	16	4

8F2	348	17	4
8F3	505	11	9

Quantitative Customer Impacts with Associated Risk Level(s) (5.4.3.2 SR-C.1d)

Completion of the project will provide GSHI the capability to provide reliable electricity supply with sufficient capacity to accommodate load/REG expansion in the south end of the City of Greater Sudbury and, further, supports the needed investment that addresses the poor condition and resultant Health Index (HI) of the existing power transformer asset 8T1 located at MS8. Existing customers will benefit from more reliable electricity supply provided by the replacement of the existing degraded power transformer unit. Future customers will benefit from the increased capacity to serve load/generation provided by the new unit that will help to accommodate any new expansion in the area.

- Reduction in relative proportion of assets with "Very Poor" or "Poor" Health Index (HI) results
- Improved reliability of service
- Improved ability to expediently connect prospective load and/or REG requests

Qualitative Customer Impacts with Associated Risk Level(s) (5.4.3.2 SR-C.1e)

The rebuild of the Marttila M11 8T1 will be designed to mitigate the impact of unplanned asset replacements by using replacement metric(s) that are selective and consider the following qualitative factor(s):

- customer satisfaction
- public safety
- paced asset replacement

This prospective investment will help to ensure that there are sufficient funds available to procure needed equipment to enact important repairs to substation assets at Marttila MS8. Customers have repeatedly demonstrated that they expect high service reliability and are not tolerant of longer duration outages. By enacting a paced, proactive project schedule for the replacement of power system transformers, GSHI seeks to mitigate the high consequence cost associated with the unplanned failure of these critical items and improve overall customer satisfaction (and safety) with this investment.

Value of Customer Impact in Terms of Characteristics of Customers Potentially Affected by Failure that have a Bearing on the Criticality and/or Cost of Failure (5.4.3.2 SR-C.1f)

The proposed investment to rebuild the 8T1 at Marttila MS8 will locally impact residential-class customers but will also positively impact quite a few GS > 50kW customers. The 'value' of reliable electricity service can be quite different between classes of customer. In general, there is a lower 'consequence of failure' for a residential customer compared with a GS < 50kW customer. The same is true of a GS > 50kW customer. For commercial customers, any outage, even momentary, can have a real impact on sales and profitability. In particular, an unplanned outage due to a failed 8T1 would affect service reliability to several schools, a medical research laboratory, hotels and a number of large apartment buildings.

An evaluation of criticality and/or cost of failure as it pertains to a particular asset (or group of assets) is employed by the Engineering Dept to determine the suitability of undertaking a construction project to address a deteriorated/underperforming asset (or group of assets).

Other Factors that may Affect Timing and Priority of Project (5.4.3.2 SR-C.2)

The prospective investment to replace the 8T1 at Marttila MS8 is the most important priority project for 2023 and will not be deferrable. However, as was discussed above in **5.4.3.2 B.1d,** these plans may have to be re-visited/re-evaluated and are contingent on the outcome of ongoing condition monitoring of municipal substation Paris MS13.

Consequences for System O&M Costs (5.4.3.2 SR-C.3)

The investment to retire the existing power transformer unit 8T1 at Marttila MS8 will improve the reliability of electrical supply by reducing the probability (and the consequence cost) of an unplanned outage event caused by failure of old equipment. Older transformers (> 50 years) are more prone to failure from lighting strikes and short circuit events, because the internal insulation becomes brittle over time and the support structures weaken, losing resilience to being able to withstand normal stressful event. Thus, oil needs to be sampled more frequently and results inspected to detect any further degradation of the DGA results and underlying condition of the power transformer.

Impact on Reliability and/or Safety Factors (5.4.3.2 SR-C.4)

The prospective investment will positively affect both of the recorded duration and frequency-related outage indices (i.e. SAIDI/SAIFI & $SAIDI_5$ /$SAIFI_5$) as well as public safety. Equipment performance, as a critical controllable parameter, has contributed 13% of system interruption minutes and 25% of the total recorded service interruptions over the period 2014-2018.

Scheduling the timely replacement of ageing distribution system assets prior to asset failure will minimize the consequence cost of equipment failure and will specifically reduce customer outages associated with distribution system equipment failures. Further, a

coordinated effort to address the replacement/refurbishment of the asset will enable a controlled approach to repair that will minimize service interruption to customers. - Highly sensitive ground fault detection algorithm makes it easy to identify and isolate the high impedance ground faults caused by breaking of power line conductors. This will result in the ability to clear such faults immediately and increase both public and power system safety; - Remote access of the substation relays will reduce truck rolls/travel time for line crew; - Highly sophisticated protection, control and SCADA technology will help coordinate the protection schemes so as to accommodate many customers with safe operation; - Faster data transfer through fiber optic network by SCADA RTU at the substation will help increase the efficiency of operation and control for GSHI; - Faster detection and clearing of faults will maintain and/or improve SAIDI/SAIDI5, SAIFI/SAIFI5 reliability indices; and - Enhanced capability to integrate with newer distributed energy generation technologies which will result in greater control over power quality and demand side management.
Analysis of Project Benefits and Costs Comparing Alternatives to the Timing of the Proposed Project (where applicable and/or reasonable variation and/or uncertainty in the above factors exists) (5.4.3.2 SR-C.5)
Failure to complete the project will expose the utility to increased risk of spending reactively to address outages and/or events affecting the reliability of the distribution system in this area that would have otherwise been eliminated and/or reduced had we proceeded in a timely fashion with the initial planned investment. As previously mentioned in section **5.4.3.2 B.1d,** it is conceivable that certain planned investments as stated in section **5.4.3.2 A.1** may need to be re-visited and altered, in both their timing and quantum, as we continue to closely monitor the deteriorating condition of municipal substation Paris MS13. However, if a decision to delay the rebuild of Marttila MS8 until 2024 becomes necessary as a result of unacceptable deterioration of asset condition over at Paris MS13, GSHI does not anticipate that the costs to rebuild MS8 will escalate in a meaningful way.
Like for Like Renewal Analysis, Alternative Project Design Comparisons (5.4.3.2 SR-C.6)
The above can be considered like for like renewal where the project is solely configured to meet the requirement.

Attachment 2 (of 5):

4-Staff-34 Attachent 2: Dash MS19

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Capital Expenditures 2025-2029

Project Title:	2025 System Renewal – Dash MS19	**Project Number:**	2025 – A1; 2026 – A4; 2027 – N/A; 2028 – A1
Project Coordinator:	Phil Guido/Kyle England	**Investment Category:**	*System Renewal*
Last Updated:	October 8, 2024	**Investment Driver:**	*Assets/asset systems at end of service life*

A. General Information

Cost (Capital and O&M) 5.4.2.1.1.1 A.1	Capital		(O & M)		Total
Year	Budget	Actual	Budget	Actual	
2025	1,303,893				1,303,893
2026	495,053				495,053
2027	0				0
2028	1,303,893				1,303,893
Totals	$3,102,839				$3,102,839

Customer Attachments and Load (5.4.2.1.1.1 A2)

Dash MS19 – Rated 40.0/53.2/66.6 MVA; Peak 24.97MVA

a) 19F1
1,570 customer attachments
b) 19F2
878 customer attachments
c) 19F3
1,355 customer attachments
d) 19F4
388 customer attachments
e) 19F5
179 customer attachments
f) 19F6
73 customer attachments
g) 19F7
771 customer attachments
h) 19F8
55 customer attachments
i) 19F9
986 customer attachments

Station	Feeder Designation	Peak Feeder Current (Amperes)	Planning Criteria Loading (Amperes)	% of Planning Criteria Loading
Dash MS19	19F1	241	300	80.43%

	19F2	179	300	59.52%
	19F3	252	300	83.86%
	19F4	66	300	22.16%
	19F5	290	300	96.55%
	19F6	126	300	42.01%
	19F7	264	300	87.93%
	19F8	263	300	87.68%
	19F9	176	300	58.74%

Start Date (5.4.2.1.1.1 A.3)	**January 1, 2025**	**In Service Date (5.4.2.1.1.1 A.4)**	**December 31, 2028**

Risk Identification and Mitigation (5.4.2.1.1.1 A.5)

Scheduling Risk:

The work execution process considers project dependencies, labour and material constraints as well as externally driven deadlines. A work execution plan is jointly developed by the Engineering and Operations Departments with input from Stores/Procurement and Control Room personnel. Development of plans and performance of work are completed in accordance with the relevant provisions of the ISO 9001/18001 standards to which GSHI's *Management System* is based.

Procurement Risk:

The cost of station components, civil development, and station construction contractors has sharply escalated post-pandemic. Equipment deliveries have also been hampered by unusually high demand. Contractors are having challenges in attracting and retaining qualified staff. All these factors are increasing the cost and timelines for building or replacing existing substations. GSHI's asset management process recognizes these risks and resolves to proceed with critical substation investments employing a multi-year project timeline.

Comparative Information on Expenditures for Equivalent Projects/Activities (5.4.2.1.1.1 A.6)

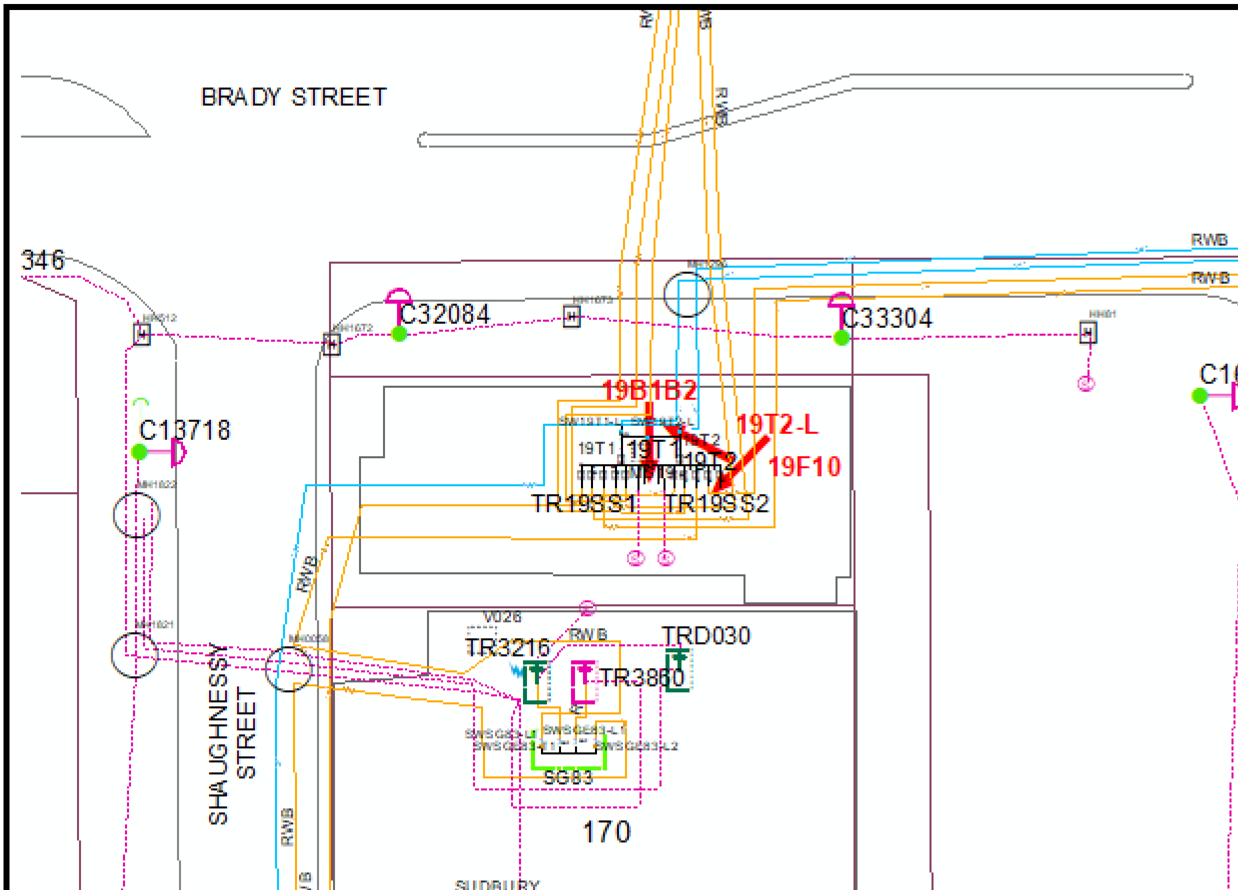
Cressey MS3 (2021): $4,750,994

This investment was part of a larger project that converted a total of 10,125 customers (26.55 MW of load) over a 5-year period from the existing 4.16kV distribution system to a 12.47kV distribution system at locations throughout GSHI's contiguous service territory in the City of Sudbury. The existing 4.16kV system was over 60 years old where the oldest transformer was 64 years old. The distribution system had reached the end of its useful life and the availability of spare parts was an issue. The renewal of two municipal stations (MS2 and MS3), along with the removal of three municipal stations (MS9, MS12 and MS14) is expected to significantly improve the reliability of the existing electricity supply with the system converted to the higher voltage.

Renewable Energy Generator (REG) Investment Details, including Capital and OM&A Costs (5.4.2.1.1.1 A.7)

This investment is not designed to directly impact REG connection capability. However, the investment will permit construction activities that will strengthen the existing legacy system underlying capability to connect additional REG capacity.

Attach Images, Drawings or Other Reference Items



B. Evaluation Criteria and Information Requirements for Each Project/Activity

Efficiency, Customer Value & Reliability – Investment Main/Secondary Drivers (Triggers) (5.4.2.1.1.1 B.1a)

Main Driver: System Renewal

- Maintaining/improving system reliability by proactively scheduling the timely replacement of ageing critical assets prior to failure (minimize consequence cost of equipment failure);
- Safety: Worker and public safety will be improved by virtue of ensuring distribution system asset replacements/refurbishments are designed/constructed to conform with present CSA C22.3 No.1 standards; Ontario Regulation 22/04 and GSHI Construction Verification Program;

Efficiency, Customer Value & Reliability – Demonstrate how investment addresses existing reliability performance concerns and is capable of adapting to future challenges (e.g., grid modernization and climate change) (5.4.2.1.1.1 B.1b)

The prospective investment in 2025 serves to re-wind and re-install the existing power transformer 19T1 located at Dash MS19, which failed in 2023. Further, the sister transformer 19T2, which is itself of a similar vintage (47 years old), and past its TUL, is scheduled to be replaced with expenditures paced over the period 2026-2028, at which point it will become a system spare for this station. Dash MS19 is the most heavily loaded station in GSHI's service territory and is soon expected to be the main source for the revitalization of the City of Sudbury Downtown area. All prospective investments are expected to maintain and/or improve SAIDI/SAIDI5; SAIFI/SAIFI5 reliability indices while providing GSHI's Control Room greater operational flexibility to plan for quick restoration of service after an outage event.

Efficiency, Customer Value & Reliability – Priority of the Investment (5.4.2.1.1.1 B.1c)

With reference to the 'Capital Project Scoring' discussion in Section 5.3.1.1 (b), these investments have an average score of 3.87 out of 5 and have been assigned a priority 1 (2025), 1 (2026), N/A (2027), and 2 (2028) during the forecast period in the Capital Expenditure Plan.

Efficiency, Customer Value & Reliability – Quantitative/Qualitative Analyses on Design, Scheduling, Funding and/or Ownership Options (5.4.2.1.1.1 B.1d)

Whenever possible, the bundling of drivers to substantiate a prospective investment strives to ensure that the timing of construction activities provides the highest possible value for our customers (e.g., avoiding re-work costs by delaying prospective *System Renewal* activities until there is an accompanying *System Service* or *System Access* driver that stacks additional value).

Due to their comparatively high level of risk, substation-related *System Renewal* investments are ascribed the highest possible priority and must be addressed proactively in the *Capital Expenditure Plan*.

Safety (5.4.2.1.1.1 B.2)

The Lakeside Power Consulting Condition Assessment Report classifies the current overall public safety risk rating as 'green' for both the 19T1 and the 19T2 side of Dash MS19. Further, the Report classifies the current worker safety risk rating as 'green' for each side.

Cyber Security, Privacy (5.4.2.1.1.1 B.3)

With the introduction of the Ontario Cyber Security Framework (OCSF), GSHI has focused efforts to implement these controls with use of a Written Information Security Program (WISP). The WISP focuses policies that cover all controls of the OCSF. These policies are then put into practice with GSHI's Cyber Security Standardized Operation Procedures (CSOP).

Co-ordination, Interoperability (5.4.2.1.1.1 B.4)

Not Applicable

Environmental Benefits (5.4.2.1.1.1 B.5)

Not Applicable

Conservation and Demand Management (5.4.2.1.1.1 B.6)

Not Applicable

C. Category-Specific Requirements for Each Project/Activity

Asset Performance-related Operational Targets and Asset Lifecycle Optimization Policies and Practices (5.4.2.1.1.1 SR–C.1a)

GSHI's policy for asset lifecycle optimization is focused on minimizing the total cost of asset ownership through efficient investment in infrastructure and management of corporate risks while providing excellence in service delivery. This is achieved by employing leading asset management practices, which include:

- Enhancing asset performance through implementation of effective maintenance practices that meet or exceed current DSC requirements;
- Risk-based prioritization both within and across investment portfolios;
- Optimizing the balance between capital and maintenance expenditures; and
- Pacing annual investments to avoid expenditure "peaks" and "troughs"

Information on the Condition of the Assets Relative to their Typical Life-Cycle and Performance Records (5.4.2.1.1.1 SR–C.1b)

With a calculated *Health Index* score of 72 ("Poor"), the condition of the 19T1 side of municipal substation Dash MS19 rates as the 18th worst in its asset population, according to the Lakeside Power Consulting Condition Assessment Report. However, the 19T1 power transformer itself failed in 2023 and is currently out-of-service and is being re-wound. The transformer oil analysis showed low dielectric and signs of gassing prior to its failure. Meanwhile, with the calculated *Health Index* score of 76 ("Good",) the condition of the 19T2 side of municipal substation Dash MS19 rates as the 21st worst in its asset population.

T1 Color Score:	Red	Poor
T1 Points Score:	72*	Poor
T2 Color Score:	Yellow	Average
T2 Points Score:	76	Good

Number of Customers (in each customer class) Potentially Affected by the Failure of the Assets (5.4.2.1.1.1 SR-C.1c)

Feeder	# of Customers		
	Residential	Small Commercial	Large Commercial
19F1	1,490	73	7
19F2	758	110	10

19F3	1,293	57	5
19F4	349	36	3
19F5	30	139	10
19F6	24	38	11
19F7	520	226	25
19F8	3	47	5
19F9	919	63	4

Quantitative Customer Impacts with Associated Risk Level(s) (5.4.2.1.1.1 SR-C.1d)

Completion of the project will provide GSHI the capability to provide reliable electricity supply with sufficient capacity to accommodate load/REG expansion in the downtown area of the City of Sudbury. Future customers will benefit from the increased capacity to serve load/generation provided by the new unit that will help to accommodate any new expansion in the area.

- Reduction in relative proportion of assets with "Very Poor" or "Poor" Health Index (HI) results
- Improved reliability of service
- Improved ability to expediently connect prospective load and/or REG requests

Qualitative Customer Impacts with Associated Risk Level(s) (5.4.2.1.1.1 SR-C.1e)

The installation of power transformers at municipal substation Dash MS19 will be designed to mitigate the impact of unplanned asset replacements by using replacement metric(s) that are selective and consider the following qualitative factor(s):

- customer satisfaction
- public safety
- paced asset replacement

This prospective investment will help to ensure that there are sufficient funds available to procure needed equipment to enact important repairs to substation assets at Dash MS19. Customers have repeatedly demonstrated that they expect high service reliability and are not tolerant of longer duration outages. By enacting a paced, proactive project schedule for the replacement of power system transformers, GSHI seeks to mitigate the high consequence cost associated with the unplanned failure of these critical items and improve overall customer satisfaction (and safety) with this investment.

Value of Customer Impact in Terms of Characteristics of Customers Potentially Affected by Failure that have a Bearing on the Criticality and/or Cost of Failure (5.4.2.1.1.1 SR-C.1f)

An evaluation of criticality and/or cost of failure as it pertains to a particular asset (or group of assets) is employed by the Engineering Dept to determine the suitability of undertaking a construction project to address a deteriorated/underperforming asset (or group of assets). The proposed investment to install power transformers at Dash MS19 will locally impact residential-class customers but will also positively impact commercial customers. The 'value' of reliable electricity service can be quite different between classes of customer. In general, there is a lower 'consequence of failure' for a residential customer compared with a GS < 50kW customer. The same is true of a GS > 50kW customer. For commercial customers, any outage, even momentary, can have a real impact on sales and profitability. Within its service area, an unplanned outage due to the failure of a major substation component would affect service reliability to the local downtown area, which includes emergency services (i.e., police, fire, etc.), the offices of municipal government, businesses, and residential customers. As the most heavily loaded substation in GSHI's service territory, any disturbance to the provision of electricity service will have a large impact on service reliability and customer satisfaction.

Other Factors that may Affect Timing and Priority of Project (5.4.2.1.1.1 SR-C.2)

The prospective investments to refurbish the power transformer assets located at Dash MS19 are the most important priority for each of the year 2025 and 2026 and are the second highest priority in 2028. These investments are not deferrable.

Consequences for System O&M Costs (5.4.2.1.1.1 SR-C.3)

Proactive, planned refurbishment and/or removal of both distribution system and substation assets exhibiting poor health index scoring is anticipated to help minimize future O&M costs. O&M costs are inversely correlated with declining asset condition; therefore, GSHI anticipates a reduction in future O&M costs as these low-HI assets are replaced proactively through a paced *System Renewal* portfolio of investments.

Impact on Reliability and/or Safety Factors (5.4.2.1.1.1 SR-C.4)

As an integral input to the asset management process, reliability assessments are extremely helpful in prioritizing project spending, particularly in the *System Renewal* category. An asset (or asset class) with a known history of poor reliability performance will be prioritized for replacement/refurbishment as compared to an asset (or asset class) that exhibits a lower risk (and thus consequence cost) of failure. These prospective investments are expected to positively affect both the duration and frequency-related outage indices (i.e., SAIDI/SAIFI & $SAIDI_5$ /$SAIFI_5$) as well as public safety. Equipment performance, as a critical controllable parameter, has contributed 37% of system interruption minutes and 41% of the total recorded service interruptions over the period 2019-2023. Scheduling the timely replacement of ageing distribution system assets prior to asset failure will minimize the consequence cost of equipment failure and will specifically reduce customer outages associated with distribution system equipment failures. Further, a coordinated effort to address the replacement/refurbishment of the asset will enable a controlled approach to repair that will minimize service interruption to customers.
Analysis of Project Benefits and Costs Comparing Alternatives to the Timing of the Proposed Project (where applicable and/or reasonable variation and/or uncertainty in the above factors exists) (5.4.2.1.1.1 SR-C.5)
Failure to complete the project will expose the utility to increased risk of spending reactively to address outages and/or events affecting the reliability of the distribution system in this area that would have otherwise been eliminated and/or reduced had we proceeded in a timely fashion with the initial planned investment. A delay in replacing/refurbishing distribution system assets that rate poorly based on the above criteria could result in the erosion of distribution system reliability performance. Further, the ability to back up other faulted feeders may be compromised if equipment condition is allowed to degrade any more. Failure to address these assets may lead to an inability of the Control Room to re-route power in the event of an outage, thereby increasing average outage duration(s). Finally, it is imperative that sufficient, reliable capacity exists in the downtown area of the City of Sudbury to expediently provide service to both the expected residential and commercial development that the local government is attempting to foster in this area of GSHI's service territory.
Like for Like Renewal Analysis, Alternative Project Design Comparisons (5.4.2.1.1.1 SR-C.6)
The above can be considered like for like renewal where the project is solely configured to meet the requirement.

Attachment 3 (of 5):

4-Staff-34 Attachment 3: Upper Coniston MS31

Greater Sudbury Hydro Inc
Hydro du Grand Sudbury Inc
A GSU company
empowering communities
le pouvoir aux communautés

Capital Expenditures 2025-2029

Project Title:	2026 System Renewal – Upper Coniston MS31	**Project Number:**	2025 – A2, A5; 2026 – A1
Project Coordinator:	Phil Guido/Kyle England	**Investment Category:**	*System Renewal*
Last Updated:	October 8, 2024	**Investment Driver:**	*Assets/asset systems at end of service life*

A. General Information

Cost (Capital and O&M) 5.4.2.1.2.1 A.1	**Capital**		**(O & M)**		**Total**
Year	Budget	Actual	Budget	Actual	
2025	480,000				480,000
2026	3,170,000				3,170,000
Totals	$3,650,000				$3,650,000

Customer Attachments and Load (5.4.2.1.2.1 A2)

Upper Coniston MS31 – Rated 3 MVA; Peak: 2.20 MVA

a) 31F1

204 customer attachments

b) 31F2

77 customer attachments

Station	Feeder Designation	Peak Feeder Current (Amperes)	Planning Criteria Loading (Amperes)	% of Planning Criteria Loading
Upper Coniston MS31	31F1	244	300	81.33%
	31F2	202	300	67.33%

Start Date (5.4.2.1.2.1 A.3)	**January 1, 2025**	**In Service Date (5.4.2.1.2.1 A.4)**	**December 31, 2026**

Risk Identification and Mitigation (5.4.2.1.2.1 A.5)

<u>Scheduling Risk:</u>
The work execution process considers project dependencies, labour and material constraints as well as externally driven deadlines. A work execution plan is jointly developed by the Engineering and Operations Departments with input from Stores/Procurement and Control Room personnel. Development of plans and performance of work are completed in accordance with the relevant provisions of the ISO 9001/18001 standards to which GSHI's *Management System* is based.

<u>Procurement Risk:</u>
The cost of station components, civil development, and station construction contractors has sharply escalated post-pandemic. Equipment deliveries have also been hampered by unusually high demand. Contractors are having challenges in attracting and retaining qualified staff. All these factors are increasing the cost and timelines for building or replacing existing substations. GSHI's asset management process recognizes these risks and resolves to proceed with critical substation investments employing a multi-year project timeline.

Comparative Information on Expenditures for Equivalent Projects/Activities (5.4.2.1.2.1 A.6)

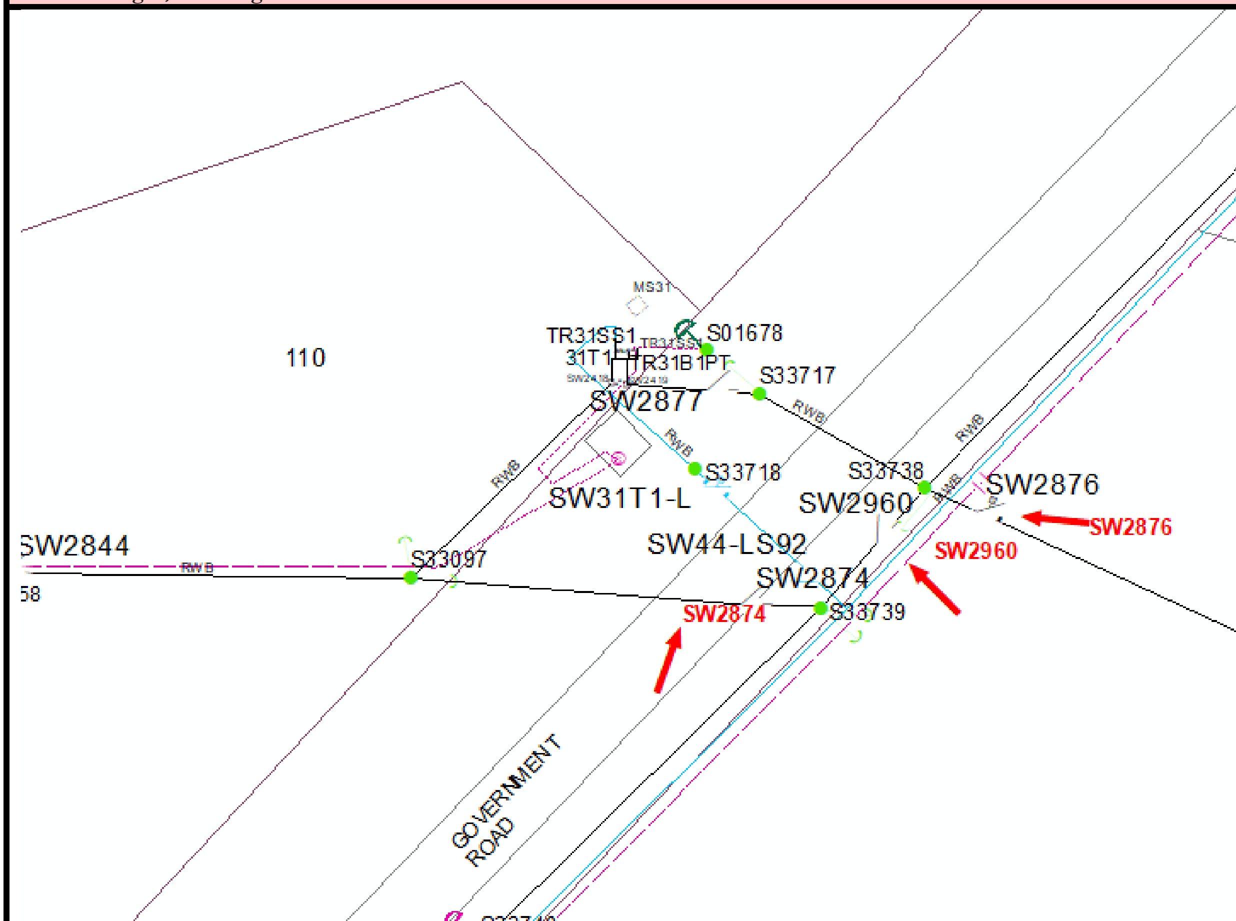
Cressey MS3 (2021): $4,750,994

This investment was part of a larger project that converted a total of 10,125 customers (26.55 MW of load) over a 5-year period from the existing 4.16kV distribution system to a 12.47kV distribution system at locations throughout GSHI's contiguous service territory in the City of Sudbury. The existing 4.16kV system was over 60 years old where the oldest transformer was 64 years old. The distribution system had reached the end of its useful life and the availability of spare parts was an issue. The renewal of two municipal stations (MS2 and MS3), along with the removal of three municipal stations (MS9, MS12 and MS14) is expected to significantly improve the reliability of the existing electricity supply with the system converted to the higher voltage.

Renewable Energy Generator (REG) Investment Details, including Capital and OM&A Costs (5.4.2.1.2.1 A.7)

This investment is not designed to directly impact REG connection capability. However, the investment will permit construction activities that will strengthen the existing legacy system underlying capability to connect additional REG capacity.

Attach Images, Drawings or Other Reference Items



B. Evaluation Criteria and Information Requirements for Each Project/Activity

Efficiency, Customer Value & Reliability – Investment Main/Secondary Drivers (Triggers) (5.4.2.1.2.1 B.1a)

Main Driver: System Renewal

- Maintaining/improving system reliability by proactively scheduling the timely replacement of ageing critical assets prior to failure (minimize consequence cost of equipment failure);
- Safety: Worker and public safety will be improved by virtue of ensuring distribution system asset replacements/refurbishments are designed/constructed to conform with present CSA C22.3 No.1 standards; Ontario Regulation 22/04 and GSHI Construction Verification Program;

Efficiency, Customer Value & Reliability – Demonstrate how investment addresses existing reliability performance concerns and is capable of adapting to future challenges (e.g., grid modernization and climate change) (5.4.2.1.2.1 B.1b)

As part of this prospective investment, the existing power transformer assets located at Upper Coniston MS31 will be upgraded from their present rating of 3MVA. The design will be comprised entirely of underground, pad-mounted structures and will be fully weather-protected. The investment will also allow for increasing numbers of connection requests, either from load and/or generation, to the

13F1, 13F2 and 13F3 distribution feeders. The prospective investment is expected to maintain and/or improve SAIDI/SAIDI5; SAIFI/SAIFI5 reliability indices while providing GSHI's Control Room greater operational flexibility to plan for quick restoration of service after an outage event.

Efficiency, Customer Value & Reliability – Priority of the Investment (5.4.2.1.2.1 B.1c)

With reference to the 'Capital Project Scoring' discussion in Section 5.3.1.1 (b), this investment has a score of 3.7 out of 5 and has been assigned the highest priority in the 2026 Capital Expenditure Plan.

Efficiency, Customer Value & Reliability – Quantitative/Qualitative Analyses on Design, Scheduling, Funding and/or Ownership Options (5.4.2.1.2.1 B.1d)

Whenever possible, the bundling of drivers to substantiate a prospective investment strives to ensure that the timing of construction activities provides the highest possible value for our customers (e.g., avoiding re-work costs by delaying prospective *System Renewal* activities until there is an accompanying *System Service* or *System Access* driver that stacks additional value).
Due to their comparatively high level of risk, substation-related *System Renewal* investments are ascribed the highest possible priority and must be addressed proactively in the *Capital Expenditure Plan*.

Safety (5.4.2.1.2.1 B.2)

The Lakeside Power Consulting Condition Assessment Report classifies the current overall public safety risk rating as 'red' for Upper Coniston MS31. Further, the Report classifies the current worker safety risk rating as 'yellow'.

Section 1: Public Safety – conditions that impact public safety at the station

Area of Concern	Check 1	Check 2	Check 3
Perimeter Security	☐	☐	☒
Fence Grounding and Bonding	☐	☐	☒
Station Yard	☐	☒	☐
~~Station Building~~	☐	☐	☐
Station Setting – Proximity	☒	☐	☐
Station Setting - Encroachments	☒	☐	☐
Overall public safety condition	☐	☐	☒

1 = Acceptable

2 = Some deficiencies

3 = Needs attention soon

Overall Public Safety Risk Rating	**Green**	**Purple**	**Yellow**	**Orange**	**Red**
	20+ Years	11-20 years	4-10 years	2-3 years	1 year
	☐	☐	☐	☐	☒

Section 2: Worker Safety – conditions that impact worker safety at the station:

Area of Concern	Check 1	Check 2	Check 3
Grounding and Bonding	☐	☐	☒
Safe limits of approach	☐	☒	☐
Working clearances	☒	☐	☐
Switching access difficult	☒	☐	☐
Multiple sources of voltage	☒	☐	☐
Porcelain	☒	☐	☐
Operational Issues	☐	☒	☐
Maintenance Issues	☒	☐	☐
Overall worker safety condition	☐	☒	☐

1 = Acceptable

2 = Some deficiencies

3 = Needs attention soon

Maintenance issues that can be quickly rectified may be eliminated from risk assessment.

Overall Worker Safety Risk Rating	Green	Purple	Yellow	Orange	Red
	20+ Years	11-20 years	4-10 years	2-3 years	1 year
	☐	☐	☒	☐	☐

Cyber Security, Privacy (5.4.2.1.2.1 B.3)

With the introduction of the Ontario Cyber Security Framework (OCSF), GSHI has focused efforts to implement these controls with use of a Written Information Security Program (WISP). The WISP focuses policies that cover all controls of the OCSF. These policies are then put into practice with GSHI's Cyber Security Standardized Operation Procedures (CSOP).

Co-ordination, Interoperability (5.4.2.1.2.1 B.4)

The replacement of old SCADA RTUs with a new device that runs on the latest secure communication protocol over fiber network will increase the reliability and efficiency in control and operation of the substation network. Thes SCADA RTUs are IEC-61850 compatible which is a major feature from the point of grid modernization. The investment will facilitate accurate data on load that will allow for increasing numbers of connection requests, either from load and/or generation, to Upper Coniston MS31.

Protection and control schemes programming will be highly flexible to accommodate new additions of the distributed generation in the network and thus help promote green energy generation.

Environmental Benefits (5.4.2.1.2.1 B.5)

A significant environmental concern with Upper Coniston MS31 is that in the event of a catastrophic failure of a power transformer, it is possible that a large quantity of transformer oil may be released outside of the station in the surrounding environment. This poses a significant environmental risk. Currently, this station does not have oil containment. With this prospective investment, proactive replacement of the critical power transformer asset seeks to reduce the probability of a catastrophic, unplanned failure event.

B. Factors that may impact the consequences of major equipment failure

Concern	Impact of Consequence					
	L		M		H	
Station setting – proximity	More than 100m	☒	Between 100m and 10m	☐	10m or less	☐
Station setting – watercourses	None	☒	Storm sewers/drains	☐	Open water	☐
Lack of backup supply	<2 hours switching	☒	Between 2 – 24h outage	☐	No backup	☐
Critical loads (hospitals etc)	None	☒	With generators	☐	No generators	☐
Grounding and bonding	Today's code	☐	Some deficiencies	☒	Poor	☐
Oil containment	Yes	☐	Partial	☐	None	☒
Explosion barriers	Yes	☐	Partial	☐	None	☒
Firefighting capability	Hydrants	☐	Storage Tanks	☐	None	☒
Presence of PCB's	None	☒	Storage Only	☐	In-service	☐
Overall equipment condition	**L**	☐	**M**	☒	**H**	☐

Conservation and Demand Management (5.4.2.1.2.1 B.6)

Not Applicable

C. Category-Specific Requirements for Each Project/Activity

Asset Performance-related Operational Targets and Asset Lifecycle Optimization Policies and Practices (5.4.2.1.2.1 SR–C.1a)

GSHI's policy for asset lifecycle optimization is focused on minimizing the total cost of asset ownership through efficient investment in infrastructure and management of corporate risks while providing excellence in service delivery. This is achieved by employing leading asset management practices, which include:

- Enhancing asset performance through implementation of effective maintenance practices that meet or exceed current DSC requirements;
- Risk-based prioritization both within and across investment portfolios;
- Optimizing the balance between capital and maintenance expenditures; and
- Pacing annual investments to avoid expenditure "peaks" and "troughs"

Information on the Condition of the Assets Relative to their Typical Life-Cycle and Performance Records (5.4.2.1.2.1 SR–C.1b)

With a calculated *Health Index* score of 46 ("Poor"), the condition of municipal substation Upper Coniston MS31 rates as the 4th worst in its peer group, according to the Lakeside Power Consulting Condition Assessment Report. The 31T1 power transformers were manufactured in 1971 and are configured in a three-phase bank. and will be 55 years old by the time a replacement unit is ordered and received, which is expected for 2026. The SCADA interface is a Survalent 6CCP4/Scout RTW which is now technically obsolete as the manufacturer no longer supports this product. The overhead structure of the station is leaning towards the road and the 44kV incoming cables. It is recommended in the Report that a structural review be completed as soon as possible. The transformer foundation is failing and requires a structural review.

Assessment

Color Score:	Red	Poor
Points Score:	46	Poor

C. Based on the equipment condition and consequences, state the risk rating for a major equipment failure:

Overall Failure Risk Rating	Green	Purple	Yellow	Orange	Red
	20+ Years	11-20 years	4-10 years	2-3 years	1 year
	☐	☐	☐	☐	☒

Number of Customers (in each customer class) Potentially Affected by the Failure of the Assets (5.4.2.1.2.1 SR-C.1c)

Feeder	# of Customers		
	Residential	Small Commercial	Large Commercial
31F1	171	31	2
31F2	72	5	0

Quantitative Customer Impacts with Associated Risk Level(s) (5.4.2.1.2.1 SR-C.1d)

Completion of the project will provide GSHI the capability to provide reliable electricity supply with sufficient capacity to accommodate load/REG expansion in the downtown area of the City of Sudbury. Future customers will benefit from the increased capacity to serve load/generation provided by the new unit that will help to accommodate any new expansion in the area.

- Reduction in relative proportion of assets with "Very Poor" or "Poor" Health Index (HI) results
- Improved reliability of service
- Improved ability to expediently connect prospective load and/or REG requests

Qualitative Customer Impacts with Associated Risk Level(s) (5.4.2.1.2.1 SR-C.1e)

The rebuild of Upper Coniston MS31 will be designed to mitigate the impact of unplanned asset replacements by using replacement metric(s) that are selective and consider the following qualitative factor(s):

- customer satisfaction
- public safety
- paced asset replacement

This prospective investment will help to ensure that there are sufficient funds available to procure needed equipment to enact important repairs to substation assets at Upper Coniston MS31. Customers have repeatedly demonstrated that they expect high service reliability and are not tolerant of longer duration outages. By enacting a paced, proactive project schedule for the replacement of power system transformers, GSHI seeks to mitigate the high consequence cost associated with the unplanned failure of these critical items and improve overall customer satisfaction (and safety) with this investment.

Value of Customer Impact in Terms of Characteristics of Customers Potentially Affected by Failure that have a Bearing on the Criticality and/or Cost of Failure (5.4.2.1.2.1 SR-C.1f)

An evaluation of criticality and/or cost of failure as it pertains to a particular asset (or group of assets) is employed by the Engineering Dept to determine the suitability of undertaking a construction project to address a deteriorated/underperforming asset (or group of assets). The proposed investment to rebuild municipal substation Upper Coniston MS31 will locally impact residential-class customers but will also positively impact commercial customers. The 'value' of reliable electricity service can be quite different between classes of customer. In general, there is a lower 'consequence of failure' for a residential customer compared with a GS < 50kW customer. The same is true of a GS > 50kW customer. For commercial customers, any outage, even momentary, can have a real impact on sales and profitability. Within its service area, an unplanned outage due to the failure of a major substation component would affect service reliability to many residential customers as well as the main shopping mall and arena in the Town of Coniston. Any disturbance to the provision of electricity service will have a large impact on service reliability and customer satisfaction.

Other Factors that may Affect Timing and Priority of Project (5.4.2.1.2.1 SR-C.2)

The prospective investment to rebuild municipal substation Upper Coniston MS31 is the most important priority in the 2026 Capital Expenditure Plan. This investment is not deferrable.

Consequences for System O&M Costs (5.4.2.1.2.1 SR-C.3)

Proactive, planned refurbishment and/or removal of both distribution system and substation assets exhibiting poor health index scoring is anticipated to help minimize future O&M costs. O&M costs are inversely correlated with declining asset condition; therefore, GSHI anticipates a reduction in future O&M costs as assets are replaced proactively through a paced *System Renewal* portfolio of investments.

Impact on Reliability and/or Safety Factors (5.4.2.1.2.1 SR-C.4)

As an integral input to the asset management process, reliability assessments are extremely helpful in prioritizing project spending, particularly in the *System Renewal* category. An asset (or asset class) with a known history of poor reliability performance will be prioritized for replacement/refurbishment as compared to an asset (or asset class) that exhibits a lower risk (and thus consequence cost) of failure.

These prospective investments are expected to positively affect both the duration and frequency-related outage indices (i.e., SAIDI/SAIFI & $SAIDI_5$ /$SAIFI_5$) as well as public safety. Equipment performance, as a critical controllable parameter, has contributed 37% of system interruption minutes and 41% of the total recorded service interruptions over the period 2019-2023. Scheduling the timely replacement of ageing distribution system assets prior to asset failure will minimize the consequence cost of equipment failure and will specifically reduce customer outages associated with distribution system equipment failures. Further, a coordinated effort to address the replacement/refurbishment of the asset will enable a controlled approach to repair that will minimize service interruption to customers.
Analysis of Project Benefits and Costs Comparing Alternatives to the Timing of the Proposed Project (where applicable and/or reasonable variation and/or uncertainty in the above factors exists) (5.4.2.1.2.1 SR-C.5)
Failure to complete the project will expose the utility to increased risk of spending reactively to address outages and/or events affecting the reliability of the distribution system in this area that would have otherwise been eliminated and/or reduced had we proceeded in a timely fashion with the initial planned investment. A delay in replacing/refurbishing distribution system assets that rate poorly based on the above criteria could result in the erosion of distribution system reliability performance. Further, the ability to back up other faulted feeders may be compromised if equipment condition is allowed to degrade any more. Failure to address these assets may lead to an inability of the Control Room to re-route power in the event of an outage, thereby increasing average outage duration(s).
Like for Like Renewal Analysis, Alternative Project Design Comparisons (5.4.2.1.2.1 SR-C.6)
The above can be considered like for like renewal where the project is solely configured to meet the requirement.

Attachment 4 (of 5):

4-Staff-34 Attachment 4: Moonlight MS18

Greater Sudbury Hydro Inc
Hydro du Grand Sudbury Inc
A GSU company

empowering communities
le pouvoir aux communautés

Capital Expenditures 2025-2029

Project Title:	2027 System Renewal – Moonlight MS18	**Project Number:**	2025 – A5; 2026 – A3; 2027 – A1
Project Coordinator:	Phil Guido/Kyle England	**Investment Category:**	*System Renewal*
Last Updated:	October 8, 2024	**Investment Driver:**	*Assets/asset systems at end of service life*

A. General Information

Cost (Capital and O&M) 5.4.2.1.3.1 A.1	Capital		(O & M)		Total
Year	Budget	Actual	Budget	Actual	
2025	330,000				330,000
2026	150,000				150,000
2027	$6,000,000				$6,000,000
Totals	$6,480,000				$6,480,000

Customer Attachments and Load (5.4.2.1.3.1 A2)

Moonlight MS18 – Rated 5.0/6.7 MVA; Peak 4.13MVA

a) 18F1

1,387 customer attachments

b) 18F2

557 customer attachments

c) 18F3

31 customer attachments

Station	Feeder Designation	Peak Feeder Current (Amperes)	Planning Criteria Loading (Amperes)	% of Planning Criteria Loading
Moonlight MS18	18F1	223	300	74.19%
	18F2	Out of Service	300	N/A
	18F3	59	300	19.76%

Start Date (5.4.2.1.3.1 A.3)	**January 1, 2025**	**In Service Date (5.4.2.1.3.1 A.4)**	**December 31, 2027**

Risk Identification and Mitigation (5.4.2.1.3.1 A.5)

Scheduling Risk:
The work execution process considers project dependencies, labour and material constraints as well as externally driven deadlines. A work execution plan is jointly developed by the Engineering and Operations Departments with input from Stores/Procurement and Control Room personnel. Development of plans and performance of work are completed in accordance with the relevant provisions of the ISO 9001/18001 standards to which GSHI's *Management System* is based.

Procurement Risk:
The cost of station components, civil development, and station construction contractors has sharply escalated post-pandemic. Equipment deliveries have also been hampered by unusually high demand. Contractors are having challenges in attracting and retaining qualified

staff. All these factors are increasing the cost and timelines for building or replacing existing substations. GSHI's asset management process recognizes these risks and resolves to proceed with critical substation investments employing a multi-year project timeline.

Construction Risk:

The footprint of the existing substation is too small for the proposed rebuild of Moonlight MS18. The surrounding geology is challenging due to significant presence of rock adjacent to the existing site. With this rebuild project, GSHI will be approaching the City of Greater Sudbury to work collaboratively on siting the station at a mutually beneficial location nearby the existing 9M4 feeder as well as near the location of the expected economic development(s) along this section of the Kingsway Corridor.

Comparative Information on Expenditures for Equivalent Projects/Activities (5.4.2.1.3.1 A.6)

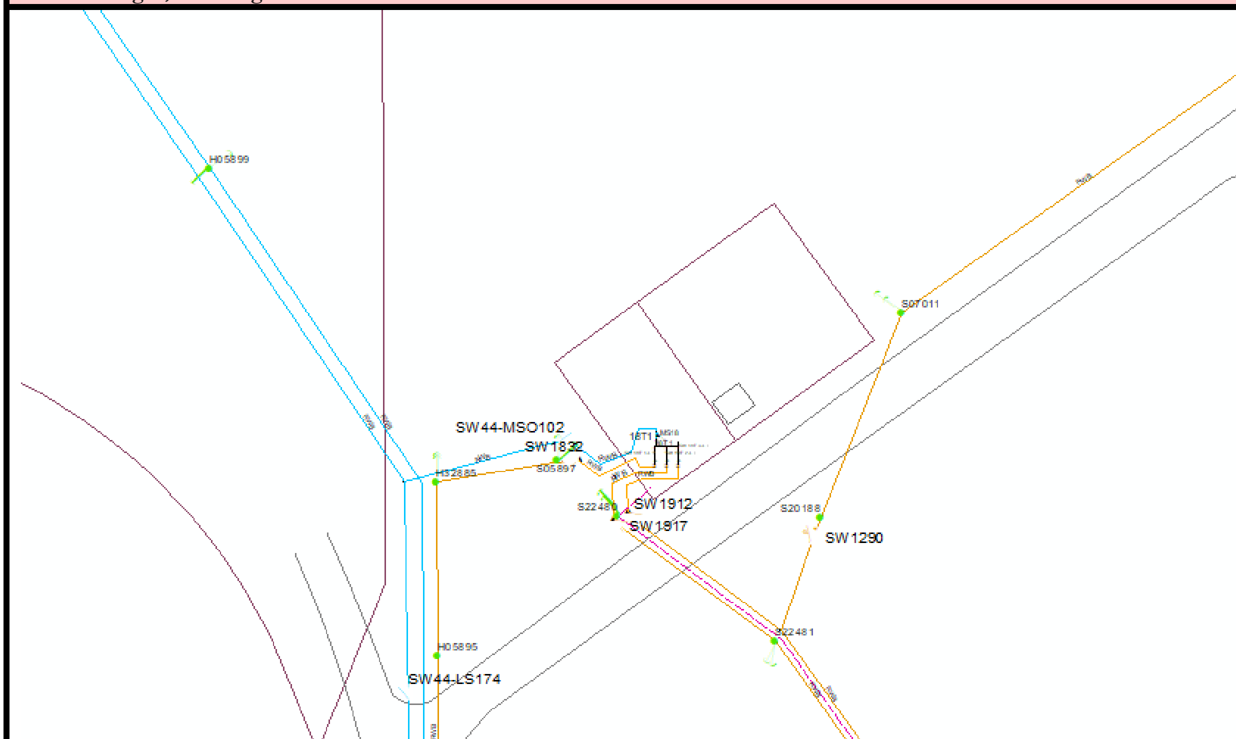
Cressey MS3 (2021): $4,750,994

This investment was part of a larger project that converted a total of 10,125 customers (26.55 MW of load) over a 5-year period from the existing 4.16kV distribution system to a 12.47kV distribution system at locations throughout GSHI's contiguous service territory in the City of Sudbury. The existing 4.16kV system was over 60 years old where the oldest transformer was 64 years old. The distribution system had reached the end of its useful life and the availability of spare parts was an issue. The renewal of two municipal stations (MS2 and MS3), along with the removal of three municipal stations (MS9, MS12 and MS14) is expected to significantly improve the reliability of the existing electricity supply with the system converted to the higher voltage.

Renewable Energy Generator (REG) Investment Details, including Capital and OM&A Costs (5.4.2.1.3.1 A.7)

This investment is not designed to directly impact REG connection capability. However, the investment will permit construction activities that will strengthen the existing legacy system underlying capability to connect additional REG capacity.

Attach Images, Drawings or Other Reference Items



B. Evaluation Criteria and Information Requirements for Each Project/Activity

Efficiency, Customer Value & Reliability – Investment Main/Secondary Drivers (Triggers) (5.4.2.1.3.1 B.1a)

Main Driver: System Renewal

This investment is part of a plan that will proactively address the replacement/refurbishment of vital distribution system assets that are owned and operated by GSHI. In 2024, GSHI contracted Lakeside Power Consulting to perform a Condition Assessment of its substations. The consultant's report provided direction on the implementation of a paced investment program and further recommended action on the part of GSHI that may include a surge of capital spending in station assets, increased maintenance and surveillance and the development of contingency plans. It recommended the development of a long-term forecast to plan for the budgeting and execution of station upgrades/replacement projects. Finally, it noted that the costs and timing of these investments should be coordinated and prioritized with other prospective distribution system investments to provide a long-term plan for all aspects of the distribution system.

In this area, several municipal station assets have experienced peak loading that have either surpassed first level cooling (ONAN; **O**il **N**atural **A**ir **N**atural) or are nearing second level (ONAF; **O**il **N**atural **A**ir **F**orced). Four of these stations are geographically situated to backup each other in the event a system operator requires load to be transferred between districts. They are located along the "Kingsway Corridor", known locally as one of the most important commercial areas in the City of Sudbury. Most of GSHI's historical (and forecast) load growth lies along this vital artery. The investment to renew the 18T1 power transformer will provide GSHI's Control Room greater operational flexibility to manage loads along the corridor.

Efficiency, Customer Value & Reliability – Demonstrate how investment addresses existing reliability performance concerns and is capable of adapting to future challenges (e.g., grid modernization and climate change) (5.4.2.1.3.1 B.1b)

As part of this prospective investment, the existing power transformer 18T1 will be upgraded from its present rating of 5/6.7MVA. The design will be comprised entirely of underground, pad-mounted structures and will be fully weather-protected. The investment will also allow for increasing numbers of connection requests, either from load and/or generation, to the 18F1, 18F2 and 18F3 distribution feeders. The prospective investment is expected to maintain and/or improve SAIDI/SAIDI5; SAIFI/SAIFI5 reliability indices while providing GSHI's Control Room greater operational flexibility to plan for quick restoration of service after an outage event.

Efficiency, Customer Value & Reliability – Priority of the Investment (5.4.2.1.3.1 B.1c)

This investment has been assigned the highest priority in the 2027 Capital Expenditure Plan.

Efficiency, Customer Value & Reliability – Quantitative/Qualitative Analyses on Design, Scheduling, Funding and/or Ownership Options (5.4.2.1.3.1 B.1d)

Whenever possible, the bundling of drivers to substantiate a prospective investment strives to ensure that the timing of construction activities provides the highest possible value for our customers (e.g., avoiding re-work costs by delaying prospective *System Renewal* activities until there is an accompanying *System Service* or *System Access* driver that stacks additional value).
Due to their comparatively high level of risk, substation-related *System Renewal* investments are ascribed the highest possible priority and must be addressed proactively in the *Capital Expenditure Plan.*

Safety (5.4.2.1.3.1 B.2)

The Lakeside Power Consulting Condition Assessment Report classifies the current overall public safety risk rating as 'red'.

Section 1: Public Safety – conditions that impact public safety at the station

Area of Concern	Check 1	Check 2	Check 3
Perimeter Security	☐	☐	☒
Fence Grounding and Bonding	☐	☐	☒
Station Yard	☐	☐	☒
Station Building	☒	☐	☐
Station Setting – Proximity	☒	☐	☐
Station Setting - Encroachments	☒	☐	☐
Overall public safety condition	☐	☐	☒

1 = Acceptable

2 = Some deficiencies

3 = Needs attention soo

Overall Public Safety Risk Rating	**Green**	**Purple**	**Yellow**	**Orange**	**Red**
	20+ Years	11-20 years	4-10 years	2-3 years	1 year
	☐	☐	☐	☐	☒

Further, the Report classifies the current worker safety risk rating as 'orange'.

Area of Concern	Check 1	Check 2	Check 3
Grounding and Bonding	☐	☐	☒
Safe limits of approach	☐	☒	☐
Working clearances	☐	☒	☐
Switching access difficult	☐	☒	☐
Multiple sources of voltage	☒	☐	☐
Porcelain	☒	☐	☐
Operational Issues	☐	☒	☐
Maintenance Issues	☐	☒	☐
Overall worker safety condition	☐	☒	☐

1 = Acceptable

2 = Some deficiencies

3 = Needs attention soon

Maintenance issues that ca be quickly rectified may be eliminated from risk assessment.

Overall Worker Safety Risk Rating	Green	Purple	Yellow	Orange	Red
	20+ Years	11-20 years	4-10 years	2-3 years	1 year
	☐	☐	☐	☒	☐

Worker and public safety will be improved by virtue of ensuring distribution system asset replacements/refurbishments are designed/constructed to conform to present CSA C22.3 No.1 standards; Ontario Regulation 22/04, IEEE Std 80 and GSHI Construction Verification Program.
All pad-mounted equipment will specify dead-front bushings, which has the effect of reducing overall electric clearances in the station and improved worker safety.
In an increasingly complex operational environment, microprocessor-based digital relays can be programmed in a myriad of ways to ensure that the distribution system components, workers and public are properly protected in the event of an abnormal condition on the distribution system that are not possible with conventional electromechanical relays.

Cyber Security, Privacy (5.4.2.1.3.1 B.3)

With the introduction of the Ontario Cyber Security Framework (OCSF), GSHI has focused efforts to implement these controls with use of a Written Information Security Program (WISP). The WISP focuses policies that cover all controls of the OCSF. These policies are then put into practice with GSHI's Cyber Security Standardized Operation Procedures (CSOP).

Co-ordination, Interoperability (5.4.2.1.3.1 B.4)

To stay current with industry standards, the station protection and control equipment and philosophy needs to be upgraded. Relay replacements are be driven by System Operator requirements for increased distribution system awareness due to the proliferation of renewable energy generation connections and the need for system protective equipment to continue to function dependably and reliably due the presence of these sources.
The investment will allow for replacement of the old and outdated relay protection technology with modern microcontroller-based technology that is more reliable, faster, and safer for the operation and control of both substation transformer and feeders as compared with conventional electro-mechanical relays. These new relays are more capable in detecting faults on the system and isolate them in a few milliseconds to reduce probability of damage to customers' electrical installations. Recording of power systems parameters such as voltage, current, frequency and harmonics through these relays provides a detailed picture of the system demand and power quality. Preventive maintenance on the feeders and transformers will become easier with the yearly records of harmonics and losses.
The replacement of old SCADA RTUs with a new device that runs on the latest secure communication protocol over fiber network will increase the reliability and efficiency in control and operation of the substation network. These new technology relays and SCADA RTUs are IEC-61850 compatible which is a major feature from the point of grid modernization. The investment will facilitate accurate data on load that will allow for increasing numbers of connection requests, either from load and/or generation, to Moonlight MS18.
Protection and control schemes programming will be highly flexible to accommodate new additions of the distributed generation in the network and thus help promote green energy generation.

Environmental Benefits (5.4.2.1.3.1 B.5)

A significant environmental concern with Moonlight MS18, which this investment seeks to eliminate, is that in the event of a catastrophic failure of a power transformer, it is possible that a large quantity of transformer oil may be released outside of the station in the surrounding environment. This poses a significant environmental risk. Currently, this station does not have oil containment. With this prospective investment, proactive replacement of the critical power transformer asset seeks to reduce the probability of a catastrophic, unplanned failure event.

B. Factors that may impact the consequences of major equipment failure

Concern	Impact of Consequence					
	L		M		H	
Station setting – proximity	More than 100m	☒	Between 100m and 10m	☐	10m or less	☐
Station setting – watercourses	None	☒	Storm sewers/drains	☐	Open water	☐
Lack of backup supply	<2 hours switching	☒	Between 2 – 24h outage	☐	No backup	☐
Critical loads (hospitals etc)	None	☐	With generators	☒	No generators	☐
Grounding and bonding	Today's code	☐	Some deficiencies	☐	Poor	☒
Oil containment	Yes	☐	Partial	☐	None	☒
Explosion barriers	Yes	☐	Partial	☐	None	☒
Firefighting capability	Hydrants	☐	Storage Tanks	☐	None	☒
Presence of PCB's	None	☒	Storage Only	☐	In-service	☐
Overall equipment condition	**L**	☐	**M**	☒	**H**	☐

Conservation and Demand Management (5.4.2.1.3.1 B.6)

Not Applicable

C. Category-Specific Requirements for Each Project/Activity

Asset Performance-related Operational Targets and Asset Lifecycle Optimization Policies and Practices (5.4.2.1.3.1 SR–C.1a)

The proposed investment aims to target assets proactively whose condition has deteriorated to the extent that prudent measures must be taken to safeguard the performance of the system and the public welfare.

As part of its asset lifecycle policies and practices, GSHI seeks to ensure smooth (paced) investment to address the pool of assets who, because of their *effective age,* increases the probability that an unplanned failure of the asset(s) could occur. As part of the levelized replacement plan shown below, wood poles require the most attention in terms of quantities of assets to be addressed.

Information on the Condition of the Assets Relative to their Typical Life-Cycle and Performance Records (5.4.2.1.3.1 SR–C.1b)

With a calculated *Health Index* score of 38 ("Poor"), municipal substation Moonlight MS18 is in the worst condition in its peer group, according to the Lakeside Power Consulting Condition Assessment Report. The transformer has shown low oil dielectric strength for the past three years. All switchgear is severely rusted inside and out and has visible evidence of moisture ingress. The station yard has several safety-related issues.

Assessment

Color Score:	Red	Poor
Points Score:	38	Poor

C. Based on the equipment condition and consequences, state the risk rating for a major equipment failure:

Overall Failure Risk Rating	**Green**	**Purple**	**Yellow**	**Orange**	**Red**
	20+ Years	11-20 years	4-10 years	2-3 years	1 year
	☐	☐	☐	☐	☒

Number of Customers (in each customer class) Potentially Affected by the Failure of the Assets (5.4.2.1.3.1 SR-C.1c)

Feeder	# of Customers

	Residential	Small Commercial	Large Commercial
18F1	1,344	37	6
18F2	514	37	6
18F3	1	28	2

Quantitative Customer Impacts with Associated Risk Level(s) (5.4.2.1.3.1 SR-C.1d)

Completion of the project will provide GSHI the capability to provide reliable electricity supply with sufficient capacity to accommodate load/REG expansion in the 'Kingsway Corridor', an important economic growth area identified in the City of Greater Sudbury's *Employment Land Strategy* (ELS). Future customers will benefit from the increased capacity to serve load/generation provided by the new unit that will help to accommodate any new expansion in the area.

- Reduction in relative proportion of assets with "Very Poor" or "Poor" Health Index (HI) results
- Improved reliability of service
- Improved ability to expediently connect prospective load and/or REG requests

Qualitative Customer Impacts with Associated Risk Level(s) (5.4.2.1.3.1 SR-C.1e)

The rebuild of municipal substation Moonlight MS18 will be designed to mitigate the impact of unplanned asset replacements by using replacement metric(s) that are selective and consider the following qualitative factor(s):

- customer satisfaction
- public safety
- paced asset replacement

This prospective investment will help to ensure that there are sufficient funds available to procure needed equipment to enact important repairs to substation assets at Moonlight MS18. Customers have repeatedly demonstrated that they expect high service reliability and are not tolerant of longer duration outages. By enacting a paced, proactive project schedule for the replacement of power system transformers, GSHI seeks to mitigate the high consequence cost associated with the unplanned failure of these critical items and improve overall customer satisfaction (and safety) with this investment.

Value of Customer Impact in Terms of Characteristics of Customers Potentially Affected by Failure that have a Bearing on the Criticality and/or Cost of Failure (5.4.2.1.3.1 SR-C.1f)

The proposed investment to rebuild the 18T1 at Moonlight MS18 will locally impact residential-class customers but will also positively impact quite a few GS > 50kW customers. The 'value' of reliable electricity service can be quite different between classes of customer. In general, there is a lower 'consequence of failure' for a residential customer compared with a GS < 50kW customer. The same is true of a GS > 50kW customer. For commercial customers, any outage, even momentary, can have a real impact on sales and profitability. An unplanned outage due to a failed 18T1 would affect a significant landfill gas generation site to the north, which contributes to the community's economic prosperity by purchasing otherwise wasted methane gas from the City of Sudbury-owned municipal landfill site to operate.

An evaluation of criticality and/or cost of failure as it pertains to a particular asset (or group of assets) is employed by the Engineering Dept to determine the suitability of undertaking a construction project to address a deteriorated/underperforming asset (or group of assets).

Other Factors that may Affect Timing and Priority of Project (5.4.2.1.3.1 SR-C.2)

Within GSHI's 2019 DSP, a prospective investment was discussed in Section 5.4.3.2.3.1 entitled 'System Renewal – Moonlight MS18 Station Rebuild'. As noted in the section, at the time the investment was prioritized as the highest priority in 2022. However, the plans were contingent on the outcomes of legal processes which were underway. Further, it was stated that the planned investment would need to be re-visited and altered, in both their timing and quantum, as those legal processes unfolded. When the governing council for the City of Greater Sudbury officially voted on July 12, 2022, to terminate the plans for the anticipated commercial development along the Kingsway corridor, the planned investment to rebuild municipal substation MS18 was also officially deferred.

In this DSP, the prospective investment to rebuild Moonlight MS18 is the most important priority investment in the 2027 Capital Expenditure Plan and will not be deferrable.

Consequences for System O&M Costs (5.4.2.1.3.1 SR-C.3)

The investment to retire the existing power transformer unit 18T1 at Moonlight MS18 will improve the reliability of electrical supply by reducing the probability (and the consequence cost) of an unplanned outage event caused by failure of old equipment. Older transformers (> 50 years) are more prone to failure from lighting strikes and short circuit events, because the internal insulation becomes brittle over time and the support structures weaken, losing resilience to being able to withstand normal stressful event. Thus, oil needs to be sampled more frequently and results inspected to detect any further degradation of the DGA results and underlying condition of the power transformer.

Impact on Reliability and/or Safety Factors (5.4.2.1.3.1 SR-C.4)

As an integral input to the asset management process, reliability assessments are extremely helpful in prioritizing project spending, particularly in the *System Renewal* category. An asset (or asset class) with a known history of poor reliability performance will be prioritized for replacement/refurbishment as compared to an asset (or asset class) that exhibits a lower risk (and thus consequence cost) of failure.

These prospective investments are expected to positively affect both the duration and frequency-related outage indices (i.e., SAIDI/SAIFI & $SAIDI_5$ /$SAIFI_5$) as well as public safety. Equipment performance, as a critical controllable parameter, has contributed 37% of system interruption minutes and 41% of the total recorded service interruptions over the period 2019-2023. There have already been signs of performance degradation of the underlying 12kV feeders, with the 18F1 finding itself on the list of 'Worst Performing Feeders.

Scheduling the timely replacement of ageing distribution system assets prior to asset failure will minimize the consequence cost of equipment failure and will specifically reduce customer outages associated with distribution system equipment failures. Further, a coordinated effort to address the replacement/refurbishment of the asset will enable a controlled approach to repair that will minimize service interruption to customers. Finally, the investment will promote worker and public safety – consistent with the provisions of O.Reg. 22/04 - whereby the existing system is upgraded to a modern CSA C22.3 No.1 *Overhead Systems*-compliant standard.

- Highly sensitive ground fault detection algorithm makes it easy to identify and isolate the high impedance ground faults caused by breaking of power line conductors. This will result in the ability to clear such faults immediately and increase both public and power system safety;
- Remote access of the substation relays will reduce truck rolls/travel time for line crews;
- Highly sophisticated protection, control and SCADA technology will help coordinate the protection schemes to accommodate many customers with safe operation;
- Faster data transfer through fiber optic network by SCADA RTU at the substation will help increase the efficiency of operation and control for GSHI;
- Faster detection and clearing of faults will maintain and/or improve SAIDI/SAIDI5, SAIFI/SAIFI5 reliability indices; and
- Enhanced capability to integrate with newer distributed energy generation technologies which will result in greater control over power quality and demand side management.

Analysis of Project Benefits and Costs Comparing Alternatives to the Timing of the Proposed Project (where applicable and/or reasonable variation and/or uncertainty in the above factors exists) (5.4.2.1.5.1 SR-C.5)

Failure to complete the project will expose the utility to increased risk of spending reactively to address outages and/or events affecting the reliability of the distribution system in this area that would have otherwise been eliminated and/or reduced had we proceeded in a timely fashion with the initial planned investment.
Meanwhile, from a planning perspective, GSHI seeks to be ready to accommodate the connection of several large load centers that are themselves in various stages of planning along the Kingsway corridor. Ultimately, the anticipated load growth in the Kingsway corridor area will require a power transformer at Moonlight MS18 with a higher rating to be installed, providing Control Room operators the capability to manage the distribution system safely and reliably. There is limited "spare" capacity in adjacent areas that could be exploited by system operators to pick up future expected connection requests.
In the interest of ensuring that sufficient system capacity exists to accommodate these expected requests, the utility is planning for this work to take place in 2027 to be followed in subsequent years with other crucial substation-related investments that are badly needed to maintain the overall reliability of supply in the distribution system.

Like for Like Renewal Analysis, Alternative Project Design Comparisons (5.4.2.1.5.1 SR-C.6)

The above can be considered like for like renewal where the project is solely configured to meet the requirement.

Attachment 5 (of 5):

4-Staff-34 Attachment 5: Ethel MS36

Capital Expenditures 2025-2029

Project Title:	2029 System Renewal – Ethel MS36 Station Rebuild	**Project Number:**	2027 – A2; 2028 – A2 2029 – A1
Project Coordinator:	Phil Guido/Kyle England	**Investment Category:**	*System Renewal*
Last Updated:	October 8, 2024	**Investment Driver:**	*Assets/asset systems at end of service life*

A. General Information

Cost (Capital and O&M) 5.4.2.1.5.1 A.1	Capital		(O & M)		Total
Year	Budget	Actual	Budget	Actual	
2027	270,000				270,000
2028	150,000				150,000
2029	3,170,000				3,170,000
Totals	$3,590,000				$3,590,000

Customer Attachments and Load (5.4.2.1.5.1 A2)

Ethel MS36 – Rated 5.0/6.3 MVA; Peak 3.39MVA

a) 36F1

294 customer attachments

b) 36F2

278 customer attachments

c) 36F3

34 customer attachments

Station	Feeder Designation	Peak Feeder Current (Amperes)	Planning Criteria Loading (Amperes)	% of Planning Criteria Loading
Ethel MS36	36F1	203	300	67.67%
	36F2	172	300	57.33%
	36F3	134	300	44.67%

Start Date (5.4.2.1.5.1 A.3)	**January 1, 2027**	**In Service Date (5.4.2.1.5.1 A.4)**	**December 31, 2029**

Risk Identification and Mitigation (5.4.2.1.5.1 A.5)

Scheduling Risk:

The work execution process considers project dependencies, labour and material constraints as well as externally driven deadlines. A work execution plan is jointly developed by the Engineering and Operations Departments with input from Stores/Procurement and Control Room personnel. Development of plans and performance of work are completed in accordance with the relevant provisions of the ISO 9001/18001 standards to which GSHI's *Management System* is based.

Procurement Risk:

The cost of station components, civil development, and station construction contractors has sharply escalated post-pandemic. Equipment deliveries have also been hampered by unusually high demand. Contractors are having challenges in attracting and retaining qualified staff. All these factors are increasing the cost and timelines for building or replacing existing substations. GSHI's asset management process recognizes these risks and resolves to proceed with critical substation investments employing a multi-year project timeline.

Comparative Information on Expenditures for Equivalent Projects/Activities (5.4.2.1.5.1 A.6)

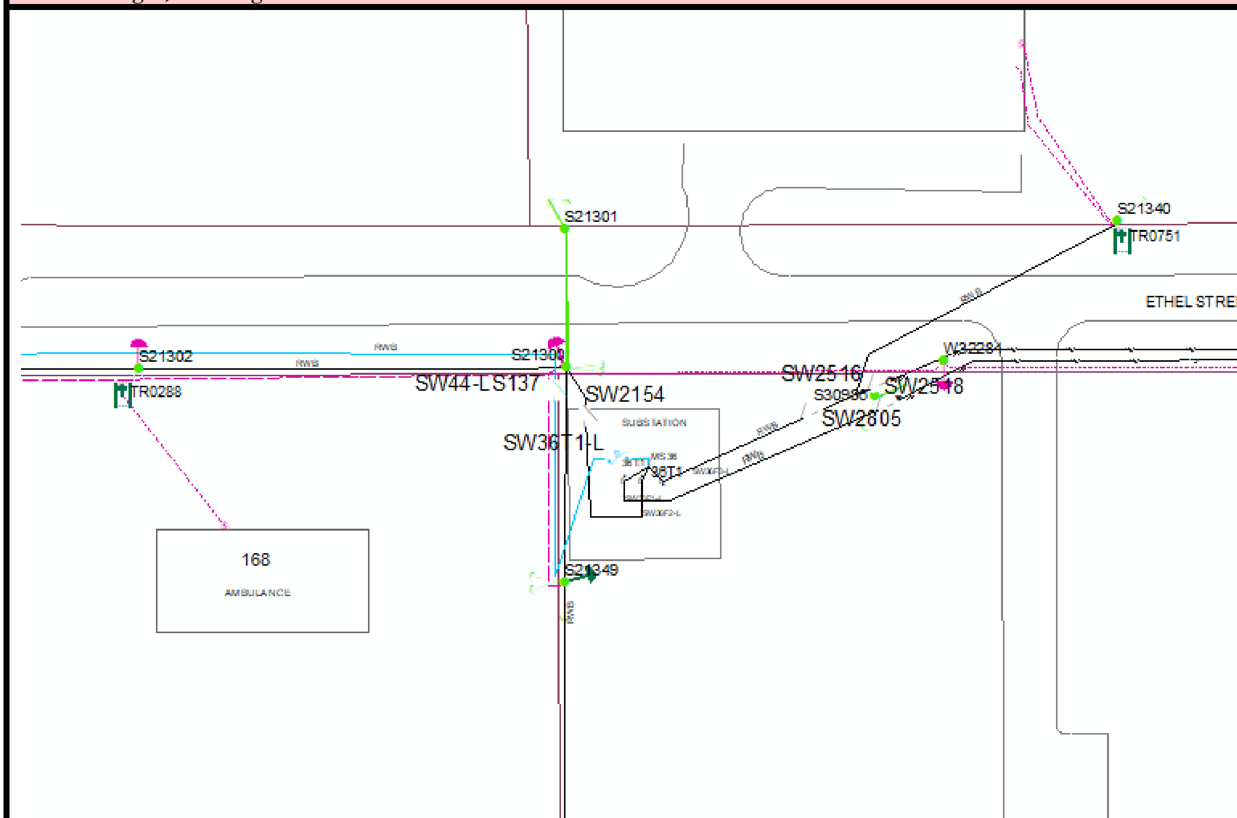
Cressey MS3 (2021): $4,750,994

This investment was part of a larger project that converted a total of 10,125 customers (26.55 MW of load) over a 5-year period from the existing 4.16kV distribution system to a 12.47kV distribution system at locations throughout GSHI's contiguous service territory in the City of Sudbury. The existing 4.16kV system was over 60 years old where the oldest transformer was 64 years old. The distribution system had reached the end of its useful life and the availability of spare parts was an issue. The renewal of two municipal stations (MS2 and MS3), along with the removal of three municipal stations (MS9, MS12 and MS14) is expected to significantly improve the reliability of the existing electricity supply with the system converted to the higher voltage.

Renewable Energy Generator (REG) Investment Details, including Capital and OM&A Costs (5.4.2.1.5.1 A.7)

This investment is not designed to directly impact REG connection capability. However, the investment will permit construction activities that will strengthen the existing legacy system underlying capability to connect additional REG capacity.

Attach Images, Drawings or Other Reference Items



B. Evaluation Criteria and Information Requirements for Each Project/Activity

Efficiency, Customer Value & Reliability – Investment Main/Secondary Drivers (Triggers) (5.4.2.1.5.1 B.1a)

Main Driver: System Renewal

- Capital deferral- capability to retire one municipal station (MS38) and utilize enhanced capacity in existing supply conductors by increasing system nominal voltage from 4.16kV to 12.47kV;
- Maintaining/improving system reliability by proactively scheduling the timely replacement of ageing critical assets prior to failure (minimize consequence cost of equipment failure);
- Safety: Worker and public safety will be improved by virtue of ensuring distribution system asset replacements/refurbishments are designed/constructed to conform with present CSA C22.3 No.1 standards; Ontario Regulation 22/04 and GSHI Construction Verification Program;
- Line/equipment losses are reduced by increasing system nominal voltage; and
- Reduced inventory requirements; reduction of complexity, Stores Dept carrying cost of inventory.

Efficiency, Customer Value & Reliability – Demonstrate how investment addresses existing reliability performance concerns and is capable of adapting to future challenges (e.g., grid modernization and climate change) (5.4.2.1.5.1 B.1b)

As part of this prospective investment, the existing power transformer 36T1 will be upgraded from its present rating of 5/6.3MVA. The prospective investment is expected to maintain and/or improve SAIDI/SAIDI5; SAIFI/SAIFI5 reliability indices while providing GSHI's Control Room greater operational flexibility to plan for quick restoration of service after an outage event.

Efficiency, Customer Value & Reliability – Priority of the Investment (5.4.2.1.5.1 B.1c)

This investment has been assigned the highest priority in the 2029 Capital Expenditure Plan.

Efficiency, Customer Value & Reliability – Quantitative/Qualitative Analyses on Design, Scheduling, Funding and/or Ownership Options (5.4.2.1.5.1 B.1d)

Whenever possible, the bundling of drivers to substantiate a prospective investment strives to ensure that the timing of construction activities provides the highest possible value for our customers (e.g., avoiding re-work costs by delaying prospective *System Renewal* activities until there is an accompanying *System Service* or *System Access* driver that stacks additional value).

Due to their comparatively high level of risk, substation-related *System Renewal* investments are ascribed the highest possible priority and must be addressed proactively in the *Capital Expenditure Plan*.

Safety (5.4.2.1.5.1 B.2)

The Lakeside Power Consulting Condition Assessment Report classifies the current overall public safety risk rating as 'red'.

Area of Concern	Check 1	Check 2	Check 3
Perimeter Security	☒	☐	☐
Fence Grounding and Bonding	☐	☐	☒
Station Yard	☒	☐	☐
Station Building	☒	☐	☐
Station Setting – Proximity	☒	☐	☐
Station Setting - Encroachments	☒	☐	☐
Overall public safety condition	☐	☒	☐

1 = Acceptable

2 = Some deficiencies

3 = Needs attention soo

Overall Public Safety Risk Rating	**Green**	**Purple**	**Yellow**	**Orange**	**Red**
	20+ Years	11-20 years	4-10 years	2-3 years	1 year
	☐	☐	☐	☐	☒

Further, the Report classifies the current worker safety risk rating as 'red'.

Area of Concern	Check 1	Check 2	Check 3
Grounding and Bonding	☐	☐	☒
Safe limits of approach	☒	☐	☐
Working clearances	☒	☐	☐
Switching access difficult	☒	☐	☐
Multiple sources of voltage	☒	☐	☐
Porcelain	☒	☐	☐
Operational Issues	☐	☒	☐
Maintenance Issues	☒	☐	☐
Overall worker safety condition	☐	☒	☐

1 = Acceptable

2 = Some deficiencies

3 = Needs attention soon

Maintenance issues that ca be quickly rectified may be eliminated from risk assessment.

Overall Worker Safety Risk Rating	Green	Purple	Yellow	Orange	Red
	20+ Years	11-20 years	4-10 years	2-3 years	1 year
	☐	☐	☐	☐	☒

Worker and public safety will be improved by virtue of ensuring distribution system asset replacements/refurbishments are designed/constructed to conform to present CSA C22.3 No.1 standards; Ontario Regulation 22/04, IEEE Std 80 and GSHI Construction Verification Program.

All pad-mounted equipment will specify dead-front bushings, which has the effect of reducing overall electric clearances in the station and improved worker safety.

In an increasingly complex operational environment, microprocessor-based digital relays can be programmed in a myriad of ways to ensure that the distribution system components, workers and public are properly protected in the event of an abnormal condition on the distribution system that are not possible with conventional electromechanical relays.

Cyber Security, Privacy (5.4.2.1.5.1 B.3)

With the introduction of the Ontario Cyber Security Framework (OCSF), GSHI has focused efforts to implement these controls with use of a Written Information Security Program (WISP). The WISP focuses policies that cover all controls of the OCSF. These policies are then put into practice with GSHI's Cyber Security Standardized Operation Procedures (CSOP).

Co-ordination, Interoperability (5.4.2.1.5.1 B.4)

To stay current with industry standards, the station protection and control equipment and philosophy needs to be upgraded. Relay replacements are be driven by System Operator requirements for increased distribution system awareness due to the proliferation of renewable energy generation connections and the need for system protective equipment to continue to function dependably and reliably due the presence of these sources.

The investment will allow for replacement of the old and outdated relay protection technology with modern microcontroller-based technology that is more reliable, faster, and safer for the operation and control of both substation transformer and feeders as compared with conventional electro-mechanical relays. These new relays are more capable in detecting faults on the system and isolate them in a few milliseconds to reduce probability of damage to customers' electrical installations. Recording of power systems parameters such as voltage, current, frequency and harmonics through these relays provides a detailed picture of the system demand and power quality. Preventive maintenance on the feeders and transformers will become easier with the yearly records of harmonics and losses.

The replacement of old SCADA RTUs with a new device that runs on the latest secure communication protocol over fiber network will increase the reliability and efficiency in control and operation of the substation network. These new technology relays and SCADA RTUs are IEC-61850 compatible which is a major feature from the point of grid modernization. The investment will facilitate accurate data on load that will allow for increasing numbers of connection requests, either from load and/or generation, to Ethel MS36.

Protection and control schemes programming will be highly flexible to accommodate new additions of the distributed generation in the network and thus help promote green energy generation.

Environmental Benefits (5.4.2.1.5.1 B.5)

Not Applicable

Conservation and Demand Management (5.4.2.1.5.1 B.6)

Not Applicable

C. Category-Specific Requirements for Each Project/Activity

Asset Performance-related Operational Targets and Asset Lifecycle Optimization Policies and Practices (5.4.2.1.5.1 SR–C.1a)

GSHI's policy for asset lifecycle optimization is focused on minimizing the total cost of asset ownership through efficient investment in infrastructure and management of corporate risks while providing excellence in service delivery. This is achieved by employing leading asset management practices, which include:

- Enhancing asset performance through implementation of effective maintenance practices that meet or exceed current DSC requirements;
- Risk-based prioritization both within and across investment portfolios;
- Optimizing the balance between capital and maintenance expenditures; and
- Pacing annual investments to avoid expenditure "peaks" and "troughs"

Much of the work to convert the voltage from 4kV to 12kV in the Town of Sturgeon Falls is necessary to remove unnecessary municipal substation assets from service. Once complete, the installed capacity at three substations, namely MS35, MS36 and MS37, will be more than sufficient to serve the Town. GSHI is proactively pursuing the retirement of municipal substation MS38 by attempting to spread out the necessary investments to complete the voltage conversion work over the five-year term of this DSP with the goal of decommissioning the substation sometime in 2030.

Information on the Condition of the Assets Relative to their Typical Life-Cycle and Performance Records (5.4.2.1.5.1 SR–C.1b)

With a calculated *Health Index* score of 45 ("Poor"), municipal substation Ethel MS36 is in the third worst condition in its asset population, according to the Lakeside Power Consulting Condition Assessment Report. The power transformer is indicating high carbon monoxide (CO) and low oil dielectric in annual oil tests. There are several issues with grounding, bonding, and crushed stone outside the fence. There are multiple potential inadvertent connections/close coupling to neighbouring guard rails and fences. The station neutral connection system requires a complete review as the connections between the X0 bushing, the ground grid, and the overhead neutral are improper. Given the use of fuses on the distribution feeders, there is no sensitive ground fault protection for distribution faults, and no ability to remotely control breakers/reclosers in the event of restoration after system faults.

Assessment

Color Score:	Orange	Fair
Points Score:	45	Poor

Number of Customers (in each customer class) Potentially Affected by the Failure of the Assets (5.4.3.2 SR-C.1c)

Feeder	# of Customers		
	Residential	Small Commercial	Large Commercial
36F1	272	20	2
36F2	238	34	4
36F3	18	10	5

Quantitative Customer Impacts with Associated Risk Level(s) (5.4.2.1.5.1 SR-C.1d)

Completion of the project will provide GSHI the capability to provide reliable electricity supply with sufficient capacity to accommodate load/REG expansion in the Town of Sturgeon Falls. Future customers will benefit from the increased capacity to serve load/generation provided by the new unit that will help to accommodate any new expansion in the area.

- Reduction in relative proportion of assets with "Very Poor" or "Poor" Health Index (HI) results
- Improved reliability of service
- Improved ability to expediently connect prospective load and/or REG requests

Qualitative Customer Impacts with Associated Risk Level(s) (5.4.2.1.5.1 SR-C.1e)

The rebuild of municipal substation Ethel M36 will be designed to mitigate the impact of unplanned asset replacements by using replacement metric(s) that are selective and consider the following qualitative factor(s):

- customer satisfaction
- public safety
- paced asset replacement

This prospective investment will help to ensure that there are sufficient funds available to procure needed equipment to enact important repairs to substation assets at Ethel MS36. Customers have repeatedly demonstrated that they expect high service reliability and are not tolerant of longer duration outages. By enacting a paced, proactive project schedule for the replacement of power system transformers, GSHI seeks to mitigate the high consequence cost associated with the unplanned failure of these critical items and improve overall customer satisfaction (and safety) with this investment.

Value of Customer Impact in Terms of Characteristics of Customers Potentially Affected by Failure that have a Bearing on the Criticality and/or Cost of Failure (5.4.2.1.5.1 SR-C.1f)

An evaluation of criticality and/or cost of failure as it pertains to a particular asset (or group of assets) is employed by the Engineering Dept to determine the suitability of undertaking a construction project to address a deteriorated/underperforming asset (or group of assets). The proposed investment to rebuild Ethel MS36 will locally impact residential-class customers but will also positively impact commercial customers. The 'value' of reliable electricity service can be quite different between classes of customer. In general, there is a lower 'consequence of failure' for a residential customer compared with a GS < 50kW customer. The same is true of a GS > 50kW customer. For commercial customers, any outage, even momentary, can have a real impact on sales and profitability. Within its service area, an unplanned outage due to the failure of a major substation component would affect service reliability to the local hospital.

Other Factors that may Affect Timing and Priority of Project (5.4.2.1.5.1 SR-C.2)

The prospective investment to rebuild Ethel MS36 is the most important priority project for 2029 and will not be deferrable.

Consequences for System O&M Costs (5.4.2.1.5.1 SR-C.3)

Completion of the project will provide GSHI the capability to provide reliable electricity supply with sufficient capacity to customers in the 4kV/12kV West Nipissing voltage conversion zone. It will improve the existing system's reliability, reduce the frequency of trouble calls and reduce transformer/line losses. Additionally, our Stores Dept will achieve reduced carrying cost of material by decreasing the need to furnish spare parts for a system that is increasingly obsolescent. Substation OM&A costs will be reduced because of the shuttering of a municipal substation (MS38) that will no longer be required after successful completion of the programme.

Impact on Reliability and/or Safety Factors (5.4.2.1.5.1 SR-C.4)

As an integral input to the asset management process, reliability assessments are extremely helpful in prioritizing project spending, particularly in the *System Renewal* category. An asset (or asset class) with a known history of poor reliability performance will be prioritized for replacement/refurbishment as compared to an asset (or asset class) that exhibits a lower risk (and thus consequence cost) of failure.

These prospective investments are expected to positively affect both the duration and frequency-related outage indices (i.e., SAIDI/SAIFI & $SAIDI_5$ /$SAIFI_5$) as well as public safety. Equipment performance, as a critical controllable parameter, has contributed 37% of system interruption minutes and 41% of the total recorded service interruptions over the period 2019-2023.

Scheduling the timely replacement of ageing distribution system assets prior to asset failure will minimize the consequence cost of equipment failure and will specifically reduce customer outages associated with distribution system equipment failures. Further, a coordinated effort to address the replacement/refurbishment of the asset will enable a controlled approach to repair that will minimize service interruption to customers. Finally, the investment will promote worker and public safety – consistent with the provisions of O.Reg. 22/04 - whereby the existing system is upgraded to a modern CSA C22.3 No.1 *Overhead Systems*-compliant standard.

- Highly sensitive ground fault detection algorithm makes it easy to identify and isolate the high impedance ground faults caused by breaking of power line conductors. This will result in the ability to clear such faults immediately and increase both public and power system safety;
- Remote access of the substation relays will reduce truck rolls/travel time for line crews;
- Highly sophisticated protection, control and SCADA technology will help coordinate the protection schemes to accommodate many customers with safe operation;
- Faster data transfer through fiber optic network by SCADA RTU at the substation will help increase the efficiency of operation and control for GSHI;
- Faster detection and clearing of faults will maintain and/or improve SAIDI/$SAIDI_5$, SAIFI/$SAIFI_5$ reliability indices; and
- Enhanced capability to integrate with newer distributed energy generation technologies which will result in greater control over power quality and demand side management.

Analysis of Project Benefits and Costs Comparing Alternatives to the Timing of the Proposed Project (where applicable and/or reasonable variation and/or uncertainty in the above factors exists) (5.4.2.1.5.1 SR-C.5)
Failure to complete the project will expose the utility to increased risk of spending reactively to address outages and/or events affecting the reliability of the distribution system in this area that would have otherwise been eliminated and/or reduced had we proceeded in a timely fashion with the initial planned investment. A delay in replacing/refurbishing distribution system assets that rate poorly based on the above criteria could result in the erosion of distribution system reliability performance. Further, the ability to back up other faulted feeders may be compromised if equipment condition is allowed to degrade any more. Failure to address these assets may lead to an inability of the Control Room to re-route power in the event of an outage, thereby increasing average outage duration(s).
Like for Like Renewal Analysis, Alternative Project Design Comparisons (5.4.2.1.5.1 SR-C.6)
The only alternative is to leave the existing 4.16kV distribution in service – however, this decision would not reflect the benefits of eliminating the 4.16kV system to customers.

4-Staff-35 Collections Officer & Credit Bureau Commisions

Question:

Billing/Collecting

Ref 1: Exhibit 4 – Tab 3 – Schedule 1

Ref 2: Chapter 2 Appendices – 2-JC

Preamble:

Greater Sudbury Hydro added a collections officer and has seen an increase in credit bureau commission costs.

Question(s):

a) Please provide the year the collections officer was hired.
b) Please explain the increases in credit bureau commission costs.
c) The collections and bad debt expense continues to increase from 2023 to 2025. Please explain how the collections officer has helped reduce this.

Response:

a) Greater Sudbury Hydro hired a temporary Collections Representative in September 2020 to manage business account collections during the winter of 2021 and the collection period from May to October 2021. The representative vacated the position in early October 2021.

b) In 2020, amid the challenges posed by the pandemic, GSHi and the City opted to suspend collection activities, recognizing the financial difficulties already burdening hydro ratepayers and water ratepayers. The Board-approved 2020 budget included Hydro's portion of shared credit bureau commissions with the City for account collections. Subsequently, the City's process was revised, limiting GSHi's responsibility to the collection of arrears related to Hydro accounts. The commission amounts increased for two primary reasons: a rise in the number of accounts forwarded to the credit bureau and the requirement of GSHi to absorb the total commissions paid as water balances were exclusively sent to the municipal tax roll.

c) The Collection Officer position has remained vacant since 2021, with collection responsibilities being absorbed by Customer Service Representatives. Additionally, a contractor has been engaged to handle disconnection and reconnection services during the collection period, spanning May to October 31st each year. Contractor costs have increased due to the limited availability of competitive service providers in Northern Ontario.

4-Staff-36 Employee Costs -Appendix 2-K

Question:

Employee Costs

Ref 1: Chapter 2 appendices 2-K – Employee Costs

Preamble:

In 2020, Greater Subury Hydro was approved 102.9 FTEs. The actual number of FTEs between 2020 and 2023 was 97 FTEs. Greater Subury Hydro then forecasts the 2024 Bridge Year FTEs and 2025 Test Year FTEs to be 105.3 and 107.7, respectively. Part of the reason for unfilled positions is due to temporary leave, in particular parental leaves.

Question(s):

a) Please provide the actual number of FTEs for the Bridge Year. If the number of FTEs is below 105.3, please provide the positions that are not filled and their status.
b) Please confirm if staff on parental leave is included in the number of FTEs provided in Chapter 2 appendices 2-K. Please confirm if Greater Sudbury Hydro’s 2025 FTEs takes into consideration potential parental leaves. If not, why not?
c) Please provide the number of vacant FTEs and what is the status of their backfill.
d) Please provide the number of employees eligible for retirement in the next 5 years and the position they hold. ‘
e) Please provide the number of FTEs in Greater Sudbury Hydro and the number of FTEs allocated to Greater Sudbury Hydro from it’s affiliates from 2020 to 2025.

Response:

a) The projected final FTE count for 2024 is 96.8, reflecting a variance of 8.5 compared to the budgeted 105.3 FTEs. The table below outlines the positions contributing to this variance and their current status.

Position	Status	Vacancy does not Persist into 2025	Currently Vacant	FTE Contributing to Variance
General Counsel	New Position Hired in 2024	✔		0.07
General Counsel - Admin Assist	New Position Hired in 2024	✔		0.62
Marketing Assistant	Vacated and filled in 2024	✔		0.11
Communications Officer	Parental Leave in 2024	✔		0.11
Health and Safety Officer	Vacated and filled in 2024 - partially offset with Contract Labour	✔		0.33
Senior Accountant	Return from parental leave later than budgeted	✔		0.16
Powerline Co-Op	Vacancy in 2024, Expected to fill in 2025	✔		0.33
Poweline Crewleader	Vacated November 2024, position currently posted		✔	0.14
Powerline Electrician	Sick leave for part of the year - persists into 2025			0.32
Powerline Electrician	Sick leave for part of the year	✔		0.38
Powerline Electrician	Parental Leave in 2024	✔		0.17
Powerline Electrician	Parental Leave in 2024	✔		0.50
Powerline Electrician	Return from parental leave later than budgeted	✔		0.06
Powerline Electrician	Vacancy from 2023 - filled in 2024	✔		0.92
Substation Crewleader	Vacated March 2024 - for relief role, became permanent September 2024		✔	0.83
Chief Operator	Vacancy from 2023 - filled in 2024	✔		0.75
System Operator	Vacated in 2024 - vacancy persists into 2025		✔	0.25
Distribution Engineer	Vacated April 2024 - persists into 2025		✔	0.74
Distribution Engineer	Vacated August 2023 - offset by new Project Coordinator hired June 2024	✔		0.47
Supervisor Engineering	Parental Leave in 2024	✔		0.08
Project Coordinator	Vacated in 2023, Filled in 2024	✔		0.47
P&C Technologist	Vacated in 2023, Filled in 2024	✔		0.44
P&C Technologist	Vacated December 2024, position is currently posted		✔	0.05
Technical Services Supervisor	Vacancy from 2023, Filled in 2024	✔		0.19
Total				**8.49**

b) For the actual FTE counts provided in Appendix 2K, parental leaves were excluded. GSHi integrates any known parental leaves into its budget preparation, ensuring that salaries are not allocated for periods when employees are on leave. GSHi provides top-up payments for parental leaves and does budget for these payments associated with parental leaves known at the time of budget preparation, however no FTE hours are counted or included in Appendix 2K for the period the employees are on leave.

In the 2024 budget, four known parental leaves were accounted for. During the preparation of the 2025 budget, only one parental leave was identified and included in the planning. At the time of responding to the IRs, one employee is on a shorter parental leave (6 weeks), and another employee's parental leave, which began in 2024, is expected to conclude in May 2025. No backfill was required for the shorter parental leave. However, the longer leave was backfilled, and this was reflected in the budget. As of now, only one other parental leave is known, however it is not expected to be a significant leave.

c) The following positions are currently vacant:

Powerline Crewleader: This position became vacant when the individual moved into the Health & Safety Officer role. This position is currently posted and is expected to be filled by the end of January.

P&C Technologist: This position became vacant when the individual left the role in December 2024. This position is currently posted.

Substation Crewleader: This position became vacant when the incumbent transitioned to a relief supervisory role, which was made permanent in September 2024. Currently, GSHi has one qualified employee on probation in another role, with the probationary period set to be completed in February 2025. If the employee does not return to the stations department following the probationary period, GSHi will proceed with posting this position.

System Operator: This position became vacant when the individual in the role moved to the Chief Operator role. This position will be posted once one of the current apprentice operators moves to Operator and GSHi can maintain the appropriate Journeyman to Apprentice ratio.

Distribution Engineer: This position became vacant when the individual left GSHi. GSHi has posted this position and has been actively working to fill the vacancy since it became vacant, holding interviews etc, but has had difficulty attracting candidates that meet the requirements of the position.

d) There are nine employees eligible for retirement in the next five years.

Positions Eligible for Retirement

Past Earliest Retirement Date

Executive Assistant to the President & CEO
Accounts Payable Clerk
President & CEO
Cost Accounting Clerk
Garage Crewleader
Meter Technician Crewleader

2025

None

2026

Manager Customer Service, Billing & Admin
GIS Analyst

2027

None

2028

VP Corporate Services & CFO

2029

Operations Supervisor

e) GSHi provides the following table with the FTE's by company.

	2020 Actual	2021 Actual	2022 Actual	2023 Actual	2024 Projection	2025 Budget
GSHi FTE	60.19	59.03	59.20	56.36	56.19	64.92
GSHPi FTE (allocated)	35.93	38.49	38.10	39.47	40.56	42.74
Total FTE's	**96.11**	**97.51**	**97.31**	**95.83**	**96.75**	**107.66**

Please see the Updated Chapter 2 Appendices – Appendix 2K GSHi and GSHPi tabs for additional information. Please note: GSHi has corrected for a small error in the 2020 – 2023 actual FTE's submitted in the initial application. GSHi has also prepared Appendix 2K and has included it as attachment 1 to this interrogatory.

Attachment 1 (of 1):

4-Staff-36 Attachment 1: Appendix 2-K by Company

TO BE UPDATED AT THE DRAFT RATE ORDER STAGE

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Appendix 2-K
Employee Costs - Combined GSHi & GSHPi

	Last Rebasing Year 2020 - OEB Approved	Last Rebasing Year (2020 Actuals)	2021 Actuals	2022 Actuals	2023 Actuals	2024 Bridge Year	2025 Test Year
Number of Employees (FTEs including Part-Time)[1]							
Management (including executive)	17.5	17.6	18.1	17.4	18.0	19.6	19.8
Non-Management (union and non-union)	85.4	78.6	79.4	79.9	77.8	77.1	87.9
Total	102.9	96.1	97.5	97.3	95.8	96.7	107.7
Total Salary and Wages including ovetime and incentive pay							
Management (including executive)	$ 2,398,316	$ 2,481,824	$ 2,550,294	$ 2,546,584	$ 2,792,157	$ 3,157,522	$ 3,181,226
Non-Management (union and non-union)	$ 7,403,141	$ 7,269,645	$ 7,270,989	$ 7,447,174	$ 7,440,082	$ 7,735,340	$ 8,820,921
Total	$ 9,801,457	$ 9,751,469	$ 9,821,283	$ 9,993,758	$ 10,232,239	$ 10,892,862	$ 12,002,146
Total Benefits (Current + Accrued)							
Management (including executive)	$ 735,220	$ 634,402	$ 736,709	$ 742,278	$ 767,437	$ 871,470	$ 894,408
Non-Management (union and non-union)	$ 2,259,846	$ 1,784,452	$ 2,325,505	$ 2,382,475	$ 2,239,559	$ 2,010,627	$ 2,365,467
Total	$ 2,995,066	$ 2,418,855	$ 3,062,214	$ 3,124,753	$ 3,006,995	$ 2,882,098	$ 3,259,875
Total Compensation (Salary, Wages, & Benefits)							
Management (including executive)	$ 3,133,536	$ 3,116,226	$ 3,287,003	$ 3,288,862	$ 3,559,594	$ 4,028,992	$ 4,075,633
Non-Management (union and non-union)	$ 9,662,986	$ 9,054,098	$ 9,596,494	$ 9,829,649	$ 9,679,641	$ 9,745,967	$ 11,186,388
Total	$ 12,796,523	$ 12,170,324	$ 12,883,497	$ 13,118,511	$ 13,239,235	$ 13,774,959	$ 15,262,021
Total Compensation Breakdown (Capital, OM&A)							
OM&A	$ 10,067,874	$ 9,412,507	$ 9,749,070	$ 10,286,633	$ 10,148,841	$ 10,471,741	$ 12,176,241
Capital	$ 2,728,649	$ 2,757,817	$ 3,134,427	$ 2,831,878	$ 3,090,393	$ 3,303,219	$ 3,085,780
Total	$ 12,796,523	$ 12,170,324	$ 12,883,497	$ 13,118,511	$ 13,239,235	$ 13,774,959	$ 15,262,021

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Appendix 2-K
Employee Costs - GSHi

	Last Rebasing Year 2020 - OEB Approved	Last Rebasing Year (2020 Actuals)	2021 Actuals	2022 Actuals	2023 Actuals	2024 Bridge Year	2025 Test Year
Number of Employees (FTEs including Part-Time)[1]							
Management (including executive)	8.0	7.7	7.1	7.0	7.4	8.8	9.0
Non-Management (union and non-union)	58.7	52.5	51.9	52.2	49.0	47.9	55.9
Total	66.7	60.2	59.0	59.2	56.4	56.7	64.9
Total Salary and Wages including ovetime and incentive pay							
Management (including executive)	$ 1,074,732	$ 1,037,174	$ 962,129	$ 983,961	$ 1,104,990	$ 1,382,112	$ 1,380,814
Non-Management (union and non-union)	$ 5,396,915	$ 5,382,631	$ 5,362,832	$ 5,467,975	$ 5,293,335	$ 5,495,467	$ 6,217,736
Total	$ 6,471,647	$ 6,419,805	$ 6,324,961	$ 6,451,936	$ 6,398,324	$ 6,877,579	$ 7,598,550
Total Benefits (Current + Accrued)							
Management (including executive)	$ 329,587	$ 258,814	$ 279,945	$ 285,396	$ 299,252	$ 355,316	$ 390,256
Non-Management (union and non-union)	$ 1,645,169	$ 1,291,763	$ 1,492,597	$ 1,520,351	$ 1,364,871	$ 1,393,055	$ 1,635,161
Total	$ 1,974,756	$ 1,550,577	$ 1,772,541	$ 1,805,747	$ 1,664,123	$ 1,748,371	$ 2,025,417
Total Compensation (Salary, Wages, & Benefits)							
Management (including executive)	$ 1,404,318	$ 1,295,987	$ 1,242,073	$ 1,269,357	$ 1,404,242	$ 1,737,428	$ 1,771,070
Non-Management (union and non-union)	$ 7,042,084	$ 6,674,395	$ 6,855,428	$ 6,988,326	$ 6,658,205	$ 6,888,522	$ 7,852,897
Total	$ 8,446,403	$ 7,970,382	$ 8,097,502	$ 8,257,683	$ 8,062,447	$ 8,625,950	$ 9,623,967
Total Compensation Breakdown (Capital, OM&A)							
OM&A	$ 5,820,976	$ 5,345,901	$ 5,108,024	$ 5,598,637	$ 5,184,087	$ 5,491,595	$ 6,698,631
Capital	$ 2,625,426	$ 2,624,481	$ 2,989,478	$ 2,659,046	$ 2,878,360	$ 3,134,355	$ 2,925,336
Total	$ 8,446,403	$ 7,970,382	$ 8,097,502	$ 8,257,683	$ 8,062,447	$ 8,625,950	$ 9,623,967

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Appendix 2-K
Employee Costs - GSHPi

	Last Rebasing Year 2020 - OEB Approved	Last Rebasing Year (2020 Actuals)	2021 Actuals	2022 Actuals	2023 Actuals	2024 Bridge Year	2025 Test Year
Number of Employees (FTEs including Part-Time)[1]							
Management (including executive)	9.5	9.9	10.9	10.5	10.6	10.9	10.8
Non-Management (union and non-union)	26.8	26.1	27.5	27.6	28.8	29.2	32.0
Total	36.2	35.9	38.5	38.1	39.5	40.0	42.7
Total Salary and Wages including ovetime and incentive pay							
Management (including executive)	$ 1,323,585	$ 1,444,650	$ 1,588,165	$ 1,562,622	$ 1,687,168	$ 1,775,409	$ 1,800,412
Non-Management (union and non-union)	$ 2,006,225	$ 1,887,014	$ 1,908,157	$ 1,979,199	$ 2,146,748	$ 2,239,873	$ 2,603,185
Total	$ 3,329,810	$ 3,331,664	$ 3,496,322	$ 3,541,822	$ 3,833,915	$ 4,015,282	$ 4,403,596
Total Benefits (Current + Accrued)							
Management (including executive)	$ 405,633	$ 375,589	$ 456,764	$ 456,882	$ 468,184	$ 516,155	$ 504,151
Non-Management (union and non-union)	$ 614,677	$ 492,689	$ 832,909	$ 862,124	$ 874,688	$ 617,572	$ 730,306
Total	$ 1,020,310	$ 868,278	$ 1,289,673	$ 1,319,006	$ 1,342,872	$ 1,133,727	$ 1,234,458
Total Compensation (Salary, Wages, & Benefits)							
Management (including executive)	$ 1,729,218	$ 1,820,239	$ 2,044,929	$ 2,019,505	$ 2,155,352	$ 2,291,564	$ 2,304,563
Non-Management (union and non-union)	$ 2,620,902	$ 2,379,703	$ 2,741,066	$ 2,841,324	$ 3,021,436	$ 2,857,445	$ 3,333,491
Total	$ 4,350,120	$ 4,199,942	$ 4,785,995	$ 4,860,828	$ 5,176,787	$ 5,149,009	$ 5,638,054
Total Compensation Breakdown (Capital, OM&A)							
OM&A	$ 4,246,897	$ 4,066,606	$ 4,641,046	$ 4,687,996	$ 4,964,754	$ 4,980,146	$ 5,477,610
Capital	$ 103,223	$ 133,336	$ 144,949	$ 172,832	$ 212,033	$ 168,863	$ 160,444
Total	$ 4,350,120	$ 4,199,942	$ 4,785,995	$ 4,860,828	$ 5,176,787	$ 5,149,009	$ 5,638,054

4-Staff-37 Customer Service Billing - COVID

Question:

CSR/Biller/Admin

Ref 1: Exhibit 4 – Tab 4 – Schedule 1

Ref 2: Exhibit 4 – Tab 4 – Schedule 2

Preamble:

Greater Subury Hydro states that as part of the General Expense Reduction from Greater Sudbury Hydro's 2020 Cost of Service Application, the Customer Service complement was reduced by 1.46 FTEs. Greater Sudbury Hydro was able to manage this reduction in FTEs at the beginning of COVID but in 2023 as things were reopening the vacancies were required.

Greater Sudbury Hydro states that over the last 5 years, several initiatives were introduced into the billing of hydro including OER, Covid relief rates, ULO, customer choice, Green Button. Greater Sudbury Hydro felt it necessary to hire 0.6 of an FTE (utility billing supervisor) to help manage the complex changes.

Greater Sudbury Hydro also states that there were increases in postage, stationery and software maintenance costs since 2020.

Question(s):

a) Please explain, during the first two years of COVID, what changes Greater Sudbury Hydro made to customer service, billing, and administration and what changes continue to this day (e.g., increased electronic communications).

b) Please provide the number of customer inquiries received from 2020 to 2025. Also, please provide the number of inquiries that were received in person from 2020 to 2025.
c) Please expand on what specifically is complex about these initiatives that required an additional FTE and why the existing team could not be trained to manage these changes.
d) Please provide the number of customers that currently use electronic billing or paper billing from 2020 to 2025.
e) Please explain if there were any changes in Greater Sudbury Hydro staff's work habits to be more electronic based since COVID. If so, please explain why there is an increase to stationary costs.

Response:

a) In March 2020, the world saw a dramatic shift in how businesses operated. As the COVID-19 pandemic took hold, many organizations were forced to rapidly adapt. For GSHi, that meant transitioning customer service and billing staff to remote work almost overnight. Fast forward to today, and we've successfully maintained a hybrid work program that continues to shape how we do business.

On March 23, 2020, GSHi's customer service and billing teams made the shift from in-office to working from home. With the onset of the pandemic, we knew that keeping staff connected and efficient was paramount. To facilitate this transition, GSHi implemented Microsoft Teams as the primary communication platform. The use of Teams, along with other digital tools, made it easier for GSHi's teams to stay in sync, collaborate, and keep providing excellent service to its customers.

GSHi also made significant strides in reducing its reliance on paper by digitizing many of its processes. The shift from paper to electronic workflows was a critical step in ensuring that operations continued seamlessly, even as staff worked remotely.

As the pandemic evolved, GSHi made several operational changes to reduce physical contact and streamline services. One notable change was the elimination of a courier service, which had been used to deliver physical items. With many businesses and services transitioning to remote or virtual operations, there was little need for in-person deliveries. This service remained suspended until May 2024, when GSHi reopened its doors and reinstated courier services.

Similarly, GSHi no longer required a third-party service to pick up bank deposits while doors were closed. However, once GSHi's physical location reopened, this service resumed. To keep things more efficient, the frequency of pick-ups was reduced from three times a week to twice a week, streamlining operations while still maintaining the necessary services for financial needs.

The hybrid work model and the operational changes GSHi has made since 2020 have proven to be more than just a temporary response to the pandemic. They've created lasting improvements in efficiency and flexibility that GSHi plans to carry forward. As we continue to adjust to the evolving business landscape, GSHi remains committed to providing excellent service while also embracing the benefits of a modern, digital-first approach to work.

b) The table below provides the number of customer inquiries received from 2020 to 2024. Note that from March 17, 2020 until October 11, 2022, GSHI's office remained closed to the public. GSHI closed again to the public December 1, 2023 and reopened May 1, 2024.

Year	Telephone	Email	In Person – Cust Serv	In Person - Cash
2020	44,755	12,599	592	2138
2021	43,633	12,828	0	0
2022	42,142	20,974	317	301
2023	40,035	19,013	1747	2843
2024	44,136	20,565	1796	2372

c) During this period, GSHi faced several challenges, including the need to implement a number of significant changes. Additionally, GSHi had to navigate a high level of staff turnover, which required constant training and onboarding of new employees. This created further complexity in managing projects, as the project teams were in a state of flux, with team members frequently changing. As a result, it was necessary to regularly bring in new staff and bring them up to speed, which ultimately impacted the consistency and efficiency of project execution.

The following are some of the changes that GSHi had to implement.

Date	Initiative	Effort Required
2020-02-24	Changes to the calculation of Ontario Electricity Rebate for customers receiving Ontario Electricity Support. Provide a lump sum payment to these customers.	Review to understand, analyze, test and implement change.
2020-03-24	Emergency price change. Fixed electricity commodity price for Regulated Price Plan (RPP) customers who pay time of use pricing at the off-peak price for every hour of every day.	Review to understand, analyze, test and implement change.
2020-03-27	Waive late payment charges	Review to understand, analyze, test and implement change.
2020-05-29	Partial deferment of Global Adjustment Charges for Non-RPP Customers	Review to understand, analyze, test and implement change.
2020-06-01	Change to pricing for TOU customers – changed the emergency price from 10.1 cents/kWh to 12.8 cents/kWh	Review to understand, analyze, test and implement change.
2020-06-16	Implement the OEB's Covid Energy Assistance Program (CEAP) for residential customers.	Review to understand, analyze, test and implement change.

2020-08-07	Implement the OEB's Covid Energy Assistance Program (CEAP-SB) for small businesses.	Review to understand, analyze, test and implement change.
2020-09-30	Implement the amendment decision to revise eligibility criteria for CEAP and CEAP-SB.	Review to understand, analyze, test and implement change.
2020-11-01	Amendment of O.Reg 95/05 that provides for customer choice.	Review to understand, analyze, test and implement change. System changes were required from GSHi's Software vendor for this initiative.
2021-01-01	Implement the 8.5 cent/kWh fixed price from 2021-01-01 to 2021-01-28	Review to understand, analyze, test and implement change.
2021-01-14	Implement the COVID-19 Energy Assistance Program	Review to understand, analyze, test and implement change.
2021-01-25	OEB issued guidance on the presentation of tiered prices and the associated cost of losses on consumer invoices	Review to understand, analyze, test and implement change.
2021-03-31	Implementation of section 5.1.3 (b) of the Distribution System Code to install MIST meters on existing customer facilities where the customer has a monthly average peak demand in a calendar year of 50 KW.	Review to understand, analyze, test and implement change. Consultation with meter and CIS vendors. Customer notifications.
2022-01-22	Implementation of the 8.2 ¢/kWh fixed price that will apply to consumers on the Regulated Price Plan for all electricity consumption from January 18 to February 7, 2022.	Review to understand, analyze, test and implement change.
2022-07-01	Changes to the Eligibility requirements to the OER and implementing the change.	Review to understand, analyze, test and implement change. Notify customers, update forms on websites, train staff.
2022-12-19	Reg. 429/04 Global Adjustment Class A change	Review and train staff on change.
2023-01-17	Electricity distributors must charge customers on the Regulated Price Plan based on the customer's choice of price plans – that is, Time-of-Use or Tiered pricing – even if the customer is net metered.	Review to understand, analyze, consult with CIS vendor to prepare for implementation.
2023-11-01	Implementation of Green Button	Review to understand, analyze, test and implement change. Procurement of a vendor to provide this service.

d) Please find below a summary of the number of customers on electronic billing for the period from 2020 to 2024.

Year	Customers on Electronic Billing
2020	10,981
2021	12,126
2022	12,742
2023	14,057
2024	17,171

e) GSHi staff implemented changes to processes to move from paper to more electronic based processes but the pandemic did create the upward pressure with respect to stationary costs. The increase in GSHI's stationary costs is twofold. The first being the increase in the price of paper and the second being the hot real estate market. The increase in paper prices can be attributed to a combination of factors. As the global economy reopened and businesses regained momentum, the demand for paper surged. However, supply chain disruptions, including raw material shortages and transportation challenges, created supply constraints. This supply-demand imbalance led to a significant rise in paper prices, with a notable 9.7% increase in 2021 alone. The upward trend in paper prices underscores the challenges faced by the industry and highlights the impact of economic recovery and supply chain dynamics on pricing.

The second factor, the bullish real estate market increased the number of real estate transactions which increased the number of first and final bills produced. This increase attributed to an increase in paper used.

4-Staff-38 General Counsel

Question:

General Counsel/Assistant

Ref 1: Exhibit 4 – Tab 4 – Schedule 1

Preamble:

Greater Sudbury Hydro stated that it is planning for a General Counsel and General Counsel Assistant because of growing complexities in corporate dealings and help with managing increased liability risks and complex employment matters. Specifically, in-house counsel can proactively address employment/labour issues and corporate governance concerns, ensuring the company follows best practices and maintains a healthy workplace culture.

Question(s):

a) Please provide the external legal costs incurred from 2020 to 2024.
b) Please explain why addressing employment/labour issues and maintaining a healthy workplace are not duties that should fall to HR.
c) What allocation basis was used to allocate the FTE count for the General Counsel and General Counsel Assistant to Greater Sudbury Hydro?
d) How did Greater Sudbury Hydro forecast the allocation for 2024 and 2025?
e) What work does the General Counsel and General Counsel Assistant do for Greater Subury Hydro Plus?

Response:

a) Please see below for external legal costs incurred from 2020 to 2024:

Year	Cost
2020	$85,305
2021	$42,080
2022	$53,153
2023	$38,935
2024	$63,298

b) The Human Resources (HR) department and the General Counsel (GC) play distinct but complementary roles. The collaboration between both departments is essential for addressing several critical issues effectively organization wide. The following are some of the key reasons why the addition of the GC is enhancing the HR department's abilities to deal with preventing and dealing with issues as quickly and efficiently as possible:

1. **Navigating Employment Laws and Regulations**: HR is responsible for implementing policies and practices that affect employees. However, HR is not qualified to ensure that these policies comply with ever-evolving employment laws, such as those related to discrimination, harassment, wages, and workplace safety. General Counsel provides legal expertise to ensure these policies align relevant legislation and reduce the risk of legal disputes and risks.

2. **Managing Risk and Litigation**: When disputes arise, whether from employee grievances, termination decisions, or workplace misconduct, HR and GC collaborate to assess risks and develop a response strategy. General Counsel's role includes managing potential litigation or settlements, while HR gathers the necessary documentation and evidence to support the organization's position.

3. **Handling Workplace Investigations**: Workplace investigations, particularly those involving claims of discrimination, harassment, or ethical violations, require a coordinated effort. HR's role is to gather facts and ensure a fair and objective process. GC ensures the investigation complies with legal standards, protects the organization's interests, and upholds employee rights.

4. **Drafting and Reviewing Employment Agreements**: Employment agreements, including contracts, often have significant legal implications. HR develops these documents based on organizational needs, while General Counsel reviews them to ensure compliance with applicable legislation and enforceability.

5. **Ensuring Compliance in Workforce Management**: The organization must comply with a broad spectrum of legislation, including those related to diversity, equity, and inclusion (DEI), immigration and data privacy. HR oversees policy implementation, while General Counsel ensures these policies are legally sound and that the organization's practices are defensible in case of scrutiny.

6**. Promoting Ethical Practices**: Both HR and General Counsel are stewards of organizational integrity. By working together, they create and enforce codes of conduct, provide training on ethical behavior, and address violations promptly and effectively.

The partnership between HR and General Counsel is crucial to the organization's success. The collaboration ensures that employee-related matters are handled with a balance of legal compliance, risk management, and a focus on fostering a positive workplace culture. By aligning their efforts, HR and GC contribute to organizational resilience and ethical leadership.

c) As this is a new role, the forecasted allocation of costs for the General Counsel and General Counsel Assistant was based on the CEO’s allocation methodology. The CEO's office uses timesheets to track time spent on various activities and allocates costs accordingly. This methodology was deemed the most appropriate proxy for the initial forecast.

d) For 2024, GSHi applied the CEO’s allocation methodology to forecast the costs for the General Counsel’s office, with minor adjustments made based on professional judgment. The General Counsel’s office tracks time using timesheets to allocate hours spent on each company, and this allocation will be adjusted at the end of 2024 based on the tracked data and refined over time to ensure accuracy.

For the 2025 budget, GSHi used the CEO’s allocation methodology as the basis for forecasting the General Counsel’s office costs, given its alignment with current organizational practices. Moving forward, GSHi intends to rely on timesheet data from the General Counsel’s office to determine allocations, reflecting the actual time spent on each company.

e) General Counsel (GC) is tasked with overseeing all legal and compliance aspects of the organization. The GC plays a critical role in ensuring the organization’s operations align with applicable legislation and regulations, mitigates risk, and support the achievement of our strategic goals. The GC assistant supports the GC in several areas as the GC role is expansive and multidisciplined. Here are a few examples of what the GC has added to our organization:

1. **Contract Management**: There are numerous contracts with vendors, contractors, government entities, and customers. The GC ensures these

agreements are legally sound and favorable to the company. This task includes:

- Drafting, negotiating, and reviewing contracts for construction projects, technology implementation, request for tender, or service delivery.
- Ensuring compliance with procurement laws and regulations.
- Managing risks associated with third-party contracts, such as performance guarantees or indemnity clauses.

2. **Corporate Governance**: The GC also acts as the Corporate Secretary. The GC advises the board of directors and executive team on corporate governance issues, ensuring ethical and legal operation at the highest levels of the company. This requires additional resources in the form of the GC assistant. Some of the key activities include:

    - Advising and providing training on fiduciary duties and regulatory obligations of directors and officers.
    - Drafting and maintaining corporate governance policies.
    - Supporting shareholder communication and compliance with all policies and governance documents.
    - Ensuring proper corporate filings are completed.
    - Preparing and reviewing meeting materials for all meetings and committees.

3. **Risk Management**: One of the key elements that the GC provides is risk management. Organizational risks can range from cyber attacks, negligence, operational outages amongst many others. The GC helps

identify, mitigate, and manage these risks. Examples of ongoing risk mitigation include:

- Ensuring robust risk assessment of processes for operational, legal, and regulatory threats.
- Managing insurance coverage for liability, property, and environmental risks.
- Overseeing cybersecurity legal frameworks to protect customer and operational data.

Ensuring proper safety and security protocols based on new relevant case law decisions are included and enforced on job sites including those with and third party contractors and within the organization.

4. **Litigation and Dispute Resolution**: The GC leads the organization's response to legal disputes, whether they involve regulatory agencies, customers, employees, or third parties. These include:

   - Handling lawsuits or claims related to accidents, incidents or service outages.
   - Managing arbitration or mediation in vendor contract disputes.
   - Representing the organization court proceedings or settlement negotiations.
   - Providing general legal counsel on all other legal issues which may arise.

5. **Labor and Employment Law**: In addition to aiding in reviewing and drafting employment letters and contracts, the GC contributes with legal interpretation and compliance of the collective agreement, labour

negotiations, general review of employment policies (Code of Conduct, Acceptable Use etc.) and consultation in cases of termination, grievances and suspensions.

6. **Strategic Advising**: The GC contributes to the organization's long-term strategy by aligning legal considerations with business objectives. Some of these areas include:

    - Advising on mergers, acquisitions, and joint ventures with other utilities.
    - Supporting the development of renewable energy projects or infrastructure modernization in partnership with the shareholder.
    - Navigating public-private partnerships.

7. **Interested Party Engagement**: Our organization interacts with a wide range of interested parties, including customers, regulators, and community groups. The GC helps navigate these relationships legally and diplomatically in the following:

    - Advising on community engagement strategies to address public concerns.
    - Supporting customer-related legal matters, such as billing disputes or service obligations.

8. **Privacy Officer**: In our organization, the General Counsel is also the Privacy Officer. The Privacy Officer ensures the organization is compliant with both legal and regulatory requirements and filings, as well as leading education and training to prevent/mitigate/and respond to data breaches.

9. **Emerging Challenges**: The utility industry faces rapid changes, and the GC plays a critical role in addressing new legal and compliance challenges that will arise from these changes. At present time this includes primarily Privacy and Cyber Security, however it is anticipated that the GC will play a supporting role in Energy transition and technological integration, in addition to all other projects which involve collaboration, cooperation and construction.

The General Counsel position is more than just a legal advisor—they are a strategic partner, risk manager, privacy officer and compliance leader. The GC's expertise ensures the organization can navigate complex legal landscapes, respond effectively to crises, and achieve its operational and strategic goals while maintaining public trust and legal compliance.

4-Staff-39 IT Support

Question:

IT support

Ref 1: Exhibit 4 – Tab 4 – Schedule 1

Preamble:

Greater Sudbury Hydro decided to retain the IT Support Desk as it allows the organization to handle routine IT tasks efficiently, freeing up IT Specialists to focus on more complex issues.

Question(s):

a) Please provide the number of IT tickets received from 2020 to 2024.
b) Please provide the number of IT staff from 2020 to 2024.

Response

a) The number of tickets received from 2020 to 2024 was 8,643. The table below shows the number of tickets by year.

IT Support

	2020	2021	2022	2023	2024
IT Tickets Received	2066	1908	1669	1407	1593

b) Please see the table below for the number of IT staff from 2020-2024.

IT Support

	2020	2021	2022	2023	2024
IT Staff	5	5	5	5	6

The IT Department had a consistent count of 5 employees until the addition of the Service Desk Support position in 2024. This position was initially hired in

March of 2024 to partially backfill a parental leave and was made a permanent position in October of 2024. The figures represent whole employees in the department and not on their FTE basis to account for any leaves or their allocation from GSHPi to GSHi.

4-Staff-40 Manger of Engineering and Asset Management

Question:

Manager of Engineering and Asset Management

Ref 1: Exhibit 4 – Tab 4 – Schedule 1

Preamble:

Greater Sudbury Hydro promoted the Engineering Supervisor in 2020 to the Manager of Engineering and Asset Management, but the Engineering Supervisor role remained unfilled till 2023.

Question(s):

a) Greater Sudbury Hydro managed without an Engineering Supervisor for three years. Please explain the incremental requirements that the Engineering Supervisor required in 2023.

b) Please provide the organization structure under the Manager of Engineering and Asset Management and the number of direct reports they have.

c) Greater Sudbury Hydro states that the Manager of Engineering and Asset Management role maintains responsibility for the overall distribution system plan (DSP). However, Greater Sudbury Hydro uses consultants for its DSP. Please explain why Greater Sudbury Hydro needs a consultant for the DSP when it has internal resources that could manage it.

Response:

a) In 2016, the Engineering Manager position at GSHi was eliminated, and the Engineering team's collective experience was heavily relied upon to maintain operations. However, since 2020, the demands on the Engineering Department have significantly increased, necessitating the reinstatement of the Engineering Manager role in 2023 to address the growing complexity and workload effectively.

The average tenure of staff in the Engineering Department has decreased, leading to a reduced depth of institutional knowledge, while the complexity of engineering projects has continued to increase. These factors require the Engineering Supervisor to dedicate more attention to project oversight, technical support, and design approvals. Additionally, to better serve the community and streamline development, the Engineering Supervisor now actively audits and participates in weekly Sudbury Planning Application Review Team meetings, where developers and municipalities collaborate on upcoming planning applications. This early engagement ensures smoother project execution but adds a significant time commitment to the role.

The absence of sufficient leadership resources also meant certain critical responsibilities—such as optimizing the lifecycle of utility equipment and infrastructure—cannot be addressed as effectively as they should be without additional resources. The growing workload placed on the Engineering Supervisor has exceeded what a single position can manage without compromising efficiency or quality. The reinstatement of the Engineering Manager ensures these vital responsibilities are managed effectively, allowing the department to meet its objectives while improving project execution and planning for long-term infrastructure sustainability. This additional leadership capacity allows GSHi to perform at the high standard required to meet both current and future demands.

b) The Manager of Engineering and Asset Management oversees the Engineering Supervisor, the Distribution Engineers, and the Power Systems Inspections (whether performed internally or externally). The

Manager of Engineering and Asset Management is responsible for overseeing the day-to-day operations of the Engineering Department through the Engineering Supervisor. Additionally, the position manages utility asset optimization, long-term capital planning, distribution system engineering, DER integration, and the development of strategies to ensure the efficient lifecycle management of infrastructure.

c) Although the DSP is developed internally by the Manager of Engineering and Asset Management, Greater Sudbury Hydro utilises consultants to review the document for completeness. With the responsibility of the DSP now assigned to a dedicated resource, GSHi has been able to reduce its dependency on external consultants for DSP assistance; down from $45,000 in the 2020 COS application to $7,000 in the 2025 COS application.

4-Staff-41 Control Room and DSO

Question:

Control Room Operator

Ref 1: Exhibit 4 – Tab 4 – Schedule 1

Ref 2: Exhibit 4 – Tab 3 – Schedule 1

Preamble:

Greater Subury Hydro stated that the additional control room operator returns Greater Sudbury Hydro to a full complement of control room operators required for future DSO initiatives. Greater Sudbury Hydro also stated that in 2023 it had 2.5 FTE vacancy.

Question(s):

a) Please provide the total number of control room operators.
b) In the absence of DSO initiatives, what is the number of control room operators required?
c) What DSO initiatives are planned in the next five years and when will they be implemented?
d) Please explain how Greater Sudbury Hydro managed the control room in 2023 with a 2.5 FTE vacancy.

Response:

a) Presently, the total number of control room operators including apprentices is four (4). The total number of control room operators required to operate a 24/7 control room is five (5).

b) The total number of control room operators required to run a 24/7 control center is five (5) irrespective of any DSO initiatives. Having a full complement of operators will position GSHI well to facilitate future DSO initiatives.

c) At present, no specific DSO initiatives are planned for the next five years, however, GSHI is keeping abreast of developments in the DSO space as a proactive approach.

d) Staffing in the control room has been a challenge in recent years, particularly in 2023. Attempting to attract qualified operators has been relatively unsuccessful and GSHI has relied on retirees to bridge the gap, while simultaneously training apprentices as a long-term strategy. In 2023 GSHI ran short in the control room as, not only did the struggle to find qualified operators continue, but GSHI was faced with unprecedented turnover in the department. As a result of a depleted workforce, GSHI was required to run a dayshift operation only for the majority of the year. Gaps in day shift coverage were primarily filled by available operators on overtime, or by the department supervisor who was also a qualified operator. Night shifts were covered by the operator on-call on an emergency basis. This practice was unsustainable and required that all discretionary control room projects such as the implementation of GSHI's Outage Management System be put on hold. It also resulted in staff working an unacceptable number of hours, with two staff members logging a total of 1,041.5 additional hours combined. Additionally, the increased workload had an impact on the work-life balance of both the operators and the department supervisor as they were unable to take all of their vacation in 2023.

4-Staff-42 Cost of Service Consultant Costs

Question:

Regulatory One-Time Costs

Ref 1: Chapter 2 Appendices – 2-M

Ref 2: Exhibit 4 – Tab 4 - Schedule 4

Ref 3: Exhibit 4 – Tab 4 - Schedule 5

Preamble:

In reference 1, it shows that Greater Sudbury Hydro incurred $367k in consultant costs from 2021 to 2025.

Question(s):

a) Please provide 2024 actuals for consultant costs.

b) Please break down the consultant costs to the consultant and the work that they did.

Response:

a) In 2024, GSHi incurred $223,549 in consultant costs.

b)

Consultant	Work Performed	2022	2023	2024 (Projection)	2025 (Budget)	Total 2025 COS
KPMG	Report on Shared Services and Cost Allocations Review	50,000	20,000	-	-	70,000
Utilis	OPEB Research and related evidence preparation	-	-	11,350	-	11,350
Kinectrics	Distribution System Asset Condition Assessment	-	-	29,962	-	29,962
Lakeside Power	Substation Asset Condition Assessment	-	-	55,000	-	55,000
YULA PLT	DSP Review	-	-	7,000	-	7,000
UTS Consultants	Polux Pole Condition Testing	-	-	63,231	-	63,231
Oracle Poll	DSP Survey	-	-	6,500	-	6,500
Elenchus	Prepare Load Forecast, Cost Allocation, Rate Design, Training and Evidence Review and Updates	-	-	50,506	27,500	78,006
Totals		**50,000**	**20,000**	**223,549**	**27,500**	**321,049**

5-Staff-43 Cost of Capital - Outcome of Proceeding

Question:

Ref 1: EB-2024-0063, Notice, March 6, 2024

Ref 2: EB-2024-0063, OEB Letter, April 22, 2024

Preamble:

On March 6, 2024, the OEB commenced a hearing (EB-2024-0063) on its own motion to consider the methodology for determining the values of the cost of capital parameters and deemed capital structure to be used to set rates for electricity transmitters, electricity distributors, natural gas utilities, and Ontario Power Generation Inc. The methodology for determining the OEB's prescribed interest rates and matters related to the OEB's Cloud Computing Deferral Account will also be considered, including what type of interest rate, if any, should apply to this deferral account.

On April 22, 2024, the OEB approved the final Issues List for this proceeding, including the following two issues, amongst other issues:

18. How should any changes in the cost of capital parameters and/or capital structure of a utility be implemented (e.g., on a one-time basis upon rebasing or gradually over a rate term)?

19. Should changes in the cost of capital parameters and/or capital structure arising out of this proceeding (if any) be implemented for utilities that are in the middle of an approved rate term, and if so, how?

Question(s):

a) Please confirm that the applicant proposes to implement the outcomes from the OEB's generic cost of capital proceeding, including what the OEB decides with respect to implementation. If this is not the case, please explain.

Response:

GSHi confirms that it will implement the outcomes from the OEB's generic cost of capital proceeding (EB-2024-0063). Specifically, GSHi will follow the OEB's directions regarding how and when regulated distributors filing a cost of service application for 2025, with an effective date of May 1, 2025, are to implement any outcomes from this proceeding.

5-Staff-44 2025 DSTDR

Question:

Ref 1: EB-2024-0063, OEB Letter, July 26, 2024

Preamble:

On July 26, 2024, the OEB issued a Letter and Accounting Oder prescribed interest rates and the deemed short-term debt rate (DSTDR).

Question(s):

a) Please confirm that the applicant will use the 2025 DSTDR set in October 2024 on an interim basis.
b) Please confirm that the applicant will follow all other direction included in the OEB's Letter and Accounting Order issued on July 26, 2024, including the establishment of a new variance account for the DSTDR.

Response:

a) GSHi confirms that it will use the 2025 deemed short-term debt rate (DSTDR) set in October 2024 on an interim basis as directed by the OEB.

b) GSHi further confirms that it will comply with all other directions included in the OEB's Letter and Accounting Order issued on July 26, 2024. This includes the establishment of a new variance account for the DSTDR as outlined in the OEB's instructions. The letter also acknowledges that this variance account may not be necessary for utilities with a rebasing rate year starting on May 1, 2025, depending on the timing of the OEB's final decision in the current proceeding.

5-Staff-45 Long term Debt

Question:

Long Term Debt

Ref 1: Exhibit 5/Tab 2/ Schedule 1, pp. 2-3

Ref 2: Ch. 2 Appendices, Tab 2-OB_Debt Instruments

Preamble:

In 2024 Greater Sudbury Hydro is planning to secure an additional $6M in third party debt with a fixed interest rate of 4.15% with a 10-year term and a 25-year amortization period, which has not been finalized at the time of filing this application. Greater Sudbury Hydro noted that it plans to enter into an interest rate swap contract.

Questions:

a) Please provide updated information about the new loan expected.
b) What due diligence has Greater Sudbury Hydro undertaken to ensure its preferred lender is offering a competitive rate and product?

Response:

a) The debt arrangement commenced on November 4, 2024. The financing was structured as a swap agreement, under which GSHi pays an all-in fixed interest rate of 3.992%. The swap term is 5 years, with an amortization period of 25 years. The amount of the debt draw was $6,000,000.

b) GSHi has undertaken a thorough due diligence process to ensure its preferred lender is offering a competitive rate and product. As part of this process, GSHi engaged with two additional financial institutions to explore alternative options for debt financing. Of the two, one institution provided a quoted term for a similar debt product; however, the quoted rate was higher than the rate offered by GSHi’s existing financial institution.

Moreover, both institutions required GSHi to transfer its banking operations to their institutions as a condition of proceeding with debt financing. This requirement was deemed infeasible, as it would disrupt GSHi’s existing banking arrangements and operations.

In accordance with the shareholder agreement, GSHi also offered the debt financing opportunity to its shareholder, providing them the option to match the terms offered by the third-party lender. The shareholder declined, which further indicates that the proposed rate is competitive.

GSHi’s preferred lender offers a competitive rate and product without necessitating changes to its current banking relationship, aligning with GSHi’s operational and financial objectives.

6-Staff-46 Taxable Additions

Question:

PILS

Ref 1: Exhibit 6 / Tab 3 / Schedule 1, p 3

Preamble

In reference 1, Greater Sudbury Hydro states that on July 16, 2024, the Ministry of Finance concluded its audit of Greater Sudbury Hydro's 2019 and 2020 taxation years, resulting in additions to taxable income of $1,323,815 for 2020 and $1,339,214 for 2019, totaling $2,663,029 over the two years. Additionally, Greater Sudbury Hydro anticipates re-assessments for the 2021, 2022, and 2023 taxation years from future audits, with taxable income adjustments expected to be similar to those for 2019 and 2020.

Question(s):

a) Please describe the nature of the taxable additions and how these were missed in the filing of Greater Sudbury Hydro's 2019 and 2020 tax returns.
b) Did the assessments of Greater Sudbury Hydro's 2020 and 2021 income taxes result in additional taxes payable? If yes, please provide the amounts.
c) Were there any penalties associated with the tax reassessments? If yes, in what amounts.
d) Please confirm if/how Greater Sudbury Hydro plans to recover any amounts relating to the reassessments.
e) What impact(s), if any, does Greater Sudbury Hydro expect from the re-assessments on its 2025 PILS, the test year?

Response:

a) The Ministry of Finance (MOF) regularly conducts PILs audits, with one area of focus in recent years being the interest rate paid by an LDC to its municipal shareholder. Generally, the MOF has taken the position that the interest paid by LDCs to their shareholders on related party debt over a certain threshold constitutes a non-market rate of interest. As a result, the MOF has reassessed several LDCs and disallowed a portion of the interest claimed as a deduction.

In the case of GSHi's 2019 and 2020 taxation years, the MOF conducted an audit and disallowed a portion of the interest paid to its shareholder that exceeded the threshold, resulting in taxable additions of $1,339,214 for 2019 and $1,323,815 for 2020. These adjustments represent the material portion of the taxable additions in question.

b) The re-assessments for 2019 and 2020 will result in an overall greater tax liability for GSHi of 26.5% of the amounts added to taxable income, so approximately $354,892 for 2019 and $350,811 for 2020. For these specific years GSHi was able to apply loss carryforward or carryback adjustments which significantly reduced the amount owing.

c) No penalties were associated with the reassessments.

d) GSHi does not plan to recover any amounts related to the reassessments from ratepayers. GSHi has engaged KPMG to assist in submitting notices of objection regarding the treatment proposed by the Ministry of Finance in the reassessments of the 2019 and 2020 taxation years. The notices of objection were filed with the Ministry of Finance on January 10, 2025, and GSHi now awaits further proceedings in this matter in due course.

e) GSHi does not anticipate any direct impact from the reassessments on its 2025 PILs as calculated for rate-setting purposes. For the purpose of setting rates, GSHi has never included the incremental interest expense—now the subject of the MOF reassessments—in its approved revenue requirement. Consequently, the inability to claim this incremental interest expense in determining its actual PILs obligation (pending resolution of the notices of objection) has no direct effect on the calculation of PILs for rate-setting purposes. GSHi consistently uses the OEB-approved interest expense to determine its PILs liability for rate-setting, absorbing any higher actual interest expense charged by its affiliate without rate recovery.

There is, however, an indirect impact on the calculation of the 2025 PILs obligation due to the loss of an incremental benefit previously provided to ratepayers. By claiming deductions for the incremental interest expense charged by the affiliate above the OEB approved rate, GSHi preserved other available tax losses for future ratepayer benefit. For instance, if the affiliate's interest rate for 2019 and 2020 had been aligned with the deemed rate, GSHi would have consumed these other available tax losses earlier, reducing their availability for future ratepayer benefit; the ability to claim incremental interest expense over the OEB approved rate allowed GSHi to preserve tax losses it would have otherwise applied in the normal course.

The MOF's reassessments, if upheld, eliminate this mechanism, preventing GSHi from preserving available tax losses carried forward for the benefit of ratepayers. For 2025 specifically, the tax losses available to offset GSHi's PILs liability for rate-setting purposes align with the deductions associated with the OEB-approved interest expense. The incremental tax losses that would have been preserved through deductions for the higher affiliate interest expense are no longer available.

In summary, the pre-assessment ability to deduct incremental interest expenses provided a net benefit to ratepayers by preserving tax losses for future use. While GSHi will continue to pursue a resolution through the objection process, the reassessments have effectively ended this incremental benefit for ratepayers.

6-Staff-47 Property Taxes

Question:

Property Tax

Ref 1: Exhibit 6 / Tab 3 / Schedule 2

Preamble

In reference 1, Greater Sudbury Hydro states that the amounts recorded in Account 6105 pertain to property taxes. Greater Sudbury Hydro uses the most recent actual property tax costs and adjusts them for anticipated increases to budget the amount for the 2025 Test Year.

Question(s):

a) Please provide the last 5 years of property taxes paid by Greater Sudbury Hydro and the amounts for bridge year and test year.

b) Please explain what properties in particular the property taxes are related to.

c) Please provide a variance analysis for the property tax for the last 5 years.

Response:

a) Property taxes paid from 2019 to 2025 are presented in the table below.

Property Types	Actual 2019	Actual 2020	Actual 2021	Actual 2022	Actual 2023	Projection 2024	Budget 2025
Main Office and Parking Lots	101,355.21	101,294.54	101,419.99	106,661.94	109,901.08	115,361.86	121,956.00
Sudbury Substations	188,387.14	193,692.41	193,746.29	200,886.30	205,374.71	201,495.20	229,756.00
West Nipissing Garage	7,878.46	7,760.21	7,550.14	7,550.14	7,833.06	8,016.08	8,256.56
West Nipissing Substations	1,653.56	1,760.11	1,727.64	1,727.64	4,486.97	4,591.99	4,729.75
Total	**299,274.37**	**304,507.27**	**304,444.06**	**316,826.02**	**327,595.82**	**329,465.13**	**364,698.31**

b) Please see table in response a) above.

c) Two key factors influence the amount of property taxes paid: the purchase and sale of properties, and changes in tax rates. Regarding property transactions, it's important to highlight the case of 40 Cobalt, a property where one of GSHi's substations reside. GSHi had been leasing this land and, under the lease agreement, was responsible for paying the property owner a portion of the property taxes. These payments, being property tax-related, are reflected in the table above. In 2024, GSHi purchased the portion of this property it had previously been leasing and has received a tax bill reflecting the portion of the year since GSHi took ownership. In addition, a payment has been made to the property owner in line with the lease agreement. For the purposes of the 2025 budget, GSHi has included an estimate for 2025 property taxes based on historical payments made to the property owner in prior years.

As for tax rates, they have been steadily increasing over time. The amounts shown for 2025 reflect a larger increase, partly due to the timing of budget preparation. When the 2025 budget was developed, the actual 2024 figures were not yet available. Consequently, the 2025 projections were based on the 2024 budget, which anticipated a greater rate increase in 2024 than what actually occurred. This explains the more significant increase reflected for 2025 compared to previous years.

It is also worth noting that property taxes associated with the main office building and parking lots are allocated to the various companies and departments within GSU based on the square footage they occupy. Starting in 2023, GSHi began including property taxes related to the main office building that were directly charged to a GSHi department under account 6105 – Property Taxes. Prior to this change, these taxes were accounted for within the respective departmental programs.

7-Staff-48 Cost Allocation Weight Factors

Question:

Weighting Factors

Ref 1: Exhibit 7, page 3

Ref 2: Cost Allocation Model, E4 TB Allocation Details

Preamble:

Greater Sudbury Hydro indicates that all service weighting factors other than residential are set to 0 because other rate classes pay contributions for services. It also indicates that gross capital.

Account 5130, maintenance of overhead services and account 5155, maintenance of underground services are also allocated based on account 1855.

Question(s):

a) When non-residential services reach end of life and require replacement, does Greater Sudbury Hydro provide the replacement, and if so, which USoA account would the replacement assets be tracked in?

b) When maintenance is required on non-residential services, does the customer pay costs? If not, which USoA account would the expense be tracked in?

Response:

a) For non-residential services, in the rare instances where replacement is required, GSHi provides replacements only if the service is overhead (because it's owned by GSHi). In such cases, the associated costs are recorded in USoA account 5130. However, if the service is underground, it is privately owned, and GSHi does not provide the replacement.

b) For non-residential services, where maintenance is required, GSHi will perform the maintenance only if the service is overhead (because it's owned by GSHi). In such cases, the associated costs are recorded in USoA account 5130. However, if the service is underground, it is privately owned, and GSHi does not provide the maintenance work.

8-Staff-49 Rate Design - 30 Day Rate

Question:

Billing Cycle

Ref 1: Exhibit 8, Tab 2, Schedule 1, page 1

Ref 2: EB-2023-0195, Final Rate Order, December 12, 2024, Schedule A, page 4.

Preamble:

Greater Sudbury Hydro proposes fixed charges based on a 30-day basis. Volumetric charges are proposed remain on a monthly basis. It proposes to do this to align with its billing system's application of charges based on a 30-day basis.

Currently, Greater Sudbury Hydro applies fixed charges, and demand charges on a 30-day basis. All other regulated electricity distributors apply fixed charges and demand charges on a monthly basis.

Question(s):

a) Is Greater Sudbury Hydro aware of the distinction between its billing system and most other electricity distributors which facilitate the application of monthly charges?
b) Can the number of days per billing cycle be configured in the billing system to a decimal number such as 30.4?
c) Please explain with an example how the billing service interval is set for a typical customer.
    a. Are customers invoiced monthly, once per 30 days, or something else (please explain)?

b. If the billing service interval begins or ends on a weekend, is the interval lengthened or shortened to align with a weekday?
c. Does the bill reflect the number of days in the service interval, the number of days in the month, or something else (please explain)?

d) Are there any scenarios where a customer could receive 13 bills in a year (please explain)?
   a. If so, would the demand charge apply 13 times in a year?

Response:

a) Greater Sudbury Hydro (GSHi) uses the Harris Northstar billing system, which is one of the more commonly used systems among Local Distribution Companies (LDCs) in Ontario. Northstar supports both calendar monthly billing and cycle billing, and GSHi has opted for cycle billing. This approach allows GSHi to bill groups of customers on different days, spreading out the workload for staff and smoothing cash flow impacts associated with billing.

GSHi understands that other LDCs using Northstar in the province may choose either calendar monthly billing or cycle billing. Transitioning to calendar monthly billing would enable GSHi to align its rate application methodology with monthly charges, but it would come at the cost of losing the operational and financial benefits provided by cycle billing.

While GSHi does not have specific information on how many LDCs use calendar monthly billing versus cycle billing, it is GSHi's understanding that any LDC using cycle billing with Northstar would need to make adjustments to its fixed monthly rates prior to entering them into its billing system. These adjustments would need to be made manually by converting the rates before inputting them into the billing system.

b) GSHi has not investigated whether custom programming changes could be made to its billing system to configure the number of billing days to a decimal point. However, even if this option were available, GSHi would still propose using 30-day rates. This approach offers three key benefits:

Charges Better Aligned with Service

By transitioning to 30-day rates, customers are billed based on the actual number of days for which service is provided. Under a monthly rate structure, customers are charged proportionately more during shorter months (e.g., February with 28 days) compared to longer months (e.g., March with 31 days). This discrepancy occurs despite the cost to GSHi for providing service being more closely aligned with the number of days service is provided rather than the number of days in the month. GSHi's proposal ensures that customers are charged in proportion to the actual number of days they receive service, promoting a fairer and more equitable approach for both GSHi and its customers.

Simplified Customer Bill Calculation

Transitioning to 30-day rates simplifies the calculation of customer bills. A 30-day rate effectively functions as a daily rate, as it can be calculated by dividing the proposed rates by 30. This simplicity allows customers and stakeholders, even those without advanced knowledge of billing calculations, to easily determine how much of GSHi's tariffs apply to any given bill. For instance, they can multiply the daily rate by the number of days in the billing period, whether for a standard bill or a first/final bill with a different number of days than a typical billing period.

Transparency in Leap Years

Using a daily rate provides greater transparency regarding billing during a leap year. GSHi's proposal explicitly accounts for the impact of a leap year on its distribution revenue. GSHi can see how an LDC converting monthly rates into their billing systems could inadvertently collect additional revenue in leap years if they do not account for the extra day during their conversion calculations, without explicitly indicating that this is intentional. For reference, GSHi's explanation of the impact of a leap year on 30-day fixed charges, as detailed in Exhibit 8, Tab 2, Schedule 1, Page 3 of its initial submission, is copied below:

Impact of Leap Year on 30-Day Fixed Charges

*In a leap year, which occurs every **four years**, GSHi will bill customers for **366 days**, as the billing system calculates fixed charges based on the number of days in the billing period. This results in GSHi collecting one extra day of **Monthly Service Charge (MSC) revenue**, equivalent to **1/365 of the total annual MSC revenue**. Based on total MSC revenues of **$23,265,220** (see **Revenue Requirement Workform**, Tab 13 "Rate Design", total of column "AK"), this additional revenue amounts to approximately **$63,740**. Conceptually, GSHi considers this outcome reasonable, and no correction mechanism is proposed. In a leap year, GSHi operates for an additional day, incurring extra costs, and the mechanics of billing based on the actual number of days fairly reflect these costs. The next leap year will occur in **2028**, which falls within this five-year rate-setting cycle from **2025 to 2029**. Furthermore, the additional revenue of **$63,740** is well below the materiality threshold of **$163,439** for this rate application, representing only **39%** of materiality, demonstrating that this amount is immaterial.*

c) GSHi has its customers divided into 60 billing cycles, which are billed within a given calendar month. Cycles 1 and 31 have a read date on the 1st of the month, billing consumption from that date back to the previous reading date on the 1st of the prior month. Similarly, cycles 2 and 32 have a read date on the 2nd of the month, and this pattern continues, with the final cycles billed in a month being cycles 30 and 60.

The only cycles with a read date of the 31st are GSHi's General Service greater than 50 kW (GS>50) cycles, which bill on a calendar-month basis. All other cycles follow the described pattern and do not have a read date of the 31st. In months with fewer than 30 days, the last two cycle groups—cycles 29/59 and 30/60—are read and billed on the last day of the calendar month.

Customers are assigned to billing cycles based on their geographical location. For GSHi's GS>50 customer rate class, billing is conducted in two distinct cycles on a calendar-month basis.

a. As explained in the preamble for part c) above, customers are billed once per calendar month. However, the number of days in the billing period can vary from month to month, depending on when the current read date falls in relation to the previous read date.
b. No, the billing interval is not adjusted to align with a weekday; it remains based on the scheduled read dates.
c. As explained in the preamble for part c) above, the bill reflects the actual number of days between the read dates.

d) In rare situations, a customer could receive 13 bills in a year, such as when there is a change in occupancy at a billed location. However, even in these instances, demand-based charges are only applied 12 times per year. Each customer is assigned to a specific billing cycle, which is billed 12 times annually under normal circumstances.

a. No, a given customer would not have the demand charge applied 13 times in a year, even if they receive 13 bills due to a change in occupancy.

8-Staff-50 Updated RTSR Model

Question:

RTSRs

Ref:Exhibit 8, Tab 3, Schedule 1, page 1

Preamble:

Greater Sudbury Hydro indicates that it will update the UTRs once the 2025 UTRs are known.

Question(s):

a) Please provide an updated RTSR model with the 2025 UTRs.

Response:

a) An updated RTSR model with 2025 UTRs is filed with interrogatory responses. The document is named as follows: "GSHI_IRR_2025_RTSR_Workform_20250128.xlsb"

8-Staff-51 Low Voltage Rates

Question:

Low Voltage Rates

Ref 1: Exhibit 8, Tab 3, Schedule 7, page 1

Ref 2: Exhibit 3, Tab 1, Schedule 1, Attachment 1, page 6

Ref 3: EB-2024-0032, Rate Order, December 19, 2024

Preamble:

The LV charges were set based on 2023 billing determinants multiplied by 2024 LV rates, escalated by 3.3%.

Greater Sudbury Hydro's consultant noted a decline in consumption in 2023 due to mild winter temperatures.

Question(s):

a) Please provide a scenario where a 5-year average of consumption is used instead of 2023.
b) Please update using 2025 LV rates without the escalation.

Response:

a) Billed LV demands are forecast based on historic LV billed demands. The forecast of billed LV demands does not rely on the consumption forecast.

b) The updated RTSR model with 2025 UTRs filed with interrogatory responses has been updated to reflect the updated total charge of $437,112 as calculated below.

Description	2023 Annual Billing Determinants	2025 Approved Rates	Estimated 2025 Low Voltage Payable
Meter Charge	84	$417.59	$35,078
Service Charge	72	$824.28	$59,348
Specific ST Lines	5.64	$677.89	$3,823
Common ST Lines	189,535	$1.71	$324,029
Low Voltage	7,025	$2.11	$14,834
Total			**$437,112**

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8-Staff-52 Bill Impacts - DVA

Question:

Bill Impacts

Ref 1: Exhibit 8, Tab 5, Schedule 3, page 2

Ref 2: Exhibit 8, Tab 5, Schedule 4, page 1

Ref 3: DVA Continuity Schedule, Rate Rider Calculation

Preamble:

The bill impacts for the sentinel lighting and street lighting rate classes are 13.1% and 15.0% respectively. Both rate classes are subject to debit variance account balances which contribute to the bill impacts. Greater Sudbury Hydro indicates that it has explored various scenarios with respect to the disposition of DVAs and other rate riders. The proposal remains to dispose of the variance accounts over a 12 month period.

Question(s):

a) As a scenario, please provide the bill impacts that would result from using a 24-month disposition period for rate riders. In doing so, please provide the monthly scenario to put 2024 and 2025 on a consistent basis.

Response:

Response to this interrogatory requires 2024 figures. The response will be filed by February 4, 2025.

9-Staff-53 Pole Attachment Charges

Question:

9-Staff-1

1508 – Pole Attachment Charges
Ref 1: Chapter 2 Filing Requirements
Ref 2: Exhibit 9 / Tab 1 / Schedule 1 / Page 7 of 24, Table 2

Preamble

In the Report of the Ontario Energy Board: Wireline Pole Attachment Charges, the OEB advised that a new variance account was required for distributors to track the revenue differences between the pole attachment charge incorporated in rates and the updated charge. In subsequent guidance, the OEB instructed distributors to record the excess incremental revenues, as of September 1, 2018, until the effective date of their rebased rates in a new variance account related to pole attachment charges. The distributor would then refund the closing balance in its subsequent cost of service application.

OEB staff notes that in Greater Sudbury Hydro's calculation of its pole attachment revenue variance account in reference 2, Greater Sudbury Hydro's revenue charged per pole attachment is $44.50 for the period of 2020 through 2024 while the approved rate during the year by OEB order ranges from $34.76 to $44.50.

OEB staff notes from the DVA continuity schedule that the proposed disposition in Account 1508 sub-account Pole attachment variance is a debit of $656,721 including the principal balance as of December 31, 2023 and interest up to April 30, 2025.

Question(s):

a) Please explain why the resulting difference between pole attachment charges is a debit to ratepayers and not a credit.
b) Please forecast the variance for the first quarter of 2025 and update the DVA continuity schedule.
c) Please update the evidence as necessary.
d) Please confirm that the account will be closed upon disposition.

Response:

a) The resulting difference between pole attachment charges is a debit to ratepayers because the rate embedded in GSHi's 2020 rates exceeded the actual rate GSHi charged over the period. As a result, the variance account reflects a shortfall in revenue, leading to a debit position that is recoverable from ratepayers. Specifically, while GSHi charged the approved rate for pole attachments each year, the revenue collected was less than the amount assumed in GSHi's approved 2020 Test Year Other Revenue forecast due to the differential in the rate embedded in the 2020 Test Year forecast and the actual rate charged each year. This variance has been tracked in the deferral account as per OEB guidance.

b) The variance for the first four months of 2025, up to April 30, 2025, has been forecasted and incorporated into the updated DVA continuity schedule. This aligns with GSHi's proposed rates effective May 1, 2025, as outlined in the application. An updated table with the forecast is provided below for reference. GSHi has also updated the interest calculation to reflect the OEB's posted interest rate for Q1 2025 and is applying this rate to the first four months of 2025.

Table 1: Pole Attachment Revenue Variance Summary by Year - Updated

Year	GSH COS 2020 Rate (Per Pole)	Approved Rate During Year (Per Pole)	Rate Difference	Full Pole Count	Service Pole Count (50% of rate)	Full Pole Deferral	Service Pole Deferral	Total Pricipal Deferral Amount	Annual Interest	Note
2020	$ 44.50	$ 44.50	$ -			$ -	$ -	$ -	$ -	N/A, rate matches approved
2021	$ 44.50	$ 44.50	$ -			$ -	$ -	$ -	$ -	N/A, rate matches approved
2022	$ 44.50	$ 34.76	$ 9.74	23,735	730	$ 231,179	$ 3,555	$ 234,734	$ 2,873	
2023	$ 44.50	$ 36.05	$ 8.45	23,611	825	$ 199,513	$ 3,486	$ 202,999	$ 16,681	
2024	$ 44.50	$ 37.78	$ 6.72	24,098	729	$ 161,939	$ 2,449	$ 164,388	$ 26,215	Projected
2025	$ 44.50	$ 39.14	$ 5.36	24,098	729	$ 43,055	$ 651	$ 43,706	$ 7,504	Projected @ 4/12ths due to rate year
						$ 635,686	$ 10,141	**$ 645,827**	**$ 53,273**	
								Total Claim	**$ 699,100**	

c) The DVA continuity schedule has been updated to reflect the revised forecast. The resulting rate riders and updated bill impact calculations will also be provided as part of the updated evidence.

d) GSHi confirms that the 1508 sub-account for Pole Attachment Variance will be closed upon its disposition.

9-Staff-54 OPEB

Question:

OPEB

Ref 1: Exhibit 9 / Tab 1 / Schedule 1/ Page 9-15

Ref 2: Report of the Board - Regulatory Treatment of Pension and Other Post-employment Benefits (OPEBs) Costs (final report)

Ref 3: EB-2019-0037, Exhibit 4 / Tab 2 / Schedule 1 / p 3

Ref 4: EB-2019-0037, Exhibit 4 / Tab 4 / Schedule 3 / p 4

Preamble

Prior to May 1, 2020, Greater Sudbury Hydro recovered included a portion of the cash cost incurred for OPEB expenses for recovery in rates. In reference 3, Greater Sudbury Hydro stated that this cash cost represented its payments for OPEBs incurred for retirees. Greater Sudbury Hydro transitioned to recovering OPEBs on an accrual basis as part of its 2020 cost-of-service rate application (EB-2019-0037). Per Greater Sudbury Hydro, the OPEB Cash to Accrual Transitional Account captures the difference calculated from this comparison.

In its application, Greater Sudbury Hydro stated that the amount deferred in this account represents the present value of Greater Sudbury Hydro's total OPEB liabilities as of December 31, 2019. Each year up to December 31, 2019, this total liability has increased due to current service and interest costs and decreased based on actual benefits paid in cash during the year. It is also adjusted by a net actuarial gain or loss for the year, which going forward in 2020 and beyond Greater Sudbury Hydro defers annually in a separate deferral account. The amount deferred as of December 31, 2019, reflects the difference between the cash and accrual accounting methods that Greater Sudbury Hydro experienced for actual costs since the inception of OPEBs, up to the transition date from cash to accrual basis in rates. Greater Sudbury Hydro states that it has not adjusted this deferral to account for the difference between the amounts embedded in rates and collected from ratepayers and the actual amounts paid out since the inception of OPEBs.

In reference 2, the OEB's "Report of the Ontario Energy Board – Regulatory Treatment of Pension and Other Post-employment Benefits (OPEBs) Costs," dated September 14, 2017, outlines the approach for calculating amounts related to the transition from a cash to accrual method for OPEB recovery. Specifically, the OEB directs regulated utilities to calculate the **amounts already recovered from customers for OPEBs through the rates charged to date and compare them to what would have been collected had the accrual method been in place over the same historical period**. [Emphasis Added]

OEB staff notes that the opening balance of $16,109,318 in Greater Sudbury Hydro's calculation of this sub-account agrees with the present value of the defined benefit obligation as of January 1, 2020 provided in Attachment 3 of RSM's actuarial valuation.

Question(s):

a) Please explain how the present value of the defined benefit obligation correlates with actual historical amounts embedded in rates, as mentioned in the OEB's Report on the Regulatory Treatment of Pension and OPEBs Costs.
b) Please provide a detailed breakdown of the $26M amount showing the portion attributable to past periods and how much of it reflects actual historical recovery differences versus forward-looking actuarial assumptions.
c) Please confirm that prior to the 2020 rebasing application, Greater Sudbury Hydro had included the OPEB expense on a cash basis in its

rates. If not, please provide the rate terms where the OPEB expenses are recovered on a cash basis.

d) Please confirm that if the OPEB expense were recovered on an accrual basis, the current service cost plus the interest cost would likely be the costs that would have been included in the revenue requirement and recovered in rates. Please explain if not confirmed.

e) OEB staff has developed a table below (Table 1) to compare the OPEB expense on cash basis and the OPEB expense on accrual basis. Please fill out the table for the comparison of the OPEB expense during the period when cash accounting was used, i.e. up to December 31, 2019, to determine the difference between the cash and accrual method of OPEBs.

Table 1: Difference between OPEBs under Cash and Accrual Methods

Year	OPEB under accrual method – Sum of current service costs and interest costs (accrued method)	OPEBs paid under cash method that had been embedded in rates in respective rebasing applications	Differences (a-b)
	(a)	(b)	(c)
xxxx			
2013			
2014			
2015			
2016			

2017			
2018			
2019			
Total difference			

Response:

a) The present value of the defined benefit obligation represents the actuarial calculation of the accrued amount required to fund GSHi's OPEB obligation to retired and current employees. This calculation reflects the current service cost plus interest, less payments made, and is adjusted for actuarial revaluations.

Historically, GSHi used the cash basis recovery method, where the amounts embedded in rates were equivalent to the actual payments made for OPEBs. The transition from the cash basis to the accrual basis recovery method shifts the recovery approach from reflecting actual payments to recovering the current service cost plus interest.

If the sum of the current service cost, interest, and actuarial revaluation exceeds the payments issued, it creates an additional liability that GSHi would have recovered had it been on an accrual basis in prior periods. As such, the present value of the defined benefit obligation accurately reflects the amount GSHi would have recovered if OPEBs had been recovered on an accrual basis from the outset.

b) GSHi's application notes that the balance in the OPEB Cash to Accrual Transitional Account does not include any adjustments for the difference between the amounts embedded in rates and the actual amounts paid out since the inception of OPEBs. Since the amounts historically embedded in rates were intended to fund actual cash OPEB payments to retirees, and the actuarial evaluation accounts for this discharged liability, there is no need to offset the cash-to-accrual transition liability by the historical OPEB payments included in rates.

By taking the $19,176,084 balance of the OPEB liability as of December 31, 2019, GSHi is presuming that the historical cash amounts embedded in rates for OPEB recovery equaled the actual cash costs incurred over time. If this presumption is accepted, then this $19M balance in the OPEB liability at December 31, 2019, is the precise amount that should be recovered upon transitioning from a cash to an accrual basis.

The breakdown of the $26M balance is as follows:

- **$19,176,084** reflects the portion attributable to the change from cash to accrual basis, based on forward-looking actuarial assumptions.
- **$6,913,826** reflects the gross-up of the balance for the recovery of PILs.

GSHi acknowledges that the OEB's 2017 Report on the Regulatory Treatment of Pension and OPEB Costs discusses the potential for utilities to calculate the amounts already recovered from customers for OPEBs through rates and compare them to what would have been collected on an accrual basis. However, GSHi does not interpret this as a directive requiring utilities to perform such a calculation, but rather as an indication of a methodology that could theoretically be applied.

The report also highlights the challenges associated with performing this calculation. For example, calculating historical recovery differences requires detailed and accurate historical data on rates, payments for OPEBs, and annual accrual values. However, such accrual data may not have been calculated or recorded historically, making it difficult or impossible to perform the calculation accurately.

In this context, GSHi has determined that the approach outlined in its application—focusing on forward-looking actuarial assumptions and the present value of the defined benefit obligation—provides an accurate and reasonable representation of the balance required to transition from cash to accrual recovery.

c) GSHi confirms that, prior to the 2020 rebasing application, OPEB expenses were included in rates on a cash basis.

d) GSHi confirms that, if the OPEB expense were recovered on an accrual basis, the current service cost plus the interest cost would be the costs included in the revenue requirement and recovered in rates.

e) GSHi understands that the OEB is seeking to compare cumulative OPEB costs under the accrual method to the amounts embedded in rates to ensure that GSHi does not experience a windfall and that customers do not pay for the same costs twice. GSHi has completed the requested table and included two additional columns: "OPEBs Actually Paid" and "Difference Between Cash Paid and Cash Embedded in Rates."

GSHi is proposing a principal transition amount of $19,176,084 pertaining to OPEBs as of December 31, 2019. This amount assumes that the cash historically embedded in rates has equaled GSHi's actual cash outlays -- the $19M balance inherently accounts for those past actual payments made. The potential difference between GSHi's proposed $19M transition amount and the methodology suggested by the OEB lies solely in the difference between actual cash payments made for OPEBs and the cash payment amounts embedded in GSHi's historical distribution rates. The additional two columns in the following table illustrate this difference, showing the comparison between GSHi's actual OPEB payments (which are reflected in the $19M balance) and the amounts embedded in rates for the 2013 to 2019 period. To the extent that actual payments made by GSHi exceed the amounts embedded in rates, which was the result in every year from 2013 to 2019, the OEB's suggested methodology would support, in theory, an increase to GSHi's proposed $19M transition amount.

GSHi submits that reproducing this table for years prior to 2013 with reasonable accuracy is not feasible due to a lack of sufficiently detailed historical records. However, GSHi notes that column "e" consistently demonstrates an under-recovery in rates compared to actual cash outlays for the seven years between 2013 and 2019. If GSHi were to revise its methodology to fully align with the OEB's symmetrical approach using the 2013 to 2019 data, the adjustment would notionally increase GSHi's transition amount and recovery from ratepayers by approximately $883,000, reflecting the under-recovery experienced during that period.

Please see below for the completed table:

Table 1: Difference between OPEBs under Cash and Accrual Methods

Year	OPEB under accrual method – Sum of current service costs and interest costs (accrued method)	OPEBs paid under cash method that had been embedded in rates in respective rebasing applications (**Note**)	Differences (a-b)		OPEBs actually paid	Difference between cash paid and cash embedded in rates (d-b)
	(a)	(b)	(a-b) = (c)		(d)	(d-b) = (e)
2013	$1,341,634	$424,775	$916,859		$537,032	$112,257
2014	$1,255,136	$424,775	$830,361		$490,242	$65,467
2015	$1,310,940	$424,775	$886,165		$526,560	$101,785
2016	$1,402,277	$424,775	$977,502		$507,749	$82,974
2017	$934,481	$424,775	$509,706		$539,306	$114,531
2018	$954,365	$424,775	$529,590		$544,198	$119,423
2019	$737,870	$424,775	$313,095		$711,058	$286,283
Difference			$4,963,278			$882,720

Note: In its last cost of service proceeding (EB-2019-0037), GSHi included $334,913 as the "OPEBs paid under cash" for 2013 to 2019. This amount represents the portion embedded in OM&A. By contrast, the $424,775 shown in the table above reflects the full balance sheet impact, encompassing both the capitalized and OM&A portions of OPEBs embedded in rates. GSHi believes it is necessary to include the gross cash amount—before allocation between capital and OM&A—for this presentation to accurately compare the cash amount to the accrual amount for those years, as the accrual amount also represents the gross amount prior to allocation.

9-Staff-55 Cloud Computing Variance Account

Question:

Cloud Computing Variance Account

Ref 1: EB-003-2023, Accounting Order, November 2, 2023

Ref 2: Cloud Computing Implementation Q&A Document, PDF, February 2024

Ref 3: EB-2024-0063, Notice, March 6, 2024

Preamble

On November 2, 2023, the OEB issued the Accounting Order (003-2023) for the Establishment of a Deferral Account to Record Incremental Cloud Computing Arrangement Implementation Costs (Cloud Computing Implementation Report). The Cloud Computing Implementation Report noted that the Cloud Computing Implementation Account is generally intended to record cloud computing implementation costs when utilities first transition from on-premise solutions to cloud computing. In February 2024, the OEB hosted a webinar and Q&A session related to the Accounting Order for the establishment of a deferral account to record cloud computing arrangement implementation costs and issued a Q&A document.

On March 6, 2024, the OEB commenced a generic hearing (EB-2024-0063) on its own motion to consider cost of capital and other matters, including those related to the OEB's Cloud Computing Deferral Account (e.g., what type of interest rate, if any, should apply to this deferral account).

Question(s):

a) Please confirm whether Greater Sudbury Hydro has considered cloud computing solutions in its rebasing term and whether any amounts have been included in its forecast.

i) If not confirmed, please explain why and Greater Sudbury Hydro's proposal to address its cloud solution implementation needs during its rebasing term.

Response:

a) GSHi has considered cloud computing solutions during its rebasing term. GSHi's ERP system has been cloud-based for several years, with the associated costs embedded in its distribution rates in both the 2013 and 2020 cost-of-service rate applications. GSHi transitioned to Microsoft Office 365 in 2021 and has incurred annual charges for this cloud-based system since then. While these costs could potentially qualify for the Cloud Computing Deferral Account, the account's effective date of December 1, 2023, is relevant because GSHi is applying for 2025 rates. Only 17 months of Office 365 costs (December 1, 2023 to April 30, 2025) would be eligible, which do not surpass GSHi's materiality threshold. Consequently, GSHi has not deferred these costs. Beyond this, GSHi has no immediate plans to transition additional on-premise solutions to the cloud during the rebasing term.

Looking ahead, GSHi plans to implement a new cloud-based solution for immutable backups in 2025, with an annual cost of approximately $40,000. These costs are included in GSHi's 2025 test year OM&A forecast.

i) As stated above, GSHi has already implemented some cloud-based solutions, including hosting its ERP system and transitioning to Microsoft Office 365 and its cloud-based collaboration platform. GSHi also plans to implement cloud-based immutable backups in 2025, with the associated costs incorporated into the 2025 test year OM&A. Otherwise, GSHi has no current plans to transition further on-premise-supported software solutions to the cloud.

9-Staff-56 GOCA - Bill 93 Impact for Locates

Question:

GOCA Variance Account

Ref 1: The OEB's Decision and Order for Getting Ontario Connected Act Variance Account, October 31, 2023

Ref 2: DVA Continuity Schedule, tab 3

Preamble

On October 31, 2023, the OEB issued a decision and order EB-2023-0143 for Getting Ontario Connected Act Variance Account (GOCA variance account). The decision states that:

The OEB notes that the GOCA variance account will only be available to a utility until the end of its current IRM period. The account is not available for utilities that have reflected Bill 93 in their most recent rebasing applications.

The disposition of any balance in this account will be subject to a prudence review and a requirement to establish that any cost incurred over and above what is provided for in initial and IRM adjusted base rates is an incremental cost resulting from Bill 93.

Question(s):

a) Please confirm that the OM&A cost in the test year reflect the Bill 93 impact for the utility's locate cost.
   i) If so, please confirm that the Account 1508 sub-account GOCA variance account is to be discontinued after this rebasing application and update the evidence accordingly.
   ii) If not, please provide the rationale why the Bill 93 impact is not reflected in the test year's OM&A cost.

Response:

a) GSHi confirms that the OM&A cost in the test year reflects the Bill 93 impact for the utility's locate cost. GSHi confirms that use of the Account 1508 sub-account GOCA will be discontinued after this rebasing application.

9-Staff-57 Account 1592 - Sub Account CCA Changes

Question:

Account 1592- Sub Account CCA Changes

Ref 1: Exhibit 9 / Tab 1/ Schedule 6 / p 1-4

Ref 2: CRA's Accelerated Investment Incentive

Preamble

On June 21, 2019, Bill C-97, the Budget Implementation Act, 2019, No. 1, was given Royal Assent. Included in Bill C-97 are various changes to the federal income tax regime. One of the changes introduced by Bill C-97 is the Accelerated Investment Incentive program (AIIP), which provides for a first-year increase in CCA deductions on eligible capital assets acquired after November 20, 2018.

Greater Sudbury Hydro stated that the impact of CCA rules changes is recorded in an Account 1592 sub-account, for the period November 21, 2018 until the effective date of Greater Sudbury Hydro's last cost-based rate order (i.e. May 1, 2020). Greater Sudbury Hydro has requested disposal of the 1592 sub-account balance in Exhibit 9 of this Application related to those historical years.

Greater Sudbury Hydro did not claim accelerated CCA expense in its 2018 taxes, therefore no difference exists for that year. Greater Sudbury Hydro's May 1, 2020 rates accounted for the impact on the 2020 year, including the effect of accelerated CCA, which was embedded in the rates. Therefore, once rebasing took effect, no further balance in this account related to the overall CCA deduction is warranted.

Also included in the 1592 sub-account CCA changes are amounts related to the Cressey ACM. Greater Sudbury Hydro has calculated the difference between the accelerated CCA, on which it actually paid tax, and the amount assumed in the ACM rate rider (i.e., without accelerated CCA).

The balance of account 1592, sub account CCA Changes is reproduced below:

	Accrual Amount			Balance		
Period	Bill C-97	Cressey ACM	Activity	Cumulative Principal	Cumulative Interest	Total Balance
2019	-$ 389,212.00	$ -	-$ 389,212.00	-$ 389,212.00	-$ 3,910.77	-$ 393,122.77
2020	$ -	$ -	$ -	-$ 389,212.00	-$ 9,262.43	-$ 398,474.43
2021	$ -	-$ 77,356.34	-$ 77,356.34	-$ 466,568.34	-$ 11,683.04	-$ 478,251.38
2022	$ -	$ 11,215.23	$ 11,215.23	-$ 455,353.11	-$ 20,480.55	-$ 475,833.66
2023	$ -	$ 7,543.38	$ 7,543.38	-$ 447,809.73	-$ 43,273.32	-$ 491,083.05
2024	$ -	$ 5,691.93	$ 5,691.93	-$ 442,117.80	-$ 66,185.24	-$ 508,303.04
2025	$ -	$ -	$ -	-$ 442,117.80	-$ 72,669.63	-$ 514,787.43
	-$ 389,212.00	-$ 52,905.80				

In reference 2, the AIIP is subject to a phase-out period for property that becomes available for use after 2023.

2020	2021	2022	2023	2024
FULL effect of AIIP in CCA	Full effect of AIIP in CCA	Full effect of AIIP in CCA	Full effect of AIIP in CCA	Phased out effect of AIIP in CCA

Question(s):

a) OEB staff notes that Greater Sudbury Hydro has calculated a balance relating to its last cost of service rate term for disposition (2019). Please explain why the credit balance of $389,212 was not requested for disposition in Greater Sudbury Hydro's last cost of service application (EB-2020-0037).

i) Please explain why the OEB should allow disposition of 2019 using the principles of rates retroactivity.

ii) Are there similar instances where the OEB allowed disposition of previous years in the last rate term relating to Account 1592 sub account CCA Changes? If yes, please provide their references.

b) Because Greater Sudbury Hydro rebased in 2020 using the full effect of AIIP in calculating its CCA, OEB staff expects that Account 1592 sub account CCA Changes would have a debit balance related to the revenue requirement impact of the CCA difference in 2024 based on 2024 capital additions.

i) Please explain why this is not the case.

ii) Please update the evidence, as necessary.

Response:

Response to this interrogatory requires 2024 figures. The response will be filed by February 4, 2025.

9-Staff-58 Cressey Substation CCA Difference

Question:

9-Staff-58

Account 1592- Sub Account CCA Changes

Ref 1: Chapter 2 Appendices, Tab 2BA

Ref 2: Exhibit 9 / Tab 1 / Schedule 6 / p 1-4

Ref 3: EB-2020-0037, Settlement Proposal, p 55

Preamble: OEB staff notes that in reference 1, the assets associated with the Cressey Station rebuild ACM were capitalized in 2021 for $4.8M.

Based on page 55 of the settlement agreement for Greater Sudbury Hydro's last cost of service (EB-2020-0037) in reference 3:

The Parties agree that GSHi will record the ACM revenue requirement impact of the difference between the CCA rule used in the ACM rate rider calculation and the CCA rule used in its actual taxes (i.e. Accelerated CCA) in Account 1592 - PILs and Tax Variances, Sub-account CCA Changes, for future disposition; GSHi will follow any future OEB guidance with respect to this amount. Also included in the 1592 sub-account CCA changes are amounts related to the Cressey ACM. Greater Sudbury Hydro has calculated the difference between the accelerated CCA, on which it actually paid tax, and the amount assumed in the ACM rate rider (i.e., without accelerated CCA).

The balance of account 1592, sub account CCA Changes is reproduced below:

	Accrual Amount			Balance		
Period	Bill C-97	Cressey ACM	Activity	Cumulative Principal	Cumulative Interest	Total Balance
2019	-$ 389,212.00	$ -	-$ 389,212.00	-$ 389,212.00	-$ 3,910.77	-$ 393,122.77
2020	$ -	$ -	$ -	-$ 389,212.00	-$ 9,262.43	-$ 398,474.43
2021	$ -	-$ 77,356.34	-$ 77,356.34	-$ 466,568.34	-$ 11,683.04	-$ 478,251.38
2022	$ -	$ 11,215.23	$ 11,215.23	-$ 455,353.11	-$ 20,480.55	-$ 475,833.66
2023	$ -	$ 7,543.38	$ 7,543.38	-$ 447,809.73	-$ 43,273.32	-$ 491,083.05
2024	$ -	$ 5,691.93	$ 5,691.93	-$ 442,117.80	-$ 66,185.24	-$ 508,303.04
2025	$ -	$ -	$ -	-$ 442,117.80	-$ 72,669.63	-$ 514,787.43
	-$ 389,212.00	-$ 52,905.80				

Question(s):

a) OEB staff expects that the revenue requirement impact for the difference in CCA for the Cressey Station rebuild should be isolated to 2021, the year in which the assets were placed in service.

i) Please explain why this is not the case.

ii) Please update the evidence, as necessary.

b) Please provide the detailed calculations showing the annual balances added to Account 1592 sub account CCA Changes for the Cressey Station ACM.

Response:

a) i) GSHi agrees that a significant portion of the CCA difference for the Cressey Station rebuild ACM pertains to the 2021 year when the assets were placed in service. However, GSHi highlights that the impact of accelerated CCA (AIIP) continues to influence the CCA calculation beyond 2021.

The difference arises due to the opening Undepreciated Capital Cost (UCC), which is recalculated each year based on the prior year's CCA claim. This persistent difference impacts the CCA deductions annually under two scenarios: when AIIP is claimed in 2021 (row “a” in the table below), and when AIIP is not claimed in 2021 (row “b” in the table below).

GSHi has provided a summary table illustrating the annual CCA differences between these two scenarios. Including this persistent variance aligns with the approach outlined in the 2020 settlement agreement referenced in the preamble.

Table 1 – Summary of CCA Differences for Cressey Substation

		2021	2022	2023	2024
CCA, AIIP	a	643,663	335,790	304,129	277,690
CCA with no AIIP	b	429,109	366,896	325,052	293,477
CCA Difference	b - a = c	- 214,554	31,106	20,922	15,787
PILs Difference	c * 26.5% = d	- 56,857	8,243	5,544	4,184
Grossed-up PILs Difference	d/(1-26.5%) = e	- 77,356	11,215	7,543	5,692
Deferred activity in year		- 77,356	11,215	7,543	5,692
Principal balance, cumulative		**- 77,356**	**- 66,141**	**- 58,598**	**- 52,906**

ii) As noted in part a) i) above, GSHi believes that recording the ongoing impact of the CCA difference in the deferral account aligns with the intended purpose of this account. Consequently, GSHi has not updated the principal balance for this account. However, GSHi has updated the cumulative interest balance, calculated using the OEB’s most recently released interest rate for deferral and variance account (DVA) balances, applicable for Q1 2025. GSHi provides this update in Table 2 below:

Table 2 – Account 1592 Summary - Updated Interest Rate for 2025

	Accrual Amount			Balance		
Period	Bill C-97	Cressey ACM	Activity	Cumulative Principal	Cumulative Interest	Total Balance
2019	-$ 389,212.00	$ -	-$ 389,212.00	-$ 389,212.00	-$ 3,910.77	-$ 393,122.77
2020	$ -	$ -	$ -	-$ 389,212.00	-$ 9,262.43	-$ 398,474.43
2021	$ -	-$ 77,356.34	-$ 77,356.34	-$ 466,568.34	-$ 11,683.04	-$ 478,251.38
2022	$ -	$ 11,215.23	$ 11,215.23	-$ 455,353.11	-$ 20,480.55	-$ 475,833.66
2023	$ -	$ 7,543.38	$ 7,543.38	-$ 447,809.73	-$ 43,273.32	-$ 491,083.05
2024	$ -	$ 5,691.93	$ 5,691.93	-$ 442,117.80	-$ 66,185.24	-$ 508,303.04
2025	$ -	$ -	$ -	-$ 442,117.80	-$ 71,549.60	-$ 513,667.40
	-$ 389,212.00	-$ 52,905.80				

b) GSHi has added a tab to the "Accelerated CCA Deferral Support" spreadsheet titled "Ex 9 Acc CCA Cressey," which provides the detailed calculations of the annual balances added to Account 1592, Sub-account CCA Changes, for the Cressey Station ACM, as requested by OEB staff.

9-Staff-59 LRAM Oversight Explanation

Question:

Lost Revenue Adjustment Mechanism (LRAM)

Ref 1: **Exhibit 9 / Tab 1 / Schedule 1 / p 23**

Preamble

In Decision and Rate order, EB-2022-0034, for IRM rates effective May 1, 2023, Greater Sudbury Hydro was approved to dispose of the requested LRAM-eligible amount pertaining to 2023, a net credit balance of $37,640. An excerpt of the decision and order pertaining this balance follows:

The OEB also approves the LRAM-eligible amounts for the years 2023 to 2027, arising from persisting savings from completed CDM programs, as set out in Table 8.2 below. These amounts will be adjusted mechanistically by the approved inflation minus X factor applicable to IRM applications in effect for a given year, and recovered through a rate rider in the corresponding rate year, beginning with the 2023 rate year. For the 2023 rate year, the OEB approves the requested LRAM-eligible amount of $37,641, a credit to be refunded to customers, and the associated rate riders.

Greater Sudbury Hydro states that due to an oversight in that rate proceeding, the rate rider to settle the 2023 LRAM balance was drafted in Greater Sudbury Hydro's write-up but ultimately not included on the tariff sheets and therefore the balance has not yet been settled. Greater Sudbury Hydro has recorded the balance, as well as projected interest, in Account 1508 sub-account LRAM and is proposing it for disposition as part of this rate proceeding.

Question(s):

a) Please describe in detail how the oversight of including the LRAM amount for 2023 on the tariff sheets occurred and whether there is rates retroactivity for this matter.

Response:

The oversight of including the LRAM amount for 2023 on the tariff sheets occurred because the proposed rates were not appropriately added to the "Additional Rates " tab in the IRM model, and as a result, the rate rider was omitted from the tariff schedule. This issue was further compounded by the unique circumstances of having two distinct LRAM rate riders in the year 2023.

The first rate rider covered the LRAM credit balance of $71,692 for lost revenues from 2021 to 2022, arising from CDM programs delivered during 2019 to 2020. This rate rider was correctly included in the tariff schedule. The second rate rider that covered a credit balance of $37,641 was intended to cover LRAM-eligible amounts for 2023, arising from persisting savings from completed CDM programs, but it was inadvertently excluded. This transition year, with two LRAM rate riders, was different from previous years and represented a deviation from what GSHi staff were accustomed to managing, contributing to the oversight.

This correction does not constitute retroactive rate setting as defined by the Ontario Energy Board (OEB). Retroactive rate setting involves altering rates for a period that has already passed, which is generally not permitted unless unique circumstances prevail. In this case, the omission was an administrative error, and the approved 2023 LRAM credit amount, along with accrued interest, has been recorded in Account 1508 sub-account LRAM. GSHi is proposing the disposition of this balance in the current rate proceeding to ensure that customers receive the credit as originally approved by the OEB.