Greater Sudbury Hydro Inc.

Interrogatory Submission

March 10, 2020

Energy Probe

EB-2019-0037

empowering communities
le pouvoir aux communautés

A GSU company

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1-EP-1

Question:

Reference: Exhibit 1, Tab 2, Schedule 1, Page 6

Preamble: "While GSHi remains focused on offering consistent value to its customers, the need for significant system renewal to preserve reliability of service, phased-in over a five-year period, along with the additional cost drivers cited in this Application, will lead to an increase to customer bills."

a) What has been the average residential distribution bill increase under the 2013-2018 IRM Plan?

b) What was the Revenue Requirement Growth rate from 2013-2019 and what is the rate 2019-2020?

c) What has been GSHi's return on equity for each year of the IRM period? Please update Figure 6, Page 34, to include 2018 and 2019 data.

d) Why is GSHi proposing a 6.9% increase in Residential Distribution Bills and a Total Bill increase of 23.7% in 2020? Explain why this is reasonable and discuss if were this level of increase was put to residential customers?

e) Please provide a copy of the Resolution of the Board of Directors approving the increase.

f) Why did GSHi not advance key System Renewal capital projects using allowed ICM/ACM during the last IRM period?

g) What specific attempts has GSHi made to mitigate these rate increases, such as smoothing or phasing System Renewal capital or deferring other Capital Costs? Please discuss in detail.

Response:

a) Please see below for a calculation of the average price cap index rate applied to GSHi's distribution rates over the IRM period. The average Price Cap Index is 1.02%, which is considered the average residential distribution bill increase under the IRM plan.

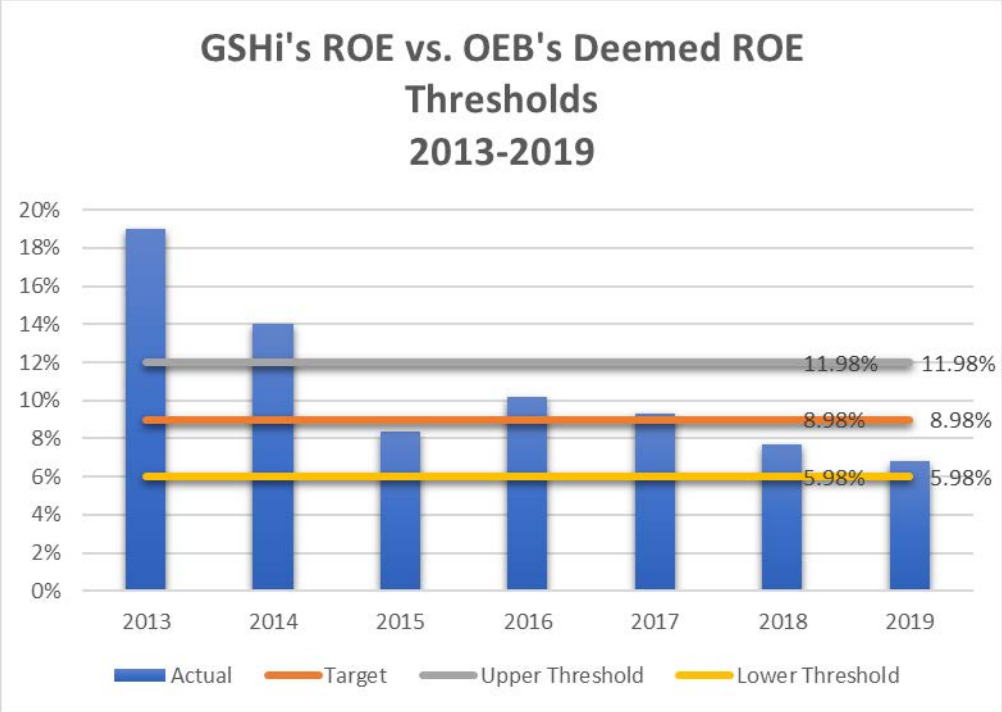
	2014	2015	2016	2017	2018	2019
Price Escalator	1.70%	1.60%	0.00%	1.90%	1.20%	1.50%
Stretch Factor	-0.30%	-0.45%	0.00%	-0.30%	-0.45%	-0.30%
Price Cap Index	1.40%	1.15%	0.00%	1.60%	0.75%	1.20%
			Note 1			
Average Price Cap Index		**1.02%**				
Note 1	GSHi elected not to take a rate increase in the IRM period for 2016.					
	The Price Escalator was 2.10% and the Stretch Factor was -0.45% ,					
	for a Price Cap Index of 1.65% in that year.					

b) Please see the table below – the compound annual growth rate for actual base revenue requirement between 2013 and 2019 is 0.76%, and the base revenue requirement growth rate as a percentage of 2020 proposed over 2019 projected is 12.76%.

	2013 Board Approved	2013 Actual	2014 Actual	2015 Actual	2016 Actual
Base Revenue Collected from Rates	$22,400,850	$ 22,489,073	$ 22,557,791	$ 22,366,955	$ 22,353,482
% over Approved or Prior Year		0.39%	0.31%	-0.85%	-0.06%

	2017 Actual	2018 Actual	2019 Actual Projected	2020 Test Year Proposed
Base Revenue Collected from Rates	$ 22,570,479	$ 23,112,310	$ 23,439,876	$ 26,431,556
% over Approved or Prior Year	0.97%	2.40%	1.42%	12.76%
	Base Revenue Requirement, CAGR 2019 over 2013			**0.76%**
	Base Revenue Requirement, % Change 2019 over 2013			**4.64%**
	Base Revenue Requirement, % Change 2020 over 2019			**12.76%**

c) Please see below for the updated chart. Please note that 2019 is the preliminary ROE for 2019. The figures for 2019 are unaudited and subject to change.



d) GSHi is proposing a 6.9% increase to the total bill residential customers will receive in 2020 in order to support the vital system renewal activities rationalized in its five-year distribution system plan and the additional cost drivers summarized in Exhibit 4 of its 2020 Cost of Service application.

GSHi believes that the consultant-led public consultations it undertook when developing and refining its distribution system plan (informed by the results of GSHi's annual customer satisfaction survey) indicate that customers have shown a strong belief in GSHi's ability to manage its operations, which includes proposing appropriate levels of rate increase to ensure reliable service delivery. The consultation process and results obtained are discussed at length in Exhibit 1, Tab 6, Schedule 1 of GSHi's 2020 Cost of Service application. This portion of the rate application includes direct feedback from customers that speaks to their perception of GSHi being a responsible and trustworthy service provider. For example:

"I get it that the [GSHi] people know what they're doing and if they're telling us that's what they need to spend, then that's what they need to spend."
(Exhibit 1, Tab 6, Schedule 1, Page 16)

"GSU is part of our community. You have skin in the game. You are communicating with the community, seeking input and feedback. Please do not be afraid to do what you know is the right thing to do."
(Exhibit 1, Tab 6, Schedule 1, Page 37)

GSHi recognizes that the above comments cannot be seen as direct endorsements of the proposed rate increase. They should be seen as being indicative of a general sentiment among customers, not a specific reflection of their feelings about seeing a 6.9% increase on their future bills.

Furthermore, the customer summary that was made public as part of GSHi's 2020 Cost of Service application invited customers to contact

GSHi representatives to discuss their support for or opposition to the proposed rate increase. Since the summary's release and the subsequent media coverage of GSHi's rate application submission, GSHi received two letters of comment from customers via the OEB which it reviewed and responded to.

In comparison, GSHi received nearly 7,300 phone calls from affected customers inquiring about the status of their power supply during a recent outage event (February 13th, 2020).

Being truly customer-focused requires making difficult decisions.
A decision that may be unpopular (a rate increase), must ultimately be rendered in order to meet another need (reliability of service). GSHi believes that the rate increase it is proposing is reasonable given the scope of work that must be undertaken to strengthen its distribution system. Assets including substations—some of which were built just after the 2nd World War—require significant upgrading. The cost to do so responsibly is reflected in the proposed rate increase.

GSHi believes that deferring vital service improvements and equipment upgrades to help keep costs neutral would be irresponsible. System reliability and public safety would be compromised to an unacceptable degree. It would not be the right thing to do.

e) Please see Attachment 1 to this interrogatory for a copy of the requested Board motion.

f) The availability of ICM/ACM funding was not a factor in determining the appropriate schedule for the key System Renewal capital projects that GSHi advanced in 2018 & 2019 and scheduled for 2020 to 2024. Had

GSHi believed that certain projects currently scheduled for 2020 and beyond needed to be completed during the last IRM period, GSHi would have scheduled those projects in the IRM period and then considered application for ICM relief as required.

g) Underpinning GSHi's overall strategy is the careful consideration of cost and the financial impact these key strategies will have on rates for its customers. GSHi exhibits prudent review and analysis of all decisions and their impact on electricity rates for its rate payers. GSHi's management carefully considers the balance between system reliability and maintaining reasonable electricity rates in its rigorous planning processes.

GSHi's 2020 Electricity Distribution Rate application provides the context and justification for this rate increase request, supported by a robust and forward-looking Distribution System Plan ("DSP"), a five-year business plan with defined strategic goals and evaluation measures that align with expected outcomes of the Renewed Regulatory Framework for Electricity Distributors, and accurate financial reporting and forecasting.

GSHi's DSP is an integrated document that supports the cost-effective planning and operation of the electricity distribution network – a network that is efficient, reliable, sustainable and provides value for customers. The DSP describes how GSHi's proposed capital investments for the forecast period 2020-2024 are informed by its asset management process, the OEB's RRFE, coordination with third parties, the results of customer engagement and the findings of both staff and third party studies/reports. All categories of system investments, including System Renewal, System Access, System Service and General Plant have been addressed and consolidated in GSHi's capital expenditure plan. GSHi has leveled the plan to address pacing and affordability where feasible.

GSHi has considered smoothing and phasing system renewal capital and deferring other capital costs in the context of its proposed DSP. The plan reflects GSHi's ability to mitigate these rate increases given the necessary investment in its distribution system, as detailed in the DSP.

Attachment 1 (of 1):

1-EP-1 Attachment 1: Motion for Approval

Greater Sudbury Hydro Inc./Hydro Du Grand Sudbury Inc.

MOTION

MOVED BY MAT LITALIEN **No.:** 2019-GSHI-IC-09-03

SECONDED BY JOSH LILLEY **Date:** October 28, 2019

"**THAT** the Board approve the 2020 Cost of Service Application (the Application) which contains an overall revenue requirement of $28,954,499 and that the approval of the 2020 Cost of Service Application constitutes approval of the following included elements:

1. The Distribution System Plan for 2020 to 2024;
2. The OM&A budget of $17,388,957 plus amortization of $4,404,632 and deemed interest on debt of $2,616,443;
3. The 2020 Net Capital budget of $9,415,007;
4. The GSHI 2019-2024 Business Plan."

Carried,

Mark Signoretti, Chair

1-EP-2

Question:

Reference: Exhibit 1, Tab 2, Schedule 1, Attachment 1, Business Plan, 5.1 Governance, Page 39

Please provide the following:

i. Shareholder Declaration
ii. Current Board of Directors and Terms
iii. If the CEO a voting member or ex-officio
iv. List of Directors that are Shareholder-Appointed and which are independent Directors
v. List of BOD Vacancies
vi. Quorum(s) and rules for voting
vii. The recorded vote on the Resolution for the 2020 rate increase
viii. Remuneration for Directors.

Response:

i. Please see Attachment 1.
ii. Please see Attachment 2.
iii. The CEO is not a voting member of the Board.
iv. See Attachment 3 and Attachment 4.
v. There are currently 2 vacancies for Citizen Directors which are expected to be filled in spring of 2020.
vi. Please see Attachment 1 - see 4.8 Meetings of the Board.
vii. Please see Attachment 5.
viii. Please see Attachment 6.

Attachment 1 (of 6):

1-EP-2 Attachment 1: Shareholder Declaration for Greater Sudbury Hydro Inc.

GREATER SUDBURY UTILITIES INC.

SHAREHOLDER DECLARATION

FOR

GREATER SUDBURY HYDRO INC.

1. Definitions and Purpose

1.1. Definitions - In this Shareholder Declaration, defined terms have the meanings set out in Appendix A attached hereto.

1.2. Purpose - This Shareholder Declaration outlines the expectations of Greater Sudbury Utilities Inc. ("GSUI") as the Shareholder of Greater Sudbury Hydro Inc. (the "Corporation") relating to the principles of governance and other fundamental principles and policies of the Corporation, as a regulated electricity distribution company. Except as provided in Sections 6 and 9, this Shareholder Declaration is not intended to constitute a unanimous shareholder declaration under the OBCA or to formally restrict the exercise of the powers of the Board.

2. Permitted Business Activities

2.1. Subject to the restrictions in Section 9, the Corporation may engage in the business activities which are permitted by any law applicable to the Corporation from time to time, including the *Electricity Act,* and as the Board may authorize including, without limitation, the business activities referred to in Subsection 2.2. In so doing, the Corporation shall conform to all requirements of the Ontario Energy Board, the Independent Electricity System Operator and all other applicable regulatory or governmental authorities.

2.2. The Corporation may engage in any of the following business activities and such other business activities as may be permitted by law and authorized by the Board, as applicable, from time to time:

2.2.1. Transmitting or distributing electricity;
2.2.2. Owning and/or operating an electricity generation or energy storage facility;
2.2.3. Business activities that enhance or develop the ability of the corporation to carry out the activities described in paragraphs 2.2.1 or 2.2.2 above;
2.2.4. Business activities the principal purpose of which is to use more effectively the assets of the Corporation, including providing meter installation and reading services, and providing billing: and
2.2.5. Providing services related to improving energy efficiency.

3. Standards of Governance

3.1. As required by the OBCA, the Board shall supervise the management of the business and affairs of the Corporation, and in so doing, shall act honestly and in good faith with a view to the best interests of the Corporation and shall exercise the same degree of care, diligence and skill that a reasonably prudent person would exercise in comparable circumstances.

3.2. In addition, the Shareholder expects the Board to observe substantially the same standards of corporate governance as may be established from time to time by the Ontario Energy Board, or any applicable regulatory or governmental authority in Canada for publicly traded corporations, in particular CSA National Policy 58-201 and National Instrument 52-110, with such modifications as may be necessary to reflect the fact that the Corporation is not a publicly traded corporation. The Board is also expected to consider and adopt, as appropriate, recognized sources of governance best practices.

4. Board of Directors

4.1. Number of Directors - The Corporation shall be governed by the Board which shall consist of a maximum of twelve Directors to be appointed by the Shareholder. The Shareholder shall, by special resolution, or by Shareholder Declaration, designate the number of members of the Board to hold office from time to time. Accordingly, the number of Directors for the Board shall be as follows:

4.1.1. The Board of the Corporation shall be comprised of seven individuals which shall include four Citizen Directors and three City Directors, appointed by the Shareholder. The Citizen Directors may not be members of Council, City employees or Corporation employees. The City Directors may include the Mayor, members of Council or City employees. None of the Citizen Directors shall be Directors on the boards of GSUI or the Non-regulated Subsidiaries.

4.1.2. The Shareholder may remove a Director for cause and appoint a new Director in their place.

4.1.3. If a Director misses three regularly scheduled meetings of the Board in a twelve month period, without prior approval, they shall be deemed to have resigned and their position deemed vacant.

4.1.4. All Directors shall remain on the Board until their successors are appointed. This provision shall include the Mayor and municipal councillors, even if their terms on City Council have terminated.

4.2. Qualification of Directors - In addition to sound judgment and personal integrity, the qualifications of candidates for the Board will be identified by the Corporation from time to time using a Board Skills Matrix, including experience and skills such as:

4.2.1. Awareness of public policy issues related to the Corporation;
4.2.2. Business expertise;
4.2.3. Experience on boards of commercial corporations;
4.2.4. Financial, legal, engineering, IT, accounting and/or marketing experience;
4.2.5. Regulated industry knowledge including, but not limited to, knowledge of municipal electric utilities; and
4.2.6. Knowledge and experience with risk management strategy.

4.3. Residency - Preference may be given to qualified candidates for the Board who are residents of the City of Greater Sudbury or of the Municipality of West Nipissing, however, non-residents shall not be excluded from serving as Board members.

4.4. Chair and Vice-Chair Position - The Board may elect its own Chair and Vice-Chair from any Directors.

4.5. Board Committees - The Board may establish committees of the Board at its discretion. The Shareholder anticipates that the Board may establish the following committees:

4.5.1. Audit and Finance Committee to oversee financial reporting and associated policies and practices;

4.5.2. Human Resources, Governance and Nominating Committee to oversee senior management compensation, evaluation and succession, corporate governance policies and practices, and to identify, evaluate and recommend potential Citizen Director Board candidates to the Shareholder.

4.6. Citizen Director Nominations - The Shareholder shall consider candidates for the Board nominated by the Human Resources, Governance and Nominating Committee. It is expected that the committee will develop a process which takes into account the qualifications identified in the Board Skills Matrix (4.2) to identify, evaluate and recommend the most qualified candidates to the Shareholder.

4.7. Appointment of Directors - In selecting the directors to be appointed to the Board, the Shareholder shall take into account the qualifications identified in the Board Skills Matrix (4.2) and the list of candidates nominated by the Human Resources and Governance Committee.

4.8. Meetings of the Board - A majority of the number of directors required by this Shareholder Declaration constitutes a quorum at any meeting of the Board, although a majority of the Citizen Directors must approve certain matters as required by the OEB, for example, declaring dividends.

5. Financial Policies, Risk Management and Strategic Plan

5.1. Policies- The Shareholder expects that the Board will establish policies consistent with best practices in corporate governance, including:

5.1.1. Capital Structure - develop and maintain a prudent financial and capitalization structure for the Corporation consistent with industry norms and sound financial principles, established on the basis that the Corporation is intended to be a self-financing entity;

5.1.2. Dividends - establish a policy relating to the dividend to be received by the Shareholder from the Corporation, consistent with a prudent financial and capitalization structure.

5.1.3. Risk Management - oversee the management of all risks related to the business conducted by the Corporation, through the adoption of appropriate risk management strategies and internal controls consistent with industry norms;

5.1.4. Strategic Plan - develop a long range strategic plan for the Corporation which is consistent with the maintenance of a viable business and preserves the value of the business for the Shareholder;

5.1.5. Director's Compensation – to set remuneration levels of board members of the Corporation and its Non-regulated Subsidiaries, using independently researched comparator benchmarks; and

5.1.6. Environment Policy - develop a long range environmental policy which provides that the Corporation operate in a safe and environmentally responsible manner.

5.1.7. Borrowing Policy – in the event that the Corporation or a subsidiary require fixed term borrowing in excess of $100,000 at a time, the Corporation shall follow the process outlined in Clause 5.1.7 of the Shareholder Declaration from the City of Greater Sudbury to Greater Sudbury Utilities Inc.

6. Decisions of the Shareholder and Shareholder Representatives

6.1. The Shareholder hereby designates the Chair of the Board of GSUI (the "Shareholder Representative") for purposes of communicating to the Board pursuant to Subsection 6.2 any consent or approval required by this Shareholder Declaration or by the OBCA otherwise.

6.2. Approvals or decisions of the Shareholder required pursuant to this Shareholder Declaration or the OBCA shall require a resolution of the Board of the Shareholder and shall be communicated in writing to the Board and signed by the Shareholder Representative.

7. Meetings and Annual Resolution

7.1. The Shareholder shall receive notification of all meetings of the Board of Directors of the Corporation and a copy of the agenda for the meeting.

7.2. Within six months after the end of each fiscal year of the Corporation:

7.2.1. Annual Report to Meeting of Council - the Board shall report to a meeting of the Shareholder, and the President and CEO of the Corporation shall attend such meeting and provide such information concerning the Corporation as is appropriate.

7.2.2. Annual Resolutions:

7.2.2.1. The Shareholder shall consider candidates for the Board as proposed by the Human Resources, Governance and Nominating Committee and the appointment of the auditors of the Corporation and receive the audited financial statements of the Corporation for the last completed fiscal year; and

7.2.2.2. The Shareholder shall appoint the necessary members of the Board and appoint the auditors for the Corporation and complete such other business as would normally be completed at an annual meeting of shareholder under the OBCA.

8. Reporting on Major Developments

8.1. The Board shall from time to time report to the Shareholder on major business developments or materially significant or adverse results as the Board, in its discretion, considers appropriate.

9. Matters Requiring Shareholder Approval

9.1. Without Shareholder approval given in accordance with Section 6, the Corporation shall not:

Statutory Approval Right

9.1.1. Change the name of the Corporation; add, change or remove any restriction on the business of the Corporation; create new classes of shares; or in any other matter amend its articles of incorporation or make, amend or repeal any by-law;
9.1.2. Amalgamate with any other corporation(s), other than amalgamations that may, under the OBCA, be approved by a resolution of directors;
9.1.3. Take or institute proceedings for any winding up, arrangement, or dissolution of the Corporation;
9.1.4. Apply to continue as a corporation under the laws of another jurisdiction;

Additional Approval Rights

9.1.5. Issue, or enter into any agreement to issue, any shares of any class, or any securities convertible into any shares of any class, of the Corporation;
9.1.6. Redeem or purchase any outstanding shares of the Corporation;
9.1.7. Take on or assume any financial obligation which would materially increase the debt/equity ratio of the Corporation above the ratio of 60/40;
9.1.8. Sell assets of the Corporation or purchase assets with an aggregate value in excess of 15% of the Consolidated Book Value of all assets of the Corporation;
9.1.9. Materially alter the nature of or geographic extent of the business of the Corporation in a manner which would have a financial impact equal to or greater than 15% of the consolidated Book Value of all assets of the Corporation;
9.1.10. Enter into a joint venture, partnership, strategic alliance or other venture, including ventures in respect of the generation or co-generation of electricity which would require an investment, or which would have a financial impact, equal to or greater than 15% of the consolidated Book Value of all assets of the Corporation.

10. Revisions to this Declaration

10.1. The Shareholder acknowledges that this Shareholder Declaration may be revised from time to time as circumstances may require and that the Shareholder will consult with the Board prior to completing any revision and will promptly provide the Board with copies of such revision.

11. This declaration replaces all earlier versions of the Declaration for the Corporation.

DATED at Sudbury, Ontario the [insert date] day of [Insert Month and Year]

GREATER SUDBURY UTILITIES INC.

BY: _____
Director

BY: _____
Officer

APPENDIX A

DEFINITIONS AND INTERPRETATIONS

In this Shareholder Declaration the following defined terms have the meaning set out below:

"Act" means the *Energy Competition Act, 1998 (Ontario);*

"Board" means the board of directors of the Corporation;

"Chair" means the chair of the Board;

"Citizen Directors" shall have the meaning set out in Section 4 of this Shareholder Declaration;

"City" means the City of Greater Sudbury;

"City Clerk" means the Clerk of the City of Greater Sudbury;

"Consolidated Book Value" of all assets of the Corporation shall be the values reported in the audited financial statements of the corporation at the end of its most recently completed fiscal year;

"Corporation" means Greater Sudbury Hydro Inc. incorporated pursuant to Section 142 of the Act;

"Council" means the city Council of the City of Greater Sudbury;

"Debt" includes all debt obligations owed to third party creditors, including debt obligations owed to the Shareholder;

"GSUI" means Greater Sudbury Utilities Inc.;

"Mayor" means the Mayor of the City of Greater Sudbury;

"Non-regulated Subsidiaries" means any subsidiary of the Greater Sudbury Utilities Inc., except Greater Sudbury Hydro Inc.;

"OBCA" means the Business Corporations Act (Ontario);

"President and CEO" means the president and chief executive officer of the Corporation;

"Shareholder" means the Greater Sudbury Utilities Inc.;

"Shareholder Declaration" means this shareholder declaration;

"Shareholder Representative" shall have the meaning set out in Subsection 6.1; and

"Vice-Chair" means the vice-chair of the Board.

GSU

Greater Sudbury Utilities Inc./
Services Publics du Grand Sudbury Inc.

MOTION

MOVED BY BERNIE HUGHES **No.:** 2019-GSUI-IC-1-10

SECONDED BY RENÉ LAPIERRE **Date:** December 9, 2019

"**THAT** the Board approve the Shareholder Declaration between Greater Sudbury Utilities Inc. and Greater Sudbury Hydro Inc."

Carried,

Mark Signoretti, Chair

Attachment 2 (of 6):

1-EP-2 Attachment 2: GSHI Director's Register

GREATER SUDBURY HYDRO INC./HYDRO DU GRAND SUDBURY INC.

DIRECTOR'S REGISTER

Name of Director	Date Appointed	Date Resigned
MARIANNE MATICHUK	Dec. 8, 2010	Dec. 10, 2012
JACQUES BARBEAU	Dec. 8, 2010	Dec. 10, 2012
FRANCES CALDARELLI	Dec. 8, 2010	Dec. 10, 2012
MICHAEL ARKILANDER	Jan. 26, 2011	Nov. 7, 2012
GERRY LABELLE	Jan. 26, 2011	May 1, 2015
DAVE KILGOUR	Dec. 11, 2012	Nov. 30, 2014
FRANCES CALDARELLI	Dec. 11, 2012	Nov. 30, 2014
JACQUES BARBEAU	Dec. 11, 2012	Nov. 30, 2014
JOHN DOUGLAS REEVES	Jan. 29, 2013	May 1, 2015
MARK SIGNORETTI	Dec. 9, 2014	Jan. 29, 2019
RENÉ LAPIERRE	Dec. 9, 2014	Jan. 29, 2019
GERRY MONTPELLIER	Dec. 9, 2014	Jan. 29, 2019
JOSHUA LILLEY	May 1, 2015	Feb. 6, 2019
GERRY LABELLE	May 1, 2015	Feb. 6, 2019
MARK SIGNORETTI	Jan. 29, 2019	(Term ending Nov. 30, 2022)

Effective date: February 6, 2019

GREATER SUDBURY HYDRO INC./HYDRO DU GRAND SUDBURY INC.

DIRECTOR'S REGISTER

Name of Director	Date Appointed	Date Resigned
RENÉ LAPIERRE	Jan. 29, 2019	(Term ending Nov. 30, 2022)
GEOFF MCCAUSLAND	Jan. 29, 2019	(Term ending Nov. 30, 2022)
JOSHUA LILLEY	Feb. 6, 2019	(Term ending Nov. 30, 2022 Term of Council)
MATHIEU LITALIEN	Feb. 6, 2019	(Term ending Nov. 30, 2022 Term of Council)

v:\board of directors\registers, gsh and gsu\gsh director's register.docx

Effective date: February 6, 2019

Attachment 3 (of 6):

1-EP-2 Attachment 3: Greater Sudbury Utilities Inc. and its Subsidiary Boards - Appointment of Independent Directors

City of Greater Sudbury
Ville du Grand Sudbury

Greater | Grand Sudbury

February 7, 2019

Greater Sudbury Utilities
Frank Kallonen, President & CEO
500 Regent St. S., Box 250
Sudbury, ON P3E 4P1

PO BOX 5000 STN A
200 BRADY STREET
SUDBURY ON P3A 5P3

CP 5000 SUCC A
200, RUE BRADY
SUDBURY ON P3A 5P3

705.671.2489

www.greatersudbury.ca
www.grandsudbury.ca

Re: Greater Sudbury Utilities Inc. and its Subsidiary Boards - Appointment

Dear Mr. Kallonen:

The following resolution #CC2019-40 was passed by Council of the City of Greater Sudbury on February 6, 2019:

WHEREAS the City of Greater Sudbury accepted Citizen Appointment applications and resumes for the two (2) Greater Sudbury Utilities Private Directors and two (2) Greater Sudbury Hydro Private Directors;

AND WHEREAS on Monday, February 4, 2019, the GSU Nominating Committee, comprised of Councillors René Lapierre, Geoff McCausland and Mark Signoretti (appointed January 29, 2019) held a meeting, pursuant to the Shareholder Declaration for the GSU and its subsidiary companies, to appoint two (2) Private Directors for the Greater Sudbury Utilities and two (2) Private Directors for Greater Sudbury Hydro;

THERFORE BE IT RESOLVED THAT after reviewing the applications, the Nominating Committee recommends that the City of Greater Sudbury appoints Peter McMullen and Bernie Hughes as Directors of the Greater Sudbury Utilities Inc. and its subsidiary boards, excluding Greater Sudbury Hydro Inc. for the term of Council and that the necessary by-laws be prepared;

AND THAT Joshua Lilley and Matthieu Litalien be appointed as Directors of the Greater Sudbury Hydro Inc. for the term of Council and that the necessary by-laws be prepared;

AND THAT such appointments are hereby approved by City Council on behalf of the City of Greater Sudbury in its capacity as the sole shareholder of the Greater Sudbury Utilities Inc. and its Subsidiary Boards;

AND THAT the Mayor for the City of Greater Sudbury is hereby authorized to execute the resolution on behalf of the City of Greater Sudbury as shareholder of the Greater Sudbury Utilities Inc. and its Subsidiary Boards.

Should you have any questions or concerns, please feel free to contact me at 705-674-4455 ext. 2010.

Yours truly,

Brigitte Sobush
Manager of Clerk's Services/Deputy City Clerk

Attachment 4 (of 6):

1-EP-2 Attachment 4: Greater Sudbury Utilities Inc. and its Subsidiary Boards - Appointment of Shareholders

City of Greater Sudbury
Ville du Grand Sudbury

Greater | Grand Sudbury

January 31, 2019

Greater Sudbury Utilities
Frank Kallonen, President & CEO
500 Regent St. S., Box 250
Sudbury, ON P3E 4P1

PO BOX 5000 STN A
200 BRADY STREET
SUDBURY ON P3A 5P3

CP 5000 SUCC A
200, RUE BRADY
SUDBURY ON P3A 5P3

705.671.2489

www.greatersudbury.ca
www.grandsudbury.ca

Re: Greater Sudbury Utilities Inc. and its Subsidiary Boards - Appointment

Dear Mr. Kallonen:

The following resolution #CC2019-11 was passed by Council of the City of Greater Sudbury on January 29, 2019:

> *THAT the City of Greater Sudbury appoints Councillors Lapierre, Signoretti and McCausland to the Greater Sudbury Utilities Inc. and its Subsidiary Boards and that the necessary by-laws be prepared.*

Should you have any questions or concerns, please feel free to contact me at 705-674-4455 Ext 2010.

Yours truly,

Brigitte Sobush
Manager Clerk's Services/Deputy City Clerk

Attachment 5 (of 6):

1-EP-2 Attachment 5: The Recorded Vote on the Resolution for the 2020 Rate Increase

Greater Sudbury Hydro Inc./Hydro Du Grand Sudbury Inc.

MOTION

MOVED BY MAT LITALIEN **No.:** 2019-GSHI-IC-09-03

SECONDED BY JOSH LILLEY **Date:** October 28, 2019

"**THAT** the Board approve the 2020 Cost of Service Application (the Application) which contains an overall revenue requirement of $28,954,499 and that the approval of the 2020 Cost of Service Application constitutes approval of the following included elements:

1. The Distribution System Plan for 2020 to 2024;
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3. The 2020 Net Capital budget of $9,415,007;
4. The GSHI 2019-2024 Business Plan."

Carried,

Mark Signoretti, Chair

Attachment 6 (of 6):

1-EP-2 Attachment 6: Board Motion - Remuneration for Directors

GSU empowering communities le pouvoir aux communautés

Greater Sudbury Utilities Inc./
Services Publics du Grand Sudbury Inc.

MOTION

MOVED BY RENÉ LADIERRE **No.:** 2019-GSUI-IG-11-15

SECONDED BY BERNIE HUGHES **Date:** December 9, 2019

"THAT the Board receive and approve the recommendation from the HR Governance Committee revising Directors remuneration and per diem effective January 1, 2020. The Chair shall receive $10,000 per annum, each Director shall receive $7,500 per annum, paid on a monthly basis from the current quarterly payment. Meeting fees (per diems) shall be $300 based on four hours, for utility business, meetings and conferences, other than regular Board meetings and will continue to be paid on a quarterly basis."

Carried,

Mark Signoretti, Chair

1-EP-3

Question:

Reference: Exhibit 1, Tab 2, Schedule 1, Attachment 1, Business Plan, Appendix 1, Customer Satisfaction Survey, Page 7, Q4

Preamble: There has been a continuing decrease in the percentage of customers that are dissatisfied with the cost of electricity in relation to other services

Please confirm whether this assertion is correct by comparing 2013 (last COS year) and 2018.

Response:

In 2013, 27% of customers expressed dissatisfaction with the cost of their electricity bills in relation to other services in comparison to the 37% dissatisfaction rate noted in 2018. However, as shown in Exhibit 1, Tab 2, Schedule 1, Attachment 1, Business Plan, Appendix 1, Customer Satisfaction Survey, Page 7, Q4, there has been a continuing decrease in the percentage of customers that are dissatisfied with the cost of electricity in relation to other services since 2015. When looking at results from 2018, 31% of customers provided a poor or very poor score compare to 40% of customers in 2017. What's more, the 2018 rate is 27% less than it was in 2016 (there was a 58% dissatisfaction rate among customers at that time).

1-EP-4

Question:

Reference: Exhibit 1, Tab 2, Schedule 1, Attachment 1, Business Plan, Appendix 1, Customer Satisfaction Survey, Page 10, Rating Performance and Page 11, Q7

Preamble: "The highest rated performance indicator remains the one related to the reliability of the power supply at 82%, although this number dropped over 2017 by -7%. Next best scored was the area of promptly responding to outages at 80% – which also fell in relation to 2017 by -6%."

a) Does GSHi agree/disagree that customers are discerning a drop in reliability? Please discuss.

b) How does this customer response inform the DSP for 2020-2024? Please be specific regarding the measures, investments and maintenance that will improve both frequency and duration of outages (for example dealing with X worst performing feeders) and provide references to components of the DSP.

c) Compare the specific Targets for SAIDI, SAIDI5, SAIFI and SAIFI5 for 2024 with the historic 5-year averages.

d) Were customers told

i. that outages had increased over the past 5 years, and
ii. that in 2020 distribution rates were going to increase by 7% ?

e) Does GSHi agree/disagree that the balance between the level of outages and higher rates would more correspond to #4 high rates few(er) outages not #3?

Response:

a) The 2018 survey results suggest that our customers are tending to rate the reliability as 'good' (4 out of 5) rather than 'very good' (5 out of 5), whereas from 2014 through 2017 inclusive, the historical survey results would suggest that our customers tended to rate the reliability as being closer to 'very good' (5 out of 5).

b) In particular, historical performance in the 'Reliability', 'Distribution System Asset Condition', 'Cost Control' and 'Customer Satisfaction' areas have affected the depth and breadth of the scope of investment GSHi feels is responsible (and required) to maintain the continued operation and flexibility of the distribution system that our customers depend on. Proactive asset replacement/refurbishment programs that address the recommendations put forth by Kinectrics in their 2019 ACA report are central to the prospective investments contemplated in GSHi's DSP, particularly in the *System Renewal* category.
Expected service reliability levels have been underperforming the OEB's prescribed level of 1.18 for both SAIDI and SAIFI going back to 2015. Equipment performance, as a critical controllable parameter, contributed 13% of system interruption minutes and was responsible for 25% of the total recorded service interruptions over the historical period 2014-2018. Recent evidence suggests that underlying reliability risk due to this factor is increasing.
The OEB defines a **Defective Equipment** (Cause 5) outage as: "Customer interruptions resulting from distributor equipment failures due to deterioration from age, incorrect maintenance, or imminent failures detected by maintenance." In words, SAIDI and SAIFI for this cause code can be calculated as follows:

$$SAIDI5 = \frac{Total\ Hours\ of\ Customer\ Interruptions}{Total\ Number\ of\ Customers\ Served}$$

$$SAIFI5 = \frac{Total\ Number\ of\ Customer\ Interruptions}{Total\ Number\ of\ Customers\ Served}$$

The $SAIDI_5$ and $SAIFI_5$ performance metrics are themselves a special subset of their respective parent metric (i.e. SAIDI/SAIFI) and relate directly to **Cause 5** outage events. These two performance metrics are vital inputs to the asset management process at GSHi because they indicate a level of poor performance at the feeder level that may be improved directly through either effective implementation of maintenance programmes or prospective *System Renewal* investments
Due to the negative trending that has been observed with respect to the prevalence of Cause 5 outages, GSHi is proposing to focus very heavily on a paced *System Renewal* – type portfolio of investments in its DSP with the aim to bring these reliability indices in line with the expectations of

both our customers and the OEB. Beginning at the substation level and moving down the risk ladder to the secondary voltage level, GSHi's investment selection and prioritization process (discussed further in Section 5.3.3.2 of the DSP) aims to proactively replace and/or refurbish assets whose unplanned failure would lead to increasingly unacceptable levels of risk at a paced and reasonable cost. As these proposed plans are implemented, customers on the affected feeders can expect that future Cause 5 "unplanned" outages will immediately be replaced to some extent by Cause 1 'scheduled' outages with improved service reliability in the years immediately following the implementation of the prospective investments.

The references below are core components of the DSP, whose implementation is intended to positively affect both the duration and frequency-related outage indices (i.e. SAIDI/SAIFI & $SAIDI_5$ /$SAIFI_5$):

5.4.3.2.1.2 System Renewal – Pole Rebuilds pgs. 227-231 **(2020)**
5.4.3.2.2.1 System Renewal – Lines pgs. 262-267 **(2021)**
5.4.3.2.3.2 System Renewal – Lines pgs. 280-285 **(2022)**
5.4.3.2.4.2 System Renewal – Lines pgs. 294-300 **(2023)**
5.4.3.2.5.2 System Renewal – Lines pgs. 310-316 **(2024)**

GSHI has had some success in recent years to reduce the number of confirmed "Tree Contact"-related outages through the implementation of four-year vegetation management cycles throughout the service territory. Further analysis to determine the suitability of these cycles will be undertaken and can potentially help to reduce the number of "Unknown/Other"-related outages by trimming back faster-growing vegetation in specific areas, which will decrease the likelihood of an inadvertent contact being made by either a tree or an animal with the distribution system.

In an ongoing effort to adapt to a changing climate, GSHI, as part of its standard engineering practices, will continue to build and design pole lines to meet or exceed the latest revision of CSA C22.3 No.1 Overhead Systems which helps to ensure that new distribution system expansions, extensions and replacements are storm-hardened to a level appropriate with the regional climate.

To help GSHI achieve an even greater ability to quickly and efficiently restore electricity service to our customers when the power goes out, an immediate investment in an Outage Management System (OMS) is

proposed for the 2020 calendar year. This system will allow GSHI to reduce outage duration and improve outage restoration by better leveraging information from existing smart meters which will get our repair crews to the field as quickly as possible. Additionally, the system will improve our ability to more accurately record service interruptions and interruption durations as well as which customers are being impacted by those outages. The OMS is also expected to assist the Control Room operators with consistently applying the appropriate outage cause code(s) during service interruption events which will lead to more accurate reporting and improved root cause analyses.

Finally, it is clear from the results of our customer consultations that customers consistently continue to want to see a balance between rates and outages, which supports the deployment of a paced distribution asset renewal strategy. Undertaking such a strategy is further supported by the data which shows that customers almost universally agree (89% residential, 95% commercial) and expect that efficient investments in the system are made "to maintain or improve on the current level of system reliability, keeping outages to as few as possible and as short as possible." With these consultation results, and in considering the historical performance of the preceding metrics in this section, a goal of the GSHI capital expenditure plan will be to leverage its' asset management plan to ensure spending levels, particularly in the *System Renewal* category, are appropriately smoothed, or levelized, to act on customer expectations with respect to efficiently balancing the risk of unplanned outages with costs.

c) The GSHi-specific target(s) for SAIDI, SAIDI$_5$, SAIFI and SAIFI$_5$ are provided in the table below, along with data from the historic five years:

Metric	2015	2016	2017	2018	2019	GSHI Target
SAIDI	1.01	1.19	1.65	1.39	1.89	1.18
SAIDI5	11.61%	15.57%	7.36%	18.39%	39.48%	≤ 15%
SAIFI	1.25	0.87	1.34	1.41	1.03	1.18
SAIFI5	14.40%	17.60%	13.20%	49.70%	41.88%	≤ 20%

Three of the four metrics, as averaged over the historic five years, are trending higher than GSHi's target for that metric. The exception is SAIFI, whose five year average of 1.18 is exactly equal to GSHi's target.

d) i) A statement in the 2018 Customer Survey that "outages have increased over the past 5 years" was not included to customers.
In the 2020 Cost of Service primer that was delivered to customers, on page 3, GSHi states that "(GSHi) has prepared a DSP that contains its proposed spending levels for necessary capital projects and the ongoing operation and maintenance of its system. **It can be found in Exhibit 2, Tab 2, Schedule 1, Attachment 1 of the Cost of Service Application**".
ii) There is no specific reference to a 2020 distribution rate increase of 7% in the 2018 Customer Satisfaction Survey.

e) GSHi takes its customer feedback at face value. In the survey, "3 – neutral – a balance between rates and outages" is most often cited by customers as desirable

1-EP-5

Question:

Reference: Exhibit 1, Tab 2, Schedule 1, Attachment 1, Business Plan, Appendix 1 Customer Satisfaction Survey, Page 22, Q14 and Page 41, Q34

a) Does GSHi agree/disagree that residential customers indicated lower rates as being most important? Please Discuss how this relates to the proposed 2020 rate increase.

b) Does GSHi agree/disagree that Business customers indicate lower rates as being most important? Please Discuss how this relates to the proposed 2020 rate increase.

Response:

a) & b) Questions 34 of GSHi's 2019 Customer satisfaction survey asks customers to consider *What can Greater Sudbury Hydro do to better service its customers?*

Responses gathered from residential customers indicate that the majority of respondents do not have a suggestion as to what GSHi could do to improve its service (35% of respondents). The 2nd and 3rd most frequent suggestions, in order, were *Lower rates (*21% of respondents) and *Maintain rates/no increase* (13% of respondents).

The results show that cost is a top concern for customers, as it has been historically and will likely continue to be into the future. GSHi always considers the impact of its decisions on its customers, and endeavors to add measurable value for the rates it charges. GSHi recognizes that the rate increase it is proposing will result in an increase to bills and that may be challenging for some customers. However, this increase is needed to ensure system reliability and reverse the trend of increasing frequency

and length of outages due to defective equipment. GSHi is making prudent and appropriate capital investments now in a planned way that allows for efficient capital spending while avoiding negative impacts to reliability. Delaying necessary capital investments down the road will likely result in significant outages and unplanned, reactionary replacement that will attract premium costs.

An increase in rates is not a decision that has been made lightly, but it is one that GSHi believes is necessary. Delaying needed renewal activities would contribute to future declines in reliability that would negatively impact customers. GSHi must act now to preserve the standards of service that customers both deserve and have come to expect.

1-EP-6

Question:

Reference: Exhibit 1, Tab 2, Schedule 1, Business Plan, Appendix 1, Attachment 2

a) Please clarify when GSHi knew about the 2020 rate increase and proposed System Renewal capital program?

b) Please clarify if the material in Attachment 2 was put to customers and if the results are/ or are not the survey results in Attachment 1.

c) If the survey did use Schedule 2, material please explain how this reconciles with the responses in Attachment 1 regarding lower or no rate increases? Please explain this disconnect.

d) Is GSHI indicating to the OEB that residential customers are comfortable with a 2020 increase of 6.9% in rates? If so, please point to the appropriate survey responses that support this.

Response:

a)

Sudbury Hydro has known about the System Renewal capital program since 2016. The 2020 rate increase was known during the preparation of the application which culminated in the Fall of 2019.

b)

Sudbury Hydro released the material cited in Attachment 2 to its customers on December 19, 2019. The results are not the survey results from Attachment 1.

c)

Sudbury Hydro presumes that the reference to 'Schedule 2' above is intended to mean 'Attachment 2'. Presuming such, no, the survey did not use Attachment 2 material.

d)

In its initial application, GSHi was proposing a 6.9% increase to the total bill residential customers will receive in 2020 in order to support the vital system renewal activities rationalized in its five-year distribution system plan and the additional cost drivers summarized in Exhibit 4 of its 2020 Cost of Service application.

This exact level of increase and the resulting bill impact was not put to residential customers for their review and feedback in a formal survey, as it had not been determined in the time needed to carry-out meaningful consultation.

With this said, GSHi believes that the consultant-led public consultations it undertook when developing and refining its distribution system plan (informed by the results of GSHi's annual customer satisfaction survey) indicate that customers have shown a strong belief in GSHi's ability to manage its operations, which includes proposing appropriate levels of rate increase to ensure reliable service delivery. The consultation process and results obtained are discussed at length in Exhibit 1, Tab 6, Schedule 1 of GSHi's 2020 Cost of Service application. This portion of the rate application includes direct feedback from customers that speaks to their perception of GSHi being a responsible and trustworthy service provider. For example:

"I get it that the [GSHi] people know what they're doing and if they're telling us that's what they need to spend, then that's what they need to spend."
(Exhibit 1, Tab 6, Schedule 1, Page 16)

"GSU is part of our community. You have skin in the game. You are communicating with the community, seeking input and feedback. Please do not be afraid to do what you know is the right thing to do."
(Exhibit 1, Tab 6, Schedule 1, Page 37)

GSHi recognizes that the above comments cannot be seen as direct endorsements of the proposed rate increase. They should be seen as being indicative of a general sentiment among customers, not a specific reflection of their feelings about seeing a 6.9% increase on their future bills. GSHi recognizes that this rate increase may present challenges for some of its customers, but at the moment, levels of dissatisfaction with the proposed rate increase remain untested through direct consultation.

Despite the lack of concrete customer feedback on the proposed 6.9% bill increase, the following bears consideration when attempting to understand customer preferences as relates to rates and outages:

The customer summary that was made public as part of GSHi's 2020 Cost of Service application invited customers to contact GSHi representatives to discuss their support for or opposition to the proposed rate increase. Since the summary's release and the subsequent media coverage of GSHi's rate application submission, GSHi received two letters of comment from customers via the OEB which it reviewed and responded to.

In comparison, GSHi received nearly 7,300 phone calls from affected customers inquiring about the status of their power supply during a recent outage event (February 13th, 2020).

Being truly customer-focused requires making difficult decisions.
A decision that may be unpopular (a rate increase), must ultimately be made in order to meet another need (reliability of service). GSHi believes that the rate increase it is proposing is reasonable given the scope of work that must be undertaken to strengthen its distribution system. Assets including substations—some of which were built just after the 2nd World War—require significant upgrading. The cost to do so responsibly is reflected in the proposed rate increase.

GSHi believes that deferring vital service improvements and equipment upgrades to help keep costs neutral would be irresponsible. System reliability and public safety would be compromised to an unacceptable degree. It would not be the right thing to do.

1-EP-7

Question:

Reference: Exhibit 1, Tab 2, Schedule 1, Attachment 1, Business Plan, Appendix 2, OEB Regulatory Scorecard

Please provide either an updated/revised Scorecard or a Table with the Operational Effectiveness measures for 2019 (Estimate) and 2020-2024 Forecast.

Response:

GSHI has projected its 2019 scorecard based on its unaudited 2019 results and has prepared a forecast for 2020 based on its Cost of service application (included as Attachment 1 to this response). Projections for 2021-2024 that GSHi would consider accurate enough to publish or be of value for discussion purposes cannot be forecasted in the time allotted for interrogatories. GSHi monitors these metrics and will continue to strive to improve on them every year.

Attachment 1 (of 1):

2-EP-7 Attachment 1: Forecasted Scorecard

GSHI 2014 - 2020 Scorecard (2019 and 2020 Forecasted)

Performance Outcomes	Performance Categories	Measures	2014	2015	2016	2017	2018	2019	2020
Customer Focus	Service Quality	New Residential/Small Business Services Connected on Time (Target: 90%)	99%	99.80%	99.40%	98.78%	99.20%	99%	99%
		Scheduled Appointments Met on Time (Target: 90%)	100%	100%	100%	100%	99.89%	100%	100%
		Telephone Calls Answered on Time (Target: 65%)	72.10%	69.40%	66.90%	67.16%	71.25%	71%	71%
	Customer Satisfaction	First Contact Resolution	82%	83%	84%	83.52%	84.19%	84%	84%
		Billing Accuracy (Target: 98%)	99.86%	99.90%	99.92%	99.92%	99.92%	99.92%	99.92%
		Customer Satisfaction Survey Results	97%	92%	91%	94%	90%	91%	92%
Operational Effectiveness	Safety	Level of Public Awareness			73.68%	80%	80%	83%	83%
		Level of Compliance with Ontario Regulation 22/04 (Target: substantially compliant)	C	C	C	C	C	C	C
		Number of General Public Incidents	0	0	0	0	0	0	0
		Rate per 10, 100, 1000 km of line	0	0	0	0	0	0	0
	System Reliability	Average Number of Times Power to Customer is Interrupted	1.83	1.25	0.87	1.34	1.41	1.03	1.18
		Average Number of Hours Power to Customer is Interrupted	1.21	1.01	1.19	1.65	1.39	1.89	1.43
	Asset Management	Distribution System Plan Implementation on Progress	87.54%	87.4	96.40%	93.28%	97.47%	85.80%	100%
	Cost Control	Efficiency Assessment (1 = most efficient 5 = least efficient)	4	3	4	3	3	3	3
		Total Cost ($) per Customer	$ 648	$ 627	$ 648	$ 629	$ 671	$ 674	$ 703
		Total Cost ($) per Km of Line	$ 30,698	$ 29,627	$ 30,649	$ 29,706	$ 31,690	$31,671	$32,963
Public Policy Responsiveness	Conservation & Demand Management	Net Cumulative Energy Savings (Percent of Target Achieved)	0.00%	20.03%	55.88%	90.20%	113.62%	N/A	N/A
	Connection of Renewable Generation	Renewable Generation Connection Impact Assessments Completed on Time			100%	100%		100%	100%
		New Micro-Embedded Generation Facilities Connected on Time (Target: 90%)	100%	100%	100%	100%	100%	100%	100%
Financial Performance	Financial Ratios	Liquidity: Current Ratio	0.46	0.47	1.47	1.53	1.45	1.49	1.5
		Leverage: Total Debt to Equity Ratio	3.26	3.04	1.99	1.9	1.86	1.99	1.91
		Profitability: Regulatory Return on Equity - Deemed	8.98%	8.98%	8.98%	8.98%	8.98%	8.98%	8.52%
		Profitability: Regulatory Return on Equity - Achieved	14.04%	8.36%	10.17%	9.30%	7.72%	6.80%	7.67%

2-EP-8

Question:

Reference: Exhibit 2, Tab 1, Schedule 2, Table 9, and Pages 19 and 20

Preamble: "In 2018, much of the variance (in distribution plant) occurred as a result of: b) Substation Renewal: Municipal substation Kathleen MS2 was renewed at a cost of $3,324,676."

a) Please confirm that the 2018 Distribution Plant capital investments were part of normal System Renewal capital.

b) Please explain why these projects were not considered "above normal capital", particularly Kathleen MS2 and an ICM/ACM was not requested.

Response:

a) Other than the investment of $3,324,676 to renew municipal substation Kathleen MS2, GSHi confirms that the 2018 Distribution Plant capital investments were part of normal System Renewal capital.

b) The Kathleen MS2 Renewal Project is a discrete capital project of a magnitude that could warrant consideration for ICM treatment. Although GSHi could have applied for ICM relief for the project the company did not, such that the company absorbed any resulting capital funding shortfall caused by the project until rebasing. GSHi notes that at the time a decision whether or not to seek ICM relief was required as part of the filing for 2018 IRM rates GSHi was scheduled for rebasing for 2019 rates, such that the lost revenue from failing to apply for ICM funding for 2018 capital projects would have been limited to the 2018 revenue requirement impact of the spending on a "half year rule" basis; it was only after 2018 rates were applied for that GSHi subsequently considered and requested a further deferral for rebasing to 2020.

2-EP-9

Question:

Reference: Exhibit 2, Tab 1, Schedule 2, Table 11, and Page 26

Preamble: "In 2020, much of the variance (in distribution plant) occurred as a result of: b) Substation Renewal: Gemmell MS11 is budgeted to be renewed at an estimated cost of $2,333,837. Along with this project, several supportive System Service related feeder investments are planned to occur."

a) Please confirm that the 2020 Distribution Plant capital investments are part of normal System Renewal capital.

b) Please explain why these projects were not considered "above normal capital", particularly Gemmell MS11 and an ACM is not requested.

Response:

a) Other than the investment of $2,333,837 to renew the 10T1 side of municipal substation Gemmell MS11, GSHi confirms that the 2020 Distribution Plant capital investments are part of normal System Renewal capital.

b) Gemmell MS11, forming part of the capital additions in the 2020 Test Year, will be included in GSHi's rate base at 50% as rate base will be calculated on the average net book value of fixed assets. Similarly, amortization will be included at 50% due to the half-year rule on additions. GSHi understands this to be appropriate treatment for all capital additions in the Test Year, and accordingly did not seek ACM treatment for these costs.

2-EP-10

Question:

Reference: Exhibit 2, Rate Base, Tab 2, Schedule 1, Attachment 1, DSP Table 11 and Page 71

Preamble: LOS appears to be major contributor to System Reliability.

a) Please break down the LOS Cause code data into host transmitter/distributor (external cause) and Scheduled Outages (internal cause).

b) Please list the host transmitter/distributor Connection points and peak capacity of each.

c) Clarify if the supply is from Hydro One Transmission or Hydro One Distribution.

d) Who owns the transformers at the Connection Points?

e) What discussions have been held with Hydro One to improve reliability of the Connection points and what is the action plan?

f) What is the plan and what are the targets to reduce Scheduled Outages?

Response:

a) Yearly SAIDI and SAIFI for the years 2014 through 2019 are shown below with the breakdown for Cause 1 in yellow and Cause 2 in orange.

For context, the OEB definitions for Cause Code 1 “Scheduled Outages” and Cause Code 2 “Loss of Supply” are provided below:

1 *Scheduled Outage Customer interruptions due to the disconnection at a selected time for the purpose of construction or preventive maintenance.*

2 *Loss of Supply Customer interruptions due to problems associated with assets owned and/or operated by another party, and/or in the bulk electricity supply system. For this purpose, the bulk electricity supply system is distinguished from the distributor's system based on ownership demarcation.*

OEB CODE	Description	2014		2015		2016		2017		2018		2019	
		SAIDI	SAIFI	SAIDI	SAIFI	SAIDI	SAIFI	SAIDI	SAIFI	SAIDI	SAIFI	SAIDI	SAIFI
0	Unknown/Other	0.14	0.45	0.11	0.27	0.03	0.08	0.43	0.51	0.06	0.11	0.00	0.01
1	Scheduled Outage	0.34	0.14	0.35	0.11	0.47	0.14	0.25	0.07	0.15	0.06	0.45	0.12
2	Loss of Supply	1.03	0.88	0.52	0.75	0.10	0.04	0.88	0.64	0.05	0.04	0.51	0.11
3	Tree Contacts	0.02	0.02	0.00	0.00	0.00	0.00	0.02	0.02	0.00	0.00	0.01	0.01
4	Lightning	0.01	0.09	0.02	0.05	0.15	0.12	0.64	0.36	0.01	0.01	0.00	0.01
5	Defective Equipment	0.23	0.83	0.18	0.29	0.20	0.16	0.19	0.26	0.49	0.79	0.95	0.48
6	Adverse Weather	0.35	0.10	0.31	0.41	0.14	0.13	0.10	0.04	0.55	0.35	0.11	0.16
7	Adverse Environment	0.00	0.00	0.00	0.00	0.02	0.04	0.00	0.00	0.04	0.02	0.00	0.00
8	Human Element	0.00	0.08	0.01	0.06	0.13	0.15	0.00	0.02	0.01	0.01	0.11	0.04
9	Foreign Interference	0.11	0.12	0.04	0.06	0.05	0.05	0.02	0.02	0.09	0.06	0.25	0.21
10	Major Event	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.22	0.14	0.00	0.00

b) The host transmitter connection points (and their respective peak capacity) are as follows:

Station	Winter Total Normal Supply Capacity	Summer Total Normal Supply Capacity
Martindale TS	182.6 MVA	168.7 MVA
Clarabelle TS	204.8 MVA	188.7 MVA
Crystal Falls TS	53.6 MVA	48.4 MVA

Note: GSHi used to also have a connection to Coniston T.S but this station was decommissioned with loads switched to Martindale T.S concurrent to the drafting of the DSP.

c) The supply is from Hydro One Transmission.

d) Hydro One owns the transformers at the connection points.

e) GSHi and Hydro One meet at least yearly, where reliability of supply has been among many topics discussed. GSHi is presently satisfied with the level of reliability service it has received from Hydro One.

f) The number of 'Scheduled Outages' has increased for two reasons: more rigorous safety procedures regarding worker safety and the type of work being undertaken. The Occupational Health & Safety Act requires that an Employer do "Everything reasonable in the circumstances for the safety of the worker" and the Infrastructure Health & Safety Association has embarked on "ZeroQuest", a path to zero Lost-Time Injuries (LTI) in the sector. GSHi has embraced both of these concepts over the years. The worker and supervisory culture emphasizes the performance of Hazard Analysis and Job Planning which includes the appropriate scheduling of outages.

Due to the negative trending that is being observed with respect to the prevalence of Cause 5 "Defective Equipment" outages, GSHi is proposing to focus on a paced System Renewal – type portfolio of investments in its DSP with the aim to bring these reliability indices in line with the expectations of both our customers and the OEB. Beginning at the substation level and moving down the risk ladder to the secondary voltage level, GSHi's investment selection and prioritization process aims to, at a paced and reasonable cost, proactively replace and/or refurbish assets whose unplanned failure would lead to increasingly unacceptable levels of risk. As these proposed plans are implemented, customers on the affected feeders can expect that future Cause 5 "unplanned" outages will immediately be replaced to some extent by Cause 1 "scheduled" outages with improved service reliability in the years immediately following the prospective investments.

2-EP-11

Question:

Reference: Exhibit 2, Rate Base, Tab 2, Schedule 1, Attachment 1, DSP, Table 11, and Page 71

Preamble: "GSHi has had some success in recent years to reduce the number of confirmed "Tree Contact"-related outages through the implementation of four-year vegetation management cycles throughout the service territory."

a) Please confirm the statement relative the cause code data in Table 11, or provide additional data to confirm the effect of a four-year vegetation management cycle.

b) Why is a four-year cycle optimum? Does this include both brush and tree trimming? Please clarify.

c) Please provide the annual and total costs O&M and capital for the historic 5 years.

d) What comments does Kinectrics have on GSHi's vegetation management cycle and program?

Response:

a) GSHi confirms the above statement relative to the cause code data in Table 11.

b) The scope of work relates to brush and tree trimming, which includes: the felling and pruning of trees, height reduction, removal of dangerous trees, log and branch wood processing, chipping, and disposal of wood, brush and debris.

Clearance, as a general rule, provides for at least four (4) years' growth except where this would result in serious mutilation of the tree. All limbs, whether sound or diseased, that are liable by allying, swaying or by other means to contact the conductor, are removed where it is practical to do so.

Based on the data included in Table 11, GSHi believes that a four-year vegetation management cycle strikes an acceptable balance between costs and reliability performance with respect to Cause 3 "Tree Contacts" outages.

c) The annual O&M costs for the historic years 2019 through 2014 are provided in the table below:

YEAR	O&M COST ($)
2019	623,427
2018	505,283
2017	306,804
2016	743,708
2015	423,406
2014	497,806

With respect to annual capital costs relating to vegetation management, GSHi is open to discussing with OEB staff and intervenors a specific approach to this calculation, but cannot respond to this question in the time allotted for interrogatories.

d) Kinectrics has not commented on GSHi's vegetation management cycle nor the program.

2-EP-12

Question:

Reference: Exhibit 2, Rate Base, Tab 2, Schedule 1, Attachment 1, DSP, Table 15, and Figure 35

a) Please Provide the 2019 Estimate and 2020 Forecast values for each metric.

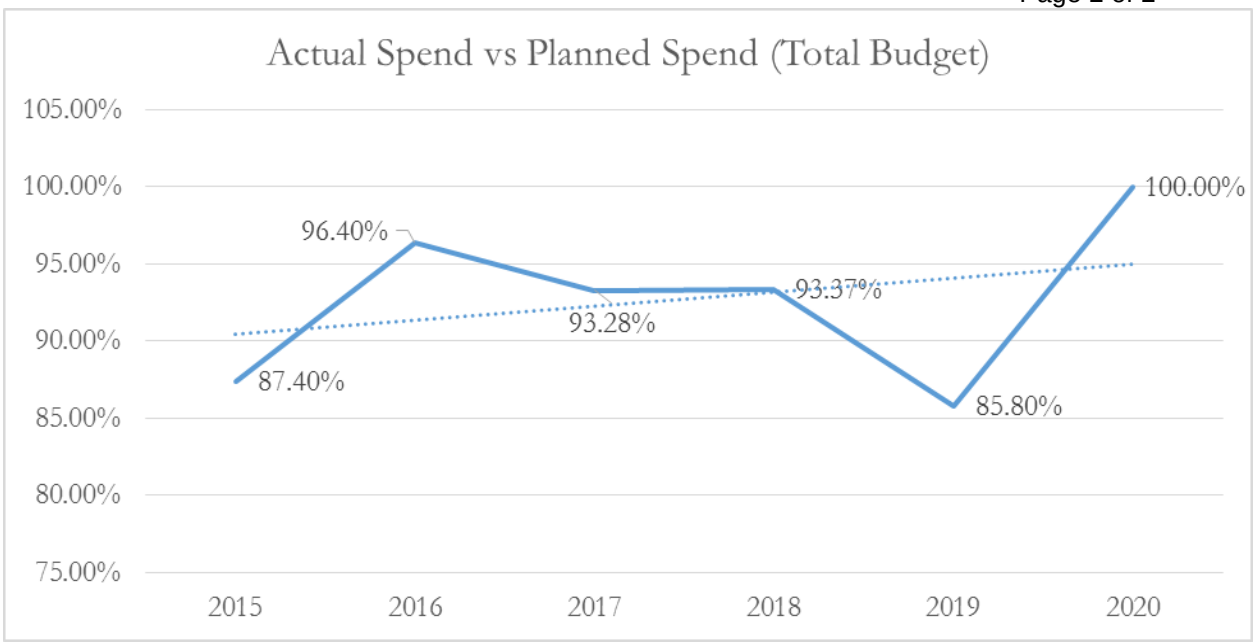
b) Please provide the Capital Spend for 2019 Estimate and 2020 Forecast and update Figure 35

Response:

a) An updated version of Table 15 is provided below:

Metric	2014	2015	2016	2017	2018	2019	2020	GSHI Target
Total Cost per Customer	260.79	262.21	264.54	283.07	296.85	283.86	318.50	Improving trend. Performance is evaluated through OEB benchmarking process
Total Cost per km of Line	15,081.97	15,116.23	15,269.59	16,294.16	17,071.91	16,256.40	18,276.30	
Total Cost of MW	79,563.29	81,732.60	89,471.68	97,432.00	96,670.13	92,356.91	105,751.02	
Total CAPEX per Customer	144.97	132.31	134.01	150.65	166.30	146.24	161.60	
Total CAPEX per km of Line	8,383.78	7,627.50	7,735.36	8,671.59	9,563.90	8,375.29	9,273.31	
Total O&M per Customer	115.82	129.90	130.53	132.42	130.55	137.62	156.89	
Total O&M per km of Line	6,698.19	6,698.19	7,488.53	7,622.57	7,508.01	7,881.11	9,002.99	

b) An updated version of Figure 35 is provided below:


Actual Spend vs Planned Spend (Total Budget)
105.00%
100.00%
95.00%
90.00%
85.00%
80.00%
75.00%
87.40%
96.40%
93.28%
93.37%
85.80%
100.00%
2015
2016
2017
2018
2019
2020

1
2

2-EP-13

Question:

Reference: Exhibit 2, Rate Base, Tab 2, Schedule 1, Attachment 1, DSP, Table 27 and 31

a) Please provide the complete list of the worst feeders.

b) Please indicate on the worst performing feeder list, which are to be replaced under the 2020 capital plan and indicate if the replacement includes voltage conversion and/or transformer upgrade.

c) What is the annual and Total Capital Cost? Indicate if this is System Renewal or another category?

d) What is the predicted improvement in outage frequency in 2024?

Response:

a) Table 27 (re-produced below) provides the complete list of GSHi's worst performing feeders. At GSHi, a feeder that makes this list is among the 15 feeders that have experienced the highest level of electricity service interruption throughout a given time period.

Feeder ID	Voltage (kV)	# of Reclosures	# of Lockouts	Total Outages	Outage Cause(s)	Customers	Customer-Minutes
20F5	12.47	9	0	64	00=11; 01=10; 02=0; 03=6; 04=1; 05=11; 06=5; 07=0; 08=2; 09=18; 10=0	4,611	329,374
17F3	12.47	16	0	53	00=3; 01=16; 02=0; 03=0; 04=0; 05=2; 06=2; 07=3; 08=2; 09=14; 10=11	3,397	2,401,609
16F4	12.47	1	0	43	00=1; 01=18; 02=0; 03=1; 04=0; 05=8; 06=6; 07=1; 08=0; 09=4; 10=4	4,603	1,516,540
17F5	12.47	10	0	40	00=4; 01=15; 02=0; 03=1; 04=1; 05=8; 06=2; 07=2; 08=1; 09=6; 10=0	6,620	406,660
7F5	12.47	12	0	36	00=21; 01=7; 02=0; 03=0; 04=1; 05=5; 06=0; 07=0; 08=0; 09=2; 10=0	8,986	232,671
15F3	12.47	2	0	33	00=3; 01=13; 02=1; 03=0; 04=0; 05=7; 06=1; 07=3; 08=0; 09=5; 10=0	4,279	215,135
11F5	12.47	4	0	33	00=2; 01=20; 02=0; 03=0; 04=0; 05=4; 06=1; 07=3; 08=0; 09=3; 10=0	1,616	117,898
19F8	12.47	24	0	31	00=4; 01=6; 02=0; 03=1; 04=0; 05=2; 06=4; 07=0; 08=0; 09=14; 10=0	7,347	250,366
20F1	12.47	4	0	29	00=4; 01=12; 02=0; 03=0; 04=1; 05=7; 06=0; 07=0; 08=0; 09=5; 10=0	2,941	233,475
35F2	12.47	2	0	28	00=2; 01=16; 02=0; 03=0; 04=2; 05=2; 06=1; 07=0; 08=1; 09=4; 10=0	3,846	164,522
19F3	12.47	12	0	28	00=5; 01=8; 02=0; 03=0; 04=0; 05=2; 06=1; 07=0; 08=0; 09=12; 10=0	3,239	133,620
25F2	4.16	11	0	26	00=0; 01=13; 02=0; 03=0; 04=0; 05=8; 06=0; 07=1; 08=2; 09=2; 10=0	3,528	215,344
18F1	12.47	2	0	26	00=2; 01=10; 02=0; 03=0; 04=0; 05=3; 06=3; 07=2; 08=1; 09=5; 10=0	2,032	81,392
7F3	12.47	6	0	25	00=2; 01=15; 02=0; 03=0; 04=1; 05=4; 06=0; 07=0; 08=2; 09=1; 10=0	995	85,948
17F6	12.47	2	0	25	00=1; 01=17; 02=0; 03=0; 04=1; 05=4; 06=0; 07=0; 08=1; 09=1; 10=0	6,128	377,099

Table 1 Worst Performing Feeders 2015 – 2018

b) Feeders that are expected to be impacted by the prospective 2020 capital plan include the 20F5 and 17F5. Prospective 2020 capital investments with respect to these two feeders do not include voltage conversion. As part of the proposed scope of work, minor overhead distribution transformer upgrades may occur.

c) The first prospective capital investment affecting the 17F5 feeder is estimated to cost $356,881. The second prospective investment, which will affect the 20F5, is estimated to cost $346,811. Both prospective investments have been classified as being in the *System Service* category where *System Renewal* is considered a secondary driver.

d) As a controllable parameter, the importance of focusing reliability investments that reduce the likelihood of equipment-related service interruptions is an important asset management objective for GSHi that delivers value to customers. The "Cause 5" worst performing feeder listing is an important tool to help focus attention on feeders where prospective investments, particularly in the *System Renewal* category, would be expected to yield reliability improvements and/or prevent degradation of either the SAIDI/$SAIDI_5$ or SAIFI/$SAIFI_5$ reliability indices. As these investments are implemented, from 2020 and beyond, customers on the affected feeders can expect that future Cause 5 "unplanned" outages will immediately be replaced to some extent by Cause 1 'scheduled' outages with improved service reliability in the years immediately following the implementation of the prospective investments.

2-EP-14

Question:

Reference: Exhibit 2, Rate Base, Tab 2, Schedule 1, Attachment 1, DSP, Table 45, Page 130 &

Kinectrics Report, Table3-2.

a) Indicate which Table corresponds to the 2020-2024 Capital Investment Plan
b) Please provide a version of Table 45 corresponding to the proposed Capital Plan with data for
    i. Inventory #units,
    ii. Units replaced per year,
    iii. Replacement Percentage of population,
    iv. Average Units/year,
    v. Number of units replaced 2020-2024, and
    vi. Total Capital cost 2020-2024.

Response:

a) Table 45, Pg130 in the DSP is the table that contributed to the formation of the Capital Investment Plan.

b) A version of Table 45 corresponding to the 2020-2024 Capital Plan with the following items is provided below:

    i. Inventory #units,
    ii. Units replaced per year,
    iii. Replacement Percentage of population,
    iv. Average Units/year,
    v. Number of units replaced 2020-2024

    Note that the below represents data associated with prospective investments that have been tabled as part of GSHi's DSP wherein planned asset removal/refurbishment is part of the project scope.

Asset Category	Units in Inventory (number)	2020		2021		2022		2023		2024		2020-2024	
		Units Replaced (number)	Units Replaced (%)	Units Replaced (number)	Units Replaced (%)	Units Replaced (number)	Units Replaced (%)	Units Replaced (number)	Units Replaced (%)	Units Replaced (number)	Units Replaced (%)	Average Units Replaced (number)	Total Units Replaced (number)
Substation Transformers	43	1	2.33%	2	4.65%	1	2.33%	1	2.33%	1	2.33%	1.2	6
Pad Mounted Transformers	1,440	3	0.21%	9	0.63%	9	0.63%	1	0.07%	0	0.00%	4.4	22
Pole Mounted Transformers	3,232	63	1.95%	76	2.35%	73	2.26%	77	2.38%	81	2.51%	74	370
Submersible Transformers	16	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0
Vault Transformers	131	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0
Overhead Line Switches	2,173	30	1.38%	16	0.74%	17	0.78%	19	0.87%	39	1.79%	24.2	121
Pad Mounted Switchgear	80	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0
Pad Mounted Junction Enclosures	70	1	1.43%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0.2	1
GSU Wood Poles	11,755	157	1.34%	184	1.57%	172	1.46%	189	1.61%	267	2.27%	193.8	969
GSU Concrete Poles	120	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0
Bell Wood Poles	2,695	29	1.08%	9	0.33%	5	0.19%	36	1.34%	48	1.78%	25.4	127
Hydro One Wood Poles	349	0	0.00%	25	7.16%	24	6.88%	41	11.75%	0	0.00%	18	90

The total capital cost for the replacement of the units shown in the Table above is shown below:

2020: $5,296,596
2021: $7,570,074
2022: $5,496,075
2023: $6,145,156
2024: $6,322,841

2-EP-15

Question:

Reference: Exhibit 2, Tab 2, Schedule 2, DSP, Page 190, Figure 66

a) Please provide a version of Figure 66 Capital Expenditures by Investment Category (Percentage) 2013-2024, showing for System Renewal Plan and Actual capital expenditures lines.

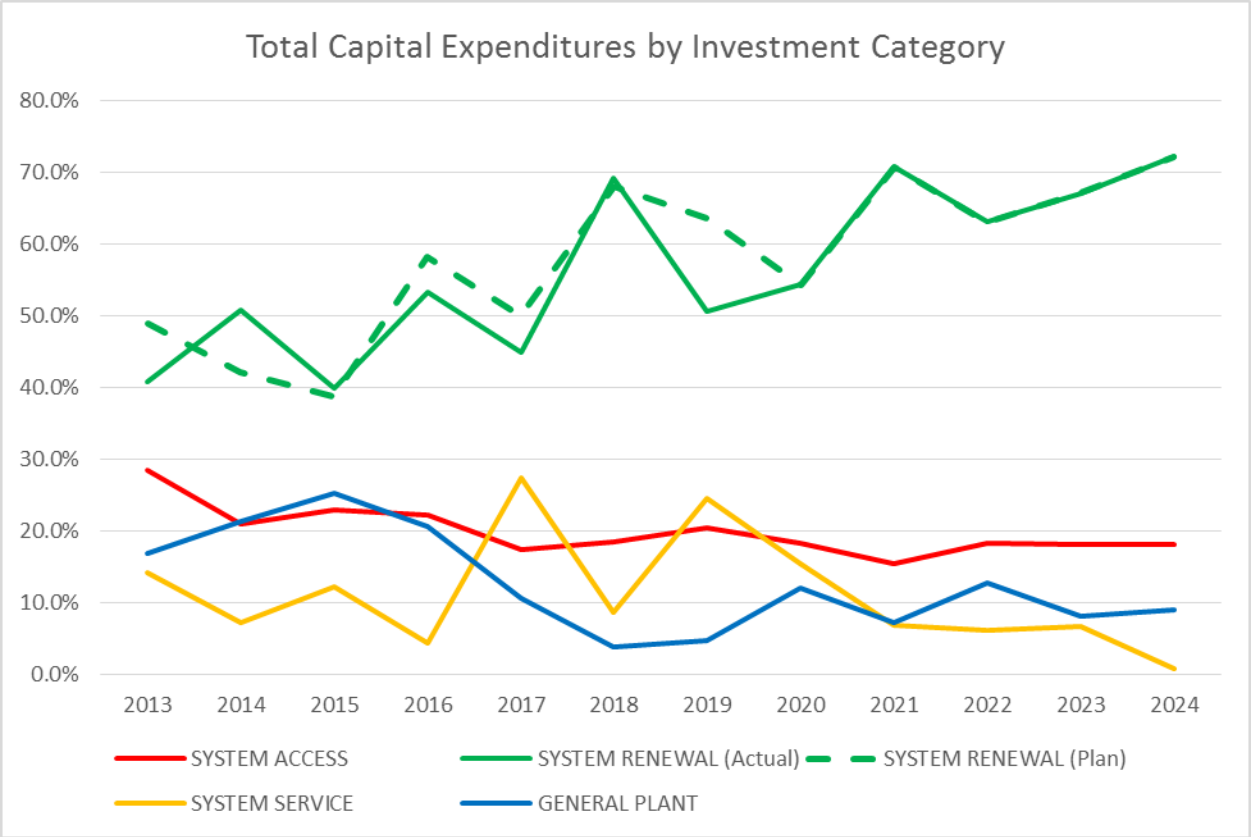
b) Please discuss the reasons for the jagged line showing material deviations, including the 2018 deviation of $833,000.

c) Why cannot GSHi bring Plan and Actual annual capital expenditures closer?

d) Please explain the rationale for the DSP projection that System Service capital expenditures will drop to almost zero in 2024.

Response:

a) Total capital expenditures by investment category are plotted together on the same graph below in Figure 66 to provide a comprehensive view of investments either made or planned to be made by GSHI from 2013 through 2024 inclusive. Figure 66 has been further modified to include System Renewal (Plan).



b) The jagged *System Renewal* lines (both Actual and Plan) in the modified Figure 66 from part a) are primarily a result of the actual spending occurring in both the *System Service* and *General Plant* investment categories.

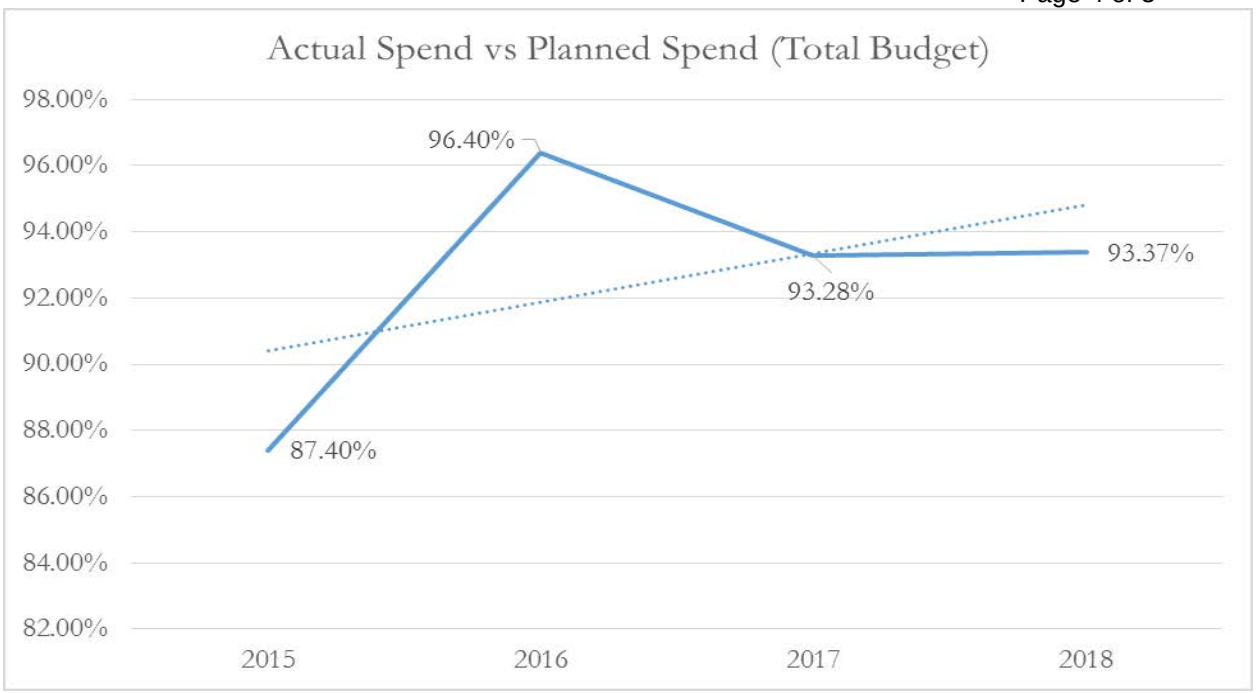
In 2014, *General Plant* was planned to account for 24.6% of expenditures whereas *System Service* was expected to account for 12.2%. However, actual expenditures in these categories were 21.2% and 7.2% respectively. Actual expenditures in these categories had the effect of increasing the actual *System Renewal* percentage spend from a planned 42.1% to 50.8%.

In 2016, the difference between *System Renewal* (Actual) and *System Renewal* (Plan) was fairly close (53.2% vs. 58.1%). However, the modified Figure 66 appears jagged because the actual spend in *System Service* for that year was only 4.2% of the total capital expenditures. That year, there were no major *System Service* projects that required capital

spending on the part of GSHi. As a result, the relative share of *System Renewal*-related capital expenditures increased, and had the effect of creating a "jagged" line in the modified Figure 66.

In 2018, the difference between *System Renewal* (Actual) and *System Renewal* (Plan) was fairly close (69.2% vs. 68.0%). However, the modified Figure 66 appears jagged because the actual spend in both *System Service* and *General Plant* for that year were only 8.6% and 3.8% respectively of the total capital expenditures. That year, most of the focus was on the necessary investments to move forward with the 4kV to 12kV voltage conversion plan and culminated with the investment in the *System Renewal* category of $3,324,676 to complete the rebuild of municipal substation Kathleen MS2. As a result, the relative share of *System Renewal*-related capital expenditures increased, and had the effect of creating a "jagged" line in the modified Figure 66.

c) GSHi acknowledges that its actual net capital expenditures were on average below the planned expenditure from 2013-2019. However, since its last Cost of Service (COS), GSHi has continued to work on its capital expenditure planning to improve the confidence level in its estimations. As an illustration of this improvement, the figure below shows the Actual Spend vs the Planned Spend (Total Budget) over the historical period 2015-2018 of the DSP:



Prior to the commencement of the yearly construction cycle, the Engineering department meets with Operations, Stores and the Control Room to map the various capital projects to the projected internal staffing capabilities using its Scheduling Tool.

Further, since the last COS, staff in both the Engineering and Operations departments have continued to enhance inter-departmental communication during project design and estimation. Guided by GSHI's ISO Management System, a vital component of prospective investment estimation involves a formal 'Design and Development' review between the responsible Project Coordinator (Engineering Technologist) and an Operations Supervisor. The Project Coordinator will produce a design using the appropriate USF distribution standards and/or GSHi-approved standards. These standards are digitized inside the corporate Superion financial system which facilitates the correct selection of materials for a given design. Design verification is subsequently accomplished by the Supervisor, Engineering's review of design outputs. Finally, the prospective work order (complete with approved standards) is reviewed and approved prior to the formal 'Pre-Construction Review' meeting with the pertinent Operations department staff. This review occurs for all jobs over $50,000 to review the scope of the job prior to the release of the work order package.

d) Prospective *System Service* capital expenditures will drop to almost zero in 2024 as a result of the proposed focus on *System Renewal*-related expenditures.

During the historical period 2015-2018, capital expenditures in the **System Renewal** category averaged 51.8% of GSHi's total capital expenditures. Over the forecast period, these expenditures are proposed to average 65.5% of the total prospective capital investment requirements.

Investment needs in the *System Renewal* category consistently tend to represent the highest percentage of the overall total spending requirements at GSHi. Each year of the forecast period features a specific substation renewal investment to proactively mitigate the largest potential reliability risk to the continued dependable provision of electricity service - namely the unplanned failure of critical station components.

Correspondingly, prospective investments in the **System Service** category are expected to moderate somewhat during the forecast period as compared to the historical period wherein a number of feeder tie-points were required to continue operating the distribution system reliably as the voltage conversion project in the Kathleen MS2/Cressey MS3 service areas progressed. With these projects completed, to a large extent, the primary *System Servic*e driver for the period 2020-2024 will be the expected commercial development along the Kingsway Corridor in the economic heart of the City of Sudbury. These prospective investments, which are detailed in Section 5.4.3.2.1.4 of the DSP, are projected to occur between 2020 and 2023.

In 2024, without an identified *System Service* driver, a concerted effort on *System Renewal* spending will necessarily result in reduced *System Service*-related prospective investments to ensure that sufficient budget exists to address the poles that at this time will require replacement/refurbishment in line with the 2019 Kinectrics Asset Condition Assessment Report.

2-EP-16

Question:

Reference: Exhibit 2, Tab 2, Schedule 2, DSP, Appendix B, Kinectrics Report, Table 16, Fleet Replacement Capital Plan

Please provide the following:

i. Estimates for the cost of each replacement vehicle in Table 16,
ii. Estimates for other routine replacements in 2020-2024 (Other),
iii. Vehicle maintenance Budgets for each year and how much is capitalized, and
iv. Total Fleet Capital and Total Maintenance costs for 2020-2024 and compare it to the Fleet Replacement Capital and Maintenance Costs for 2013-2018.

Response:

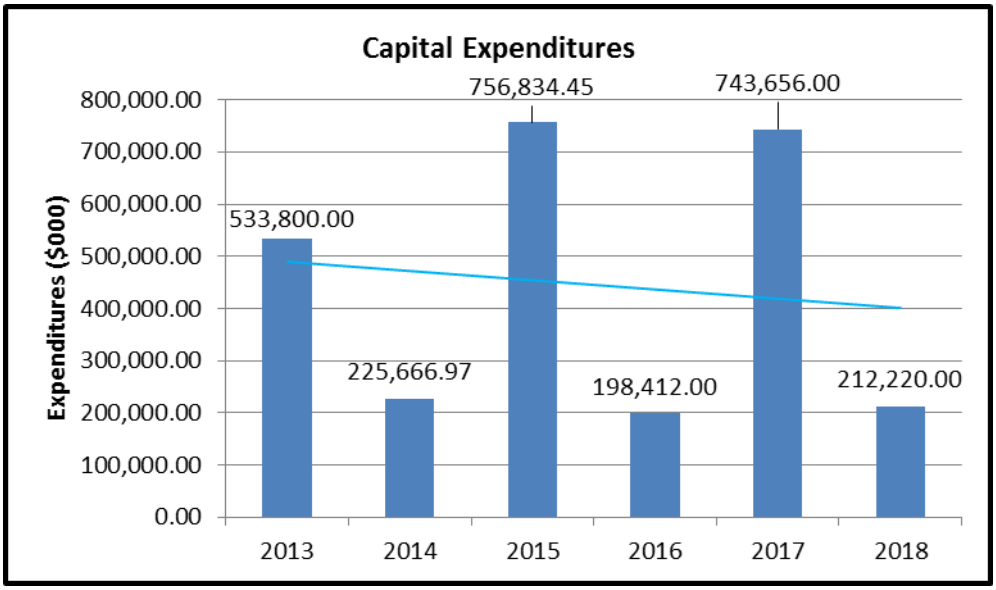
i) Estimates for the cost of each replacement vehicle in Table 16 are shown in the updated Table below:

Vehicle Description	Flagged for Action Year	Estimated Replacement Cost ($)
#38 1996 Int. Telelect RBD	2020	397,218
#66 2011 Freightliner FM2	2021	310,000
#26 1989 IHC Bucket Truck 65'	2022	480,000
#61 2003 Freightliner SB	2023	440,000
#45 2007 Freightliner FM2	2024	440,000
#85 2012 Freightliner FM2	2025	440,000
#77 2011 Freightliner FM2	2026	325,000
#29 Toyota Forklift	2026	120,000

ii) Any “routine” capital replacements from 2020-2024 would be immaterial.

iii) The vehicle maintenance budget for 2020 is $1,355,880 of which $733,124 is capitalized through Fleet charge-out rates. GSHi expects the remainder of the forecast period of 2021 through 2024 to track on a similar basis to 2020 in this area.

iv) The first table below shows the fleet replacement capital costs for 2013-2018:



The second table shows the Total Fleet Capital Costs for 2020-2024:

Year	Budget
2020	450,000
2021	459,000
2022	468,180
2023	477,544
2024	487,094
Totals	$2,341,818

Proposed investment under '*Vehicles'* is a smaller, albeit important part of the capital expenditure plan. Every year, spending is required to replace and/or refurbish GSHi's *Fleet* assets to ensure the organization can meet the expectations of its customers as it relates to reliable and cost effective provision of electricity services.

The average value of the historical fleet capital expenditures from 2013-2018 is $445,098. In the modified 'Table 16' provided above in response to i), it can be seen that the estimated fleet replacement cost for a given year during the forecast period 2020-2024 matches reasonably well with the budgeted amount in the DSP.

From part iii), GSHi expects the remainder of the forecast period of 2021 through 2024 to track similarly to 2020 with respect to budgeted vehicle maintenance costs. In 2020, this budget is approximately $1,355,880. During the period 2013 through 2019 (inclusive), the vehicle maintenance costs were as follows:

2013: $896,600
2014: $1,031,228
2015: $1,107,728
2016: $1,181,242
2017: $1,209,341
2018: $1,201,674
2019: $1,389,657

2-EP-17

Question:

References: Exhibit 2, Tab 2, Schedule 2, Table 62; Exhibit 2, Tab 2, Schedule 6, Table 1,
ACM Projects, and Page 2, List of ACM projects

Preamble: "GSHi is requesting ACM approval for four discrete capital projects that are expected to come into service during the 2021-2024 Price Cap IR term. GSHi has populated the OEB's Capital Module ACM Module, and the live Excel model accompanies this Application. Table 1 below, which is an excerpt from Sheet 9A of the ACM model, shows that the projects meet the threshold criteria for ACM treatment".

a) Please provide a list and capital expenditures for all historic System Renewal projects (2013-2019) that exceeded the materiality threshold.

b) Why have System Renewal capital expenditures decreased from $ 7.5 million in 2018 to $5.7 million in 2020 and will then increase to $9 million in 2021?

c) Does GSHi have a plan to smooth the impacts of such large swings in System Renewal capital expenditures on rates?

d) What is the general GSHi Materiality Threshold for Capital Projects?

e) Please provide for 2020-2024 a list and capex for all projects (including the ICM/ACM projects that individually exceed the Materiality Threshold.

f) Please discuss the criteria GSHi used for selecting the four proposed ICM/ACM projects, including why not other projects, or a smaller or larger number of projects. of the same or similar capital cost.

Response:

a) For a list (and capital expenditures) for all historic System Renewal projects (2013-2019) that exceed the materiality threshold, please see Attachment #1.

b) ***System Renewal*** capital expenditures decreased from $7.5 million in 2018 to $5.7 million in 2020 due mostly to the 2018 Kathleen MS2 renewal ($3,256,732) project costing more than the 2020 planned renewal of the 10T1 side of Gemmell MS11 ($2,333,837) for a net difference of $922,895. The remainder of the difference between 2018 and 2020 is mostly due to the increased 2020 System Service-related investments of approximately $1.61 million as compared with the 2018 actual System Service investments of approximately $934,000, where the net difference in 2018 was directed predominantly towards System Renewal-related investments. The material 2020 prospective investments in System Service are shown below, along with their corresponding page reference in the DSP:

5.4.3.2.1.4 System Service – 9M2 Extension, pgs. 236 – 239;
5.4.3.2.1.5 System Service – Gemmell MS11, pgs. 239 – 242;
5.4.3.2.1.6 System Service – Sunnyside 12kV Feeder Relocation, pgs. 242 – 246; and
5.4.3.2.1.9 Cressey MS3 Rebuild/Voltage Conversion, pgs. 252 – 261.

Further to the above, 2021 System Renewal-related investments of approximately $9 million are proposed as compared with the 2020 proposal of $5.7 million, due mostly to the Cressey MS3 renewal ($4,465,219) project costing more than the planned renewal of the 10T1 side of Gemmell MS11 ($2,333,837) for a net difference of $2,131,382. The remainder of the difference between 2020 and 2021 is mostly due to the 2020 prospective level of investment of $2,875,129 in both System Service and General Plant as compared with the 2021 prospective level of investment of $1,781,396, where the net difference in 2021 is proposed to be directed predominantly towards System Renewal-related investments. The material 2021 prospective investments in System Service are shown below, along with their corresponding page reference in the DSP:

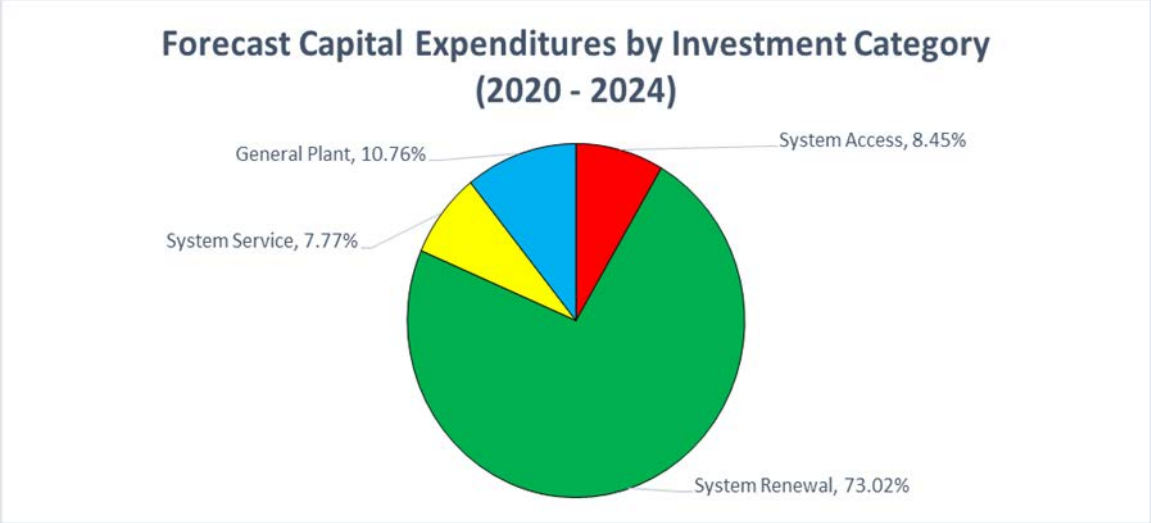
5.4.3.2.1.4 System Service – 9M2 Extension, pgs. 236 – 239; and
5.4.3.2.2.2 System Service – Dublin/Arthur 3 Phase Feeder Tie, pgs. 267 – 271.

c) To smooth the impact of the variation in prospective System Renewal-related investment during the Forecast Period 2020-2024, a levelized System Renewal investment plan is being proposed by GSHi to ensure a paced, balanced approach to spending while seeking to contain operational risk within acceptable parameters.

Each year of the forecast period features a specific substation renewal investment to proactively mitigate the largest potential reliability risk to the continued dependable provision of electricity service - namely the unplanned

failure of critical station components. The largest of these prospective investments in terms of cost will be required to renew the station assets located at Cressey MS3 in 2021 and will be the penultimate investment required to complete the multi-year 4kV to 12kV voltage conversion project within GSHi's contiguous service territory in the City of Greater Sudbury. This project is responsible for the noticeable increase in total planned capital spending to $11,639,000 in 2021 as compared with an average planned capital spend of $9,960,667 during the remainder of the period.

As depicted in the 'Forecast Capital Expenditure by Investment Category (2020-2024)" figure below, GSHi is projecting a smaller contribution to overall prospective capital expenditures from the System Access, System Service and General Plant categories to permit a focus on System Renewal-type capital expenditures.



d) GSHI's materiality threshold for capital projects is $115,000.

e) For a list (and capital expenditures) for 2020-2024 projects that individually exceed the Materiality Threshold, please see Attachment #2.

f) In the Report of the Board, New Policy Option for the Funding of Capital Investments: The Advanced Capital Module, dated September 18, 2014, section 4.1.1. speaks to "The Adoption of the 'Discrete' Project Criterion", as the following: "The Board is of the view that projects proposed for incremental capital funding during the IR term must be discrete projects, and not part of typical annual capital programs." GSHi considered this

provision when submitting ACM applications for the projects selected. These projects meet the criterion outlined in the above noted report.

Attachment 1 (of 2):

2-EP-17 Attachment 1: Historic System Renewal Projects (2013-2019)

Year	Project Name	Capital Expenditures ($)
2013	Failed Transformers	207,884
	Major Repairs to Substations	451,352
	System Betterment	231,927
	Vanier Lane Rebuild	429,190
	Algonquin (Culver to Regent) Rebuild	150,050
	Sunnyside	402,031
	West Nip 4 to 12 Conversion	223,227
	Pole Replacements	136,291
	Pine St. - 4 kV Rebuild	171,143
	Beatty	354,475
	Copper Cliff Rebuild/Evans Road Rebuild	166,729
	Coppercliff Gardens Rebuild	135,832
2014	Emergency Plant Mtce	279,054
	Failed Transformers	173,492
	Major Repairs to Substations	643,332
	3F7	126,563
	3F10	121,589
	Lo-EllenParkRebuild	125,130
	Vanier Lane Rebuild-Phase 2	296,055
	Woodbine/Agincourt/Rinfret/Roy	546,967
	Harju/Pennala	151,066
	West Nip 4 to 12 Conversion	431,743
	Raft Lk	176,241
2015	Failed Transformers	552,325
	Major Repairs to Substations	407,866
	System Betterment	556,129
	Chapman/Stafford Rebuild	133,235
	44KV RECONDUCTORING (Walford, Deslage, Kelly Lake)	147,296
	Beverly Drive Rebuild	172,245
	Griffith St	117,526
	Crescent Park/Gordon Ac Rebuild	177,792
	Brebeuf front lot	368,773
	Mcdonell/Rix Falconbridge	155,288
	Voltage Conversion/Tear Down in West Nip	352,628
	Emergency Plant Mtce	291,263
	Failed Transformers	438,522
	Major Repairs to Substations	695,749

	West Nipissing (MS37)	208,116
	System Betterment	371,196
	Fourth Ave Minnow Lake	154,003
	Bloor St	221,473
	Ester (Long Lake Rd to Treeview)	129,678
2016	Lavoie St	241,013
	Mountview Cres	135,997
	Struthers St	161,172
	Hay St (Cache Bay)	115,856
	Rear Line Marymount to St. Anne's Rd	197,717
	Mildred St	176,166
	Madeleine St	115,994
	Somers St.	182,147
	CRESSEYSTNVOLTAGECONVERSN	132,566
	Emergency Plant Replacement	452,446
	Failed Transformers	232,001
	Coniston Edward Station	293,715
	System Betterment	341,251
	Tedman Voltage Conversion	184,601
	Kathleen Voltage Conversion	181,565
2017	Hudson St 11F5	119,335
	Lansing Ave 7F5	354,270
	Croatia Rd 20F5	174,998
	Jarvi/Lammi's/Hannah Lake Rd 20F3	360,408
	West Nipissing Voltage Conversion	251,106
	Lasalle Park Manor Underground	395,943
	Holland Road - 2017	204,197
	Lincoln road rebuild	129,477
	9M4TRF - 9M4 Transfer Conductors	362,645
	CLEARW - Clearwater Lake Rd 20F5	291,310
	COPCLF - CopperCliff 25F4 25F1	926,473
	FERGSN - Ferguson Ave	179,025
	FOURCN - FourthAveConiston31F1	234,909
2018	KATHVC - KATHLEENVOLTAGECONVERSION	406,803
	SB - System Betterments	190,380
	TEDVC - Tedman 4-12kv conversion	234,258
	EPR - Emergency Plant Replace	577,726
	FT - Failed Transformers	532,151

	MS2 - MS2 Kathleen Station	3,256,732
2019	COMPOL - NOTRE DAME SWAMP WOODPECK	346,118
	COPCLF - CopperCliff 25F4 25F1	127,219
	FERGSN - Ferguson Ave	154,270
	HAWTHN - Hawthorne 2019 Project	265,884
	Capital Site Restoration	134,682
	REGVTC - Regent Voltage Conversion	433,836
	SB - System Betterments	156,920
	TEDVC - Tedman 4-12kv conversion	471,984
	WATRWN - WestNipissingWaterfrontDr	234,439
	WNCONV - WestNipissing4-12kvconver	115,852
	EPR - Emergency Plant Replace	314,790
	FT - Failed Transformers	180,301
	MS32 - MS32-Capreol Station	1,503,333

Attachment 2 (of 2):

2-EP-17 Attachment 2: 2020-2024 Projects that exceed the Materiality Threshold

Year	Project Name	Capital Expenditures ($)
2020	Meter Installations	174,862
	Emergency Plant Replacement	326,547
	Failed Transformers	350,000
	Major Repairs to Substations	180,000
	Battery Bank Replacements	120,000
	System Betterment	574,555
	Overhead Services	150,500
	Underground Services	122,400
	City Road Work	275,000
	Capital Site Restoration	150,000
	Gemmell MS11 (T1); Purchase Major Equipment, Rebuild/Commission	2,333,837
	Cressey MS; Detailed Design, preliminary studies, tenders	250,000
	Tedman Voltage Conv Part 2	653,464
	Haig St Rebuild - Cressey Stn to Caruso Club; Upgrade to 336mcm, double feeder egress	341,152
	Big Nickel Mine Rd - Brennan St to Spruce St; New 3ph Ckt; 3F2/3F8 Tie	191,285
	Gemmell St New 12k Double Ckt (S4317 to B3809) 11F2	356,881
	Attlee Ave (S4317 to S4574)17F5	175,559
	Lasalle 9M2 Extension	464,138
	Sunnyside (S9919 to S9887) - Relocate 3ph from bush (S10389 to S9939 via Edgewater/Pearson Rd) 20F5	346,811
	CKSO Rd 24F4	167,625
	South Bay Rd 10F5	176,667
	OMS	400,000
	Building	300,000
	Vehicles	450,000
2021	Meter Installations	178,359
	Emergency Plant Replacement	333,078
	Failed Transformers	357,000
	Major Repairs to Substations	183,600
	Battery Bank Replacements	122,400
	System Betterment	586,046
	Overhead Services	150,500
	Underground Services	122,400
	City Road Work	280,500
	Capital Site Restoration	150,000
	Cressey MS (T1 & T2); Purchase Major Equipment, Rebuild/Commission New Station	4,378,519
	Moonlight MS18; Detailed Design, Preliminary Studies, Tenders	153,000
	Second Ave, Coniston - Renewal, 44kV Extension	459,000
	Stewart/Marie/Wilson/Windle 24F1	318,921
	Dew Drop Rd 20F5	464,550
	West Nipissing Voltage Conversion	250,000
	Lansing Ave (Maley to Madison) UG Renewal 7F5	210,466
	Attlee Ave (S4306 to S4290) 17F5	192,649
	Velray/Claudia Cres (S4175 to S3974; S3960 to S30728; S3973 to S3966)11F3	321,149
	Peter St (S30988 To S 15535) 25F3	322,815
	Caruso St (B18361 to S18513) 30F1	188,113
	Dublin/Arthur 3ph tie	287,432
	Forest Lake Rd (S9251 to S9281) 20F5	151,310
	Maley Dr Rebuild - (S20203 to H01480) 7F5	169,743
	New Sudbury Centre - Replace 350mcm from S4408 to TRP187 11F1	142,840
	Building	306,000
	Vehicles	459,000
	Meter Installations	181,926
	Emergency Plant Replacement	339,739
	Failed Transformers	364,140
	Major Repairs to Substations	187,200
	Battery Bank Replacements	124,800
	System Betterment	597,767
	Overhead Services	150,500
	Underground Services	122,400

2022	City Road Work	286,000
	Capital Site Restoration	150,000
	Moonlight MS18; Purchase Major Equipment, Rebuild/Commission New Station	2,693,405
	Marttila MS8; Detailed Design, Preliminary Studies, Tenders	150,000
	Robinson MS15 Relay Upgrades	120,000
	Second Ave, Coniston - Renewal, 44kV Extension	459,000
	Centennial Voltage Conversion - Make Ready; Transformer Replacements/Resinsulation	522,800
	West Nipissing Voltage Conversion	200,000
	Ridgemount/Gagne/Claude 18F1	214,349
	Kelvin/Melbourne 7F5	120,000
	Paquette St (S1568 to S1576) 7F3	124,400
	Beatrice Cres 17F5	150,000
	Northshore Dr (S6347 to S6368)19F3	147,292
	Roy Ave (S1897 to S1880) 16F4	163,749
	Attlee, Roland, Carmen 16F4	230,829
	Redfern Cres 16F4	192,000
	Kingslea Cres 16F4	133,504
	Leon Ave 16F4	144,747
	Asset Management Software	500,000
	Building	312,120
	Vehicles	468,180
2023	Meter Installations	185,565
	Emergency Plant Replacement	346,534
	Failed Transformers	371,423
	Major Repairs to Substations	190,800
	Battery Bank Replacements	127,200
	System Betterment	609,722
	Overhead Services	150,500
	Underground Services	122,400
	City Road Work	291,500
	Capital Site Restoration	150,000
	Marttila MS8; Purchase Major Equipment, Rebuild/Commission	2,301,978
	Paris MS13; Detailed Design, Preliminary Studies, Tenders	150,000
	West Nipissing Voltage Conversion	175,000
	Hawthorne (Barrydowne to Auger) 11F3	206,614
	Hildegarde Ave/Delaware Ave 11F3	171,555
	Patrick Ave/Sharon Ave 11F3	156,873
	Lauzon/Wedgewood/Grandview (S1999 to S30773)16F4	228,449
	Second Ave, Coniston - Renewal, 44kV Extension	459,000
	Nipissing St (West Nipissing)	500,000
	Robinson 15F3	333,627
	Niemi,kivinen,golf course renewa line 20F3	500,376
	Lynwood Dr 11F2	213,038
	Downland/Maureen S4376 to S4387 17F5	185,200
	Event Monitoring/Work Dispatch	200,000
	Silver Lake Rd (S959 to B20347) 20F2	325,824
	Building	318,362
	Vehicles	477,544
	Meter Installations	189,726
	Emergency Plant Replacement	353,465
	Failed Transformers	378,851
	Major Repairs to Substations	194,400
	Battery Bank Replacements	129,600
	System Betterment	621,917
	Overhead Services	150,500
	Underground Services	122,400
	City Road Work	297,000
	Capital Site Restoration	150,000
	Paris MS13; Purchase Major Equipment, Rebuild/Commission New Station	2,314,793
	West Nipissing MS36; Detailed Design, Preliminary Studies, Tenders	200,000

2024	West Nipissing Voltage Conversion	175,000
	Little Italy/Copper Cliff 25F4	745,479
	Southview (B11085 to B10669) 15F3	344,886
	Armstrong (B572 to S434) 24F1	246,759
	Moonlight Beach/Dube/Navanod 6F2	274,889
	Roger St 6F2	148,778
	Blyth/Colby 24F3	187,899
	Montel/Virginia 24F1	117,353
	Cranbrook Cres 15F1	197,471
	Ramsey Lake Rd (S6563 to S6577) 10F5	147,892
	Desloges (S8424 to S8444) 21F1	250,548
	Diane Ave S1426 to S1435 7F4	141,302
	Ida St (S9089 to S9101) 24F3	160,337
	East St 31F2	206,716
	Latimer S689 to S31366 24F1	169,671
	rebuild 9M3 eastward feeders outside Dash MS	169,648
	Howey Dr (S6284 to S6289) 19F3	150,663
	Building	324,730
	Vehicles	487,094

2-EP-18

Question:

References: Exhibit 2, Tab 3, Schedule 1, Table 15; Exhibit 1, Tab 5, Schedule 9, Table 1

Preamble: The second reference shows a 23.7% increase for 2020, the first shows a one year $2.8 Million increase in Residential Revenue ($16,613,711-13,884,976) or 19.65%.

a) Please reconcile these two referenced Tables.

b) Does GSHi agree that the proposed increase for the Residential Class is not appropriate or tenable?

c) Specifically discuss what is the utility proposing to deal with this? In the explanation please expand on the statement at Page 1, Lines 19-23 of the first referenced Exhibit.

Response:

a) The calculation of the 19.65% increase for Residential Revenue compares a projected or forecast revenue amount for 2019 on the same basis for 2020. Up until April 30, 2019, GSHi's Residential rate class was charged Distribution Revenue on a partially variable charge. Therefore the 2019 projection is calculated based on projected consumption for the rate class and customer counts for the year, multiplied by the current approved rates. The 2020 projection is the proposed fixed rate for residential customers multiplied by the projected customer count.

The 23.7% increase in the Bill Impact summary table reference above refers to the increase in the distribution revenue collected from the typical residential customer, being a customer billed 750kWh per month.

As one reference refers to the increase in distribution revenue collected from a typical residential customer, and the other refers to the increase in total distribution revenue collected from the entire rate class, GSHi does not believe it can reconcile the two tables in a logical way as they do not refer to the same information.

b) For reference, GSHi submits the following table:

Revenue Requirement Components	2013 Board Approved	2020 Test Year Proposed	Change 2013 to 2020 ($)	Change 2013 to 2020 (%)	Compound Annual Growth Rate (%)
OM&A Expenses	$ 13,937,537	$ 17,388,957	$ 3,451,420	24.76%	3.21%
Amortization/Depreciation	$ 3,960,817	$ 4,375,882	$ 415,065	10.48%	1.43%
Property Taxes	$ 252,080	$ 268,803	$ 16,723	6.63%	0.92%
Income Taxes (Grossed up)	$ 467,431	$ 316,940	$ (150,491)	-32.20%	-5.40%
Return - Deemed Interest Expense	$ 2,136,693	$ 1,998,550	$ (138,143)	-6.47%	-0.95%
Return - Deemed Equity	$ 3,196,320	$ 3,602,210	$ 405,890	12.70%	1.72%
Service Revenue Requirement	$ 23,950,878	$ 27,951,342	$ 4,000,464	16.70%	2.23%
Revenue Offsets	$ (1,550,028)	$ (1,519,787)	$ 30,241	-1.95%	-0.28%
Base Revenue Requirement	$ 22,400,850	$ 26,431,556	$ 4,030,706	17.99%	2.39%

The above table details GSHi's updated Service Revenue Requirement, submitted as part of these interrogatories. This table calculates the Compound Annual Growth Rate ("CAGR") between GSHi's 2020 Test Year Proposed revenue requirement and its 2013 Board Approved revenue requirement from its last Cost of Service rate proceeding. The Service Revenue CAGR (%) calculated in the above table equals 2.23%.

Also submitted as part of these interrogatory responses is an updated Bill Impact Model. For the typical residential customer consuming 750kWh per month, the total bill impact is projected as a 3.46% increase.

Understanding that all of GSHi customers experienced rate increases that were less than any inflationary measure in Price Cap Index (IRM) years between 2013 and 2020, and considering the above information pertaining to GSHi's CAGR and the total bill impact for a typical residential customer, GSHi believes that the proposed increase for the Residential Class is reasonable.

c) GSHi discussed potential rate mitigation in Exhibit 1, Tab 5, Schedule 9, Page 1 of the initial application. The paragraph referenced in this question is included below:

> *As a form of rate mitigation, GSHi is proposing to explore ways of reducing its bill impacts, during the interrogatories and settlement phases of this application. This may include deviating from Board policy with respect to adjustments to revenue/costs ratios and fixed to variable to help reduce the impact to all classes but more specifically the Residential class at the 10th percentile threshold and the Sentinel Lighting class.*

Specific to the Residential rate class discussed in this question, the 10th percentile threshold customer had a total bill impact of 13.3% in the initial application. As per the Chapter 2 Filing Requirements, at this level of increase some rate mitigation is expected to be proposed. However, in the updated Bill Impact Model submitted as part of these interrogatory responses, GSHi notes that the 10th percentile threshold customer now

has a total bill impact of 7.34%, which is below the level where rate mitigation is expected.

GSHi maintains that whether rate mitigation is ultimately required and what measures can accomplish any required mitigation can be best assessed at the end of the application process. This would occur after any required updates to the evidence and any changes to the application as a result of the settlement process, or any decisions made by the Board with respect to the application have been made.

4-EP-19

Question:

EP-19

Reference: Exhibit 4, Tab 2, Schedule 1

Preamble: "Costs Allocated from Affiliates: This fluctuation of cost represents increased costs allocated from Greater Sudbury Hydro Plus ("GSHP") to GSHi. GSHP has added 12 positions and eliminated 2. Burden costs related to OPEBs for GSHP FTEs allocated to GSHi also impact this fluctuation, which is discussed in detail in Exhibit 4, Tab 2, Schedule 1."

a) Please reconcile Table 2, Page 3 to OEB Appendix 2D.

b) For the Increased costs allocated from GSHP please provide a breakdown by Staff/positions:

i. Compensation for positions directly allocated to GSHi distribution operations, and

ii. Compensation for GSHP staff/positions indirectly allocated to GSHi.

c) Please list Other allocated Costs (detail).

d) Please Reconcile the above costs to the 2020 Affiliate cost allocations from GSHP to GSHi.

Response:

GSHi believes the reference for part a) of this question is Exhibit 4, Tab 1, Schedule 1 and not the reference quoted in the question above and has answered the question on that premise.

a) GSHi has created an adaptation of Appendix 2D in table 1 below and has reproduced Table 2 referenced in part a of the question above to reconcile the figures.

Table 1 – Appendix 2D (Adapted)

Appendix 2-D									
Overhead Expense									
OM&A Before Capitalization									
	2013	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**
	Board Approved	*Historical Year*	*Historical Year*	*Historical Year*	*Historical Year*	*Historical Year*	*Historical Year*	*Bridge Year*	*Test Year*
Administration and general expenses	3,835,190.00	4,502,706.57	4,942,813.47	4,910,477.76	5,313,722.81	4,935,241.97	4,922,433.05	5,659,695.00	5,632,977.00
Billing and Collecting	2,114,055.00	1,866,995.20	2,075,374.24	1,839,665.28	2,305,885.46	2,043,286.83	2,431,549.84	2,567,289.00	2,614,941.00
Community	-	524,978.46	39,448.00	65,137.14	- 0.01	2,217.41	9,126.17	3,682.00	-
Distribution Maintenance	1,994,623.00	2,614,037.37	1,787,401.30	2,011,057.50	2,165,932.54	1,815,396.23	1,840,611.48	1,752,730.00	2,054,449.00
Distribution operations	5,993,671.00	4,735,948.34	4,884,928.07	5,487,597.14	5,377,304.04	5,851,329.99	5,738,060.17	6,137,704.00	7,086,590.00
Subtotal	13,937,539.00	14,244,665.94	13,729,965.08	14,313,934.82	15,162,844.84	14,647,472.43	14,941,780.71	16,121,100.00	17,388,957.00
Labour burden (Capitalized)	423,500.00	472,213.87	615,272.92	643,837.87	643,159.24	609,743.73	642,318.73	680,578.00	659,915.00
Vehicle Burden (Capitalized)	650,020.29	482,101.93	477,567.50	500,287.08	522,478.28	535,337.95	596,189.53	764,456.00	658,317.00
Materials burden (Capitalized)	205,657.49	170,954.94	165,870.80	170,868.52	179,079.40	230,944.26	269,120.63	252,744.63	241,847.19
Operations Supervision (Capitalized)	196,770.81	183,357.08	186,200.66	156,701.29	226,468.24	227,863.99	332,763.62	293,492.00	253,075.00
Engineering Burden (Capitalized)	161,476.00	151,648.90	129,879.94	230,521.25	202,696.47				
Total OM&A Before Capitalization (B)	**15,574,963.59**	**15,704,942.66**	**15,304,756.90**	**16,016,150.83**	**16,936,726.47**	**16,251,362.36**	**16,782,173.22**	**18,112,370.63**	**19,202,111.19**
Capitalized OM&A									
	2013	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**
	Board approved	*Historical Year*	*Historical Year*	*Historical Year*	*Historical Year*	*Historical Year*	*Historical Year*	*Bridge Year*	*Test Year*
Labour burden	423,500.00	472,213.87	615,272.92	643,837.87	643,159.24	609,743.73	642,318.73	680,578.00	659,915.00
Vehicle Burden	650,020.29	482,101.93	477,567.50	500,287.08	522,478.28	535,337.95	596,189.53	764,456.00	658,317.00
Materials burden	205,657.49	170,954.94	165,870.80	170,868.52	179,079.40	230,944.26	269,120.63	252,744.63	241,847.19
Operations Supervision	196,770.81	183,357.08	186,200.66	156,701.29	226,468.24	227,863.99	332,763.62	293,492.00	253,075.00
Engineering Burden	161,476.00	151,648.90	129,879.94	230,521.25	202,696.47	-	-	-	-
Total Capitalized OM&A (A)	**1,637,424.59**	**1,460,276.72**	**1,574,791.82**	**1,702,216.01**	**1,773,881.63**	**1,603,889.93**	**1,840,392.51**	**1,991,270.63**	**1,813,154.19**
% of Capitalized OM&A (=A/B)	10.51%	9.30%	10.29%	10.63%	10.47%	9.87%	10.97%	10.99%	9.44%

GSHi has inserted a subtotal line in Table 1 above and highlighted the figures that reconciles to Table 2 below.

Table 2 – OM&A Cost Driver Summary

(From Exhibit 4, Tab 1, Schedule 1 Page 3)

	$	% of Total Change
2013 Board Approved OM&A	**$ 13,937,539**	
Labour Complement & Burdens	$ 716,506	20.8%
Other Post Employment Benefit Costs (Retirees)	$ 357,800	10.4%
Costs Allocated from Affiliates	$ 1,518,735	44.0%
Succession Planning/Training	$ 221,548	6.4%
Bad Debt Expense	$ (131,185)	-3.8%
Productivity and Business Planning	$ (61,441)	-1.8%
Governance	$ 62,550	1.8%
Vehicles & Material Costs	$ 48,682	1.4%
Tree Trimming	$ 14,171	0.4%
Construction Write Offs	$ 2,832	0.1%
Insurance	$ (63,805)	-1.8%
Cost of Service Amortization	$ 90,000	2.6%
OEB Quarterly Assessment	$ 40,000	1.2%
Pole Attachment Costs	$ 82,698	2.4%
Cybersecurity Costs	$ 61,200	1.8%
Monthly Billing Costs	$ 272,066	7.9%
Other Miscellaneous	$ 219,060	6.3%
Total OM&A Change	$ 3,451,418	100.0%
2020 Test Year OM&A	**$ 17,388,957**	

b)

i) The base compensation (no burdens) for the net 10 new positions directly attributed to GSHi accounts for $538,400 of the increase payroll costs.

ii) The amount of compensation indirectly allocated to GSHi relates to IT Professionals and Stores Personnel payroll. GSHi has calculated, at a high level, that 44% of IT personnel is charged directly to GSHi and a further 34% is indirectly charged through the

GSHP departments that are allocated to GSHi. The portion of Stores Personnel that is not directly attributed to GSHi is only 3% and therefore any portion of their payroll that would be indirectly attributed to GSHi would be less than this amount.

c) Table 1 below provides further detail on the Costs Allocated from Affiliates cost driver.

Table 1 – Detailed Costs Allocated from Affiliates

Payroll	1,092,280.32
Burden	309,935.30
Training	24,037.38
Maintenance & Support	51,427.02
Stationary & Postage Inflation	37,661.07
Telephone	27,334.60
Advertising	23,672.84
Consulting/Contract Labour	- 52,921.34
Other miscellaneous	5,307.81
	1,518,735.00

d) Table 2 below provides a reconciliation of the cost driver to the Appendix 2N.

1 **Table 2 – Reconciliation to Appendix 2N**

	Appendix 2N Variance
	2020/2013 BA $
Executive/Finance/ Communications/Innovation	790,669
Regulatory	141,647
HR	67,016
Risk Management	136,074
Quality Management	(38,348)
Accounts Payable/Payroll/Accounting	(381,312)
Customer Billing and related services	883,642
Stores/Procurement	(40,816)
Subtotal of Above	**1,558,573**
Monthly Billing - Separate Cost Driver	(272,066)
Stores Material - Separate Cost Driver	298,274
Sucession - Separate Cost Driver	(63,750)
Per Table 2	1,518,735
	2,296

2

4-EP-20 BPI/SI and Siemens Details

Question:

References: Exhibit 4, Tab 2, Schedule 1, Page 8

Preamble: "As BPI/SI was winding down, GSHi began to focus on industry-specific organizational development with the assistance of Siemens. The result of this partnership was the

Siemens Compass Study."

a) What was the cost of each of BPI/SI and Siemens Compass Study?

b) Please provide a copy of the Siemens Compass Study.

c) Please provide a list of productivity gains and estimated OM&A cost reductions resulting from the BP/SI and Siemens Compass Study.

d) Please reconcile this to the actual compound OM&A growth rate from 2013 to 2018 and specifically whether/how the growth rate was reduced due to the above initiatives.

Response:

a) Each project cost approximately $500,000 over the IRM term.

b) The Siemens Compass Study was included as an attachment to the DSP in the original application. The DSP can be found at Exhibit 2, Tab 2, Schedule 2, Attachment 2 and the Compass Study is included as Appendix J to that document (pages 880 – 1359 of the DSP and pages 951 – 1429 of Exhibit 4). Due to its size and for printing purposes, GSHi prefers not to submit it again with this interrogatory response.

c) The Siemens Smart Grid Compass was developed at a time when public policy was requiring utilities to engage in extensive planning and preparedness for the anticipated mass deployment of new energy technologies and associated

network upgrades on accelerated timelines. Shortly after the Siemens Compass report was complete, GSHi began introducing formal change and project management practices to respond to Siemens' recommendations (grouped into value packs).

One of the significant drivers of the Siemens Compass planning process was to engage Siemens subject matter experts, with experience in a variety of countries that were evolving electricity systems (Australia, Germany, England, United States) to help create a roadmap that would help GSHI to avoid costly false start technology deployments.

However, with the change in provincial government in 2018 and the accompanying shift in public policy, the pace and rate of adoption of what was formerly seen as high-growth-potential technologies such as Distributed Energy Resource Management Systems has slowed considerably. As a result, GSHi has chosen to focus on value pack initiatives that build foundational capacity and add direct value to ratepayers. Projects have been prioritized based on an assessment of key organizational factors such as technology maturity, readiness, resource availability and workforce capability. Examples of some of these projects are presented in GSHi's response to 4-Staff-56 Innovation.

Below is a listing of Siemens' value packs with examples of some of the initiatives that are in progress, planned, or which may be considered in the future. The schedule shown below is subject to change:

Value Pack & some initiatives in progress, planned or viable for future consideration	**Start**	**End Year**	**Ongoing** Improvement
VP0 Change management, etc.	2016	2018	Y
VP.1 Enhanced Asset & Work Information Enterprise Asset Management - 360° Asset Register, introduce basic KPI system for asset class, introduce joint coordination and planning of IT/OT implementations and management, introduce internal employee briefings.	2019	2022	Y
VP.2 Basic Performance Monitoring Enterprise Asset Management Condition Based Maintenance, Integration - Visualization, manage asset information consistently across organizational	2021	2025	Y

boundaries, Introduce strategic prioritization of individual assets.			
VP.3 Grid Value Maximization Leveraging Grid Information Grid Segment Analysis, Workforce Management - Mobile Workforce, introduce a comprehensive approach to the management of change, Vary parameter sets to setup different scenarios, Introduce historic information access in the field	2021	2025	Y
VP.4 Leveraging Grid Information for Enhanced Performance Monitoring Enterprise Asset Management - GIS, Chronological Model, KPI system for all assets, grid structures as aggregation hierarchies, introduce analysis of consumption using historic data, establish electronic communication between control center and work crews	2019	2025	Y
VP.5 Introducing Business Value and Risk as Parameters for Asset Management Strategic Asset Management-Planning Integration and Risk Based Asset Management, Reporting on a regular basis, Analysis of consumption and supply over a period of time	2020	2024	Y
VP.6 Extending Network Planning through Lean Design Techniques Introduce active integration of new technologies and information into design and planning	2021	2023	Y
VP.7 Utilize Reliability and Communication Improvements to Improve Customer Satisfaction Leverage portal as broadcast channel for the utility	2021	2023	Y
VP.8 Basic Demand-Side Management	TBD	TBD	-
VP.9 Balance Load & Generation Based on Network Condition	TBD	TBD	-
VP.10 Advanced Demand Side Management	TBD	TBD	-
VP.11 Advanced Grid Management Based on Substation Automation	TBD	TBD	-
VP.12 Introduction of Self-Healing Network Characteristics	TBD	TBD	-

The BPI/SI project undertaken with MNP was focused on building a proper foundation for GSHI's ISO 9001:2015 Management System. BPI/SI first mapped all of GSHI's significant business processes as they then were. During the Business Process Mapping phase, a list of process improvements was maintained to provide quick wins. That list is included as Attachment 1 to this response.

As all significant business processes were mapped and reviewed the BPI project phase gave way to a more operational approach to continuous improvement. The process of mapping and identifying quick wins as a

project evolved to a practice of leveraging the tools of a typical ISO 9001 system; non-conformances, regular management reviews, internal audit amongst others, which has contributed significantly to a culture of continuous improvement at GSHI.

While GSHI has not estimated and maintained a specific list of empirical impacts of each efficiency project, these initiatives have enabled additional capacity, and this additional capacity has allowed GSHi to drive projects that allow it to align its operations more closely with the outcomes outlined in the Renewed Regulatory Framework – Customer Focus, Operational Effectiveness, Public Policy Responsiveness, and Financial performance. See the interrogatory response for SEC-4 (Tab 4, Schedule 4) for a discussion on some specific examples of these initiatives.

d) Given the response to part c) above, it is not possible to reconcile the benefits GSHi has experienced from these initiatives to compound OM&A growth rate. These initiatives have enabled additional capacity, and this additional capacity has allowed GSHi to drive projects that allow it to align its operations more closely with the outcomes outlined in the Renewed Regulatory Framework – Customer Focus, Operational Effectiveness, Public Policy Responsiveness, and Financial performance. See the interrogatory response for SEC-4 (Tab 4, Schedule 4) for a discussion on some specific examples of these initiatives.

Attachment 1 (of 1):

4-EP-20 Attachment 1: GSHi Improvement Opportunities - Consolidated Tracker

								Categorized Based on Previous Maps							
#	Process Stream	Map ID	Process	Active / Implemented / Dead	Improvement ID	Issue	Opportunity	Implementation Complexity	Benefit Ranking	Related to GIS? (Y/N)	Related to HTE? (Y/N)	Related to NorthStar? (Y/N)	Validated? (Y/N)	Priority	Status
1	Accounting, Budgeting & Reporting	ABR1	Budget	Active	IM.01	Responsible parties require the budget template at an earlier point in the existing process	Send out budget template at the same time as parties are informed of budget responsibilities	-	-	N	N	N	Y	-	
2	Accounting, Budgeting & Reporting	ABR1	Budget	Active	IM.02	Require a way to automate the manual entry of information into SunGard	Automation process needs to be created	-	-	N	N	N	Y	-	
3	Accounting, Budgeting & Reporting	ABR2	Managing Receivables	Active	IM.01	Overall streamline within the managing receivables process	General improvements to consider: - Systems can be streamlined – are all three systems needed? - Can all functionality be found in one system? - Implement miscellaneous receipts module in AS400 - Consolidate system to use only AS400 (can Northstar functionality go into AS400 & deposit quickly) - Receivables in Northstar: protection can be included in bill	-	-	N	Y	Y	Y	-	
4	Accounting, Budgeting & Reporting	ABR2	Managing Receivables	Active	IM.02	Flagging and matching process for receivables is performed manually by Accounting staff.	Automate the flagging and matching process to reduce the possibility of errors and increase efficiencies.	-	-	N	N	Y	Y	-	
5	Accounting, Budgeting & Reporting	ABR2	Managing Receivables	Active	IM.03	Triplicate copies of the invoice	Determine how many copies are required	-	-	N	N	N	Y	-	
6	Accounting, Budgeting & Reporting	ABR2	Managing Receivables	Active	IM.04	Lack of communication	CDM needs to communicate better with accounting on any received payments	-	-	N	N	N	Y	-	
7	Accounting, Budgeting & Reporting	ABR3	Month End Reporting & Financial Statements	Active	IM.01	Detailed AP aging report may not be required every month	Report could be done quarterly instead	-	-	N	N	N	Y	-	
8	Accounting, Budgeting & Reporting	ABR3	Month End Reporting & Financial Statements	Active	IM.02	Quarterly Interest Rates are sent to the Business Analyst by the accountant	Analyst could perform this task themselves	-	-	N	N	N	Y	-	
9	Accounting, Budgeting & Reporting	ABR3	Month End Reporting & Financial Statements	Active	IM.03	Review should take place earlier	Accountant 1 should review expenditure listing prior to month end.	-	-	N	N	N	Y	-	
10	Accounting, Budgeting & Reporting	ABR4	Payroll	Active	IM.01	Currently distribute paper copy paystubs	Create email paystubs	-	-	N	N	N	Y	-	
11	Maintaining Distribution System	GIS1	Update GIS	Active	IM.01	Manual updating of attributes does not always capture certain details.	Need to ensure attributes being updated include number, length and size of conductor (style line drawing) from the Ops update print. (Training on this)	M	M	Y	N	N	Y	2	
12	Maintaining Distribution System	GIS1	Update GIS	Active	IM.02	Currently no identifier for a 3 way or 4 way switch for transformers on transformer data sheet used to update GIS system.	Consider including check box on transformer data sheet to ID switch type (include in as-builts AB/12).	L	M	Y	N	N	Y	1	QW
13	Maintaining Distribution System	GIS1	Update GIS	Active	IM.03	GIS can't search by meter number for account info.	Consider interfacing GIS with NorthStar to ensure linked to customer account information.	H	M	Y	N	Y	Y	3	
14	Maintaining Distribution System	GIS1	Update GIS	Active	IM.04	Deleted data is not currently captured anywhere once it is removed from the GIS system.	Need a way to capture deleted data (i.e. Archive GIS system regularly and store off-site).	H	H	Y	N	N	Y	3	
15	Maintaining Distribution System	GIS1	Update GIS	Active	IM.05	Customer owned secondary not part of data in GIS.	Consider including customer owned secondary as data included in GIS, if capable. Should also include on work orders consistently. Training is required.	L	H	Y	N	N	Y	1	QW

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16	Maintaining Distribution System	GIS1	Update GIS	Active	IM.06	Work Orders don't always get revisions/as builts/fuse information missing/GIS cannot determine difference between revisions and original schematics.	Training on/ Quality Control; - As builts – Ops => GIS => Project Coordinator. - Underground work orders should have schematic with them (add to design checklist) - Include fuse information - Create engineer standards for drawing (in progress)	L	M	Y	N	N	Y	1	QW
17	Maintaining Distribution System	GIS1	Update GIS	Implemented	-	N/A	Better definitions of old & new schematics, ensure GIS receives colour copy (Colour printer has been acquired).	L	M	Y	N	N	Y	1	QW
18	Maintaining Distribution System	GIS1	Update GIS	Implemented	-	N/A	Include schematics, with work prints	L	M	Y	N	N	Y	1	QW
19	Maintaining Distribution System	GIS1	Update GIS	Active	IM.07	Take Sheets are difficult to read on the 3rd copy/info sometimes missing (i.e. address)/lack of keeping info current and timely.	- Produce electronic take sheets - 2nd copy to GIS instead of 3rd	H	H	Y	N	N	Y	3	
20	Maintaining Distribution System	GIS1	Update GIS	Active	IM.08	Streetlight Sheets often have a gap in data and GIS not receiving sheets.	- Data may be available in paper form, should be moved to database - Karen sends weekly streetlight report to GIS	H	H	Y	N	N	Y	3	
21	Maintaining Distribution System	GIS1	Update GIS	Implemented or Inactive	-	Billing City needs backup	Reconcile streetlighting to GIS	H	H	Y	N	N	Y	3	
22	Maintaining Distribution System	GIS1	Update GIS	Active	IM.09	Hand Drawn Sheets Small Maintenance - GIS is not receiving the sheets (impacts locates as well).	- Provide copy, an electronic copy would be better - Map transformer database update process (training)	L	M	Y	N	N	Y	1	QW
23	Maintaining Distribution System	GIS1	Update GIS	Active	IM.10	Offer to Connect Form is sometimes missing drawings when received by GIS.	- Ops needs to forward drawing that comes with OTC form to GIS (training)	L	M	Y	N	N	Y	1	QW
24	Maintaining Distribution System	GIS1	Update GIS	Implemented	-	Microfits lack timeliness/need specific info on which account is 'sell' and which is 'buy'.	- Develop process to get buy/sell account info to GIS - Need to make priority for qualified people	L	M	Y	N	N	Y	1	QW
25	Maintaining Distribution System	GIS1	Update GIS	Active	IM.11	Switching Orders are not being received by GIS/open points are not being provided.	Need to create more accountability for switching orders and open points provided to GIS. Training on this is required.	L	M	Y	N	N	Y	1	QW
26	Maintaining Distribution System	GIS1	Update GIS	Implemented or Inactive	-		Link between scada and GIS.	H	H	Y	N	N	Y	3	
27	Maintaining Distribution System	GIS1	Update GIS	Implemented	-	Pictures are not taken by anyone qualified to enter in proximity of a transformer.	Neila to inform Kerry/Jim if pictures are required.	L	H	Y	N	N	Y	1	QW
28	Maintaining Distribution System	GIS1	Update GIS	Active	IM.12	Net Metering (new process) is providing insufficient information to GIS.	Consider providing training to create accountability for this new process to ensure information required for GIS is clearly defined and communicated to staff.	H	M	Y	N	N	Y	3	
29	Maintaining Distribution System	GIS1	Update GIS	Active	IM.13	West Nippissing has no formal process to date	TBD	H	M	Y	N	N	Y	2	
30	Maintaining Distribution System	MDS1	Third Party Attachments (New)	Active	IM.01	Often do not receive notification from 3rd Party upon completion.	Enforce by not providing permits until they are closed.	L	H	N	N	N	Y	1	QW
31	Maintaining Distribution System	MDS1	Third Party Attachments (New)	Active	IM.02	Currently there is no sharing on GIS with pole inventory. GSHI has a database that outlines each 3rd party attachment.	Consider updating the attributes in GIS with the associated information.	H	H	Y	N	N	Y	3	
32	Maintaining Distribution System	MDS1	Third Party Attachments (New)	Active	IM.03	SPIDA calculations are currently outsourced, which is expensive.	Calculations may need to be more sophisticated in the future (ie. better training and equipment to allow for a thorough calculation checks as opposed to SPIDA Calc.). Commscope is good software for this, takes into account catenary. Would make this more cost effective.	L	H	N	N	N	Y	1	QW

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33	Maintaining Distribution System	MDS1	Third Party Attachments (New)	Active	IM.04	Need better way to flag invoices for accounting and better way to audit poles.	Implement new process	L	H	N	N	Y	Y	1	QW
34	Maintaining Distribution System	MDS2	Tree Trimming	Implemented or Inactive	-	The City commits to tree trimming in certain areas, which is sometimes delayed.	Work with City to find a way to ensure that commitments are fulfilled. Implement performance measures. (Contract is up right now).	M	H	N	N	N	Y	2	
35	Maintaining Distribution System	MDS2	Tree Trimming	Implemented or Inactive	-	Complaints from customers asking for GHSI to do more than what they are required to do or bylaws that prevent GSHI from touching City's trees.	Communications to customers about tree trimming requirements/bylaws. (Nothing can be done about this).	-	-	N	N	N	Y	-	
36	Maintaining Distribution System	MDS3	Third Party Attachments (Pole Changes or Rebuilds)	Active	IM.01	Joint Use Request forms are not always filled out correctly.	Need training on Joint Use Request forms for staff and third parties.	M	H	N	N	N	Y	2	
37	Maintaining Distribution System	MDS3	Third Party Attachments (Pole Changes or Rebuilds)	Implemented or Inactive	-	N/A	Consider having the Project Coordinator track permits and manage the whole process.	-	-	N	N	N	Y	-	
38	Maintaining Distribution System	MDS4	Locates	Active	IM.01	One answering service in Sudbury (after hours) – often confused by the locate process and calls are not made appropriately.	Consider adding additional answering services in Sudbury and designating a specific answering service for locates process.	L	H	N	N	N	Y	1	QW
39	Maintaining Distribution System	MDS4	Locates	Implemented	-	N/A	Review script provided to answering service to ensure appropriate detail (ie. Areas of service).	L	M	N	N	N	Y	1	QW
40	Maintaining Distribution System	MDS4	Locates	Active	IM.02	Locators do not properly use the App.	Need to train locators on how to use the App properly. (Have training material in place and overall decrease number of people with locator responsibilities).	L	M	N	N	N	Y	1	QW
41	Maintaining Distribution System	MDS4	Locates	Active	IM.03	Sometimes emergency locates calls in the App are not closed out. Skews tracking of the response times.	Implement controls around locates calls being closed out in the App to ensure timely response.	L	M	N	N	N	Y	1	QW
42	Maintaining Distribution System	MDS4	Locates	Active	IM.03	Is a confirmation e-mail sent to 1Call?	Consider sending a confirmation email to 1Call.	L	M	N	N	N	Y	1	QW
43	Maintaining Distribution System	MDS4	Locates	Active	IM.04	Answering service tracks billing differently than GSHI, major rate gaps between the two as well. CK the billing.	Opportunity to get rid of some of the unnecessary notifications from answering service by revising the contact requirements. (Now rectified)	L	M	N	Y	N	Y	1	QW
44	Maintaining Distribution System	MDS4	Locates	Implemented	-	N/A	Check streetlight contract - is it under maintenance contract with City.	L	H	N	N	N	Y	1	QW
45	Maintaining Distribution System	MDS4	Locates	Implemented or Inactive	-	Not billing for locates for 3rd Party Plants / Streetlights (There is a streetlight locate WF). 4 different afterhours WFs.	On the App would be good to have options to put under streetlights / 3rd party.	M	M	N	N	N	Y	2	
46	Maintaining Distribution System	MDS4	Locates	Active	IM.05	Forms are filled out on-site and scanned for the Accounting Clerk.	It would be beneficial to have the App generate a report as proof and tie this report to a work order. Future state - paperless process map to determine business requirements.	M	M	N	N	N	Y	2	
47	Maintaining Distribution System	MDS4	Locates	Implemented or Inactive	-	Accountant creates a manual spreadsheet and determines % met in 5 days.	Opportunity to have the App generate reports in OEB format, this would reduce the summarizing.	-	-	N	N	N	Y	1	
48	Maintaining Distribution System	MDS4	Locates	Active	IM.06	Not harnessing the Apps potential	Opportunity for App to generate reports in OEB format, this would reduce the summarizing	-	-	N	N	N	Y	1	
49	Maintaining Distribution System	MDS4	Locates	Active	IM.07	N/A	CAC would like scanned or e-mailed copies to improve efficiency.	-	-	N	N	N	Y	1	
50	Maintaining Distribution System	MDS4	Locates	Active	IM.08	Require a way to confirm and reconcile the billing	Proper training on charging time to correct WF.	-	-	N	N	N	Y	1	

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51	Maintaining Distribution System	MDS6	Protection Study	Active	IM.01	Currently the process of transferring data into coordination software (LightTable) is onerous and manual.	Consider automating this process to achieve efficiencies. Provide training to staff on LightTable, applications in Milsoft.	-	-	N	N	N	Y	-	
52	Maintaining Distribution System	MDS6	Protection Study	Active	IM.02	N/A	Develop form to provide instructions to program relays.	L	M	N	N	N	Y	1	
53	Maintaining Distribution System	MDS6	Protection Study	Active	IM.03	Lack of definition around zone-end protection.	Define appropriate zone-end protection.	M	L	N	N	N	Y	2	
54	Maintaining Distribution System	MDS6	Protection Study	Active	IM.04	N/A	Should stamp and sign coordination sheet	-	-	N	N	N	Y	-	
55	Maintaining Distribution System	MDS6	Protection Study	Active	IM.05	N/A	Determine what is missing from MF form.	-	-	N	N	N	Y	-	
56	Maintaining Distribution System	MDS6	Protection Study	Active	IM.06	N/A	Adjust relay calibration sheet to allow for test results sign-off.	L	H	N	N	N	Y	1	QW
57	Meter to Cash	MC1	Electricity Billing	Active	IM.01	Should automate bill schedule	Automatically notify owners of bill cycles that work has began	-	-	N	N	N	Y	-	
58	Meter to Cash	MC1	Electricity Billing	Active	IM.02	Require workflow management software	Engineering looked at partner soft, what are the other options?	-	-	N	N	N	Y	-	
59	Meter to Cash	MC2	Collections	Active	IM.01	N/A	Promote OEB advocacy re: deposits, 2011 ruling stating deposits must be applied to outstanding bill before disconnect.	-	-	N	N	N	Y	-	
60	Meter to Cash	MC2	Collections	Active	IM.02	N/A	Assess removal of deposits (GSHI has 3 years of history).	-	-	N	N	N	Y	-	
61	Meter to Cash	MC2	Collections	Active	IM.03	Require better understanding of collection statistics, for root cause analysis.	Implement shorter collection timelines.	M	M	N	N	N	Y	2	
62	Meter to Cash	MC2	Collections	Active	IM.03		Implement IVR for collections (1st Notice).	M	M	N	N	N	Y	2	
63	Meter to Cash	MC3	MDMR Sync	Active	IM.02	Manual process	Way to automate the manual entry of information into SunGard	-	-	N	N	N	Y	-	
64	Meter to Cash	MC3	MDMR Sync	Active	IM.02	Manual process	'Manual' installation (no tablet) - not as good in Northstar (tries to backfill data)	-	-	N	N	N	Y	-	
65	Meter to Cash	MC3	MDMR Sync	Active	IM.03	N/A	Tablets can enable: move check and reads	-	-	N	N	N	Y	-	
66	Meter to Cash	MC3	MDMR Sync	Active	IM.04	N/A	Consider updated construction standards on-line	-	-	N	N	N	Y	-	
67	Meter to Cash	MC4	Process Payments	Active	IM.01	Lack of Telpay usage.	Encourage Telpay/PAP – Telpay is better, won't be NSF. Possibility to initiate a competition among staff.	L	H	N	N	N	Y	1	QW
68	Meter to Cash	MC4	Process Payments	Active	IM.02	Customers are not changing account number and not choosing the correct payee.	Encourage proper payee usage. Include message on first bill. IVR to remind to update pay information. When change of address info is provided, educate customer.	M	H	N	N	N	Y	2	
69	Meter to Cash	MC4	Process Payments	Active	IM.03	Lack of e-bill & e-post usage.	Encourage e-bill & e-post. Advertise and communicate etc.	M	H	N	N	N	Y	2	
70	Meter to Cash	MC5	Metering	Active	IM.01	N/A	All pertinent information needs to be included in the inventory in NorthStar	-	-	N	N	Y	Y	-	
71	Meter to Cash	MC5	Metering	Active	IM.02	N/A	Verify if annual or automated for sample service orders	-	-	N	N	N	Y	-	
72	Meter to Cash	MC7	Complex Commercial Metering	Active	IM.01	Installation of meters gets forgotten because the current trigger is a phone call (informal), which sometimes gets lost in translation. Need a better trigger to notify metering of need for 3phase metering and start process .	Opportunity to add to design checklist, project coordinator should notify metering if there is going to be a big time lag between initiation and need for installation	-	-	N	N	N	Y	-	
73	Meter to Cash	MC7	Complex Commercial Metering	Active	IM.02	Metering is not currently a topic covered in the planning meeting.	Engineering clerk could distribute drawings at this point, provide work order to metering to ensure they are aware of required meter installations.	-	-	N	N	N	Y	-	
74	Meter to Cash	MC7	Complex Commercial Metering	Active	IM.03	No record of meter passwords is maintained.	Consider maintaining a record of meter passwords in the GIS system, if possible.	-	-	Y	N	N	Y	-	
75	Meter to Cash	MC7	Complex Commercial Metering	Active	IM.04	Often notification to say the meter is ready to be installed is last minute.	Notify metering when operations is notified.	-	-	N	N	N	Y	-	

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76	Meter to Cash	MC7	Complex Commercial Metering	Active	IM.05	No trigger to install meter.	Consider using site visit as trigger to install meter.	-	-	N	N	N	Y	-	
77	Meter to Cash	MC7	Complex Commercial Metering	Active	IM.06	Offer to Connect form is not provided to metering early enough in the process to facilitate scheduling.	Provide the Offer to Connect form to metering once it is completed.	-	-	N	N	N	Y	-	
78	PPAP	PPAP1	Procurement	Implemented or Inactive	-	Dave uses judgment to adjust list produced by HTE to determine what actually needs to be ordered. This is a subjective and manual process. Dave's knowledge and experience is heavily utilized for this step.	Consider implementing a step in the IFRS process to standardize this process. Deeper analysis required around the various decisions that Dave has to make, can any be automated?	H	H	N	Y	N	Y	3	
79	PPAP	PPAP1	Procurement	Implemented or Inactive	-	During the close out step, information on take sheet can be wrong, and it has proven difficult to fix at the source (i.e. employees filling in take sheet properly).	Consider providing additional training to staff completing the take sheets to fix the issue at the source. Barcoding is the better solution for this issue. GSHI tablets have barcode scanners built into them already, just require the software. The payback could be huge.	M	H	N	N	N	Y	2	
80	PPAP	PPAP1	Procurement	Implemented or Inactive	-	Issues are arising with completion of take sheets.	The yard needs to be better organized to simplify completing take sheet to ensure no errors. Barcoding could resolve this issue as well.	M	H	N	N	N	Y	2	
81	PPAP	PPAP1	Procurement	Implemented or Inactive	-	N/A	Overall increase frequency of tendering for materials so vendors already have contracts to facilitate re-order process.	-	-	N	N	N	Y	-	
82	PPAP	PPAP1	Procurement	Implemented or Inactive	-	Verbal orders are a risk	Create accountability during the order process, ensure agreement is put in writing	-	-	N	N	N	Y	-	
83	PPAP	PPAP1	Procurement	Implemented or Inactive	-	Paper work is sometimes completed after the materials have been procured, instead of following the proper process.	Need to increase accountability of staff to follow the proper process.	M	L	N	Y	N	Y	3	
84	PPAP	PPAP1	Procurement	Active	IM.01	Currently non-inventory items are not tracked.	Consider a step to track non-inventory items.	L	L	N	Y	N	Y	2	
85	PPAP	PPAP1	Procurement	Active	IM.02	Do vendors need to be pre-approved?	N/A	-	-	N	N	N	Y	-	
86	PPAP	PPAP1	Procurement	Active	IM.03	Currently, there is no supplier assessment process in place.	Need a suppler pre-screening process.	-	-	N	N	N	Y	-	
87	PPAP	PPAP1	Procurement	Active	IM.04	Currently the MF paper form and equipment approved metric & spec sheets are prepared manually by Dave and Brian using an ESA template. Slight variations to an approved product requires tremendous amount of work – whole process has to be redone. There are similar documents in multiple places.	Consider automatically generating this form from test/standard data form. Have documentation in one place, combine with spec sheets, issues could be resolved in HTE.	H	H	N	Y	N	Y	3	
88	PPAP	PPAP1	Procurement	Active	IM.05	Currently all support is kept in hard copy.	Consider inputting data into Golf system and use controls over materials info in HTE for engineering visibility.	H	H	N	Y	N	Y	3	
89	PPAP	PPAP1	Procurement	Active	IM.06	Currently all support is kept in hard copy.	Consider adding electronic engineering stamps on files.	H	H	N	Y	N	Y	3	
90	PPAP	PPAP1	Procurement	Active	IM.07	Lack of communication between procurement and engineering resulting in materials sometimes procured before approval.	Including more information in HTE on a timely basis will increase visibility for engineering team and improve communication.	L	L	N	Y	N	Y	2	
91	PPAP	PPAP1	Procurement	Active	IM.08	Vendors are not always set-up prior to orders being made.	Develop a checklist/form for required new vendor information. Consider implementing a control to have one person in charge of setting up vendors to prevent multiple records for same vendors. All information from the required form should be inputted into the HTE system.	L	L	N	Y	N	Y	2	

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92	PPAP	PPAP1	Procurement	Implemented or Inactive	-	Approvals for purchases is not being correctly documented.	Consider adding controls to prevent purchases from a vendor with incomplete information in the HTE system.	-	-	N	Y	N	Y	-	
93	PPAP	PPAP1	Procurement	Implemented or Inactive	-	Currently no formalized approval process for new materials purchases.	Consider implementing a formal approval process for all new materials with a protocol for requirements in place.	-	-	N	Y	N	Y	-	
94	PPAP	PPAP2	Purchasing & Accounts Payable	Implemented or Inactive	-	Allocating materials is currently a manual process.	Examine scheduling capabilities in HTE for allocation purposes.	H	L	N	Y	N	Y	4	
95	PPAP	PPAP2	Purchasing & Accounts Payable	Implemented or Inactive	-	Materials may sit in inventory If there is a delay in the start of the project.	N/A	-	-	N	Y	N	Y	-	
96	PPAP	PPAP2	Purchasing & Accounts Payable	Implemented	-	Need better communication between the departments involved (engineering, operations, stores) regarding upcoming projects that have been scheduled.	Implement scheduling plan/meetings.	L	H	N	N	N	Y	1	QW
97	PPAP	PPAP2	Purchasing & Accounts Payable	Implemented or Inactive	-	Updates to contract files in HTE are not occurring regularly.	Create accountability for staff to update all contact files in HTE on a bi-weekly or monthly basis.	-	-	N	Y	N	Y	-	
98	PPAP	PPAP2	Purchasing & Accounts Payable	Implemented or Inactive	-	It is unclear if timing of award aligns with Board meetings.	Ensure timing of award aligns with Board meetings (i.e. bi-monthly).	-	-	N	N	N	Y	-	
99	PPAP	PPAP2	Purchasing & Accounts Payable	Implemented or Inactive	-	Currently no formal mechanism for reporting on vendor timeliness.	Formalize the process of reporting on vendor timeliness.	-	-	N	N	N	Y	-	
100	PPAP	PPAP2	Purchasing & Accounts Payable	Implemented or Inactive	-	Standard template for RFQ/RFT is not yet finalized.	Finalize and implement RFQ/RFT template as soon as possible.	-	-	N	N	N	Y	-	
101	PPAP	PPAP2	Purchasing & Accounts Payable	Implemented or Inactive	-	Mail does not reach Accounts Payable and it is difficult to meet the 30 day pay period when this happens.	Ensure that mail is passed along to Accounts Payable in a timely manner.	-	-	N	N	N	Y	-	
102	PPAP	PPAP2	Purchasing & Accounts Payable	Implemented or Inactive	-	It can be a lengthy wait for authorization from the departments.	Increased accountability within the various departments, get mail back to accounts payable ASAP.	-	-	N	N	N	Y	-	
103	PPAP	PPAP2	Purchasing & Accounts Payable	Active	IM.01	N/A	Standard template being developed (very early stages)	-	-	N	N	N	Y	-	
104	PPAP	PPAP2	Purchasing & Accounts Payable	Active	IM.02	N/A	For ETF create file instead of cheque.	-	-	N	N	N	Y	-	
105	PPAP	PPAP2	Purchasing & Accounts Payable	Active	IM.03	N/A	Overall ability to go paperless and B2B in the future?	-	-	N	N	N	Y	-	
106	Rates, Regulatory & CDM	RRC1	IESO Settlement	Active	IM.01	Three Phase FIT and microFIT information is not being read daily, need to incorporate into the net system load settlement (however difference is somewhat insignificant). Metering is currently going out once a month to collect this information (manual process).	Consider automating the monthly metering process and/or increasing the frequency to weekly or daily.	-	-	N	N	N	Y	-	
107	Rates, Regulatory & CDM	RRC1	IESO Settlement	Active	IM.02	Files often come in different formats, customer service has to convert these files to the same format, PRN Text File.	Consider asking IESO if the files can be provided directly in PRN Text File format.	-	-	N	N	N	Y	-	
108	Rates, Regulatory & CDM	RRC3	Regulatory Reporting (IESO)	Active	IM.01	N/A	Improve communication between departments about '0' generation readings.	-	-	N	N	N	Y	-	
109	Rates, Regulatory & CDM	RRC3	Regulatory Reporting (IESO)	Active	IM.02	Daily statements require validation	Someone in accounting could be validating the daily statements	-	-	N	N	N	Y	-	
110	Rates, Regulatory & CDM	RRC3	Regulatory Reporting (IESO)	Active	IM.03	Require application to automate	IT could create an application to automatically validate the invoice, check against calcs etc.	-	-	N	N	N	Y	-	
111	Rates, Regulatory & CDM	RRC4	Rates	Active	IM.01	Useful to have information already in OEB format	Compile the required information in realtime and in OEB format (for appendices)	-	-	N	N	N	Y	-	
112	Rates, Regulatory & CDM	RRC4	Rates	Active	IM.02	Custom applicable tool required	CustomerFirst could hire an economist or develop a custom application tool.	-	-	N	N	N	Y	-	

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113	Rates, Regulatory & CDM	RRC4	Rates	Active	IM.03	N/A	Provide board with final document	-	-	N	N	N	Y	-	
114	Renewing Distribution System	RDS1	Design	Implemented	-	No standard 'new project sheet' for this initial visit.	An actual checklist of standard design considerations would be a useful tool.	L	M	N	N	N	Y	1	QW
115	Renewing Distribution System	RDS1	Design	Implemented or Inactive	-	Legal/easement information is not easily tracked and archived.	Incorporate legal/easement information into GIS. Large undertaking, with limited accuracy, would still have to validate, could be used for references purposes only.	H	L	Y	N	N	Y	4	
116	Renewing Distribution System	RDS1	Design	Implemented or Inactive	-	Cost of City materials/information is expensive and adds up quickly.	Negotiate a fee for complete access to city materials (CAD files, plans, drawings etc.).	M	M	N	N	N	Y	2	
117	Renewing Distribution System	RDS1	Design	Implemented or Inactive	-	Drawing design and building a bill of materials is time consuming exercise and often results in errors.	Nirvana would be a bill of material that changes as you design the drawing. Automate this process. (Newmarket Hydro is attempting to do this). Need to ensure this information is correct, value in not being automated at this time.	H	L	N	N	N	Y	4	
118	Renewing Distribution System	RDS1	Design	Implemented or Inactive	-	Concrete orders are missing.	Notify Eng with PO that was given to fill any concrete orders. For the most part, have developed a work around for this. Biggest issue is that accounting does not receive the packing slip.	M	M	N	N	N	Y	2	
119	Renewing Distribution System	RDS1	Design	Implemented or Inactive	-	It is difficult to co-ordinate correct attendance at the pre-construction meetings.	Ideal attendance would include; crew, foreman, supervisor and project co-ordinator.	M	M	N	N	N	Y	2	
120	Renewing Distribution System	RDS1	Design	Active	IM.01	Improving efficiency around the 'Initial Site Visit'.	Checklist outlining design criteria could be implemented at this step.	L	M	N	N	N	Y	1	QW
121	Renewing Distribution System	RDS1	Design	Active	IM.02	When obtaining applicable plans/drawings from City, 'Vault Agreements' are not being concluded.	Devise a way to ensure that 'Vault Agreements' are concluded.	-	-	N	N	N	Y	-	
122	Renewing Distribution System	RDS1	Design	Active	IM.03	During the 'Design Development Review with Ops/Metering' should be validating with 'Metering' as well as 'Control Room' for 1500-3000kW. Extra: Define "validate", who is appropriate to make feeds loading / switching decisions?	Ensure that the design development review is validated with both Metering and the Control Room.	M	M	N	N	N	Y	2	
123	Renewing Distribution System	RDS1	Design	Implemented or Inactive	-	E-mail sent to stores is redundant with HTE release.	Stop sending e-mails to store and rely HTE release. Some items pose a problem due to longer delivery time.	-	-	N	Y	N	Y	-	
124	Renewing Distribution System	RDS1	Design	Active	IM.05	When GSHI 'Receive Connection Authorization from ESA' and the 10 day clock begins, there is a need for improved co-ordination.	Streamline the receiving of the 'Connection Authorization'. Improved coordination between engineering/metering/operations.	L	M	N	N	N	Y	1	QW
125	Renewing Distribution System	RDS1	Design	Active	IM.06	Supervisor should be signing off before recovery of cash and signing agreement.	Ensure signature is acquired.	L	M	N	N	N	Y	1	QW
126	Renewing Distribution System	RDS1	Design	Active	IM.10	Cost accountant currently initiates a lot of the analysis and file closures.	Project coordinator can perform more of the project cost analysis. Provide cost accounting with a complete file.	L	M	N	N	N	Y	2	
127	Renewing Distribution System	RDS1	Design	Implemented or Inactive	-	N/A	Define validate. Who is appropriate to make feeder loading switching determinations, distribution engineer? Control operations? PC?	-	-	N	N	N	Y	-	
128	Renewing Distribution System	RDS1	Design	Implemented	-	Improving efficiency around the 'Initial Site Visit'.	"Design considerations" checklist could be implemented at this step.	L	M	N	N	N	Y	1	QW
129	Renewing Distribution System	RDS1	Design	Implemented	-	Should be validating with 'Metering' as well.	Should be validating with 'Metering' as well.	L	M	N	N	N	Y	1	QW

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130	Renewing Distribution System	RDS1	Design	Implemented	-	Receive Engineering Supervisor's Approval on Final Drawing' needs to happen earlier in the process.	Get supervisor approval prior to signing/collecting money.	L	M	N	N	N	Y	1	QW
131	Renewing Distribution System	RDS1	Design	Implemented	-	Developer contacts project co-ordinator directly instead of the Supervisor in most cases. Should go through Supervisor.	Project co-ordinator to flow all requests through supervisor.	L	M	N	N	N	Y	1	QW
132	Renewing Distribution System	RDS1	Design	Implemented	-	Improving efficiency around the 'Initial Site Visit'.	It would be beneficial to have a design criteria checklist to go over for site visits. Perform site visit prior to construction meeting.	L	M	N	N	N	Y	1	QW
133	Renewing Distribution System	RDS1	Design	Implemented or Inactive	-	Improving efficiency around the 'GIS Extraction to CAD'.	Opportunity to develop a high level multi-phase design. Has been resolved.	-	-	Y	N	N	Y	-	
134	Renewing Distribution System	RDS1	Design	Implemented	-	Improving 'Developer Agreements'.	Review agreement to increase specifics. Ensure all developer expectations are outlined in agreement accordingly.	L	M	N	N	N	Y	1	QW
135	Renewing Distribution System	RDS1	Design	Implemented or Inactive	-	Is two years long enough for 10% maintenance deposit? May consider 5 years to align with developer timelines.	Review and implement terms around maintenance deposit. Develop a trigger/tracking to know when this is required.	L	L	N	N	N	Y	2	
136	Renewing Distribution System	RDS1	Design	Implemented or Inactive	-	No confirmation that stores have receipt of material release.	Implement feedback from stores. All done by email, this should be happening now.	-	-	N	N	N	Y	-	
137	Renewing Distribution System	RDS1	Design	Implemented or Inactive	-	Stores are very reliant on one person.	Begin knowledge transfer on stores activities.	M	H	N	N	N	Y	2	
138	Renewing Distribution System	RDS1	Design	Active	IM.08	N/A	Potential replacement of SPIDA calc in 2015	M	M	N	N	N	Y	2	
139	Renewing Distribution System	RDS1	Design	Implemented	-	Should tendering apply when it is the developer who pays?	Review policies to determine requirements and implement change. Economic evaluation based on lower of developer cost or our estimate.	L	M	N	N	N	Y	1	QW
140	Renewing Distribution System	RDS1	Design	Active	IM.09	HTE has space to note construction deposit – issues harnessing full potential of this feature.	Use HTE to full potential by including notes in construction deposits. PC should write a notation in comments portion of the WF in HTE	-	-	N	Y	N	Y	-	
141	Renewing Distribution System	RDS10	Daily Scheduling	Active	IM.01	Schedules can be altered through the night/ early morning hours due to the following; vehicles (downed trucks, truck availability and scheduled maintenance), people (sick days, training, overtime hours) new jobs (trouble/emergency calls), materials (missing materials) and work deficiencies (locates, outside contractors and control room).	N/A	-	-	N	N	N	Y	-	
142	Renewing Distribution System	RDS2	Construct & Project Close	Active	IM.03	Construction verification is not always performed prior to closing a project in HTE.	Perform construction verification prior to closing project in HTE.	L	H	N	Y	N	Y	1	QW
143	Renewing Distribution System	RDS2	Construct & Project Close	Active	IM.04	No formal trigger to start project variance analysis.	Need trigger to start analysis. Possible for Operations or GIS to Update HTE status to "Complete".	M	H	N	Y	N	Y	2	
144	Renewing Distribution System	RDS2	Construct & Project Close	Active	IM.05	Adjustments identified in quantity variance report are not dealt with by the source individual.	Return adjustment to source to fix as a training mechanism. A process change as well.	M	H	N	Y	Y	Y	2	
145	Renewing Distribution System	RDS2	Construct & Project Close	Active	IM.05	In addition, all adjustments are currently made without a focus on higher dollar value items.	Develop thresholds for Adjustments in costing based on a predetermined materiality level.	M	H	N	Y	Y	Y	2	
146	Renewing Distribution System	RDS2	Construct & Project Close	Active	IM.06	N/A	Consider creating a Work Form on all job orders closed. Project Coordinator needs to open those that are required.	L	H	N	Y	N	Y	1	QW

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147	Renewing Distribution System	RDS2	Construct & Project Close	Active	IM.07	Non-inventory report is not included in initial project variance analysis.	Run non-inventory report in 2 week wait period so that it is included in initial analysis. Possibility to include on the engineering close out checklist.	L	H	N	Y	Y	Y	1	QW
148	Renewing Distribution System	RDS2	Construct & Project Close	Active	IM.08	Line/material allocated/recorded to wrong job order.	Provide training for all staff to ensure a comprehensive understanding of job order coding.	M	H	N	Y	N	Y	2	
149	Renewing Distribution System	RDS2	Construct & Project Close	Active	IM.09	Lack of training for new project coordinators on processes.	Create a reference manual for various processes for new project coordinators to refer to on the job.	M	M	N	N	N	Y	2	
150	Renewing Distribution System	RDS2	Construct & Project Close	Active	IM.10	Perform as built estimate.	Consider the use of the fixed asset module to streamline this process.	H	R	N	N	Y	Y	3	
151	Renewing Distribution System	RDS2	Construct & Project Close	Active	IM.11	Lack of communication between Project Coordinator and Accounting staff on project close and analysis.	Book meetings (weekly) between Project Coordinator + Accounting to review newly closed projects and analysis. This will require a trigger.	L	H	N	N	N	Y	1	QW
152	Renewing Distribution System	RDS2	Construct & Project Close	Active	IM.12	Report complete but WF are not closed in HTE.	Implement a control to ensure WF are closed in HTE upon completion of report. Review date fields in HTEand sue to track status.	L	M	N	Y	N	Y	1	QW
153	Renewing Distribution System	RDS2	Construct & Project Close	Active	IM.13	Currently not reporting within 60 day window to determine ISO performance.	Begin to report on 60 day window (project 'complete' to project 'close') to determine ISO performance.	L	M	N	Y	N	Y	1	QW
154	Renewing Distribution System	RDS2	Construct & Project Close	Active	IM.14	Lack of formal accountability for a variety of shared process.	Investigate workflow in Sunguard and trigger civil completion.	M	H	N	Y	N	Y	2	
155	Renewing Distribution System	RDS4	Legal Process (Hydro Driven)	Active	IM.01	Design process is on going throughout the entire legal process. Need to determine how far along the design process to go without legal approval.	Develop guideline as to how much design is completed prior to legal approvals. (Inquiry with the lawyer on this).	L	H	N	N	N	Y	1	QW
156	Renewing Distribution System	RDS4	Legal Process (Hydro Driven)	Active	IM.02	Where a 3rd party survey is required, GSHI often proceeds without a binding agreement.	GSHI should obtain an agreement to grant on title prior to proceeding with ordering survey. (GSHI's lawyer is currently providing them with a legal opinion on this option and whether or not it protects GSHI).	L	H	N	N	N	Y	1	QW
157	Renewing Distribution System	RDS4	Legal Process (Hydro Driven)	Implemented	-	Legal Instructions E-mail to Lawyer - Currently lots of back and forth, information is rarely correct the first time around.	Develop a standard form, Suggestion: PC provides legal requirements and details to ES Clerk and Clerk completes a standard form. PC then approves the standard form. (Utilize an updated tax/street roll index and use as a template to populate).	L	H	N	N	N	Y	1	QW
158	Renewing Distribution System	RDS4	Legal Process (Hydro Driven)	Active	IM.03	Improved efficiency in GIS pertaining to legal descriptions.	Incorporate legal description information into GIS.	H	H	Y	N	N	Y	3	
159	Renewing Distribution System	RDS4	Legal Process (Hydro Driven)	Active	IM.04	If a JO is not taken out ENESC does not know to track it.	Essential to have a JO taken out.	L	M	N	Y	N	Y	1	
160	Renewing Distribution System	RDS5	Legal Process (Inquiry)	Active	IM.01	GSHI does not currently charge for easement searches	Need to review why not	L	M	N	N	N	Y	2	
161	Renewing Distribution System	RDS5	Legal Process (Inquiry)	Implemented or Inactive	-	Cannot trust Mindoka for easement information. Need to search government system to obtain accurate information.	Update Mindoka. Ensure accuracy.	M	H	N	N	N	Y	2	
162	Renewing Distribution System	RDS5	Legal Process (Inquiry)	Implemented or Inactive	-	Need to obtain copies of registered documents from lawyer, usually have to chase them down for this piece.	Review process or find ways to work more closely with lawyers. Carrie has developed a process to ensure that follow up letters are sent. Resolved.	-	-	N	N	N	Y	-	
163	Renewing Distribution System	RDS6	Substation Maintenance & Rehabilitation	Implemented	-	Lack of interdepartmental involvement in new substation design process.	Involve engineering, control room, operations and substation team when developing requirements to get a broader view of the potential design. (Create standards for redundancy, depth etc.).	L	H	N	N	N	Y	1	QW

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164	Renewing Distribution System	RDS6	Substation Maintenance & Rehabilitation	Implemented	-	N/A	Approved Structure Protection Specification. Need to develop a minimum standard.	L	H	N	N	N	Y	1	QW
165	Renewing Distribution System	RDS6	Substation Maintenance & Rehabilitation	Implemented	-	N/A	Ensure vendors have substantial substation experience to avoid complications (reference checks and oversee/inspect the job as required).	L	H	N	N	N	Y	1	QW
166	Renewing Distribution System	RDS6	Substation Maintenance & Rehabilitation	Implemented or Inactive	-	Currently no Protection Studies are completed for upcoming substation maintenance.	Perform Protection Studies for upcoming substation maintenance. (Study is currently underway, experiencing a problem with the numbers in Milsoft).	H	H	N	N	N	Y	3	
167	Renewing Distribution System	RDS6	Substation Maintenance & Rehabilitation	Implemented	-	Changes to design drawings are not always formally approved and stamped by the Engineering team.	If there are changes to the design drawing, Engineering approval should be obtained and drawing should be stamped to indicate evidence of approval and date of approval.	L	M	N	N	N	Y	1	QW
168	Renewing Distribution System	RDS6	Substation Maintenance & Rehabilitation	Active	IM.05	GIS is not provided with relevant information	Provide with the relevant information	L	M	Y	N	N	Y	2	
169	Renewing Distribution System	RDS6	Substation Maintenance & Rehabilitation	Active	IM.06	No ground grid analysis is performed.	Ground grid analysis should be performed. Do not have the proper tools at the moment, either acquire tools or contract out going forward. Some employees are being trained on this already.	M	H	Y	N	N	Y	2	
170	Renewing Distribution System	RDS6	Substation Maintenance & Rehabilitation	Active	IM.02	Scheduling of substation maintenance is not integrated with the capital plan and other builds.	Substation maintenance schedule should be coordinated with capital plan and other builds to increase efficiencies.	M	M	N	N	N	Y	2	
171	Renewing Distribution System	RDS6	Substation Maintenance & Rehabilitation	Active	IM.03	Issues in communicating schedule changes to crews.	Improve communications with respect to coordinating schedule changes (i.e. email notifications, memos, updated schedules circulated, etc.).	L	L	N	N	N	Y	2	
172	Renewing Distribution System	RDS6	Substation Maintenance & Rehabilitation	Active	IM.04	Better communication of substation maintenance results to asset management. In addition, the results are currently communicated via PDF. This is not ideal as it does not interface well with other software systems being used.	Consider automating the process of sharing substation maintenance results with asset management. Data should be captured in a shareable form – potentially GIS - and easily integrated with other systems. Must check against Asset Management Assessment Plan.	H	H	Y	N	Y	Y	3	
173	Renewing Distribution System	RDS6	Substation Maintenance & Rehabilitation	Active	IM.01	Changes to design are supposed to be signed & approved on the date the change is made. This is not occurring in all cases.	If there are changes to the design drawing, Engineering approval should be obtained and drawing should be stamped to indicate evidence of approval and date of approval.	L	M	N	N	N	Y	1	QW
174	Renewing Distribution System	RDS6	FIT	Active	IM.01	(Duplicate) Improved checklist should be utilized	Provide checklist of information required before connections, such as SLD, permits etc.	-	-	N	N	N	Y	-	
175	Renewing Distribution System	RDS6	FIT	Active	IM.02	(Duplicate) N/A	Need to check if distribution capacity is available.	-	-	N	N	N	Y	-	
176	Renewing Distribution System	RDS6	FIT	Active	IM.03	(Duplicate) Often a hold up to get city permit.	Customer applies for a building permit and arranges city inspection, GSHI needs permit before connecting. Sometimes there is a holdup to get city permit, need to ensure the permit has been granted.	-	-	N	N	N	Y	-	
177	Renewing Distribution System	RDS6	FIT	Active	IM.04	(Duplicate) Additional database is maintained	Use GIS for info instead of maintaining generation database.	-	-	N	N	N	Y	-	
178	Renewing Distribution System	RDS6	FIT	Active	IM.05	Require proper commissioning test	Create process and train for implementation of a commissioning test.	-	-	N	N	N	Y	-	
179	Renewing Distribution System	RDS7	Substation New Design	Implemented or Inactive	-	Currently no standards exist for the engineering analysis performed in relation to the work order.	Standard principals/guidelines for work orders should be developed to ensure consistency. Standards may be general. (Rural vs. Urban)	M	M	N	Y	N	Y	2	

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180	Renewing Distribution System	RDS7	Substation New Design	Active	IM.01	Need to perform a soil test at this stage	Train employees on soil tests and ensure that they are performed as required	M	H	Y	N	N	Y	2	
181	Renewing Distribution System	RDS7		Active	IM.03	No legal process for property acquisition	Create a standard process	M	M	N	N	N	Y	2	
182	Renewing Distribution System	RDS7	Substation New Design	Active	IM.02	GIS is not provided with relevant information	Provide with the relevant information	L	M	Y	N	N	Y	2	
183	Renewing Distribution System	RDS7	Substation New Design	Implemented	-	N/A	Approved Structure Protection Specification. Need to develop a minimum standard.	L	H	N	N	N	Y	1	QW
184	Renewing Distribution System	RDS7	Substation New Design	Implemented or Inactive	-	Engineering approval of Protection Specification 2204 must be obtained as per ESA requirement.	Ensure documentation of Engineering approval of Protection Specification 2204 is kept to meet ESA requirements. (Abide by this now).	-	-	N	N	N	Y	-	
185	Renewing Distribution System	RDS7	Substation New Design	Implemented	-	New substation design does not currently consider the outside fence requirements.	Consider including outside the fence requirements in the design of new substations. Stamp.	L	M	N	N	N	Y	1	QW
186	Renewing Distribution System	RDS7	Substation New Design	Implemented or Inactive	-	Currently no formal process for electrical design of new substations.	A formal approval process should be developed for the electrical design.	M	M	N	N	N	Y	2	
187	Renewing Distribution System	RDS7	Substation New Design	Implemented or Inactive	-	Issues in booking contractors on a timely basis.	Civil tender process should be examined to determine if it can be performed earlier.	M	M	N	N	N	Y	2	
188	Renewing Distribution System	RDS7	Substation New Design	Implemented	-	N/A	Ensure vendors have substantial substation experience to avoid complications (reference checks and oversee/inspect the job as required).	L	H	N	N	N	Y	1	QW
189	Renewing Distribution System	RDS7	MicroFIT	Implemented or Inactive	-	Welcome Letter and Form are sent to the customer but formal requirements are not explicitly outlined.	Consider providing a checklist to customer with requirements. Already included in the welcome letter.	-	-	N	N	N	Y	-	
190	Renewing Distribution System	RDS7	MicroFIT	Implemented or Inactive	-	Site meeting and assessment does not include a check of distribution capacity. Site checks are done after the digital offer to connect form is completed.	Need to check distribution capacity during site meeting and assessment process. Need to do the site check prior to the digital offer to connect form. Distribution capacity is already checked.	-	-	N	N	N	Y	-	
191	Renewing Distribution System	RDS7	MicroFIT	Active	IM.01	Improved checklist should be utilized	Provide checklist of information required before connections, such as SLD, permits etc.	-	-	N	N	N	Y	-	
192	Renewing Distribution System	RDS7	MicroFIT	Active	IM.02	N/A	Need to check if distribution capacity is available.	-	-	N	N	N	Y	-	
193	Renewing Distribution System	RDS7	MicroFIT	Active	IM.03	Often a hold up to get city permit.	Customer applies for a building permit and arranges city inspection, GSHI needs permit before connecting. Sometimes there is a holdup to get city permit, need to ensure the permit has been granted.	-	-	N	N	N	Y	-	
194	Renewing Distribution System	RDS7	MicroFIT	Active	IM.04	Remove use of paper form	Change filing mechanism to be electronic	-	-	N	N	N	Y	-	
195	Renewing Distribution System	RDS7	MicroFIT	Active	IM.05	Additional database is maintained	Use GIS for info instead of maintaining generation database.	-	-	N	N	N	Y	-	
196	Renewing Distribution System	RDS8	Connections	Implemented or Inactive	-	A new connection may be for an customer that already exists in NorthStar, but there is currently no way to validate this.	Additional training for ESC.	H	H	N	N	Y	Y	3	
197	Renewing Distribution System	RDS8	Connections	Implemented or Inactive	-	The Offer to Connect process is not automated (paper forms are used).	Automation of the offer to connect forms could be done on tablet.	H	H	N	N	Y	Y	3	

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198	Renewing Distribution System	RDS8	Connections	Implemented or Inactive	-	Although the customers name in the system not the person you met on-site necessarily	It would be ideal to be able to search a customer database and tell if you already have the customer set-up. Alternatively, everything could go through the call centre and at that point they collect all account information and THEN send to Carrie/Mike.	-	-	N	N	Y	Y	-	
199	Renewing Distribution System	RDS8	Connections	Active	IM.01	Duplication of work	Could these two OTC forms be integrated? Could the by digital as well?	-	-	N	N	Y	Y	-	
200	Renewing Distribution System	RDS8	Connections	Active	IM.02	OTC's paid by the Dalron and SalDan accounts are never truly confirmed	Require confirmation	-	-	N	N	Y	Y	-	
201	Renewing Distribution System	RDS8	Connections	Active	IM.03	OTC's paid by the Dalron and SalDan accounts are never truly confirmed	Require confirmation	-	-	N	N	Y	Y	-	
202	Renewing Distribution System	RDS8	Connections	Implemented or Inactive	-	OTC is not always signed by customer	Determine if it needs to be? – if so, when? Need to establish a policy)	-	-	N	N	N	Y	-	
203	Renewing Distribution System	RDS8	Connections	Implemented	-	ESC preps schedule by department (metering or operations). Schedules are done one day in advance, 3 o'clock cut off for jobs. When ESC is away, there is no schedule. No way of ensuring that teams receive the schedule when it is sent to the printer for pick-up.	The schedule could be streamlined into ONE single email. So there is certainty around everybody having received the schedule. Additionally, ensure that someone is trained on prepping the schedules in order to support the ESC when he/she is away. (ESC has since implemented this E-mail).	L	M	N	N	N	Y	1	QW
204	Renewing Distribution System	RDS8	Connections	Active	IM.04	Better customer service is required.	Operations/Metering crews could contact customer to notify they are on the schedule and a representative will be there soon. Keep customer informed of when the work will be done, close the loop. Increase visibility on the current schedule to allow for this.	H	H	N	N	N	Y	3	
205	Renewing Distribution System	RDS8	Connections	Implemented or Inactive	-	The main challenge in this process is not having the customer account set up prior to the service being done.	Set up the account first, when it comes time to do call have utilize a tablet to enter time in etc. This would eliminate on the job the passing of paper back and forth. Note it is important that that paper comes to CS to validate.	-	-	N	N	N	Y	-	
206	Renewing Distribution System	RDS9	Fleet Management	Active	IM.01	N/A	Consider a program to track GPS on vehicles to determine when maintenance is required	-	-	N	N	N	Y	-	
207	Renewing Distribution System	RDS9	Fleet Management	Active	IM.02	N/A	Include next service mileage number in the log book	-	-	N	N	N	Y	-	
208	Streetlighting	SL1	Streetlight Maintenance	Active	IM.01	Zones are not integrated in GIS	Integrate zones into streetlight map in GIS.	M	M	N	N	N	Y	2	
209	Streetlighting	SL1	Streetlight Maintenance	Active	IM.02	N/A	Tag materials with bar codes and link to GIS to better track allocations to specific jobs	M	M	N	N	N	Y	2	
210	Streetlighting	SL1	Streetlight Maintenance	Active	IM.03	Tablets are not being fully utilized	Tablets should be used during this process to reduce paperwork and expedite updating of databases. Tablets could provide best route for repair, group remapping in outlying areas and how to group jobs by area.	M	M	N	N	N	Y	2	
211	Streetlighting	SL1	Streetlight Maintenance	Active	IM.04	Require more options	Options to classify temporary close (e.g. if further work is required, type of work).	M	M	N	N	N	Y	2	
212	Streetlighting	SL1	Streetlight Maintenance	Active	IM.05	Better tracking is required	Track actual work completed and ten business day window to complete work.	L	M	N	N	N	Y	2	
213	Streetlighting	SL1	Streetlight Maintenance	Active	IM.06	Improved communication	May require communication to GIS if removal or significant change (pertaining to LEDs).	L	M	N	N	N	Y	2	
214	Streetlighting	SL2	Streetlight Capital	Active	IM.01	Improving efficiency around the 'Initial Site Visit'.	"Design considerations" checklist could be implemented at this step.	L	M	N	N	N	Y	1	QW
215	Streetlighting	SL2	Streetlight Capital	Active	IM.02	City lighting does not meet RP-8 standards.	Update Streetlight contract with City.	M	M	N	N	N	Y	2	

#	Process Stream	Map ID	Process	Active / Implemented / Dead	Improvement ID	Issue	Opportunity	Implementation Complexity	Benefit Ranking	Related to GIS? (Y/N)	Related to HTE? (Y/N)	Related to NorthStar? (Y/N)	Validated? (Y/N)	Priority	Status
216	Streetlighting	SL2	Streetlight Capital	Active	IM.02	City lighting does not meet RP-8 standards.	Consistent sign off by City regardless of PC responsible.	L	M	N	N	N	Y	1	QW
217	Streetlighting	SL2	Streetlight Capital	Active	IM.02	City lighting does not meet RP-8 standards.	Upgrade Software.	M	H	N	N	N	Y	2	
218	Streetlighting	SL2	Streetlight Capital	Active	IM.03	Lighting design is time consuming and could be a job on its own.	Subcontract lighting design.	M	H	N	N	N	Y	2	
219	Streetlighting	SL2	Streetlight Capital	Active	IM.04	PCs are making a takesheet, the info is manually passed to stores, who then manually input this info onto another similar takesheet. Typo/errors/duplication of effort, overall opportunity for improvement.	Review administrative streetlight process for efficiencies. Require further investigation, opportunity for incorporating barcoding.	M	M	N	N	N	Y	2	
220	Support	COM1	Freedom of Information	Active	IM.01	N/A	Provide timeline to requestor to provide payment with fee estimate.	-	-	N	N	N	Y	-	
221	Support	COM1	Freedom of Information	Active	IM.02	N/A	Develop an annual WF and job order for each FOI request.	-	-	N	N	N	Y	-	
222	Support	HR	Recruiting (Internal & External)	Active	IM.05	External skills testing can occur before or after the interview. Scheduling causes problems.	Create a standard process around external testing, determine whether it is best to do to prior to or following the interview.	L	H	N	N	N	Y	1	QW
223	Support	HR	Recruiting (Internal & External)	Active	IM.01	No formal process around confirming the need to hire, currently a verbal agreement.	Create an approval form for documenting decision to hire. President and CEO could sign off on the intention to hire.	L	H	N	N	N	Y	1	QW
224	Support	HR	Recruiting (Internal & External)	Active	IM.02	Not consistent with preliminary screening, sometimes HRA conducts preliminary screening, sometimes sends to VP/Supervisor for screening.	Establish concrete process around preliminary screening expectations .	-	-	N	N	N	Y	-	
225	Support	HR	Recruiting (Internal & External)	Active	IM.03	Do not always interview (would like to).	Establish consistency around need for internal interviews.	L	M	N	N	N	Y	1	QW
226	Support	HR	Recruiting (Internal & External)	Active	IM.04	Evaluation Grid' not always created prior to the interview.	Upon intent to hire, create a roll-specific evaluation grid to be implemented during the interview process.	L	H	N	N	N	Y	1	QW
227	Support	HR	Recruiting (Internal & External)	Active	IM.06	Candidates do not sign any form of job offer acceptance at this point.	Add signature portion for the new employee beside VP's signature on 'Job Offer Letter'.	L	M	N	N	N	Y	1	QW
228	Support	HR2	On-Boarding & Orientation	Active	IM.01	Would like to review power line summer student checklist to confirm if adequate.	Would like to review power line summer student checklist to confirm if adequate.	L	H	N	N	N	Y	1	QW
229	Support	HR2	On-Boarding & Orientation	Active	IM.02	Would like to review what is to be attached to all packages.	Ensure that all pieces of the package are included when handed out to the new employee	L	H	N	N	N	Y	1	QW
230	Support	HR2	On-Boarding & Orientation	Active	IM.03	Supervisor is not consistent with notifying IT.	HR would like to proactively remind supervisor to notify IT.	L	H	N	N	N	Y	1	QW
231	Support	HR2	On-Boarding & Orientation	Active	IM.04	Review and complete Phase I of applicable 'Orientation Checklist' with employee is documented by hand.	Could train the HR personnel involved on how to input in AS400.	M	M	N	N	N	Y	2	
232	Support	HR2	On-Boarding & Orientation	Active	IM.05	Training is sometimes missed and HR does not receive 'Confirmation of Completion'.	Within a 2 week period, RMO should audit to ensure that training requirements have been met.	M	H	N	N	N	Y	2	
233	Support	HR2	On-Boarding & Orientation	Active	IM.06	During 2/4/6 month performance reviews lack of information on casual hours.	Initiate tracking of monthly casual hours.	M	L	N	N	N	Y	3	
234	Support	RM1	Injury Response Reporting	Active	IM.01	N/A	Completing the investigation and document findings process should be relocated into GOLF	-	-	N	N	N	Y	-	

4-EP-21

Question:

Reference: Exhibit 4, Tab 2, Schedule 1, Page 18, Monthly Billing

Please provide a profile of GSHi billing for 2013 and 2020 including

i. Number of e-bills
ii. Number of paper bills
iii. Number of Joint Bills for both water and electricity, and
iv. Cost per bill.

Response:

i) And ii) GSHi's CIS does not track billing detail to the level required to answer this question with respect to the number of e-bills and paper bills. However, GSHi has calculated an estimate based on the number of electricity customers who were enrolled in either EPOST (through Canada Post) type bills or E-Billing (through GSHi's CIS). GSHi averaged the number of customers enrolled in these programs at each year end to estimate the number of customers enrolled throughout the year and then multiplied that by either 6 (for monthly billing) or 12 (for monthly billing) based on when GSHi made the switch to monthly billing (2017). These figures represent electricity customers only.

	2013	2020
Ebills	4,464	105,660
Epost	6,726	12,162
Paper Bills	273,972	460,212
Total Bills	285,162	578,034

iii) GSHi's CIS does not track this level of detail, however GSHi provides the following estimation, based on the number of active accounts at December 31, 2013 with both water and electric service, multiplied by 6 for bi-monthly billing of 150,726 bills issued

in 2013 that had both water and electric services. For 2020, the estimate is 303,984.

iv) GSHi provides the following incremental bill costs for its three types of bill offerings. These are incremental postage and stationery costs only, as the costs to prepare the bill and process them remain the same, regardless of the type of bill delivery method.

Paper	Epost	Ebill
$ 1.02	$ 0.43	$ 0.01

4-EP-22 Appendix 2-K Clarification

Question:

Reference: Exhibit 4, Tab 2, Schedule 1, Table 1, and Appendix 2-K

a) Please confirm the Total compensation in Table 1 and Appendix 2-K relates to all *directly assigned positions* and indirect compensation costs from GSHP are designated Affiliate Transactions.

b) Please provide a version of Appendix 2K in Excel format showing year to year and Total changes 2013-2020 for all Staffing and Compensation Cost categories.

Response:

a) GSHi confirms that Exhibit 4, Tab 2, Schedule 1, Table 1 relates only to employees directly employed by GSHi. Appendix 2-K contains all GSHi direct employees and the portion of GSHP employees allocated to GSHi.

b) Please see the live model included with this interrogatory submission: GSHI_IRR_EP_22_Comparative_Appendix_2K_20200310.

4-EP-23

Question:

Reference: Exhibit 4, Tab 4, Schedule 2, Page 14, Table 1, Overtime

a) Please updated Table 1 to show the 2019 actual and 2020 Overtime projection.

b) Please provide the Actual Overtime costs corresponding to the hours listed for 2013-2019.

c) Please provide the average hourly rate for Union staff and the average cost/hr of overtime.

d) What is the Split between hours at 1.5x and hours at 2x?

Response:

a) Please see below for the table updated with the 2020 projection. Please note, GSHi refined its process for extracting this data from its ERP system and provides updated information for the historical period.

Year	Overtime Hours	Cost - Wages only	Cost - wages and benefits	Average rate/ overtime hour	Average overtime rate with benefits
2013	9,129	$ 617,179	$ 716,060	$ 67.60	$ 78.44
2014	8,806	$ 616,092	$ 715,917	$ 69.97	$ 81.30
2015	8,563	$ 596,656	$ 691,689	$ 69.68	$ 80.77
2016	8,203	$ 590,751	$ 686,828	$ 72.01	$ 83.73
2017	6,947	$ 504,611	$ 583,674	$ 72.64	$ 84.02
2018	10,473	$ 809,164	$ 932,319	$ 77.26	$ 89.02
2019	9,419	$ 719,774	$ 774,387	$ 76.42	$ 82.21
2020 Budget	6,668	$ 601,071	$ 649,562	$ 90.14	$ 97.41

b) See table above

c) The current average hourly rate for a Unionized employee is $34.55 and the average overtime rate for Unionized employees is $69.10.

d) As per the collective agreement, all overtime is paid at double time.

4-EP-24

Question:

References: Exhibit 4, Tab 5, Schedule 1, Tables 1-9, and Attachment 2, BDR Report

Preamble: The BDR Report contains no data on costs for the Affiliate Transactions reviewed.

a) Please provide a Copy of Figure 1 (page 10) -Corporate Organization Chart with labels corresponding to the designations/abbreviations used in the BDR Report.

b) Please file the Service Schedules provided to BDR.

c) Please provide a version of Table ES2 with each of the affiliates and transaction costs shown, using data provided to BDR.

d) Please provide a cost breakdown of the following Corporate Services for 2020:
   i. Executive and Board of Directors
   ii. Communications
   iii. Insurance and risk management
   iv. General financial services and regulatory services
   v. Procurement, inventory and stores services
   vi. Human resources
   vii. Information technology and telephone services.

e) Please provide a copy of the BDR Working Papers related to Corporate Services, Street lighting Services and the three Buildings, including Total Costs, Allocation factor and basis, Specific allocations to each affiliate.

Response:

a) Please see Figure 1 and Figure 2 below for the Corporate Organization Chart with labels corresponding to the designations/abbreviations used in the BDR Report.

Figure 1

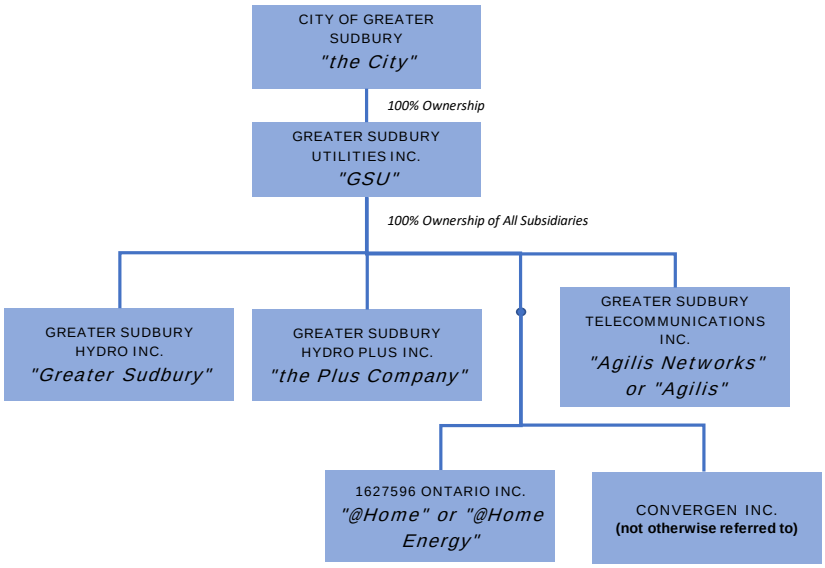
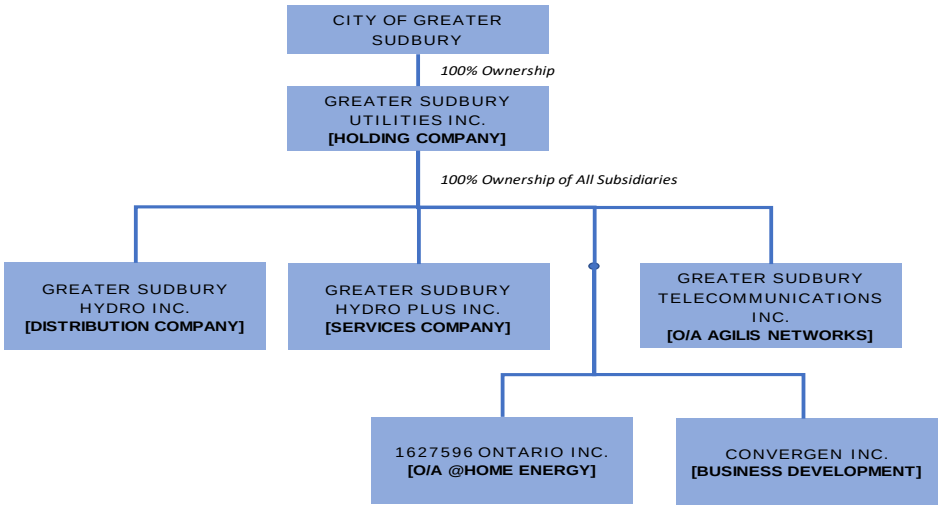


Figure 2



b) No Service Schedules were provided to BDR for its 2020 update. GSHi provided updated organizational charts and discussed whether there were any changes in the allocation approach or structure of services since 2012. GSHi was not required as a result of its last COS application to provide another full transfer pricing study in its 2020 Cost of Service Application. GSHI provided an update confirming that allocations were still reasonable to/from GSHi and its Affiliate companies. The updated Transfer Pricing Study was completed by GSHi's consultant, BDR, who conducted the full transfer Pricing Study in GSHi's 2013 COS application. The update resulted in a change in its methodology for the allocation of HR costs which were reflected in GSHi's 2020 Test Year.

c) No cost data was provided to BDR. In Table 1 in part (d) below, GSHi has broken out the costs of the services provided by the affiliates to GSHi.

d) Below is an excerpt from the Chapter 2 Appendices live model Appendix 2-N included with this submission. The breakdown of the services provided from GSHi's affiliates, including the total cost before allocation, the cost allocated and the % of the cost allocated to GSHi is provided.

Year: 2020 Test

Shared Services

Name of Company		Service Offered	Pricing Methodology	% Cost Allocation	Price for the Service	Cost for the Service
From	To				$	$
Affiliate	Greater Sudbury Hydro	Executive/Finance/Communications/ Innovation	Time Records	75%	$1,539,617	$2,039,769
Affiliate	Greater Sudbury Hydro	Regulatory	No current activities identifiable with affiliates; therefore 100% assigned to Greater Sudbury	100%	$285,986	$285,986
Affiliate	Greater Sudbury Hydro	HR	HR - Directly assigned where possible, number of employees for other costs; 2nd tier allocation to reallocate portionassociated with shared services/	74%	$355,076	$479,832
Affiliate	Greater Sudbury Hydro	Risk Management	97% of costs allocated to Greater Sudbury, based on time records	98%	$380,388	$386,966
Affiliate	Greater Sudbury Hydro	Quality Management	QMS - Costs of the Plus Company directly assigned to Greater Sudbury, as the other affiliates pay for their own programs directly	100%	$117,494	$117,494
Affiliate	Greater Sudbury Hydro	Insurance	Revenue	80%	$211,901	$264,519
Affiliate	Greater Sudbury Hydro	IT	Telephone systems, PCs and ERP, by unweighted number of users; telephone sets by weighted number of users reflecting complexity of the units; systems for customer information and billing by factors related to that function; costs directly assigned where specifically identified with an affiliate or function.	51%	$721,563	$1,401,140
Affiliate	Greater Sudbury Hydro	Accounts Payable/Payroll/Accounting	AP - Time tracking for activities identifiable with one affiliate; number of invoices for other costs Payroll - Time tracking for activities identifiable with one affiliate; number of employees for other costs Accounting - A time estimate for forecast; time records for actual	54%	$392,144	$729,272
Affiliate	Greater Sudbury Hydro	Customer Billing and related services	Detailed analysis of each costcomponent, with different allocation methods, including number of bills, call volumes, number of meters, and space occupied on the shared bill. Direct assignment where applicable.	76%	$2,455,443	$3,228,782
Affiliate	Greater Sudbury Hydro	Any costs of the Plus Company not otherwise allocated	For redistribution of costs which were allocated by other methodologies to the Plus Company. In proportion to the allocation of other costs.	91%	$128,628	$141,641
Affiliate	Greater Sudbury Hydro	Board of Directors	50% cost of two boards, (GSHi and GSU), plus direct assignment of two independent directors	50%	$109,675	$219,350
Affiliate	Greater Sudbury Hydro	Stores/Procurement	Materials Issued/Time record of staff	91%	$527,359	$580,080
Greater Sudbury Hydro	Affiliate	Garage/Fleet Services	Hourly charge out rate based on full cost recovery	92%	$104,738	$1,347,616
Greater Sudbury Hydro	Affiliate	Streetlight Maintenance	Time of staff as recorded in the work order system	100%	$441,246	$441,246
Greater Sudbury Hydro	Affiliate	Building Services and Occupancy Costs	Market Rate applied to square footage	309%	$61,235	$19,798
Greater Sudbury Hydro	Affiliate	Building Services and Occupancy Costs	Cost recovery based on square footage	82%	$132,773	$755,178

Corporate Cost Allocation

Name of Company		Service Offered	Pricing Methodology		Price for the Service	Cost for the Service
From	To				%	$

e) BDR has no working papers related to corporate services, streetlighting services, and building with total costs for reasons stated in response to part (a) above. Please see response in Table 1 in part (d) above for the total costs, allocation % and basis for allocations (as excerpted from GSHi's Transfer Pricing Study submitted in its original application).

4-EP-25

Question:

Reference: Exhibit 4, Tab 5, Schedule 1, Attachment 2, BDR Report, Table 4.1

Preamble: "These components have been allocated based on the number of bills, the number of telephone calls, number of printed characters on the shared bill, or a combination of factors as Applicable."

a) Please confirm the allocations shown are the 2012 allocations.

b) If each allocation has been reviewed in the current study, why are the allocations not designated as 2019/20 allocations? If the allocations have not been reviewed in detail, please provide the reasons.

c) Please clarify the following:
   i. Postage allocator- why not equal to number of bills
   ii. How Training is related to call volumes
   iii. Software support OEB order in 2013 COS decision. Why is this relevant in 2020?

Response:

a) GSHi confirms that the allocations shown are the 2012 allocations.

b) The underlying statistics for the most recent historic year, which would have been 2018, were reviewed by Management, and in the judgment of Management the ratios were consistent enough with 2012 data to justify accepting the 2012 data as a basis to develop forecast allocations for the test year costs. BDR accepted Management's assurance that the statistics had remained consistent over time, and considered the use of the same factors as 2012 as reasonable on that basis.

statistics had remained consistent over time, and considered the use of the same factors as 2012 as reasonable on that basis.

c)

i. An equal amount of postage is assumed for each bill sent out. There are, however, three types of bills for purposes of the allocation: (a) bills for electricity only; (b) bills for water and wastewater services only; and (c) bills that include both electricity and water/wastewater services. For bills of type (c), the postage cost must, in order to be fair, be shared between electricity and water/wastewater. In order to do this, the postage cost for these bills is allocated between the two services based on the space utilization on the paper bill of information related to each service, so that both services benefit from the shared service. For clarity then, electricity bills are allocated the full cost of postage for each bill that is for electricity only, and a portion of the postage for each bill that is for both electricity and water/wastewater. This was the method accepted in the prior rate application, and has been applied consistently in this application.

ii. The training is for call centre staff, whose function is to handle customer calls related to both electricity and water/sewer. Therefore the cost of training for these staff is understood to be caused by these calls.

iii. In the 2013 COS decision, the OEB ordered a specific treatment of this type of cost. Therefore the Company has assumed that the OEB would continue to consider that treatment appropriate today. If the OEB orders a different treatment, the Company would, of course, adopt that for 2020.

4-EP-26

Question:

Reference: Exhibit 4, Tab 5, Schedule 1, Attachment 2, BDR Report Page 25 - 500 Regent Street

a) Please provide the Building Market Rate Information from 2012.

b) Please update the square footage and the updated costs and allocations for 2020.

Response:

a) Please see Attachment 1 for the Building Market Rate information from 2012.

b) GSHi has used the same square feet allocation as 2019 for its 2020 building allocations as these are not expected to change in 2020. The building square feet allocation can be found in Table 1 below. The cost for the building can be found in Table 2 below as excerpted from Appendix 2-N from the Chapter 2 Appendices live models included with this submission.

Table 1 – 2020 Building Square Feet

Building Sq Ft 2020	
	2020
Affiliates	27,124
GSHi	152,547
	179,671

Table 2 – 2020 Building Costs

Year: 2020 Test

Shared Services

Name of Company		Service Offered	Pricing Methodology	% Cost Allocation	Price for the Service	Cost for the Service
From	To				$	$
Greater Sudbury Hydro	Affiliate	Building Services and Occupancy Costs	Market Rate applied to square footage	303%	$61,235	$20,231
Greater Sudbury Hydro	Affiliate	Building Services and Occupancy Costs	Cost recovery based on square footage	82%	$132,773	$755,178

Attachment 1 (of 1):

4-EP-26 Attachment 1: Royal Lepage Cost of Office and Industrial Space

ROYAL LEPAGE

NORTH HERITAGE REALTY INC.
COMMERCIAL REAL ESTATE SERVICES
860 Lasalle Blvd.,
Sudbury, ON P3A 1X5
Phone (705)564-9999 Fax (705)671-7117
Email: gnichols@eastlink.ca

Greater Sudbury Hydro Inc.
500 Regent Street S.
Sudbury, Ontario
P3E 3Y2

Re: 500 Regent Street, Sudbury, Ontario P3E 3Y2 Office and Industrial space.

Attention: Mr. Frank Kallonen President

As per our telephone conversation please find enclosed my opinion of the rental rates for the office space and industrial space, garage space for the above property.

As the same Tenant is occupying the office space as well as the industrial area in the same premises, and the size of the area being rented a more favorable rent would be negotiated in the $12.50 to $13.50 per square foot Net range for the office area and $6.50 to $7.50 per square foot Net for the industrial area. All other costs such as taxes, hydro, heating, water and sewer, Insurance, janitorial, repairs and maintenance etc. are charged back as additional rent.

Therefore I have used a rental rate for the above property of $13.00 per square foot Net for the office space and $7.00 per suare foot Net for the industrial space.

The above rents compare to other Tenants in the Sudbury area who have negotiated rents in these price ranges. The Tenants I used as a comparable have office and small amounts of industrial but also have little to no land component with their Lease agreement.

The above rents based on 27,377 square feet of office and 33,127 square feet of industrial space will give you a blended rate $9.73 per square foot Net in case you have a sub-tenant who occupy a mixed use.

Here are some rates for your reference.
Rates for new office space would be in the $20 to $22.00 range Net.
Rates for new industrial space in our Sudbury market are in the $10 to $13.00 range Net.

If you have any questions please contact me by email or phone number above.

Yours truly

George Nichols

George Nichols CCIM

Broker

4-EP-27

Question:

Reference: Exhibit 4, Tab 5, Schedule 1, Attachment 2, BDR Report, Page 25 – Street lighting

a) Please provide a breakdown of the 2012 Street lighting costs and the number of hours billed to the Plus Company for the SL services.
b) Please provide the same breakdown for the 2020 forecast.
c) Who is responsible for Capital costs related to Street lighting—standards, luminaires, etc.?
d) How much capital was billed in each of the above years?
e) Please provide a copy of the Fully Allocated service rate calculations for 2013 and 2020 forecast.

Response:

a)

Streetlight costs billed to Plus company		
		Projected
Type	2012	2020
Maintenance		
Labour	146,018.57	138,524.00
Burden	66,875.44	64,345.00
Vehicles	78,883.93	67,907.00
Total costs	291,777.94	270,776.00
Employee hours billed	4,006.00	2,879.58
Recoverable		
Labour	90,060.39	96,526.35
Burden	51,874.64	45,767.87
Supervision	171,325.66	23,752.10
Vehicles	68,963.68	45,511.73
	384,384.87	211,558.05
total employees hours billed capital	2,160.50	1,103.41

b) See chart above

c) Costs associated with capital work for streetlight is considered recoverable work for GSHI and is billed to the City of Greater Sudbury. GSHI receives a preapproved budget from the City for the work to be completed and in turn, bills actual costs to complete the required work. In no cases is any of the costs for streetlighting included in the Capital budget for GSHI.

d) GSHI billed the following for City Capital work completed in 2012 and provides an estimate of recoverable work for 2020:

	2012	2020
Cost for Streetlight Capital work invoiced to the City	$ 640,862	$ 347,735

e) GSHI bases the Labour crew rate on a 3-person crew. This includes a Crew leader and 3 Powerline Electricians. Crew rates are calculated below.

	2013	2020
Powerline Electrician hourly rate	$ 36.53	$ 42.41
Powerline Electrician hourly rate	$ 36.53	$ 42.41
Powerline Crew leader hourly rate	$ 40.42	$ 46.93
Crew rate	$ 113.47	$ 131.75
Burden rate	47.16%	54.32%
Burden $	$ 53.51	$ 71.57
Total hourly Crew rate charged	$ 166.98	$ 203.32

Vehicle charges are based on rate determined through the budgeting process to cover the costs of the Garage for the maintenance GSHI's fleet of vehicles. The hourly vehicle rate per class of vehicle is based on a 5 year rolling average of vehicle hours charged. The vehicles are charged based on the Operations staff time on the job.

	2013	2020
Vehicles		
Class A/B	$6.78/hour	$8.77/hour
Class C/D	$42.40/hour	$54.81/hour

4-EP-28 Regulatory Expenses Details

Question:

Reference: Exhibit 4, Tab 6, Schedule 3, Attachment 1, OEB Appendix 2-M

Please provide more detail regarding 2020 One Time costs, specifically Expert Witness costs, Consultants Costs and Intervenor costs compared to 2013 Rebasing.

Response:

Expert Witness Costs: GSHi has not budgeted any Expert Witness Costs for the 2020 Rate Application. This is consistent with the actual costs incurred in 2013.

Intervenor Costs: GSHi's cost for four Intervenors in 2013 was $51,537. When GSHi budgeted for this application, GSHi assumed the same number of intervenors and a nominal increase in costs ($60,000 total). GSHi believes this budget is reasonable, given it has the same number of intervenors as it did in its 2013 application.

Consultant Costs: GSHi has reallocated budget for its 2020 Cost of Service Application between categories to better reflect what has actually transpired for the preparation of the initial application versus what GSHi expected when preparing the budget. GSHi has transferred $45,000 from Consultants' costs to Incremental operating expenses associated with staff resources allocated to the application. GSHi provides the following table with a breakdown of the revised consultant costs budget and the costs incurred for the preparation of the initial application. Costs related to this interrogatory submission were not known at the time of filing this response and as such, have not been included.

Table 1 – COS Consultant Budget & Costs (for initial application)

Consultant Service	Budget	Actual to Dec 2019
Application Assistance	80,000.00	37,635.00
Transfer Pricing Study Update	10,000.00	8,700.00
Distribution System Plan Assistance	50,000.00	45,000.00
Asset Condition Assessment	40,000.00	30,000.00
Customer Consultation	40,000.00	36,352.00
	220,000.00	157,687.00

Included in the Application Assistance line are the models GSHi purchased to aid in the preparation of the application, preparation of the load forecast and LRAMVA workform, assistance and review of cost allocation and rate design as well as evidence review prior to submission.

5-EP-29

Question:

Reference: Exhibit 5 Tab 1 Schedule 1Attachment 2 OEB Appendix 2-OB 2020 Debt Instruments, Rows 4 and 5

a) Please provide the basis and details of the additional $497,462 from TD Equipment Financing Canada Inc related to 500 Regent Street.

b) Specifically indicate the reason why GSHi, rather than GSHP is servicing debt related to upgrades to the infrastructure of the 500 Regent Street property when GSHi is a tenant (as opposed to normal freehold improvements).

c) Please provide the basis and details for the additional $3,250,000 in Affiliated Debt.

d) Please provide an update and details of the Third Party $3,000,000 in additional debt.

e) Provide the Debt to Equity Ratio for each of 2013 and 2020 forecast.

Response:

a) GSHi entered into a financing agreement with TD Equipment Finance Canada Inc. in 2015 in the amount of $971,604. In the Test Year (2020), the outstanding balance of this loan will be $497,462. The finance term was for 10 years at a fixed interest rate of 4.33% and is secured by the specified assets under financing. This was a market rate of interest at the time (the OEB's deemed long-term debt rate was 4.77% in 2015). A copy of the financing agreement is included as Exhibit 5, Tab 1, Schedule 2, Attachment 3 of the initial rate application, which includes "Schedule A" listing a description of the collateral of the equipment financing loan. The collateral was primarily HVAC equipment financed when the building was renovated.

b) GSHi is the owner of the building and not a tenant, therefore GSHi believes it is appropriate that it service the debt related to building upgrades.

c) In October 2019, GSHi issued a promissory note to its parent company, GSU, in the amount of $3,250,000. This debt has a variable rate that matches the Board's deemed long-term debt rate as amended from time to time. The OEB Cost of Capital Report (page 53) provides that "For debt that has a variable rate, the deemed long-term debt rate will be a ceiling on the rate allowed for that debt. This applies whether the debt holder is an affiliate or a third-party." Accordingly, in its initial filing, GSHi used the deemed long-term debt rate of 4.13% for 2020 Test Year, as established by the Board's Cost of Capital parameters letter dated November 22, 2018. This has been updated as discussed in part (d).

As per its audited financial statements, GSHi had bank indebtedness of $5.5M at December 31, 2018 (see Exhibit 1, Tab 8, Schedule 1, Attachment 4 of the initial application). GSHi operated throughout 2018 and 2019 in a cash deficit position, with the net deficit amount fluctuating month-to-month. By entering into this Affiliated Debt agreement, GSHi formalized an affiliated debt loan agreement to alleviate cash flow pressures.

d) At the time of submission of these interrogatory responses, GSHi is actively investigating the arranging of third-party debt financing. In doing so, GSHi would endeavor to replace the $3,250,000 of Affiliated Debt entered into in October 2019 (discussed in part c) above) with third party debt. GSHi estimates that $5,500,000 in external debt will be arranged by April 1, 2020 at a rate of 2.42%. As terms have not been finalized, these are provided as placeholder figures only and are subject to change. This

differs from the debt structure proposed in the initial application. As such, GSHi submits as part of these interrogatory responses an updated Chapter 2 Appendix 2-OB.

e) Please see below for GSHi's 2013 debt to equity ratio, and an estimated debt to equity ratio for 2020.

Year	Debt-to-equity ratio
2013	3.31
2020	1.91

7-EP-30 R/C Rebalancing Bill Impacts

Question:

Reference: Exhibit 7, Tab 1 Schedule 1, Tables 1 and 5

Preamble: GSHi is proposing to rebalance Residential and Sentinel classes upwards as they are the only other classes below 100%. GSHI notes that applying the revenue change to classes above 100% would result in them moving further away from 100%.

a) Please confirm that the 2020 residential R/C ratio based on the CA model is 93.07 and the GSHi 2020 proposed R/C ratio is 93.72 after revenue is reallocated.

b) What are the total and distribution residential bill impacts with/without the increase in the R/C ratio?

c) Please discuss why GSHi is not delaying the change in R/C ratio to mitigate rate impacts?

Response:

a) Confirmed, as per originally filed figures. The revised figures are 91.02% and 91.44%.

b) The bill impacts with and without the R/C ratio increase are provided in the table below.

Residential Class	Status Quo	Proposed
R/C Ratio	91.02%	91.44%
Distribution Bill Impact %	13.1%	13.6%
Total Bill Impact %	3.4%	3.5%

c) GSHi has revised the transition period to 5 years to further mitigate the rate impacts to residential and sentinel class customers. A delay to residential rate increases would require a delay to the streetlight rate decreases. In GSHi's view it would not be appropriate to delay rate reductions for a class with an R/C ratio above 200%.

7-EP-31

Question:

Reference: Exhibit 7, Tab 1, Schedule 1, Table 6

Preamble: "GSHi is proposing to rebalance Residential and Sentinel classes upwards as they are the only other classes below 100%. GSHI notes that applying the revenue change to classes above 100% would result in them moving further away from 100%. Table 6 below provides GSHi's proposed rebalancing over three years."

a) Assuming annual 2021-2024 Revenue Requirement increases based on the OEB inflator, please provide for the Residential Class the annual and 5-year bill impacts (distribution and total) for 2020-2024 using
   i. Status quo R/C ratios and
   ii. Proposed R/C ratios.

b) Discuss why rate mitigation is/is not appropriate.

Response:

a) The requested information is provided in the two tables below. For clarity, the distribution bill impact is the Sub-Total B bill impact (including RTSR) and a 2% inflation factor is applied to the revenue requirement and revenues.

i. Status Quo R/C Ratios

Residential Class	**2020**	**2021**	**2022**	**2023**	**2024**	**5-Year**
Monthly Charge	$30.66	$31.27	$31.90	$32.54	$33.19	
R/C Ratio	91.02%	91.02%	91.02%	91.02%	91.02%	
Distribution Bill Impact %	13.1%	1.8%	1.8%	1.8%	1.8%	21.5%
Total Bill Impact %	3.4%	0.6%	0.6%	0.6%	0.6%	5.9%

ii. Proposed R/C Ratios

Residential Class	**2020**	**2021**	**2022**	**2023**	**2024**	**5-Year**
Monthly Charge	$30.81	$31.56	$32.33	$33.11	$33.90	
R/C Ratio	91.44%	91.81%	92.17%	92.53%	92.87%	
Distribution Bill Impact %	13.6%	2.2%	2.2%	2.2%	2.2%	23.9%
Total Bill Impact %	3.5%	0.7%	0.7%	0.7%	0.7%	6.4%

a) GSHi has revised its proposal to transition rates over a 5-year period, instead of 3 years, so the total bill impact in 2020 is lower than the bill impacts as originally filed. As the total bill impact for a typical residential customer is now 3.5%, GSHi believes that rate mitigation is not warranted.