Waterloo North Hydro (WNH)

Interrogatory Responses

EB-2020-0059

September 28, 2020

Table of Contents

OEB STAFF (STAFF) INTERROGATORIES 18

EXHIBIT 1 – ADMINISTRATIVE DOCUMENTS 18

1-Staff-1 18

1-Staff-2 20

1-Staff-3 25

1-Staff-4 27

1-Staff-5 28

1-Staff-6 30

1-Staff-7 32

EXHIBIT 2 – RATE BASE 35

2-Staff-8 35

2-Staff-9 41

2-Staff-10 42

2-Staff-11 43

2-Staff-12 44

2-Staff-13 46

2-Staff-14 48

2-Staff-15 49

2-Staff-16 52

2-Staff-17 55

2-Staff-18 57

2-Staff-19 58
2-Staff-20 59
2-Staff-21 61
2-Staff-22 62
2-Staff-23 62
2-Staff-24 63
2-Staff-25 64
2-Staff-26 65
2-Staff-27 66
2-Staff-28 67
2-Staff-29 68
2-Staff-30 71
EXHIBIT 3 – OPERATING REVENUE 73
3-Staff-31 73
3-Staff-32 75
3-Staff-33 79
3-Staff-34 83
3-Staff-35 84
3-Staff-36 85
3-Staff-37 89
3-Staff-38 91
3-Staff-39 91
EXHIBIT 4 – OPERATING EXPENSES 92
4-Staff-40 92

4-Staff-41 94
4-Staff-42 97
4-Staff-43 98
4-Staff-44 100
4-Staff-45 102
4-Staff-46 104
4-Staff-47 105
4-Staff-48 106
4-Staff-49 107
4-Staff-50 111
4-Staff-51 112
4-Staff-52 115
4-Staff-53 116
4-Staff-54 117
4-Staff-55 120
4-Staff-56 122
4-Staff-57 123
4-Staff-58 126
4-Staff-59 129
4-Staff-60 134
4-Staff-61 135
EXHIBIT 5 – COST OF CAPITAL 138
5-Staff-62 138
EXHIBIT 7 – COST ALLOCATION 139

7-Staff-63 139
7-Staff-64 142
7-Staff-65 143
7-Staff-66 145
7-Staff-67 149
EXHIBIT 8 – RATE DESIGN 151
8-Staff-68 151
8-Staff-69 152
8-Staff-70 153
8-Staff-71 154
8-Staff-72 155
8-Staff-73 156
8-Staff-74 158
8-Staff-75 159
8-Staff-76 164
EXHIBIT 9 – DEFERRAL AND VARIANCE ACCOUNTS 165
9-Staff-77 165
9-Staff-78 166
9-Staff-79 168
9-Staff-80 169
9-Staff-81 170
9-Staff-82 170
9-Staff-83 171
9-Staff-84 173

9-Staff-85 175
9-Staff-86 177
9-Staff-87 179
9-Staff-88 183
9-Staff-89 184
9-Staff-90 186
9-Staff-91 189
9-Staff-92 189
9-Staff-93 192

CONSUMERS COUNCIL OF CANADA (CCC) INTERROGATORIES ... 194

EXHIBIT 1 – ADMINISTRATION 194

1-CCC-1 194
1-CCC-2 194
1-CCC-3 196
1-CCC-4 196
1-CCC-5 198
1-CCC-6 198
1-CCC-7 201
1-CCC-8 201
1-CCC-9 203
1-CCC-10 204
1-CCC-11 205
1-CCC-12 205
1-CCC-13 206

1-CCC-14 208
1-CCC-15 209
1-CCC-16 210
1-CCC-17 211
1-CCC-18 211
1-CCC-19 212
1-CCC-20 213
1-CCC-21 214
1-CCC-22 214
1-CCC-23 214
1-CCC-24 216
EXHIBIT 2 – RATE BASE 217
2-CCC-25 217
2-CCC-26 217
2-CCC-27 219
EXHIBIT 4 – OPERATING EXPENSE 220
4-CCC-28 220
4-CCC-29 221
4-CCC-30 221
4-CCC-31 222
4-CCC-32 223
4-CCC-33 223
EXHIBIT 8 – RATE DESIGN 224
8-CCC-34 224

ENERGY PROBE (EP) INTERROGATORIES 225

EXHIBIT 1 – ADMINISTRATIVE DOCUMENTS 225

1-EP-1 225

1-EP-2 227

1-EP-3 228

1-EP-4 230

1-EP-5 231

1-EP-6 232

EXHIBIT 2 – RATE BASE 238

2-EP-7 238

2-EP-8 239

2-EP-9 244

2-EP-10 245

2-EP-11 246

2-EP-12 246

2-EP-13 248

2-EP-14 249

2-EP-15 251

EXHIBIT 3 – OPERATING REVENUE 252

3-EP-16 252

3-EP-17 253

3-EP-18 254

EXHIBIT 4 – OPERATING EXPENSES 255

4-EP-19 255

EXHIBIT 6 – REVENUE REQUIREMENT 257

6-EP-20 257

EXHIBIT 7 – COST ALLOCATION 258

7-EP-21 258

EXHIBIT 8 – RATE DESIGN 259

8-EP-22 259

ENVIRONMENTAL DEFENSE (ED) INTERROGATORIES 260

EXHIBIT 2 – RATE BASE 260

2-ED-1 260

2-ED-2 261

2-ED-3 264

2-ED-4 265

2-ED-5 267

EXHIBIT 8 – RATE DESIGN 271

8-ED-6 271

8-ED-7 278

EXHIBIT 2 – CAPITAL RATE BASE 280

2-ED-8 280

2-ED-9 285

2-ED-10 289

2-ED-11 289

2-ED-12 293

2-ED-13 296

2-ED-14 298

2-ED-15 300

2-ED-16 301

EXHIBIT 7 – COST ALLOCATION 305

7-ED-17 305

7-ED-18 307

HYDRO ONE (HONI) INTERROGATORIES 315

EXHIBIT 9 – DEFFERAL AND VARIANCE ACCOUNTS 315

9–HONI–1 315

9–HONI–2 316

9–HONI–3 317

SCHOOL ENERGY COALITION (SEC) INTERROGATORIES 318

EXHIBIT 1 – ADMINISTRATION 318

1–SEC-1 318

1-SEC-2 318

1-SEC-3 319

1-SEC-4 320

1-SEC-5 320

1-SEC-6 321

1-SEC-7 322

1-SEC-8 323

1-SEC-9 324

1-SEC-10 324

1-SEC-11 325

1-SEC-12 325

1-SEC-13 327
1-SEC-14 329
1-SEC-15 329
1-SEC-16 330
1-SEC-17 331
1-SEC-18 331
1-SEC-19 332
1-SEC-20 333
1-SEC-21 333
1-SEC-22 335
1-SEC-23 335
1-SEC-24 336
1-SEC-25 336
1-SEC-26 337
EXHIBIT 2 – RATE BASE 338
2-SEC-27 338
EXHIBIT 3 – OPERATING REVENUE 339
3-SEC-28 339
3-SEC-29 339
EXHIBIT 4 – OPERATING EXPENSE 340
4-SEC-30 340
4-SEC-31 340
4-SEC-32 341
4-SEC-33 341

4-SEC-34 342

4-SEC-35 343

4-SEC-36 343

EXHIBIT 7 – COST ALLOCATION 345

7-SEC-37 345

EXHIBIT 8 – RATE DESIGN 349

8-SEC-38 349

VULNERABLE ENERGY CONSUMERS COALITION (VECC) INTERROGATORIES 350

EXHIBIT 1 – ADMINISTRATION 350

1-VECC-1 350

1-VECC-2 352

1-VECC-3 353

1-VECC-4 354

1-VECC-5 355

1-VECC-6 357

1-VECC-7 358

EXHIBIT 2 – RATE BASE 359

2-VECC-8 359

2-VECC -9 360

2-VECC -10 361

2-VECC-11 362

2-VECC-12 363

2-VECC-13 364

2-VECC-14 366
2-VECC-15 368
2-VECC-16 368
2-VECC-17 369
2-VECC-18 369
2-VECC-19 370
2-VECC-20 371
EXHIBIT 3 - OPERATING REVENUE 372
3-VECC-21 372
3-VECC-22 373
3-VECC-23 375
3-VECC-24 376
3-VECC-25 377
3-VECC-26 379
3-VECC-27 381
3-VECC-28 382
3-VECC-29 383
3-VECC-30 384
3-VECC-31 386
3-VECC-32 389
3-VECC-33 390
3-VECC-34 391
3-VECC-35 392
EXHIBIT 4 – OPERATING EXPENSE 394

4-VECC-36 394
4-VECC-37 396
4-VECC-38 396
4-VECC-39 397
4-VECC-40 398
4-VECC-41 398
4-VECC-42 399
4-VECC-43 400
4-VECC-44 400
4-VECC-45 401
4-VECC-46 402
4-VECC-47 402
4-VECC-48 403
4-VECC-49 404
EXHIBIT 5 – COST of CAPITAL 404
5-VECC-50 404
5-VECC-51 405
5-VECC-52 406
EXHIBIT 7 – COST ALLOCATION 407
7–VECC–53 407
7– VECC–54 409
7–VECC–55 410
7–VECC–56 412
7– VECC–57 414

EXHIBIT 8 – RATE DESIGN 415

8–VECC-58 415

8–VECC-59 416

8–VECC-60 418

EXHIBIT 9 - DEFERRAL AND VARIANCE ACCOUNTS 418

9-VECC-61 418

9-VECC-62 419

Attachments

Attachment 1a	Waterloo EFritz 2020 09 28 Response
Attachment 1b	Waterloo MNassar 2020 09 28 Response
Attachment 2	Load Forecast Jan – Aug 2020
Attachment 3	CDM 2018-2020 Program Details
Attachment 4	WNH Breakfast – Business Feedback Results
Attachment 5a	WNH Annual Tax Return – 2019
Attachment 5b	WNH MoF PILs Audit Summary 2015
Attachment 6	Load Forecast – Load Displacement Modification
Attachment 7	2021 RRWF 13 Rate Design Modification
Attachment 8	WNH – HONI Billing Arrangement
Attachment 9	2006 EDR Handbook Sch11-2
Attachment 10a	Support – Power Liability Explanation
Attachment 10b	Support – Power Liability Explanation
Attachment 11	2020 & 2021 Operating & Capital Budget Package
Attachment 12	WNH Amended LDC Liqiudity Reporting Worksheet 2020 08 28
Attachment 13	Cost of Service Kick Off and Consensus Meeting
Attachment 14a	WNH Project Estimate Ph 1
Attachment 14b	WNH Project Estimate Ph 2
Attachment 15a	WNH Scorecard - English
Attachment 15b	WNH Scorecard - French
Attachment 16	2014-2019 & 2021 WNH Internal Scorecard
Attachment 17	Sample Inspection Records
Attachment 18	GSC Transformer Purchasing Specifications
Attachment 19	Community Energy Investment Strategy
Attachment 20	Community Climate Adaptation Strategy
Attachment 21	Pan-Canadian Framework on Clean Growth and Climate Change
Attachment 22a	Letter A – Standby Rates Notification – Load Displacement Customers

Attachment 22b	Letter B – Standby Rates Notification – GA Avoidance Customers
Attachment 23	Adapting to Climate Change State of Play and Recommendations for the Electricity Sector in Canada
Attachment 24	Executvie Total Compensation Policy
Attachment 25	Brickworks Communication
Attachment 26	Fixed Assets – Half Year Rule Modification
Attachment 27	Fixed Assets – Software Depreciation Modification
Attachment 28	Load Forecast – CDM Persistence Modification
Attachment 29	Customer Count Trend Analysis
Attachment 30	IESO COVID-19 Impacts on Ontario’s Electricity System
Attachment 31a	CDM WNH 2006-10 Final OPA CDM Results
Attachment 31b	CDM WNH 2011-15 program Persistence Results Report

OEB STAFF (STAFF) INTERROGATORIES

EXHIBIT 1 – ADMINISTRATIVE DOCUMENTS

1-STAFF-1

Interrogatory:

Updated Revenue Requirement Work Form (RRWF) and Models

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

In addition, please file an updated set of models that reflects the interrogatory responses.

Response:

Please refer to the following Attachments:

Waterloo_IRR_Rev_Reqt_Workform_2021_COS_20200928 – changes documented on 3. Data_Input_Sheet, 10. Load Forecast, 11. Cost_Allocation, 13. Rate Design and summarized on 14. Tracking_Sheet.

Waterloo_IRR_Load_Forecast_2021_COS_20200928 – changes documented on Changes tab with reference to specific interrogatories.

Waterloo_IRR_PILs_Workform_2021_COS_20200928 – changes documented on tab S1. Integrity Checks with reference to specific interrogatories.

Waterloo_IRR_LRAMVA_Workform_2021_COS_20200928 – changes documented on 1-a. Summary of Changes with reference to specific interrogatories.

Waterloo_IRR_Cost_Allocation_Model_2021_COS_20200928 – changes documented as follows:

1. I3 TB updated per revised RRWF
2. I4 BO ASSETS updated per capital revisions as discussed in RRWF
3. I6.1 Revenue updated per RRWF & Load Forecast revisions
4. I7.1 Meter Capital number of meters updated per IR 7-Staff-67
5. I8 Demand Data: Co-Incident and Non-Co-Incident Peaks updated per revised Load Profile model per Load Forecast 2021 kWh per above.

Waterloo_IRR_Load_Profile_Model_2021_COS_20200928 – changes made to Model Input – 2021 tab, cells D6:J6 for updated Load Forecast 2021 kWh per above.

Waterloo_IRR_RTSR_Workform_2021_COS_20200928 – changes documented as follows:

1) 4. UTRs and Sub-Transmission per 8-Staff-70
2) 5. Historical Wholesale per 8-Staff-70

Waterloo_IRR_Tariff_Schedule_and_Bill_Impact_Model_COS_20200928 – changes documented as follows:

1) 4. Additional Rates per Deferral and Variance Account Workform
2) 5. Final Tariff Schedule per updated RRWF, DVA Workform and 8-Staff-72
3) 6. Bill Impacts

Waterloo_IRR_Deferral_and_Variance_Account_Workform_2021_COS_20200928 – changes documented as follows:

1) 2a. Continuity Schedule
2) 2b. Continuity Schedule
3) 4. Billing Determinants
4) 5. Allocation of Balances
5) 6.2a CBR B Allocation
6) 7. Rate Rider Calculations

Waterloo_IRR_2021_Filing_Requirements_Chapter2_Appendices_2021_COS_20200928 – changes documented on each tab as necessary.

Waterloo_IRR_2020-Benchmarking-Spreadsheet-Forecast-Model_2021_COS_20200928 – changes documented as follows:

1) OM&A changes per Appendix 2-JC
2) 2020 and 2021 capital changes
3) Updated with actual 2019 Benchmarking results

Waterloo_IRR_Rate_Order_2021_COS_20200928 – changes documented as follows:

1) Fixed and Variable Rates per RRWF
2) Updated RTSR Workform
3) Updated Deferral and Variance Account Workform
4) Standby Power Service Classification per 8-Staff-72

1-STAFF-2

Interrogatory:

Letters of Comment

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

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

Response:

As of September 8, 2020, there are two Letter of Comments posted on the OEB website for EB-2020-0059. The responses are included below. WNH will monitor the OEB website for further Letters of Comment. The responses are also provided as Attachments 1 a) and 1 b).

Letter of Comment 1

September 28, 2020

Dear M Nassar:

Thank you for your Letter of Comment submitted to the Ontario Energy Board with respect to Waterloo North Hydro Inc.'s (WNH) proposed Cost of Service Rate Application for rates effective January 1, 2021. We appreciate all customer feedback and the time you took to submit your comments.

You ask about the unexplained delivery charge and that you do not believe a rate change is required. The delivery charge that WNH charges is the portion of your bill used to build, operate and maintain a safe and reliable electricity distribution and transmission system. It is used to pay for provincial transmission lines and, closer to home, for new connections, road relocations and to service, rebuild and upgrade transformers, poles and wires that are used to deliver the electricity to your home. A significant portion of our system was

installed in the 1960s and 1970s and these upgrades combined with our smart grid technology ensure a more reliable system and allow us to respond faster to outages. It also pays for metering, billing and collections of all electricity related charges.

WNH takes its obligations with regards to customer service seriously. WNH has met most of the customer focused performance targets established by the Ontario Energy Board (OEB) for connecting new residential/small business services on time, answering telephone calls on time and billing accuracy. WNH has met the customer performance targets for meeting scheduled appointments on time since 2015, with the exception of 2019 due to a factor not in control of WNH.

WNH has applied to the Ontario Energy Board for a 2.2% distribution rate increase beginning January 1. If the application is approved, it will mean a monthly increase of $0.70 for the average residential customer using 750 kWh a month.

The OEB will only approve an increase in distribution rates if WNH can provide adequate evidence to support its underlying costs. The OEB’s rate hearing process allows anyone to participate including customers and businesses. Various intervenor groups, acting on behalf of consumers, will review the details and may challenge the specifics of WNH’s application. A final decision on the application is expected by the end of the year.

There is help available for customers struggling to pay their electricity bills such as the Ontario Electricity Support Program (OESP), the Low-Income Energy Assistance Program (LEAP) and the Affordability Trust Fund (AFT). I encourage you to call our office and speak to one of our Customer Service Representatives should you require such assistance.

In addition, the provincial government is making funds available through WNH for the COVID-19 Energy Assistance Program (CEAP) to help residential customers pay their

energy bills. CEAP provides a one-time credit to eligible residential electricity customers to help them catch up on their energy bills and resume regular payments.

To learn more or to apply, please visit https://www.wnhydro.com/ceap

Thank you again for your comments and please contact us again should you have questions or concerns.

Yours truly,

Albert P. Singh, MBA, CPA CGA
Vice-President, Finance and CFO

Letter of Comment 2

September 28, 2020

Dear E Fritz:

Thank you for your Letter of Comment submitted to the Ontario Energy Board (OEB) with respect to Waterloo North Hydro Inc.'s (WNH) proposed Cost of Service Rate Application for rates effective January 1, 2021. We appreciate all customer feedback and the time you took to submit your comments.

You mention a concern that you find the increase to be unreasonable and problematic due to Management's inability to manage its costs.

Rest assured the concern you raised is unfounded. WNH management carefully controls its costs. WNH is applying for an increase on the distribution rate to maintain and operate

local electricity systems. It is used for new connections, road relocations and to service, rebuild and upgrade transformers, poles and wires. A significant portion of our system was installed in the 1960s and 1970s and these upgrades combined with our smart grid technology ensure a more reliable system and allow us to respond faster to outages.

The OEB evaluates the utilities based on a benchmarking model that is used to determine the cost efficiency of distributors. There are 5 cohorts with Cohort 1 being the most efficient and Cohort 5 being the least. The largest group making up 41% of all utilities are in Cohort 3. WNH has been in Cohort 3 since 2014 and is projected to be in Cohort 3 through 2021.

A challenge that WNH faces is that WNH's Service Area is 8% larger than Toronto Hydro's, but with 92% less customers. As in the past, WNH always looks for efficient and resourceful ways to continue providing a strong and reliable infrastructure covering a large service area with fewer customers to bear the costs.

The OEB's rate hearing process allows anyone to participate including customers and businesses. Expert intervenors, acting on behalf of consumers, will challenge the specifics of WNH's application to ensure costs are managed. A final decision on the application is expected by the end of the year.

Thank you again for your comments and please contact us again should you have questions or concerns.

Yours truly,

Albert P. Singh, MBA, CPA CGA
Vice-President, Finance and CFO

1-STAFF-3

Interrogatory:

Customer Survey

Ref 1: Attachment 1-9a Customer Engagement Report, pp. 4-5

Ref 2: Exhibit 1 – Changes After Engagement, pp. 109-111

Ref 3: Attachment 1-9b Customer Engagement Report

Ref 4: Chapter 2 appendices – 2-AB

Brickworks asked customers how important outages and causes of outages are to them based on costs. Then Brickworks asked customers to prioritize their preferences, which included reliability and costs. The outcome appears that reliability is only important up to the point it causes additional costs to the majority of customers. After the engagement, Waterloo North Hydro stated that it adjusted its plans by increasing capital by $422,000 to move overhead lines to underground and invest in innovative investments such as Customer Information System upgrades and smart switches and reclosers. Waterloo North Hydro also noted that to accommodate this increase in spending, it deferred capital spending for a new Enterprise Resource Planning System (ERPS) to 2022.

a) Did Waterloo North Hydro prepare a reliability to cost analysis to justify this change in the plan? If so, please provide.

b) Waterloo North Hydro stated that it determined that a significant group of customers would like overhead services moved underground. However, in the report in reference 3, it shows that 56% of customers would not be willing to pay more for underground distribution. Please explain how Waterloo North Hydro determined that it was prudent to increase area rebuilds by $200,000 to accommodate underground distribution.

c) Please provide the business case or capital investment details for the ERPS.

d) The total net capital expenditure for 2022 in reference 4 is higher than 2021. Please confirm if this is due to the deferral of the ERPS? If not please explain the increase.

Response:

a) WNH has not prepared a formal reliability-to-cost analysis report.

The customer engagement survey results show that 89% of customers surveyed feel a Smart Grid (Grid Modernization program) is important to prevent or reduce power interruptions. Please see Exhibit 1, Attachment 1-9, p. 4.

b) WNH recognizes that customers have a reluctance to pay more money, but WNH also recognizes that reliability, especially during major weather events, is of paramount importance to its customers (p. 5 of Attachment 1-9a and p. 12 of Attachment 1-9b).

The creation of this project allows WNH to address reliability issues for those customers with elevated risk of equipment damage and prolonged outages during major storms. As secondary services are less expensive to bury than primary lines, this approach is also sensitive to customer's feedback regarding costs.

WNH's experience with recent ice and wind storms points out that the weak spots in its system during major weather events are overhead secondary services in heavily treed areas. It is common for fallen trees or branches to damage customer owned equipment, which requires WNH to first disconnect the service, the customer to hire an electrician to fix the damage, and WNH to reconnect the service. Typical outages for customers under these circumstances are longer than 24 hours. This program will not only reduce the risk of prolonged outages for those

customers, but also during major storms it will help free up WNH resources to fix and restore power to other parts of its system faster.

Please refer to Exhibit 2, Attachment 2-2, Appendix B, pg. 48-50 for more information.

c) In 2015, WNH began to recognize that a number of its corporate information systems were becoming increasingly costly to maintain and limiting in their ability to support efficiency and functionality improvements in its corporate business processes. Purchased in 2005, WNH's Superion Enterprise Resource Planning (Superion ERP) system was identified as one of those systems.

A vendor evaluation was concluded in 2018 of what was currently available in the market. WNH's planned spend beginning in 2022 is based on the results of this evaluation. WNH will create a formal plan, including an updated market analysis, prior to the investment in 2022.

d) WNH deferred $1.25 million in ERPS costs from 2021 to 2022. This contributed to the net capital expenditure for 2022 being higher than that in 2021.

1-STAFF-4

Interrogatory:

Customer Survey

Ref 1: Attachment 1-9b Customer Engagement Report, p. 8

Ref 2: Chapter 2 Appendices – 2AA

Brickworks asked customers to rate their interest in improvements and upgrades in the next five years. In Waterloo North Hydro's system service capital budget, it includes

system investments such as contingency enhancement, grid modernization, grid resilience, and station equipment upgrades.

Please explain why the types of system upgrades included in Waterloo North Hydro's system service capital budget are not included in this section of the customer engagement.

Response:

The references noted above in regards to Improvements and Upgrades were meant to focus on customer facing services and communications. References to System Service upgrades (distribution related) are mentioned elsewhere in the survey, specifically p. 12, 28 and 37 of Reference 1: Attachment 1-9b Customer Engagement Report.

1-STAFF-5
Interrogatory:

Performance Measurement
Ref 1: Exhibit 1 – Performance Measurement, p. 118

Waterloo North Hydro stated that it is committed to improve reliability through reviewing the worst-performing feeders on an on-going basis.

a) Please provide the list of worst-performing feeders, which should include the feeder designation, length of the feeder, and reliability statistics for the feeder itself.

b) Based on this list of worst-performing feeders, how many feeders on the list are addressed in the 2021 capital budget?

c) How has Waterloo North Hydro paced the capital budget to address the worst-performing feeders?

Response:

a)

2019 Annual Service Continuity Report - Appendix A Summary (WNH Feeder Performance) Excluding Scheduled, Loss of Supply & Major Event Days									
Ranking	Feeder	2019 Length (km)	2015 SAIDI	2016 SAIDI	2017 SAIDI	2018 SAIDI	2019 SAIDI	3 yr - Average CMI	3 yr - Average SAIDI
1	HS22	35	0.0073	0.0155	0.0926	0.0724	0.1399	335,209	0.1016
2	3F68	95	0.0019	0.0070	0.0263	0.0402	0.0634	142,739	0.0433
3	HS20	14	0.0021	0.0351	0.0636	0.0387	0.0039	116,746	0.0354
4	ER44	54	0.0125	0.0416	0.0224	0.0815	0.0016	115,904	0.0351
5	3F61	122	0.0029	0.0022	0.0958	0.0048	0.0004	110,997	0.0337

2019 Annual Service Continuity Report - Appendix A Summary (WNH Feeder Performance) Excluding Scheduled, Loss of Supply & Major Event Days									
Ranking	Feeder	2019 Length (km)	2015 SAIFI	2016 SAIFI	2017 SAIFI	2018 SAIFI	2019 SAIFI	3 yr - Average Customer Frequeuncy	3 yr - Average SAIFI
1	HS22	35	0.1379	0.1432	0.2306	0.0514	0.1314	7,573	0.1378
2	3F68	95	0.0011	0.0027	0.0944	0.2163	0.0479	6,572	0.1196
3	HS20	14	0.0013	0.0748	0.1851	0.0695	0.0032	4,724	0.0859
4	ER44	54	0.0086	0.0390	0.0963	0.0462	0.0010	2,629	0.0478
5	3F61	122	0.0012	0.0013	0.0970	0.0026	0.0002	1,830	0.0333

b) Work on feeders HS22, 3F68, HS20, and ER44 are included in the 2021 capital program. A plan for feeder 3F61 is currently being developed.

c) Causes contributing to Worst Performing Feeders (WPF) normally fall into the categories that require System Renewal, System Service, or O&M investments.

Capital investments to address WPFs are prioritized and paced the same as any other capital project in these categories. Please refer to DSP, 4.2.2.4 Pacing of Capital Expenditures for a full description of the pacing process.

1-STAFF-6

Interrogatory:

Executive Compensation

Ref 1: Exhibit 1 – 2.1.4 Administration, pp. 54-56

As part of an approved settlement proposal dated November 13, 2015, Waterloo North Hydro agreed to undertake a review of its executive compensation incentive plans with its board of directors to evaluate the potential for more objective measures. Waterloo North Hydro stated that in December 2015, the Waterloo North Hydro board developed and approved a total compensation policy for its Executive team. Waterloo North Hydro also stated that it engages the services of an independent external compensation consultant who provides research to analyze the competitive markets and to establish total compensation that will attract, retain, and motivate employees.

a) Please confirm if the development of the compensation policy approved in December 2015 started before the approved settlement proposal.

b) Did Waterloo North Hydro engage in the services of an independent external compensation consultant in the development of the December 2015 compensation policy? If not, why not? If so, what was the vintage of the competitive market research provided by the independent external compensation consultant?

c) Please explain the differences between the December 2015 compensation policy and the previous compensation policy.

d) Waterloo North Hydro stated that the goals, which incentive pay is based on, are weighted. Please provide the weights for the four performance objectives listed for the past five years.

e) Is there a cap to the total executive compensation? If so, how is it established? If not, how is the per-unit executive compensation established?

Response:

a) The development of the compensation policy approved in December 2015 started before the approved settlement proposal.

b) In 2015, WNH engaged a consultant to conduct current market based research and provide information to the WNH Board of Directors which was used to determine the appropriate compensation for the executive group.

c) The previous compensation policy was salary based and did not include any performance incentives.

d) The following table shows the weights for the four performance objectives listed for the past five years.

	2015	2016	2017	2018	2019
Objective #1	N/A	25.0%	20.0%	20.0%	20.0%
Objective #2		30.0%	30.0%	30.0%	30.0%
Objective #3		25.0%	30.0%	30.0%	30.0%
Objective #4		20.0%	20.0%	20.0%	20.0%

The performance incentives plan was developed in 2015 and implemented in 2016.

e) There is a cap to the total executive compensation. The cap is established by the HR and Compensation Committee of the WNH Board of Directors and is reviewed every three years with industry benchmarks.

1-STAFF-7

Interrogatory:

Conditions of Service

Ref 1: Exhibit 1 – Statement Regarding Conditions of Service, p. 57

Waterloo North Hydro states that the Conditions of Service would be updated because of the proposed Standby Charges.

Please provide draft updates to the Conditions of Service, if the Standby Charges are approved.

Response:

WNH proposes the following additions to the existing Conditions of Service.
Under existing Section 2.4 Tariffs and Charges, add a new subsection as follows:

2.4.5 Standby Charges

The Standby Charge will apply to customers in the GS>50kW and Large Use Customers with load displacement generation or storage, here within referred to as Load Displacement Generation (LDG), equal to or exceeding 50kW. For customers with LDG, WNH is required to maintain sufficient distribution system capacity to supply the customer's maximum demand in the event that the LDG is offline.

The Standby Charge will be calculated one of two ways:

a) Variable (metered) approach:

The Standby Charge will be applied to the coincident peak load delivered by the LDG on a per kilowatt basis and billed monthly at the distribution volumetric rate for the applicable rate class of the customer. For facilities without a WNH revenue meter monitoring the output of the LDG, the Standby Charge will be applied based on the LDG nameplate capacity on a per kilowatt basis and billed monthly whether backup power is taken or not.

b) Fixed (calculated) approach:

The Standby Charge will be applied to the difference between the monthly peak load and a pre-determined Fixed Capacity Reserve value on a per kilowatt basis at the distribution volumetric rate for the applicable rate class of the customer. This approach is only available to those customers with stable and predictable load patterns as described in Section 3.7.3. The Fixed Capacity Reserve value will be set as the average of the three (3) most recent annual peak load demands of the customer, without LDG.

Regardless of the approach chosen above, Customers are eligible to reduce their Standby Charges in proportion to the verified Load Curtailment value (load they are able to curtail automatically and instantaneously) in case the LDG comes offline. Refer to Section 3.7.3 for more details.

Customers who use their LDG solely for the purpose of Global Adjustment avoidance are eligible to have their Standby Charges reduced to 0kW provided a WNH revenue meter is installed to measure the LDG output.

Standby charges are subject to annual rate reviews and will be adjusted accordingly based on data collected.

Under existing Section 3.7 Embedded Generation, add a new subsection as follows:

3.7.3 Load Displacement Generation or Storage Load Displacement Generation (LDG) is behind the meter generation (or storage) produced by a Customer that is used to partially or fully displace their own electricity needs. Generation output from the LDG Facility must not feed into the WNH distribution system. Customers intending to install a LDG Facility must first follow the connection process described in subsection 3.7.2 as well as provide information necessary to establish appropriate backup power needs and corresponding standby charge levels.

Customers with LDG size equal to or greater than 50kW who also require reserve capacity on WNH's distribution system to the LDG facility, will be required to pay Standby Charges as described in detail in Section 2.4.5.

Customers have a choice between being billed on fixed capacity needs or variable capacity needs. To qualify for a Fixed Capacity Reserve approach, the historical load profile of the customer, without any LDG, must be stable and predictable. Stable and predictable load patterns are defined as those where the variation in the customer's annual peak demand, without generation, over the most recent 3-year period does not exceed +/- 15% from the average over the same period, to a maximum variance of 250kW, and where there is a reasonable expectation that this level of load will continue over the next year.

Customers also have the option to reduce their reserve capacity needs by demonstrating the amount of load they can curtail automatically and instantaneously in case their LDG comes offline. Load Curtailment amount will be established through technical discussions with the customer substantiated by witness testing.

EXHIBIT 2 – RATE BASE

2-STAFF-8

Interrogatory:

COVID Impacts

Ref 1: Exhibit 3 – COVID Impact to Load Forecast, p. 17

Waterloo North Hydro stated in Ref 1 that "It is very difficult to determine at this time what the lasting implications of this pandemic will be on customers, businesses and electricity load however it will have long term impacts."
Waterloo North Hydro proposes either to use a load forecast that includes the forecasted impacts of COVID-19 or to track the difference between load forecast and actuals in a deferral and variance account for future disposition. Both of these options would effectively be for the five-year term.

a) Since Waterloo North Hydro has requested that COVID-19 impacts be taken into effect for the load forecast, has Waterloo North Hydro reflected COVID-19 impacts in its capital expenditures? If so, how?

b) If Waterloo North Hydro has not included COVID-19 impacts in its capital expenditures, please explain why?

c) Please provide the planned and actual capital expenditures from March to July 2020.

Response:

a) WNH did not include COVID-19 related impacts on capital expenditures at the time of filing the application as the impacts were not clearly understood or quantifiable

during the development of the application. WNH chose to file the already prepared evidence with the intent to update the capital expenditure during the interrogatory phase of the rate application process.

WNH has now had an opportunity to update its capital plan to reflect all known changes arising with the passage of time, including all the changes that are directly and indirectly due to COVID-19.

The table below represents WNH's revised capital plan reflecting the best available information management of WNH has as of the time of filing the IRRs.

Table 2-Staff-8a-1

Adjustments to CapEx	2020	2021	2022	2023	2024	2025
System Access	982,714	-	-	(346,000)	-	-
System Renewal	(172,149)	851,540	300,000	(100,000)	(100,000)	(100,000)
System Service	(435,500)	-	-	-	200,000	150,000
General Plant	(1,201,545)	406,690	208,289	156,408	513,592	-
Adjustments to CapEx	(826,480)	1,258,230	508,289	(289,592)	613,592	50,000
Adjustment to Contributed Capital	532,644	53,100	-	(227,647)	-	-
Adjustments to Net CapEX	(1,359,124)	1,205,130	508,289	(61,945)	613,592	50,000

System Access updates:

Changes in customer driven projects created a net increase of $982,714 in 2020 capital expenditures. This increase is comprised of two main drivers: Customer Connections at $514,000 and Expansions (Subdivisions) at $507,000. The developer of one subdivision project, valued at $346,000, advanced the project to 2020 from 2023. WNH is showing the offsetting decrease in System Access in

2023. These changes also triggered an increase in contributed capital of $523,644.

In 2021, WNH is updating the mix of customer driven projects, but the net effect on capital expense remains unaffected. Due to the project mix update, WNH expects an additional $53,100 in contributed capital.

System Renewal updates:

Due in part to the increase in work-from-home arrangements arising due to COVID-19, WNH has deferred of $1,100,000 of 2020 Underground Line Renewal projects to minimize outage impact to customers. This deferral is a unique and one-time deferral of underground renewal arising due to COVID-19. It is partly offset by the completion of a portion of a 2019 Underground Line Renewal project in 2020, resulting in additional $380,000 capital expense in 2020. The project extended into 2020 due to additional work triggered by secondary service cables found to be in poor condition.

The deferred Underground Line Renewal work is to be completed in 2021 ($600,000) and 2022 ($500,000). To mitigate this increase, WNH has re-paced its forecast System Renewal program with a reduction deferral of $500,000 between 2022 and 2025.

In 2020 WNH also experienced higher than budgeted equipment damage and failures ($496,300 extra costs above the budget of $304,486). Several adjustments below materiality were made due to material, resource, or outage impacts. The net effect of all the above described changes in the 2020 System Renewal category is a decrease of $172,149 and a net increase of $851,540 in 2021 System Renewal category.

2020 System Service updates:

WNH deferred a portion of the Grid Modernization project ($350,000) due to material delivery concerns as a result of COVID-19. The entire amount of this deferral is intended to be completed in 2021 and the pace of the work in 2022 and 2023 will be adjusted with the extra costs deferred until 2024 and 2025.

Several other adjustments below materiality were made due to material, resource, or outage impacts. The net effect of these changes in 2020 System Service is a decrease of $435,500. There are no changes to the 2021 System Service capital expense.

General Plant updates:

Several components of IT System Changes and Improvements project, each below materiality, having an approximate total of $421,000, was not completed in 2020 due to reduction in throughput capacity of IT staff and vendors as resources were refocused on mandated COVID related CIS system changes. Approximately $90,000 of this amount is a reduction in cost and the reminder will be paced over 2021 and 2022 along with other projects in IT, Fleet, and equipment areas.

WNH Deferred MS/DS Decommissioning project of $670,000 in value to reduce financial impact in 2020. Funds already budgeted for this program in 2021 will be used to do some of the planned 2020 work with the remainder of the 2020 work and the originally planned 2021 work being completed in 2023 ($156,000) and 2024 ($514,000). The net effect of these updates is a net decrease of $1,201,545 in 2020 General Plant capital expense and a net addition of $406,690 in 2021.

Overall 2020-2025 Update:

The overall impact of the above described changes is a net decrease in gross capital expense of $826,480 in 2020 and a net increase of $1,258,230 in 2021.

Table 2-Staff-8a-2 below is a summary of the revised Bridge, Test, and Forecast years for capital expense.

Revised Bridge, Test, and Forecast Years:	2020	2021	2022	2023	2024	2025
System Access	6,821,873	5,840,262	6,166,099	5,959,421	6,447,529	6,592,480
System Renewal	8,439,927	8,947,309	9,671,995	9,448,434	9,593,203	9,851,367
System Service	1,763,491	2,293,605	1,346,209	1,288,333	1,411,460	1,361,589
General Plant	2,353,034	3,225,566	3,775,721	3,750,299	2,576,229	2,221,975
Revised Gross CapEx	19,378,325	20,306,742	20,960,024	20,446,487	20,028,421	20,027,411
Revised Contributed Capital	2,598,450	2,695,494	2,709,839	2,536,389	2,819,317	2,875,703
Revised Net CapEX	16,779,875	17,611,248	18,250,185	17,910,098	17,209,104	17,151,708

b) WNH did not include COVID-19 related impacts on capital expenditures at the time of filing the application as the impacts were not clearly understood during the development of the application. WNH chose to file the already prepared evidence with the intent to update the capital expenditure during the Interrogatory phase of the rate application process.

Subsequently, WNH has developed a better appreciation of those impacts and has made adjustments to portions to its capital program as a result of COVID-19. See the response to 2-Staff-8(a) above.

c) Please refer to the table below.

Project Name	Budget March-July	Actual Expenses March-July	Change from Budget
Overhead Line Renewal	351,092	257,015	(94,078)
Underground Line Renewal	1,234,782	212,664	(1,022,119)
Overhead Line Renewal - Failing Condu	1,034,449	478,763	(555,686)
Overhead Line Renewal (8kV)	2,021,029	1,505,369	(515,660)
Reactive Renewal	126,869	367,582	240,713
Proactive Renewal	321,673	342,406	20,733
Station Equipment Renewal	317,693	111,826	(205,867)
Non-PSWHA Relocations	154,791	248,788	93,997
PSWHA Relocations	399,532	540,107	140,575
Customer Connections	1,194,373	1,529,097	334,724
Expansions (Subdivisions)	292,378	408,370	115,993
Expansions (Lines)	-	392,367	392,367
Retail Meters	294,938	340,624	45,686
Contingency Enhancement	74,734	166,343	91,609
Grid Modernization	344,756	124,326	(220,429)
Stations Equipment Upgrades	25,000	55,958	30,958
Fleet - Trucks	52,359	52,359	-
IT Asset Lifecycle	134,955	156,134	21,179
IT System Changes/Improvements	356,838	202,185	(154,652)
IT New Systems and Services	85,295	28,949	(56,346)
OT Software	104,728	134,805	30,077
Bulding and Furniture Improvements	187,717	125,830	(61,887)
MS/DS Decommissioning	280,643	718	(279,926)
Land Rights	35,514	17,647	(17,867)
Miscellaneous/Other - System Access	-	-	-
Miscellaneous/Other - System Renewal	239,473	110,476	(128,997)
Miscellaneous/Other - System Service	164,876	150,854	(14,022)
Miscellaneous/Other - General Plant	48,328	4,161	(44,167)
Total	**9,878,814**	**8,065,723**	**(1,813,091)**
Summary by OEB Investment Code			
System Access	2,336,012	3,459,353	1,123,341
System Renewal	5,647,061	3,386,100	(2,260,961)
System Service	609,366	497,482	(111,884)
General Plant	1,286,376	722,788	(563,588)
Total	**9,878,814**	**8,065,723**	**(1,813,091)**

2-STAFF-9

Interrogatory:

Customer Information System
Ref 1: Exhibit 2 – Variance Analysis on Gross Assets, p. 34
Ref 2: EB-2015-0108 – Appendix G – Replacement of Customer Information System (CIS) Software

In Waterloo North Hydro's last cost of service application, the capital project summary showed that cost of the CIS software was estimated to be $378k, as shown in reference 2. In reference 1, Waterloo North Hydro stated that the new CIS system totalled $1.4M.

d) Please explain the variance in price for the new CIS.

e) If there was a scope change, please highlight the change in scope and provide an explanation to justify the change in scope.

Response:

a) The variance in cost for the new customer information system was caused by three factors:
   1. At the time of planning WNH did not include capital labour in the cost of software projects. However, this practice changed during the project which resulted in an additional $644k from internal labour costs.
   2. WNH had a high level of attrition in both IT and Customer Service departments during implementation. This change of staff caused additional cost in efficiency of internal labour.
   3. During implementation the WNH team discovered opportunities to increase quality in billing and customer service at additional cost.

It is worth noting that despite the variance, the cost of the CIS implementation at $1.4M is comparatively inexpensive to the majority of the market.

b) During the implementation of the new CIS WNH discovered opportunities to increase quality and service in billing, customer interactions and system integrations. Examples would include:
   1. Consolidated reports previously found in multiple systems into one new CIS
   2. Automating tasks that were previously done manually by staff
   3. Increased quality controls around billing

2-STAFF-10

Interrogatory:

Qualifying Generation Facilities

Ref 1: Exhibit 2 – Costs of Eligible Investments for the Connection of Qualifying Generation Facilities, p. 74

Ref 2: EB-2015-0108, Settlement Proposal

Waterloo North Hydro states that it has not identified any material eligible investments and has not filled out 2-FA through 2-FC. In Waterloo North Hydro's approved settlement proposal in EB-2015-0108, Waterloo North Hydro noted that it recorded the total cost of the qualifying projects in rate base and recorded the IESO revenue as a revenue offset.

a) Please confirm if the qualifying projects from EB-2015-0108 are still in rate base.

b) Please confirm if Waterloo North Hydro is requesting to recover the remaining qualifying project amounts through revenue requirement.

Response:

a) WNH confirms that the single qualifying project from EB-2015-0108 is still in rate base.

b) WNH continues to receive monthly payments from the IESO for Ratepayer Protection under O. Reg. 330/09, offsetting the cost of the qualifying project in rate base. The remaining balance outside of these payments remains in Revenue Requirement.

2-STAFF-11

Interrogatory:

Asset Condition Assessment

Ref 1: Exhibit 2 – Appendix A – Asset Condition Assessment Report

Waterloo North Hydro states that for poles and underground cables it used ENGIN, METSCO's asset analysis, prioritization, and optimization tool, in developing the asset assessment Health Indices for the replacement analysis recommendations in this report.

a) Please explain the process ENGIN uses to assess risk based on the health indices.

b) Please explain the process of deciding the pacing of asset replacements.

In the asset condition assessment report, Waterloo North Hydro provided how asset replacements are determined. Waterloo North Hydro stated that very poor and poor condition assets are normally replaced between 1 to 2 years depending on the condition and risk assessments.

c) Please explain how Waterloo North Hydro determines that assets in very poor and poor condition need to be replaced between 1 to 2 years.

d) How does Waterloo North Hydro assess risk?

Response:

a) The development of Health indices (HIs) in ENGIN are based on condition parameters, probability of failure and remaining life curves.

b) Please refer to Exhibit 2, DSP, s 4.2.2.4 Pacing of Capital Expenditures.

c) WNH has found that, for planned asset replacements, it normally takes 1-2 years from asset condition assessment through to planning, budgeting, approvals, design, scheduling and construction. As there are ranges of asset health within the HI categories, the priority and timing of the asset replacement will range from those with scores at the lower end of the Very Poor category to those at the higher end of the Poor category. It must also be remembered that asset condition assessment results are continually informing WNH asset management process creating a pool of asset replacements that are regularly being prioritized.

d) Please refer to the following;

- Exhibit 2, DSP, s 3.1.2.7, Reliability Risk / Consequence of Failure Analysis
- Exhibit 2, DSP, s 3.3.2, Description of asset life cycle risk management policies and practices
- Exhibit 2, DSP, s 4.2.1, Analytical Tools and Methods used for Risk Management

2-STAFF-12

Interrogatory:

Station Transformers

Ref 1: Appendix A – Waterloo North Asset Condition Assessment Report – 2.2 Station Transformers, pp. 19-22

In Table 2-8, it states that if an asset condition is E then divide the overall health index by two.

a) Please explain the reason behind this and the justification for a factor of two.

In Table 2-9, the health index range for very poor and poor condition assets are twice as large as for the very good and good condition assets.

b) Please provide justification for why it is reasonable to have a smaller range for good assets and a larger range for poor assets.

c) Please provide support on how the health index ranges are decided.

d) Please confirm if this health index definition applies to all other assets.

Response:

a) Most asset degradation factors are represented in the health index formulation by a relative weighting factor and a linear grading scale. The impact of degradation factors on the health of an asset however, are not always linear. Some asset degradation factors when they reach a certain level of degradation, are so impactful on the health of the asset that their influence needs to be amplified. Lowering the HI in such a manner raises the priority of the asset. These are called gateway parameters, where a numerical score below a certain threshold results in a modification to the entire HI result. This is typical for a very poor condition (ranking of “E” or “0”) for critical asset observations. For the transformer health

formulation in Table 2-8, Dissolved Gas Analysis and Insulation Power Factor are two such factors that are critical in reflecting the health of a transformer.

b) The development of the HI ranges is based on the probability of failure and remaining life curves; and reflect, in part, the non-linearity of the impact of degradation factors on asset health. The acceptance of these HI ranges is also based on METSCO's and WNH's collective expertise, judgement and experience in the industry. These are very similar ranges that have been employed by various utilities of similar and greater size than WNH across Ontario and have previously been presented before the Ontario Energy Board.

c) Please refer to response in part b).

d) Yes, the health index definition applies to other assets in the Asset Condition Assessment Report.

2-STAFF-13

Interrogatory:

Pole Replacement

Ref 1: Appendix A – Waterloo North Asset Condition Assessment Report – 2.8 Poles, pp. 47-54

Ref 2: Appendix K – Distribution System Reliability Report

In the asset condition assessment, Waterloo North Hydro proposes to replace around 3,000 poles over five years because they are in poor and very poor condition. In the Distribution System Reliability Report, it breaks out the number of outages due to defective equipment but not the specific equipment that is defective.

a) Please breakdown the SAIDI and SAIFI for defective equipment into the type of equipment that caused the outage.

b) Please explain if Waterloo North Hydro took into consideration the historical pole related outage information from the Distribution System Reliability Report when pacing pole replacements? If not, why not?

Response:

a) Please see the table below.

Summary	SAIDI 2016	SAIFI 2016	SAIDI 2017	SAIFI 2017	SAIDI 2018	SAIFI 2018	SAIDI 2019	SAIFI 2019
Arrestor	0.002	0.001	0.001	-	-	-	0.001	0.016
Capacitor Bank	0.002	0.057	0.001	0.026	-	0.008	-	0.001
Conductor - Primary O/H	-	0.001	0.003	0.039	-	-	0.003	0.006
Conductor - Primary U/G Cable	0.001	0.042	-	-	0.001	-	-	-
Conductor - Secondary	0.004	0.003	0.001	0.001	0.002	0.005	0.001	0.001
Customer Equipment	-	-	0.002	0.035	-	0.018	-	-
Elbow	-	-	0.004	0.002	0.020	0.010	0.006	0.002
Electronic Switch	-	-	-	-	-	-	0.033	0.012
Fused Cutout	0.008	0.059	0.042	0.104	0.024	0.056	0.016	0.020
Insulator	0.002	0.022	0.012	0.029	0.033	0.016	0.004	0.001
Load Break	-	-	-	-	0.023	0.022	-	-
Meter	-	-	-	-	-	-	-	-
Meter Base	-	-	-	-	-	-	-	-
Neutral Connection	-	-	-	-	-	-	-	-
Other	-	-	-	-	0.008	0.004	0.003	0.003
Pole	0.032	0.017	0.026	0.060	0.001	-	0.004	0.006
Recloser	-	-	0.005	0.055	0.035	0.040	-	-
Solid-Blade Disconnect	-	0.004	-	0.003	0.004	0.014	-	-
Station Breaker	-	-	0.049	0.120	-	-	0.030	0.200
Termination	0.006	0.002	-	-	-	-	0.045	0.040
Transformer	0.023	0.029	0.012	0.008	0.083	0.048	0.021	0.010
Total	**0.0798**	**0.2366**	**0.1579**	**0.4829**	**0.2342**	**0.2418**	**0.1668**	**0.3175**
RRR	**0.08**	**0.24**	**0.16**	**0.48**	**0.2342**	**0.2418**	**0.1668**	**0.3175**

b) Yes, WNH takes historical pole related information into account when pacing pole replacements. The pacing of the pole replacement program is primarily

informed by the analytics provided from the ENGIN tool, which incorporates historical outage information into its analytics algorithms. This is further supplemented by findings from the Distribution Reliability Report, specifically in case of premature pole failures often triggering extra inspections and analytics for that area.

2-STAFF-14

Interrogatory:

Material Capital Investments

Ref 1: Exhibit 2 – Table 4-22: 2021 Material Investments

Waterloo North Hydro provides a list of material investments for 2021 along with expected capital spending and prioritization.

a) Please provide similar tables for 2022-2025. For multi-year capital programs in 2021 that extend into 2022-2025 please present the capital budget side-by-side for comparison purposes.

b) For material capital investments in 2022-2025 that are not part of a 2021 capital program please provide a brief description of the project, including the objective and scope of work.

Response:

a)/b) The list of material capital expenditures provided in Reference 1 for the 2021 Test Year have been derived through WNH's detailed capital budgeting, planning and approval process. The Capital Budget was formulated on a project by project basis. Individual projects were developed in detail for the upcoming budget year and

approved by WNH's Board of Directors. Please reference the detailed budgeting process which is included in Exhibit 4 Section 2.4.2 p. 17-19.

WNH's 2022 – 2025 capital expenditure forecasts are completed on a category basis (System Access, System Renewal, System Service, and General Plant) based on historical trending and estimated information. These costs have not gone through the rigor of WNH's typical capital budgeting process nor have they been approved by the WNH Board of Directors. As such, WNH is unable to provide a list of approved projects for the period 2022 – 2025 at this time.

The effort required to prepare a list of material capital projects for 2022-2025 is disproportionate to any probative value that OEB Staff may hope it might achieve. WNH does not have staff dedicated to perform this work. Combining this additional work with regular duties would require a team of WNH senior engineering staff six months to generate a comprehensive list of potential projects, which would then need to be filtered through WNH's prioritization process (as described in the DSP) to arrive at list of proposed projects and associated budgets. This list would then need to be vetted through senior management and ultimately approved by the Board of Directors, which would take a further three weeks. As circumstances change over time (which they always do), WNH will be forced to re-organize its priorities and change projects. Any list prepared for the sole purpose of responding to this IR would quickly become out-of-date and not useful for system planning purposes.

To the extent that comparative data may be helpful, Exhibit 2, Appendix B, Comparative Information (5.4.3.2.A. sixth bullet) provides historical comparative data for each material project capital project in the test year.

2-STAFF-15

Interrogatory:

Overhead Line Renewal

Ref 1: Exhibit 2 – Appendix B – Overhead Line Renewal, pp. 19-22

Ref 2: Exhibit 2 – Appendix A – Asset Condition Assessment Report – 2.8 Poles, p. 47

Ref 3: EB-2015-0108 – Distribution System Plan – 3.2 Overview of Assets Managed, p. 125

Waterloo North Hydro's Overhead Line Renewal budget, which includes the Overhead Line Renewal program and the Overhead Line Renewal 4kV and 8kV program, is approximately 12% lower than historical actual spending. In EB-2015-0108, Waterloo North Hydro identified 715 poles in poor or very poor condition. In this application, Waterloo North Hydro identified 3,094 poles in poor and very poor condition. While Waterloo North Hydro has changed its health indices methodology, it is still predominantly based on age and strength of the pole.

a) Please provide an explanation for the increase in the number of identified poles in poor and very poor condition between the last application and the current application.

b) The historical spending for overhead line renewal has generally been higher than the 2021 capital budget even though there were less poles in poor or very poor condition to address. How has Waterloo North Hydro been able to address more required pole replacements with a smaller capital budget?

c) Please provide the number of poles replaced between 2016 and 2020.

Response:

a) As part of WNH's commitment to continuous improvement in the asset management process, over the last five years WNH made a number of changes which resulted in higher data availability, higher degree of detail, and improved analytics. Specifically, over the last five years WNH replaced the previous version of field collection software for OEB inspections. As part of that upgrade, WNH incorporated collection of more details about pole characteristics and a standardized rating system as recommended by the USF Asset Management working group. While prior to 2015 WNH analytics comprised heavily on pole age and strength, today's data collection includes greater detail about pole body condition (ex. Cracking) as well as pole top condition (ex. Feathering). These parameters are fed into the newly implemented ENGIN Asset Analysis, Prioritization and Optimization tool and account for almost 32% of the Health Index calculation (please refer to Table 2-41 on p. 52 of the ACA). Of particular note should be pole top condition, which, if found in very poor state, results in decreasing the overall health of the pole by 50%. The analysis results from ENGIN are more in line with field assessments and confirm that WNH has taken the correct steps in its continuous improvement process.

In 2015 WNH changed the Typical Useful Life of its poles from 50 years down to 45 years. Based on WNH practice for strength testing of all poles within 5 years of depreciation, this action resulted in more poles being included in the test pool compared to 2015. In addition, WNH is working toward implementing the test frequency recommended by the USF Asset Management working group, which recommends testing poles as young as 25 years old. This action also expands the pool of poles eligible for testing resulting in higher data availability for ENGIN analytics.

b) Poles in poor and very poor condition fall into one of four projects:

Projects	2016 Actual	2017 Actual	2018 Actual	2019 Actual	2020 Bridge	2021 Test
Reporting Basis	MIFRS	MIFRS	MIFRS	MIFRS	MIFRS	MIFRS
System Renewal						
Overhead Line Renewal	179,585	608,222	514,169	1,117,214	235,928	3,181,346
Overhead Line Renewal - Failing Conductor	30,618	405,673	312,801	647,791	1,245,812	853,987
Overhead Line Renewal (8kV)	1,514,370	1,527,537	2,148,877	1,970,758	3,252,494	703,076
Overhead Line Renewal (4kV)	2,567,067	3,090,030	1,831,507	1,621,924		
Subtotal	**4,291,640**	**5,631,462**	**4,807,354**	**5,357,687**	**4,734,234**	**4,738,409**

The 2016-2020 average spending for the sum of the above categories is $4,964,475, or approximately 5% higher than the 2021 budget. The variability in cost compared to number of poles is explained by the type of line the poles are supporting. Single phase lines are least costly to replace, followed by a single three-phase circuit line, whereas multi-circuit lines are most expensive. The mix of projects in 2021 consists of single-phase and single circuit lines whereas prior years have some components of multi-circuit lines.

c)

	2016	2017	2018	2019	2020	Annual Average
Poles Replaced per Year	638	655	538	547	702	616

2-STAFF-16

Interrogatory:

Underground Line Renewal

Ref 1: Exhibit 2 – Appendix B – Underground Line Renewal, pp. 23-26

Ref 2: Exhibit 2 – Appendix A – Asset Condition Assessment Report – 2.9 Primary Underground Distribution Cables, p. 62

In reference 1, Waterloo North Hydro provides two projects it intends to complete in 2021. In reference 2, Waterloo North Hydro stated that it intends to replace approximately 7.1km of direct buried cable annually.

a) Please confirm the total km of underground line that will be installed under the two projects listed in reference 1.

b) Please provide the total km of underground line installed for each year between 2016 and 2020.

c) Has Waterloo North Hydro considered cable refurbishment instead of cable replacement? If not, why not?

d) In reference 2, it was recommended that 20% (37.5km) of direct buried cables in fair condition be proactively replaced over the forecast period. The proactive recommendation is based on the age of the cables in this category but age only comprises 25% of the health index. Please explain how Waterloo North Hydro justifies that proactive replacement of 37.5km of direct buried cables is prudent.

Response:

a) 6.7 km

b) 2016 - 6.3km
2017 - 7.7km
2018 - 9.7km
2019 - 7.6km
2020 - 2.5km

In 2020 WNH deferred a portion of the Underground Line Renewal project due to COVID-19 impacts.

c) Yes, WNH considered cable refurbishment. Cable refurbishment is an option for older cable which has limited number of splices and has construction with no strand blocking agents. Strand blocking is a tar-like substance applied during the cable manufacturing process to fill gaps between strands of the centre conductor in a cable. The cable rejuvenation process relies on the air gaps between the strands of the centre conductor to inject chemicals, and hence, is only an option for the older construction cable. For WNH, this type of cable is predominantly found in two subdivisions: Lakeshore North and Westvale.

Lakeshore North subdivision, when rebuilt, is required to be upgraded from 13.8kV to 27.6kV due to overall system needs and hence is not an appropriate candidate for refurbishment.

The older sections of the Westvale subdivision were installed during a time when cable splicing on new installation was common practice and splice locations were not recorded. Existing cable splices diminish the cost effectiveness of cable rejuvenation as they block the flow of the rejuvenating chemicals. To rejuvenate a cable with splices, each splice needs to be located, excavated, removed, cable injected in both directions and a new splice installed. Rather than embarking on a project with many unknown risks and costs, a full rebuild is considered more appropriate for the Westvale subdivision, which is also expected to bring additional benefits from modern construction standards.

d) As stated in the ACA, the replacement of direct buried cables along with the associated submersible concrete vaults and transformers, is logistically difficult, more disruptive for customers and significantly more time consuming than cable-in-duct replacements. The large number of XLPE cables (51 km) past its Typical

Useful Life (TUL) of 35 years is already greater than 5 years of work based on WNH's historical replacement program. There will be 95.7 km of cable past TUL by the end of forecast period.

The cables being targeted are those that, although currently in fair condition, are approaching the poor condition and are expected to reach this condition over the forecast period. Based on WNH's historical work force and financial capacity WNH feels it is more prudent to effectively pace the work and expenditures over the next 20 years than to deal with an onrush of cable failures at increased cost and reduced reliability.

2-STAFF-17
Interrogatory:

Overhead Line Renewal – Failing Conductor
Ref 1: Exhibit 2 – Appendix B – Overhead Line Renewal – Failing Conductor, pp. 23-26

Waterloo North Hydro states that it intends to replace overhead lines that have small conductors which have the tendency to become brittle as they age and fail prematurely, especially during storms. Waterloo North Hydro also states that while conductor condition is the main driver, other assets such as poles, transformers, insulators, arrestors are also replaced at the same time to be cost effective and less disruptive. This is because these assets are nearing end of life and would not normally survive a second life cycle.

a) There is no asset condition assessment related to overhead conductors. Please explain how Waterloo North Hydro identifies conductors that need to be replaced based on condition.

b) If the replacement of conductors is purely based on conductor size, please provide the threshold of conductor size that would warrant replacement and the total km of conductor of that size in Waterloo North Hydro's service territory.

c) Please provide the number of outages experienced between 2016 and 2020 related to failing conductors.

d) How does Waterloo North Hydro assess that assets along the replacement route of these conductors would not survive a second life cycle?

e) There is higher overhead line renewal spending in 2020 as compared to the historical average. Please explain the reason for this.

Response:

a) This project is part of the Overhead Line Renewal portfolio. As such, it is comprised of pole lines in poor condition based on a health index for poles. If such pole lines also have a small conductor that has a history of breaking, they are grouped into this project to reflect the safety risk associated with failing conductors as a higher prioritization factor in the ranking of projects.

Conductors that need to be replaced based on condition are those that are of a size that has a history of breaking.

b) As explained above, this project is not a purely conductor replacement project. It is a pole line replacement project of pole lines with poles that are inadequate to meet today's safety standards, are in poor condition, and carry small conductors that have a history of breaking. WNH identifies #6 Copper and #4 ACSR conductors as those with increased safety risk to workers and general public. There are 7.8 km of these types of conductor left in service.

c) There were five failed conductor events over the 2016-2020 time-frame where energized conductors fell to the ground, causing outages and serious public safety concerns.

d) As explained above, this project is comprised of major assets already at the end of their useful life (poles based on heath index and/or inadequacy to meet today's standards, and conductor based on history of failures).

e) Through inspection, WNH found additional segments of rural line with failing conductor that were prioritized for replacement due to safety concerns.

2-STAFF-18

Interrogatory:

Station Equipment Renewal

Ref 1: Chapter 2 Appendices – 2AA

Waterloo North Hydro has a capital program called Station Equipment Renewal with a budget of $125,503 for the 2021 test year.

While the test year amount is below Waterloo North Hydro's materiality threshold, the historical actual amounts are not. Please provide a project summary for this program.

Response:

This project category is comprised of Station equipment including HV switches, transformers, switchgear, breakers, MV bus ducts, feeder cables, protection relays, and auxiliary systems such as station batteries.

Projects under this program involve refurbishment or replacement of existing equipment or major components due to their age, condition and/or obsolescence. These programs have been developed based on deteriorating conditions identified from third party assessments, asset condition, functional obsolescence, end-of-life from the manufacturer, failure rates, cyber security vulnerabilities requiring hardware replacements, and equipment at the end of their Typical Useful Life.

The program details change year to year with asset needs.

2-STAFF-19

Interrogatory:

Miscellaneous/Other

Ref 1: Chapter 2 Appendices – 2AA

Waterloo North Hydro has several capital programs named miscellaneous/other for each capital investment category, which represent grouping of immaterial project. The 2021 budgeted amount is close to twice the amount of the average historical actuals for each capital investment category.

a) Please provide the methodology Waterloo North Hydro forecasts the amount in the miscellaneous/other budget.

b) Please provide an explanation of the forecasted increase in 2021.

Response:

a) WNH does not forecast miscellaneous/other budget as its own category. This category is a collection of non-material projects that are an outcome of the

grouping process in the preparation of the DSP and Material Investments Project Summaries.

The grouping process allows WNH to explain a larger percentage of the capital program within the Application and the material investment project sheets compared to presenting it based on a non-grouped basis.

b) In order to ensure adequate resources for unexpected projects that arise each year through asset inspections, requests from customers, and requests from municipalities, engineering design time is allocated into the System Renewal, System Access and System Service OEB categories. In a similar fashion engineering time is allocated for planned future construction projects. The estimated expenditure for the design time in each category is below materiality, and hence, it is initially placed in the miscellaneous category. As the scope of work for each design becomes clear, the grouping of that project can then be assigned. For the historical years, the actual design time expenditures have been allocated to their proper grouping, thereby lowering the amounts in miscellaneous. For the forecast year however, while WNH's experience shows this overall cost allocation is sufficient for each category, the specific groupings are not yet able to be assigned. The 2021 miscellaneous category also includes the replacement of two pieces of equipment, both of which are below materiality.

After the completion of the 2021 work program, the miscellaneous category will be cleared as was done in the historical years leaving only the true miscellaneous projects below materiality.

2-STAFF-20

Interrogatory:

Public Service Works on Highways Act Relocations (PSWHA) and Non-PSWHA

Ref 1: Exhibit 2 – Appendix B – Non-Public Service Works on Highways Act Relocations, pp. 1-3
Ref 2: Exhibit 2 – Appendix B – Public Service Works on Highways Act Relocations, pp. 4-6

Since 2016, the yearly actual spending for Non-PSWHA has been steadily declining while the PSWHA actual spending fluctuates.

Please provide all known relocation projects that fall into the PSWHA and Non-PSWHA capital program for 2022 to 2025.

Response:

Relocation projects are highly unpredictable in timing and scope. Below is a list of projects that, based on the information known to WNH at this time, have a high chance of materializing in the 2022-2025 timeframe:

PSWHA – Pole Line Relocations along:
Conservation Drive from Beaver Creek Road to Erbsville Road, Waterloo
Church Street from Arthur Street to Spruce Lane, Elmira

Non-PSWHA – Pole Line Burial along:
Kossuth Road near the Waterloo Regional Airport, Woolwich
Erb Street from Erbsville Road to Wilmot Line, Waterloo

From time to time relocation project details change such that a project that was classified as Non-PSWHA could become PSWHA, or vice versa. The above assessments are based on the information known about the projects as of the date of this interrogatory response.

2-STAFF-21

Interrogatory:

Subdivisions Expansions

Ref 1: Exhibit 2 – Appendix B – Expansions Subdivisions, pp. 10-12

The Subdivisions Expansions investment is 25% higher than historical actuals when Waterloo North Hydro has seen declining customer growth rates since 2011.

Please provide all known subdivision expansion projects for 2022 to 2025, avoiding confidential information if possible.

Response:

Subdivision Expansions projects are driven by customer/developer demand and are variable in nature. Additionally, in WNH's service territory, these projects tend to be lumpy and cyclical for a number of reasons stemming from policies of the local municipalities. In 2021, WNH anticipates higher level of activity compared to the previous two years due to a commercial subdivision scheduled to come online. This level of investment is not unusually high – it is very similar to the level of investment in 2017.

While WNH is aware of a few potential projects that may materialize in the 2022-2025 timeframe, there is only one project of 50 townhouses in the Township of Wellesley that is far enough in their design to consider it very likely to materialize in the 2022-2025 window.

A number of potential new subdivision projects in the WNH service territory have been subject to holding provisions by the municipalities and/or public objections due to their proximity to environmentally sensitive lands. These circumstances make it very difficult

to predict with any level of certainty their eventual scope (number and type of lots) as well as the timing of these projects materializing.

2-STAFF-22

Interrogatory:

Pole Condition

Ref 1: Exhibit 2 – Appendix A – Asset Condition Assessment Report – 2.8 Poles, p. 47

As part of Waterloo North Hydro's 2020 inspection and pole-testing program, Waterloo North Hydro stated that it would complete missing pole data in the condition assessment.

Please provide an updated condition assessment if available.

Response:

The 2020 Pole asset condition assessment is still in progress and analysis results will not be available until late Q4 2020.

2-STAFF-23

Interrogatory:

Contingency Enhancement

Ref 1: Exhibit 2 – Appendix B – Contingency Enhancement, pp. 41-43

Waterloo North Hydro has included one rebuild project in the Contingency Enhancement capital budget.

Please provide the total kilometers of line that will be rebuilt for the project.

Response:

The project consists of rebuilding approximately 0.5 km of line to double circuit and involves working with circuits feeding commercial customers near a traffic congested intersection.

2-STAFF-24
Interrogatory:

Grid Modernization
Ref 1: Exhibit 2 – Appendix B – Grid Modernization, pp. 41-43

Waterloo North Hydro's strategy for urban feeders is to segment it into two parts, supplemented by remote tie switches on either side of the segmentation device. For rural feeders, due to typically long lengths, the strategy is to segment the feeder into three parts supplemented by remote tie switches on either side of all segmentation devices.

a) Please provide the number of reclosers and fault indicators that Waterloo North Hydro intends to install in 2021.

b) Please provide the number of feeders affected by the reclosers and fault indicators.

c) For the feeders affected please provide outage information between 2016 to 2020.

Response:

a) WNH intends to install seven reclosers in its overhead distribution system and approximately 100 fault indicators in its underground distribution system in 2021.

b) Nine feeders will be affected by the reclosers. (3F68, HS20, ER44, HS30, ER46, HS21, HS11, 33M1, and HS13)

Five feeders will be affected by the fault indicators. (HS26, HS11, 21M25, HS23, and HS15)

c) The following table lists Customer Minutes of Interruption for each of the feeders identified above between 2016 – July 31, 2020. The data excludes Major Event Days, Planned Outages, and Loss of Supply causes.

	2016	2017	2018	2019	YTD - July 31 2020
Feeder #	Unplanned Sustained	Unplanned Sustained	Unplanned Sustained	Unplanned Sustained	Unplanned Sustained
21M25	37,522	87,619	69,248	27,486	27,389
33M1	57,318	51,397	31,956	112,212	141,482
3F68	23,116	86,750	132,500	208,966	41,008
ER44	137,184	73,862	268,720	5,130	5,442
ER46	9,273	23,424	10,705	227,705	9,426
HS11	1,454	3,801	41,681	182,161	9,172
HS13	8,446	4,174	1,142	1,180	8,727
HS15	240,594	7,327	14,860	93,182	2,151
HS20	115,669	209,727	127,745	12,766	114,312
HS21	32,482	1,432	213,713	13,916	329
HS23	96,736	72,984	42,183	14,748	12,682
HS26 (T6)	2,912	15,267	130,647	156,246	2,256
HS30	104,853	49,010	176,985	91,083	276

2-STAFF-25

Interrogatory:

Grid Resiliency

Ref 1: Exhibit 2 – Appendix B – Grid Resiliency, pp. 48-50

Waterloo North Hydro intends to move a number of sections of residential services from overhead to underground in Waterloo North Hydro's most heavily treed areas where the primary lines were recently reconstructed.

Please provide the total length of the planned underground services.

Response:

Typical overhead services in the target area are approximately 28 meters long. The project stipulates up to 150 services to be converted totalling up to 4,200 meters of underground service lines.

2-STAFF-26
Interrogatory:

Station Equipment Upgrade
Ref 1: Exhibit 2 – Appendix B – Station Equipment Upgrade, pp. 51-53
Ref 2: Asset Condition Assessment – Table 2-19 HMSTS "A" Breaker Condition Assessments

Waterloo North Hydro's station equipment upgrade budget for the 2021 test year is almost double the historical actuals. In the 2021 test year, Waterloo North Hydro intends to replace feeder breakers at Scheifele 'A' TS due to the short circuit rating limits. Based on the asset condition assessment provided, most of these breakers are still in very good condition.

a) Please explain what Waterloo North Hydro plans to do with the old breakers.

b) Please provide all known station equipment upgrade projects for 2022 to 2025 and confirm if they are connected to the asset condition assessment.

c) Based on the asset condition assessment the only assets that are in poor condition are the high voltage circuit switch at Schedifele 'B' TS and the protection relay at MTS#3. For future Station Equipment Upgrades that do not include assets that are in poor condition, what does Waterloo North Hydro plan to do with those assets?

Response:

a) The breakers themselves cannot be repurposed at other WNH stations, and found only scrap metal value in the used equipment market. WNH will salvage useable components from the old breakers and retain for spare parts.

b) Please refer to WNH's response to 2-Staff-14.

c) WNH makes best efforts to repurpose assets that become surplus after a station upgrade. Where possible WNH will salvage equipment or components for reuse. Often this cannot be achieved due to the reliability of removed equipment, the obsolescent of components, firmware/software applications or changes in standards.

2-STAFF-27

Interrogatory:

Fleet – Trucks

Ref 1: Exhibit 2 – Appendix B – Fleet - Trucks, pp. 54-56

The fleet investments include the replacement of one large vehicle and the replacement of three small vehicles.

Please provide the type and number of vehicles purchased for each historical year between 2016 and 2020.

Response:

The table below provides the vehicle type, purchase date and a brief description for each vehicle purchased between 2016 and 2020 year to date.

Vehicle Type	Purchase Year	Description
Small	2016	Van
Large	2016	Crane Truck
Small	2017	Van
Large	2017	Single Bucket Truck
Small	2018	Van
Large	2018	Single Bucket Truck
Small	2018	Pick Up Truck
Small	2019	Pick Up Truck
Rolling Stock	2019	Reel Trailer
Small	2019	Pick Up Truck
Small	2019	Pick Up Truck
Medium	2019	Pick Up Truck
Small	2019	SUV
Medium	2020	Work Van

2-STAFF-28

Interrogatory:

Information Technology – Asset Life Cycle

Ref 1: Exhibit 2 – Appendix B – Information Technology – Asset Life Cycle, pp. 57-59

Ref 2: Distribution System Plan - Appendix N – IT Management Plan

Ref 3: Chapter 2 appendices – 2-BB Service Life

Waterloo North Hydro has shown a three-year laptop replacement investment in reference 1. In the IT management plan, it shows that a laptop's life cycle can be 3-5 years and the depreciation rate shown in reference 3 for laptops is five years.

Please explain the discrepancy between Waterloo North Hydro's depreciation rate of three years in Ref 1 and the depreciation rate for computer hardware in Ref 3.

Response:

WNH confirms that laptops are capitalized under USoA 1920 Computer Equipment – Hardware and are depreciated over 5 years. The budgeted amount in Appendix B corresponds to specific laptop hardware which is used for high-performance tasks. These laptops will be repurposed after 3 years for lower-use functions and will remain in service for as long as they still function.

2-STAFF-29
Interrogatory:

Operational Technology Software
Ref 1: Exhibit 2 – Appendix B – Operational Technology Software, pp. 60-62
Ref 2: Distribution System Plan - Appendix N – IT Management Plan

Waterloo North Hydro intends to replace its graphical information system and has divided this project over several phases between 2019 and 2023. Phase 2 in the 2021 test year is for the migration from the old system to the new system.

In addition, Waterloo North Hydro's IT management plan states that it is monitoring the growing trend from the ownership and self-hosted model to a software as a service (SAAS) cloud model.

a) Please provide the projects that Waterloo North Hydro has planned in the capital program for 2024 and 2025.

b) In reference 2 table 5-4, Waterloo North Hydro provided a list of information technology software applications that it uses. For the applications that have a host model of self-managed or hybrid, are there possible alternatives for them to be cloud-hosted?

Response:

a) WNH's 2022 – 2025 capital expenditure forecasts are based on historical trending and estimated information. These costs have not gone through the rigor of WNH's capital budgeting process nor have they been approved by the WNH Board of Directors. Please refer to the detailed budgeting process which is included in Exhibit 4 Section 2.4.2 p. 17-19. As such, WNH has no approved projects at this time for period 2022 – 2025.

b) WNH regularly evaluates the most efficient (cost, staff time, business use) hosting models for each application. Please see the table below with detailed options for software listed in Table 5-4, p. 9, Section 5.13 of Appendix N.

System	Current Model	Options for Cloud
Customer Information Systems (CIS)	Hybrid	Cloud offering exists at increased operating cost and lower efficiency
Enterprise Resource Planning (ERP) including AP/AR, GL, Payroll and Assets	Self-Managed	Cloud ERP offering exists and will be considered during ERP replacement
Operational Data Store (ODS) to store MDM/R meter data	Hybrid	Cloud offering exists at increased operating cost and lower efficiency
Outage Management System (OMS)	Hybrid	Cloud offering exists at increased operating cost
Supervisory control and data acquisition (SCADA)	Self-Managed	Cloud will not be explored for grid security reasons
Regional Network Interface (RNI)	Hybrid	Currently moving to cloud with go-live of Q4-2020 or Q1-2021
Geographic Information System (GIS)	Self-Managed	Cloud offering exists at increase operating cost and requires large process changes
Web presentment for TOU customers	Self-Managed	Cloud offering exists at increased operating cost
Phone System	Self-Managed	Cloud offering exists at increased operating cost and lower efficiency
Document management	Self-Managed	Cloud offering exists at increased operating cost

2-STAFF-30

Interrogatory:

MS/DS Decommissioning

Ref 1: Exhibit 2 – Appendix B – MS/DS Decommissioning, pp. 66-68

Ref 2: Asset Condition Assessment – Table 2-34: DS Transformers Health Condition Assessments

Historically, Waterloo North Hydro retired all of the old 4.16kV municipal stations and some 8.32kV municipal stations. The 2021 capital budget is to complete phase II environmental assessments, associated work at three different sites, and prepare them for sale. Waterloo North Hydro also stated that no properties are planned to be sold prior to the end of 2021.

a) Please provide a cost breakdown of the work required at the three sites.

b) Does Waterloo North Hydro have estimated sale prices for the three properties?

c) Does Waterloo North Hydro have a proposal on how any gain from the sale of these properties will be dealt with if they are sold in the coming years? If not, why not?

d) Based on the asset condition assessment, the remaining 8.32kV transformers are in relatively good health. Does Waterloo North Hydro have plans to retire these stations between 2022 and 2025?

e) If no more 8.32kV stations are going to be retired, what does Waterloo North Hydro intend to do with this capital program between 2022 and 2025?

Response:

a) Cost breakdown of the three properties are as follows:

Project Task	MS #1	MS#5	DS #34
Property Valuation	$3,200	$3,200	$3,200
Phase 1 ESA	$5,400	$5,200	$5,200
Designated Substance / Hazardous Material Survey	$4,900	$3,600	$3,200
Environmental Consultant oversight of Abatement & Demolition	$13,800	$9,200	$9,200
Abatement & Demolition contractor	$37,500	$30,200	$30,200
Phase 2 ESA	$45,000	$30,700	$29,700
Soil Delineation	$21,200	$10,600	$10,600
Environmental Consultant oversight of Remediation	$16,700	$8,400	$8,400
Remediation contractor	$78,000	$26,000	$26,000
Record of Site Condition Filing with Ministry of the Environment, Conservation and Parks	$6,800	$6,800	$6,800
WNH Internal Costs (electrical decommissioning, project management & review)	$62,500	$21,000	$10,500
Total	$ 295,000	$ 154,900	$ 143,000

The costs are estimates based on previous projects and subject to change if unexpected subsurface contaminants are encountered.

b) The average valuation for each of the three properties:

MS#1 - $ 2,075,000

MS#5 - $ 323,750

DS #34 - $ 4,125

c) WNH has not proposed how to deal with future sales of MS/DS Decommissioning as part of the Application. As noted in the evidence, there are no sales of MS/DS in the test year.

d) Referring to Reference #2, Section 2.7.5, p. 46, MS 26 will be retired at the end of 2020 as the 8.32kV supply will no longer be needed in that area. The transformer, which is in Good condition, will be repurposed at one of the other stations. No other stations are planned for retirement before the end of 2025.

e) Once the decommissioning and environmental clean up for the aforementioned four stations is complete, this capital program will end until a future station retirement is planned.

EXHIBIT 3 – OPERATING REVENUE

3-STAFF-31

Interrogatory:

Load forecast

Ref 1: Exhibit 3 Load Forecast Model, Tab: Rate Class Customer Model. p.20

Waterloo North Hydro observes “that customer growth across the classes has slowed in recent years.” Waterloo North Hydro proposes to use a trend of growth rates to forecast growth to 2021.

Waterloo North Hydro appears to use an average of year beginning and year ending customer counts to forecast each year’s customer connections.

a) Please confirm OEB staff’s observation that customer connections are calculated using an average of the count at the beginning and end of each year, or explain the approach used.

b) Is Waterloo North Hydro able to determine the cause of the decrease in growth of customer connections?

c) How many customer connections does Waterloo North Hydro have in each rate class as of June 30, 2020?

d) Has Waterloo North Hydro considered other approaches to addressing the changing growth rates, such as shorter-term averages or regression methodologies? If not, why was a trend chosen in favour of other possible methodologies?

Response:

a) Confirmed. Per the Rate Class Customer Model of the Load Forecast, the year-end customer counts are contained in the bottom table. The upper table calculates average based on the beginning and end of each year.

b) As discussed in section 1.3.3 Service Area & Customer Demographics of the DSP, WNH attributes the decrease in customer growth to be due to "a decreasing inventory of developable greenfield land, and the increasing penetration of bulk metered high rise condominium style housing within WNH's service area."

c) Please refer to WNH's response to 3-VECC-25.

d) As described in Exhibit 3 p.20, WNH considered the following growth rates:

- Geometric mean from 2004 (or first available year) to 2019
- 5-year geometric mean (2015-2019)
- 3-year geometric mean (2017-2019)
- Trend analysis from 2004 (or first available year) to 2019

Each of the above rates are calculated on the Rate Class Customer Model tab of the Load Forecast. The shorter term growth rates corroborate the observation that growth rates are declining. Based on this data, WNH determined the trend calculation was the best predictive measure for future growth.

3-STAFF-32

Interrogatory:

Load forecast

Ref 1: Exhibit 3 – Table 3-7 Total System Load Reductions March-May, 2020

Ref 2: Exhibit 3 – Table 3-8 kW April Variances for GS>50kW and Large User

Waterloo North Hydro has provided tables that compare Total System Load Reductions for March, April, and May of 2020 to 2019 and 2018. These are provided in kWh and kW for the total system, and by rate class for kW only in April.

a) Please provide these tables by rate class and month for the months January – July for both kW and kWh.

b) For January – July 2020, please provide the actual system purchases by month as well as predicted values based on the proposed load forecast. These predicted values should be based on actual explanatory variables, including weather, wherever possible. Where estimates are required, please identify what was estimated, and how it was estimated.

c) Please update and explain any trends Waterloo North Hydro has noticed with the updated tables provided above.

Response:

a) WNH has provided updated versions of Table 3-7 and Table 3-8 below. It should be noted that the Table 3-7 data is taken directly from WNH's third party meter data management provider. The GWh will not include purchase adjustments per tab LF Model 2020. WNH has expanded Table 3-8 to include

specific rate classes to align with responses to other interrogatories. WNH has also provided the month of August to align with responses to other interrogatories.

Table 3-7 System Load Reductions - Revised January - August

Month	kW Peak			Variance	
	2020	2019	2018	% change (2020 & 2019)	% change (2020 & 2018)
January	218,842	240,428	234,026	-8.98%	-6.49%
February	213,835	223,672	224,412	-4.40%	-4.71%
March	201,667	223,051	207,495	-9.59%	-2.81%
April	174,349	196,470	203,765	-11.26%	-14.44%
May	249,380	186,414	262,416	33.78%	-4.97%
June	253,487	240,301	269,283	5.49%	-5.87%
July	287,196	271,173	288,524	5.91%	-0.46%
August	269,977	251,886	269,522	7.18%	0.17%

Month	GWh			Variance	
	2020	2019	2018	% change (2020 & 2019)	% change (2020 & 2018)
January	128.96	136.04	136.80	-5.20%	-5.73%
February	120.09	120.76	117.63	-0.56%	2.09%
March	118.82	127.47	125.56	-6.78%	-5.37%
April	102.09	113.31	116.90	-9.90%	-12.67%
May	105.38	111.48	118.87	-5.47%	-11.35%
June	118.01	114.94	122.48	2.67%	-3.65%
July	142.44	141.08	139.57	0.97%	2.06%
August	128.75	127.51	136.87	0.97%	-5.93%

Table 3-8 kW Variances for GS>50kW and Large User - Revised January - August

Month	kW			Variance	
	2020	2019	2018	% change (2020 & 2019)	% change (2020 & 2018)
January					
GS>50kW	134,443.53	138,505.22	138,047.64	-2.93%	-2.61%
Large User	12,737.28	13,317.12	13,570.56	-4.35%	-6.14%
Direct Market Participant	1,219.18	1,210.90	741.41	0.68%	64.44%
Street Lights	825.57	821.12	817.28	0.54%	1.01%
Embedded Distributor	7,627.20	8,139.04	8,108.80	-6.29%	-5.94%
February					
GS>50kW	133,683.85	138,381.18	136,644.06	-3.39%	-2.17%
Large User	12,802.56	13,251.84	13,416.96	-3.39%	-4.58%
Direct Market Participant	1,167.11	1,238.82	2,894.67	-5.79%	-59.68%
Street Lights	825.78	821.31	824.99	0.54%	0.10%
Embedded Distributor	7,657.44	7,684.32	7,621.60	-0.35%	0.47%
March					
GS>50kW	132,249.39	132,080.66	124,512.16	0.13%	6.21%
Large User	12,718.08	13,155.84	13,347.84	-3.33%	-4.72%
Direct Market Participant	1,249.43	2,884.55	2,908.70	-56.69%	-57.05%
Street Lights	826.05	821.36	815.49	0.57%	1.29%
Embedded Distributor	7,629.44	7,631.68	6,927.20	-0.03%	10.14%
April					
GS>50kW	111,315.75	132,709.68	135,855.98	-16.12%	-18.06%
Large User	9,312.00	13,048.32	13,121.28	-28.63%	-29.03%
Direct Market Participant	1,228.58	1,298.55	1,285.36	-5.39%	-4.42%
Street Lights	825.15	824.93	814.96	0.03%	1.25%
Embedded Distributor	7,032.48	7,064.96	7,033.60	-0.46%	-0.02%
May					
GS>50kW	131,570.47	127,937.25	146,232.63	2.84%	-10.03%
Large User	9,561.60	14,315.52	16,047.36	-33.21%	-40.42%
Direct Market Participant	1,457.64	1,423.52	1,521.90	2.40%	-4.22%
Street Lights	825.95	824.61	814.92	0.16%	1.35%
Embedded Distributor	7,701.12	6,744.64	6,919.36	14.18%	11.30%
June					
GS>50kW	136,584.50	140,947.01	147,125.34	-3.10%	-7.16%
Large User	11,769.60	14,918.40	16,619.52	-21.11%	-29.18%
Direct Market Participant	1,446.39	1,431.33	1,563.76	1.05%	-7.51%
Street Lights	825.97	824.61	815.21	0.16%	1.32%
Embedded Distributor	7,278.88	7,003.36	7,196.00	3.93%	1.15%
July					
GS>50kW*	174,858.00	151,904.83	158,322.57	15.11%	10.44%
Large User	13,916.16	16,569.60	17,041.92	-16.01%	-18.34%
Direct Market Participant	1,537.69	1,507.08	1,560.34	2.03%	-1.45%
Street Lights	823.87	824.53	815.90	-0.08%	0.98%
Embedded Distributor	7,679.84	7,704.48	7,136.64	-0.32%	7.61%
August					
GS>50kW*	141,414.79	141,615.40	145,261.75	-0.14%	-2.65%
Large User*	14,524.00	15,002.88	16,047.36	-3.19%	-9.49%
Direct Market Participant	1,465.02	1,473.97	3,069.71	-0.61%	-52.27%
Street Lights	823.67	824.53	815.09	-0.10%	1.05%
Embedded Distributor	7,407.68	7,656.32	6,641.60	-3.25%	11.53%

*As of the date of IR filing, not all customers had been billed. WNH has estimated peak demand based on meter data.

b) Please see Attachment 2 - Load Forecast Jan-Aug 2020. Purchases and all explanatory variables are based on actuals. The Persistent CDM variable and the regression model coefficients are all based on WNH's initial filing and do not include updates filed in 1-Staff-1.

c) Responses to parts a) and b) corroborate the trend that WNH's energy consumption and demand has begun to return to pre-COVID-19 levels.

Table 3-7 Revision kW Peak: After May 2020 WNH has noted a return to peak levels consistent with prior years with the exception of variances due to actual weather.

Table 3-7 Revision GWh: WNH notes that these values are not weather normalized. The analysis of the LF Model 2020 would provide a better comparison.

Table 3-8 Revision kW: Similar to Table 3-7, after May 2020 for most rate classes (all but Large User) WNH has noted a return to peak levels consistent with prior years with the exception of variances due to actual weather. WNH's Large User displays a slower return to pre-COVID-19 demand. This is consistent with WNH's understanding of their COVID-19 re-opening plans.

LF Model 2020: This analysis provides the best comparison as it is weather normalized by using actual weather and customer count inputs for the predictive regression model. Similar to the revised tables above, after May 2020 the variance between the actual Purchased kWh and the Predicted Purchases (based off actual inputs) has returned to regular variance levels.

The above trends in WNH data correspond to trends observed by the IESO (please see response to 3-VECC-28). However, WNH would like to raise the uncertainty surrounding a full return to pre-COVID-19 environment. Although WNH has

witnessed a gradual return over the 3 most recent months (June to August 2020), this is not guaranteed to persist if Ontario – or more specifically the Region of Waterloo – determines the need to re-enforce lockdown protocols. Consistent with response to 3-Staff-33, WNH intends on utilizing the generic 1509 sub-account Lost Revenues Arising from the COVID-19 Emergency for Electricity Distributors and Natural Gas Distributors for any non-weather related impacts to revenue.

3-STAFF-33

Interrogatory:

Load Forecast

Ref 1: Exhibit 3, COVID Impacts to Load Forecast, p.17

Ref 2: Exhibit 9, pp 40-41

Waterloo North Hydro proposes two options for the 2021 load forecast:
Option 1: Allow for a special sub-account for WNH of Account 1509-Impacts Arising from the COVID-19 Emergency which calculates the variance between the load forecast included in this Application and actuals.
Option 2: Use the revised COVID-19 adjusted load forecast included in this Application.

In requesting the new sub-account Load Forecast Variance under Account 1509 Impact Arising from the COVID-19 Emergency, Waterloo North Hydro states:
Due to the COVID-19 pandemic during the time of the preparation of this Application, it has been difficult for WNH to determine the short and longer term impacts to load. While all will agree there will be long lasting effects, determining the specific impact to include in WNH's load forecast cannot be well supported at this time. A discussion of this is included in Exhibit 3 of this Application. WNH is requesting a sub-account under Account 1509 – Impacts Arising from the COVID-19 Emergency that is specific to WNH's situation.

WNH is requesting to track all variances from the Load Forecast included in this Application for both customer count and kWh to be cleared through an annual rate rider as part of the annual IRM application. WNH is requesting that this sub-account accrue carrying charges.

On March 25, 2020, the OEB issued an Accounting Order to set up an account for Lost Revenues.

a) Please confirm that the load forecast variance account is not needed if the OEB decides to approve the second option for the load forecast.

b) Please clarify whether the proposed load forecast variance account is symmetrical, i.e. Waterloo North Hydro will collect from customers the impacts resulting from an over-forecast of load/customer count and refund the impacts in the case of an under-forecast in load/customer count.

c) Please provide details of which variances are proposed to be tracked among forecasted energy, demand, and customer connections?

d) Is Waterloo North Hydro proposing to track variances to all customer classes, or to a subset of customer classes? If a subset, which classes?

e) For which year(s) is Waterloo North Hydro proposing to use the variance account to track and dispose of variances?

f) Please confirm whether or not variances resulting from any cause would be captured by this variance account.

g) If differences arising due to weather are to be captured by the variance account, please explain why, in Waterloo North Hydro’s opinion, this is appropriate given

that variances due to weather occur regularly, and are not normally recovered through a true-up mechanism such as a variance account.

h) If differences arising due to weather are not to be captured by the variance account, please provide the methodology by which variances due to weather vs COVID vs variances due to any other sources are to be determined, and which of these variances are to be trued up through the proposed variance account.

i) How does Waterloo North Hydro propose that easement of socioeconomic restrictions and economic recovery be reflected into the proposal for Option 1?

j) Has there been a consideration of Waterloo North Hydro's exposure to certain business sectors or customers and corresponding risk?

k) How does Waterloo North Hydro propose to address potentially burdening one class of customers due to the loss of load from another class in terms of equitability and cost causality?

l) How would the proposed variance account interact with the Lost Revenues sub-account approved by the OEB in its March accounting order?

m) Given that this proposed sub-account was not one of the three generic sub-accounts approved by the OEB in its March accounting order, please provide Waterloo North Hydro's assessment of the eligibility criteria for this sub-account, i.e. materiality, causation, and prudence.

n) Is Waterloo North Hydro aware of any circumstances where the OEB has approved a similar variance account for load forecast uncertainty? If so, please provide references to the EB number and any associated OEB Decisions and Orders.

o) As an alternative to recording loss of load amounts in the Account, should there be consideration for early rebasing or a special rates adjustment to address redistribution of the overall lower load amongst the other rate classes?

Response:

a) At the time of filing, WNH took a cautious approach by requesting the two options listed above. Although the March 25, 2020 letter from the OEB Accounting Order for the Establishment of Deferral Accounts to Record Impacts Arising from the COVID-19 Emergency did list out Sub-Account - Lost Revenues Arising from the COVID-19 Emergency for Electricity Distributors and Natural Gas Distributors, the calculation methodology was not specifically outlined. There remain outstanding questions concerning the calculation, tracking, disposal and other accounting guidance requirements with respect to this sub-account. However, WNH has been closely following EB-2020-0133 Consultation on the Deferral Account – Impacts Arising from the COVID-19 Emergency. As time has passed, WNH has grown more confident that EB-2020-0133 and the corresponding sub-account will be sufficient in recovering any lost revenues due to COVID-19 from the Load Forecast presented in this Application. Therefore, WNH requests that WNH use the generic Lost Revenues Arising from the COVID-19 Emergency for Electricity and Gas Distributors in place of the WNH-specific sub-account requested in Exhibit 3 p.17. Moreover, WNH requests that the COVID-adjusted load forecast submitted as part of Exhibit 3 be ignored and the revised Load Forecast submitted as part of WNH's response to 1-Staff-1 be the only forecast used for the purposes of this Application. A summary of changes has been provided on the Changes tab of the revised Load Forecast.

b-o) WNH will rely on the results of EB-2020-0133 and the resulting accounting guidance.

3-STAFF-34

Interrogatory:

Load Forecast

Ref 1: Load Forecast Model - Rate Class Energy Model tab

Ref 2: Chapter 2 Appendix 2-R

Waterloo North Hydro has used a 16-year historic average of losses to estimate losses in the test year. OEB Appendix 2-R uses a five-year historic average of losses to estimate losses in the test year. The loss factor in the load forecast model when all 16 years are used is 1.0357. When only the last five years are used, the loss factor is 1.0329.
The 16 years of historic losses are graphed below:

a) Does Waterloo North Hydro believe that the difference in losses between the earlier years relative to the later years is due to random variability, or due to systemic changes in its line losses?

b) If Waterloo North Hydro believes that the difference in line losses over the years is due to systemic changes, such as upgrades to lines, please explain why a 16-year average was chosen.

Response:

a) WNH believes that the improvement to line losses is due to a mixture of random variability and systemic changes to the system.

b) WNH initially chose a 16-year average to incorporate all available data. WNH recognizes that a significant portion of the difference is due to improvements to the distribution system. In particular, the decommissioning of several substations in the service territory prior to 2016 has had a positive effect on line losses. WNH has revised the loss factor used in the load forecast (submitted as part of model updates per 1-Staff-1) to be the average of the last five years which is 1.0329.

3-STAFF-35

Interrogatory:

Load Forecast Model

Ref 1: Load Forecast Model – Rate Class Energy Model

In Waterloo North Hydro's Load Forecast model, under the tab "Rate Class Energy Model" and cell J91, Waterloo North Hydro provided the weather sensitive percentage for the GS>50kW rate class. There were also weather sensitive percentages for the residential, GS<50kW, and Large User rate class, which are derived from the GS>50kW rate class.

Please explain how the weather sensitive percentages were derived.

Response:

As described in Exhibit 3 p.23, WNH utilized the HONI weather sensitivity data prepared in the 2006 Load Profile Study for WNHI. These values are consistent with WNH's 2016 Cost of Service Application (EB-2015-0108).

3-STAFF-36
Interrogatory:

CDM Adjustment
Ref 1: Exhibit 3, section 2.3.1.3, page 28, lines 16 to 21
Ref 2: 2021 COS Load Forecast Model, Tab "CDM Activity"
Ref 3: 2019 Participation & Cost (P&C) Report, dated April 2019

Waterloo North Hydro provided the following preamble:

"Due to the inclusion of 2019 and 2020 projected net program savings in the Persistent CDM variable used in the regression model, a manual adjustment to the load forecast is not required. CDM results for historical years up to the conclusion of the program in 2019 are inherently included in the actual billed data in Table 3-14. The wind-down of the programs in 2020 is not significant and is sufficiently considered in the forecast usage per customer in Table 3-16."

a) Please clarify whether actual 2019 CDM impacts have been incorporated into the base load forecast. If 2019 CDM savings are forecasted impacts, please discuss whether the base load forecast can be updated to include actual 2019 CDM program activity.

b) In light of your response to part a) above, please clarify the appropriateness of including 2019 and 2020 projected net savings in the load forecast through the CDM variable as opposed to establishing a separate CDM manual adjustment.

c) The 2019 net savings of 6,916,461 kWh included in CDM variable is not consistent with the P&C Report showing 211,878 kWh. Please discuss what program activity is included in the 2019 net savings of 6,916,461 kWh and explain how the persistence of 2019 program savings was estimated into 2020 and 2021. Please include reference(s) to any IESO reports or project level savings reports used.

d) Please discuss what program activity is included in the 2020 forecast savings of 11,436,208 kWh. As the P&C report does not include new program activity beyond April 2019, please explain how the persistence of 2020 program savings was estimated into 2021 and include reference(s) to any IESO reports or project level savings reports used.

e) Based on the response to parts c) and d) above, please provide the breakdown of 2019 and 2020 projected net program savings by project, in excel format, showing the following detailed information:

i. What framework (e.g. CFF wind-down program, interim framework, etc.) the project(s) are being completed under
ii. The timing of approval for each project
iii. Confirmation that LDC and its customer(s) have entered into a contractual agreement for the energy efficiency project(s) to be completed
iv. The total estimated savings and project timeframe for each project(s) that LDC is contractually obligated to complete

f) Based on the half year rule used to estimate CDM impacts in the 2021 load forecast, it appears that 112,584,450 kWh is the cumulative CDM impact in 2021

from both savings persisting from 2006-2018 and forecast savings from 2019-2020. Please confirm if this is Waterloo North Hydro's proposal.

g) It does not appear that Waterloo North Hydro has proposed an LRAMVA threshold, as there is no CDM manual adjustment proposed. Please confirm that Waterloo North Hydro is not seeking approval of an LRAMVA threshold as part of this application.

h) In the event Waterloo North Hydro wishes to dispose of lost revenue amounts in the LRAMVA in a future application, please clarify what would be appropriate to compare against actual savings, if any, as 112,584,450 kWh of cumulative CDM savings are embedded into the 2021 load forecast. Specifically, please break out the net incremental savings from new CDM programs (2019 and 2020) from the persistent historical savings included in the CDM Persistent variable and show detailed calculations.

i) Waterloo North Hydro notes that 2020 CDM savings are sufficiently considered in forecast usage per customer. Please confirm whether the utility intends to true-up for any differences between forecast and actual CDM savings through the proposed Load Forecast variance account (a/c 1509) instead of using the LRAMVA.

Response:

a) 2019 CDM savings included in the Load Forecast model in WNH's initial filing were projections based off the most up-to-date program data available at the time of filing. WNH has revised these projections as part of its response to part e).

b) Given the wind-down of CDM programs, WNH has been able to project program savings with a sufficient level of accuracy to include within the Load Forecast as part of a variable rather than a manual adjustment.

c) The 2019 net savings includes internally tracked program savings outside of those reported as part of the April 2019 P&C report. WNH has revised these program savings as part of its response to part e). Persistence of 2019 savings into 2020 and 2021 have been estimated based on the persistence of 2018 programs.

d) The 2020 net savings consists of internally tracked program savings. WNH has revised these program savings as part of its response to part e). Persistence of 2020 savings into 2021 have been estimated based on the persistence of 2018 programs.

e) Please refer to Attachment 3 – CDM 2018-2020 Program Details, for a detailed breakdown of 2018-2020 program savings by project (see Project Detail tab). WNH notes that due to COVID-19, some projects were delayed into Q1 and Q2 of 2021. WNH has included these projects in this detail. Moreover, WNH has added summaries to reconcile program savings to both the revised LRAMVA workform and the revised Load Forecast per response to 1-Staff-1.

f) Confirmed. Please note that the total cumulative CDM impact has been revised as part of response to part e) and included in the revised Load Forecast submitted as part of response to 1-Staff-1. In addition, WNH has included the 2020 program savings that have been delayed due to COVID-19 to 2021 Q1/Q2.

g) Confirmed.

h) In this Application WNH has requested disposal of lost revenue amounts up to the end of 2018 using the LRAMVA threshold determined as part of the 2016 Cost of

Service Application (EB-2015-0108). As this threshold will still be relevant for 2019 and 2020, WNH may request disposal of LRAMVA amounts for these years using the 2016 threshold. Per response to part e), WNH is anticipating 5,391,702 kWh in program savings in 2021 due to the delay of 2020 projects due to COVID-19. WNH has applied the same half-year rule to these savings. Since no new programs are anticipated beyond this carryover, all program savings will be included in the 2021 load forecast and no LRAMVA disposals for CDM programs will be necessary in 2021 and beyond.

WNH has included a CDM Activity – No 2019-2021 tab in Attachment 3 – CDM 2018-2020 Program Details, which compares CDM Activity used in the Load Forecast (revised version submitted as part of response to 1-Staff-1) to a revised calculation which excludes CDM Activity from 2019-2021. Please refer to columns S and T.

i) Per response to 3-Staff-33, WNH is no longer proposing the WNH-specific Load Forecast variance account.

3-STAFF-37

Interrogatory:

Other Revenue – Specific Service Charges
Ref 1: Chapter 2 appendices – 2-H Other Operating Revenue
Ref 2: Exhibit 8 – Specific Service Charges, pp. 13-14

Waterloo North Hydro states that the proposed changes to specific service charges are recorded as offsets to distribution expenses and have been forecasted as a reduction in OM&A.

a) Please explain why Waterloo North Hydro has not recorded the offset as part of other revenue for the specific service charges.

b) Please provide the forecasted amount of the OM&A offset from the new specific service charges and the underlying calculations.

c) Please provide the OM&A budget where the revenue offset from the new specific service charges are included.

Response:

a) For customer charges designed to recover direct costs it is WNH's practice to record service charges as offsets to underlying expenses rather than as revenue offsets.

b) Please see the table below. WNH forecasts $49,815 to be offset in OM&A in 2021. This has been calculated at proposed rates and estimated number of disconnect/reconnect requests by type from a 3-year historical average.

Specific Service Charge	Historic Charge ($)	# of Charges			Total Recovery ($)			Proposed Charge ($)	Est. # of Charges 2021	Est. Recovery 2021 ($)
		2017	2018	2019	2017	2018	2019			
Disconnection/Reconnection at Meter - During Regular Hours	65.00	145	159	180	9,425.00	10,335.00	11,700.00	130.00	160	20,800.00
Disconnection/Reconnection at Meter - After Regular Hours	185.00	4	3	1	740.00	555.00	185.00	335.00	3	1,005.00
Disconnection/Reconnection at Pole - During Regular Hours	185.00	62	56	48	11,470.00	10,360.00	8,880.00	310.00	55	17,050.00
Disconnection/Reconnection at Pole - After Regular Hours	415.00	12	24	13	4,980.00	9,960.00	5,395.00	685.00	16	10,960.00
		223	**242**	**242**	**26,615**	**31,210**	**26,160**		**234**	**49,815**

c) Costs and revenue offsets have been budgeted under USoA 5005 Operation Supervision and Engineering. These amounts were included in the initial OM&A budget filed in the initial Application and have been included in the revised budget per WNH's response to 4-Staff-41.

3-STAFF-38

Interrogatory:

Other Revenue – Retail Service Revenues
Ref 1: Chapter 2 appendices – 2-H Other Operating Revenue
Ref 2: EB-2015-0304 Decision and Order, February 14, 2019

Waterloo North Hydro's historical Retail Service Revenues has been approximately $50,000. This was based on the 2016 approved retail service charges, which was prior to the OEB's Decision and Order in reference 2. The increase in retail service rates results in revenues greater than amounts previously approved in electricity rates.

Please explain how Waterloo North Hydro has forecasted a retail service revenue of $36,000 when most of the retail service rates have doubled.

Response:

2021 Test Year Budget had an error and has been increased by $24,500. This has been updated in the Revenue Requirement Model. Please refer to 1-Staff-1.

3-STAFF-39

Interrogatory:

Other Revenue – Miscellaneous Non-Operating Income
Ref 1: Chapter 2 appendices – 2-H Other Operating Revenue
Ref 2: Chapter 2 appendices – 2-BA Fixed Asset Continuity

Waterloo North Hydro has forecasted sale of scrap for 2020 and 2021 but in the fixed asset continuity schedule there are no forecasted disposals noted.

Please confirm if the sale of scrap is from the assets that Waterloo North Hydro disposes. If so, please explain why there are no forecasted disposals for 2020 and 2021.

Response:

Sale of scrap is primarily from inventory or inventory by-products. Examples include but are not limited to: empty conductor reels, inventory that has been phased out of WNH's distribution system, obsolete inventory and other miscellaneous goods. A limited amount of scrap is related to damaged assets that are brought back from the field due to motor vehicle accidents, underground conductor damage and other unforeseeable circumstances. Where possible, the assets are repaired and brought back into inventory as spare parts rather than sold for scrap. WNH does not budget for the retirement of assets involved in such incidents.

EXHIBIT 4 – OPERATING EXPENSES

4-STAFF-40

Interrogatory:

COVID Impacts

Ref 1: Exhibit 3 – COVID Impact to Load Forecast, p. 17

Waterloo North Hydro stated in reference 1 that "it is very difficult to determine at this time what the lasting implications of this pandemic will be on customers, businesses and electricity load however it will have long term impacts."

Waterloo North Hydro has proposed either to use a load forecast that includes the forecasted impacts of COVID-19 or to track the difference between load forecast and actuals in a deferral and variance account for future disposition. Both of these options would effectively be for the five-year term.

a) Since Waterloo North Hydro has requested that COVID-19 impacts be taken into affect for the load forecast, how has Waterloo North Hydro reflected COVID-19 impacts in its OM&A?

b) If Waterloo North Hydro has not included COVID-19 impacts in its OM&A, please explain why?

c) Please provide the planned and actual OM&A from March to July, 2020.

Response:

a) WNH has not made adjustments to the Test Year OM&A to reflect COVID-19.

b) WNH has not made adjustments to Test Year OM&A because WNH does not foresee reductions in costs due to COVID-19 in 2021. While WNH anticipates seeing a decrease in revenue due to less customer growth and decreased usage, the operational costs will be the same as projected. WNH is still required to provide the same level of service to customers, maintain its assets and perform regular business functions. WNH could actually see an increase in costs due to additional collections activities, increases in sick time, sanitizing efforts and bad debt expenses depending on how long WNH and its customers are impacted by the pandemic. In 2020, there are some costs that have decreased such as training and development due to deferring in-person training however, going forward WNH employees will still require training and development, it may just be facilitated remotely.

c) The table below provides the planned and actual OM&A from March to July, 2020.

Expenses	Mar - Jul 2020 Planned	Mar - Jul 2020 Actual
	MIFRS	MIFRS
Distribution Expenses - Operation	2,523,425	2,497,929
Distribution Expenses - Maintenance	779,311	682,244
Billing and Collecting	1,255,905	1,320,522
Community Relations	145,242	102,094
Administrative and General Expenses	1,577,557	1,538,912
Property Tax	192,655	122,582
LEAP	42,000	42,000
Total	**6,516,095**	**6,306,284**

4-STAFF-41

Interrogatory:

Operations, Maintenance, and Administration Summary

Ref 1: Chapter 2 appendices – 2-JA OM&A Programs

Ref 2: Chapter 2 appendices – 2-JC OM&A Programs

Ref 3: Revenue Requirement Workform – 9. Revenue Requirement

The total OM&A in 2-JA does not match 2-JC.

a) Please reconcile the two tables for 2020 and 2021.

The OM&A in reference 3 does not match 2-JA or 2-JC.

b) Please reconcile the two excel models.

Response:

a) The table below provides the reconciliation between 2-JA and 2-JC based on the Application OM&A totals for 2020 and 2021. The difference between the two appendices is that in 2-JA, LEAP and Property Taxes were not included.

OM&A	2020	2021
2-JA		
Operations	6,039,717	6,310,421
Maintenance	1,867,332	1,903,411
Billing and Collecting	3,008,184	3,137,007
Community Relations	347,738	508,564
Administrative and General	3,778,758	3,869,654
2-JA - Total	**15,041,729**	**15,729,057**
LEAP	42,000	48,000
Property Tax	462,373	471,620
2-JC - Total	**15,546,102**	**16,248,677**

The table below provides the reconciliation between 2-JA and 2-JC based on the new Collective Agreement changes in 2020 and 2021, and an increase to the intervenor costs in 2021.

OM&A	2020	2021
2-JA		
Operations	6,056,220	6,343,243
Maintenance	1,870,346	1,908,962
Billing and Collecting	3,014,171	3,149,683
Community Relations	348,581	511,540
Administrative and General	3,786,136	3,897,973
2-JA - Total	**15,075,454**	**15,811,401**
LEAP	42,000	48,000
Property Tax	462,373	471,620
2-JC - Total	**15,579,827**	**16,331,021**

b) The table below provides the reconciliation between 2-JA, 2-JC and Revenue Requirement Workform (RRWF) – 9. Revenue Requirement based on the Application OM&A totals for 2020 and 2021. The difference between the

appendices is that Property Taxes is included on a separate line item and LEAP is included with OM&A Expenses in the RRWF.

OM&A	2020	2021
2-JA		
Operations	6,039,717	6,310,421
Maintenance	1,867,332	1,903,411
Billing and Collecting	3,008,184	3,137,007
Community Relations	347,738	508,564
Administrative and General	3,778,758	3,869,654
2-JA - Total	**15,041,729**	**15,729,057**
LEAP	42,000	48,000
Property Tax	462,373	471,620
2-JC - Total	**15,546,102**	**16,248,677**
Less: Property Tax	462,373	471,620
RRWF - 9. Revenue Requirement	**15,083,729**	**15,777,057**

The table below provides the reconciliation between 2-JA, 2-JC and Revenue Requirement Workform (RRWF) – 9. Revenue Requirement based on the new Collective Agreement changes in 2020 and 2021, and an increase to the intervenor costs in 2021. These changes have been reflected in the revised RRWF submitted in WNH's response to 1-Staff-1.

OM&A	2020	2021
2-JA		
Operations	6,056,220	6,343,243
Maintenance	1,870,346	1,908,962
Billing and Collecting	3,014,171	3,149,683
Community Relations	348,581	511,540
Administrative and General	3,786,136	3,897,973
2-JA - Total	**15,075,454**	**15,811,401**
LEAP	42,000	48,000
Property Tax	462,373	471,620
2-JC - Total	**15,579,827**	**16,331,021**
Less: Property Tax	462,373	471,620
RRWF - 9. Revenue Requirement	**15,117,454**	**15,859,401**

4-STAFF-42

Interrogatory:

Engineering and Operations

Ref 1: Chapter 2 appendices – 2-JC OM&A Programs

Ref 2: EB-2015-0108 Table 4-13 OM&A Program Tables

Waterloo North Hydro lists the Engineering and Operations OM&A program in reference 1 but this program was not in the last application (reference 2). Waterloo North Hydro also showed in reference 1 that this program spent 18% less than the OEB approved in the 2016 test year. Waterloo North Hydro also anticipates filling an asset management position in 2020 and providing training and development for engineering leadership in 2021.

a) Please reconcile the Engineering and Operations OM&A budget to the OM&A programs provided in reference 2.

b) Please provide an explanation for the 18% variance between the 2016 OEB-approved amount and the 2016 actual amount.

c) Please provide an update on the status of the asset management position.

d) Please provide the amount Waterloo North Hydro anticipates to spend on training and development and explain what types of training and development it plans to do.

e) Are these training costs reoccurring costs or one-time costs to develop training and development material?

Response:

a) WNH acknowledges that there are changes to the programs from the 2016 Application. In 2016, this was the first time that WNH prepared a programs table. In this Application, WNH made an effort to better align actual business programs for 2-JC. There was a misallocation of three labour positions in the "Last Rebasing Year (2016 OEB – Approved)" column. The affected line items are Engineering and Operations and Overhead Distribution – Operations and Maintenance. A revised 2-JC has been prepared as part of 1-Staff-1.

b) Based on the response to part a) of this question the actual variance is 2.85% in Engineering and Operations from 18.04% in the original submission. The variance for Overhead Distribution – Operations and Maintenance was originally -35.29% in 2-JC, however, with the revision it is 0.00%.

c) The filling of the asset management position has been deferred to 2021 due to COVID-19.

d) WNH plans to spend $122,587 in this budget category. This budget category covers all areas of distribution engineering, stations engineering, GIS, admin staff supporting these areas. The training needs fluctuate from year to year driven by changes in staffing (training new staff), development of existing staff, project specific training requirements for stations and GIS areas, and leadership training.

e) These are reoccurring costs with different frequencies of reoccurrence as explained in part d).

4-STAFF-43

Interrogatory:

Control Room

Ref 1: Chapter 2 appendices – 2-JC OM&A Programs

Ref 2: Exhibit 4 – Program Variance Analysis, p. 42

The Control Room OM&A program increased by 34% in 2018 and stays consistent through to 2021. Waterloo North Hydro states that since 2016, it has hired an additional full time employee to resolve a deficit of hours required for the control room.

a) Please explain the 34% increase for the Control Room budget in 2018.

b) Please confirm when the new employee for the control room was hired.

c) Was the new employee a qualified system operator or a system operator in training?

d) Please provide the typical staffing schedule for the control room, which should include the rotational schedule, number of staff, and hours of each shift.

Response:

a) There are two main reasons for this increase. Due to being short staffed in 2018, there was overtime required to operate 24x7 as well as requiring a contractor who was compensated at a higher rate than FTEs. The second reason was an allocation of $260K that was done in 2017 only, moving hours out of the control room and into the stations budget. This was done to better allocate the expense required to monitor the high voltage stations. However, this made it difficult to internally track budget to actual for the supervisors and this allocation was

abandoned in 2018. The opposite effect of this adjustment can be seen the response to 4-Staff-44 a).

b) The new employee for the Control Room was hired on April 23, 2019.

c) The new employee is an Operator in Training.

d) Please see below for a typical staffing schedule for the Control Room:

7 Full-time Employees

Shifts;

S10 = 10-hour shift (Day Mon-Fri)

D = 12.25-hour shift (Day Shift)

N = 12.25-hour shift (Night Shift)

P = 8-hour (Planning Shift)

	Week 1							Week 2							Week 3							Week 4							Week 5						
	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F
A			S10	D	D			N	N	N			D	D				S10	S10	S10	S10				N	N			D	D	D			N	N
B										S10	D	D			N	N	N			D	D				S10	S10	S10	S10				N	N		
C	D	D	D			N	N										S10	D	D			N	N	N			D	D				S10	S10	S10	S10
D				N	N			D	D	D			N	N										S10	D	D			N	N	N			D	D
E			S10	S10	S10	S10	S10				N	N			D	D	D			N	N									S10	D	D			
F	N	N	N			D	D			S10	S10	S10	S10					N	N			D	D	D			N	N							
Planner			P	P	P	P	P			P	P	P	P	P			P	P	P	P	P			P	P	P	P	P			P	P	P	P	P

4-STAFF-44

Interrogatory:

Stations, Operations, and Maintenance

Ref 1: Chapter 2 appendices – 2-JC OM&A Programs

Ref 2: Exhibit 4 – Program Variance Analysis, p. 42

Ref 3: Distribution System Plan – Appendix B – MS/DS Decommissioning

Waterloo North Hydro states that between 2016 and 2019 it was able to retire five 4.16 kV stations. In reference 3, Waterloo North Hydro stated that by retiring a station there is expected OM&A savings of $19,000 per station. There was also an 18% increase between the 2016 OEB-approved and 2017 actuals amount for the Stations, Operations, and Maintenance program.

a) Please explain the 18% increase between the 2016 OEB-approved and 2017 actuals amount.

b) Did Waterloo North Hydro realize the expected OM&A savings after the retirement of the five 4.16kV stations? If so, how is it reflected in the Station, Operations, and Maintenance budget?

Response:

a) There are four main reasons for the increase in Stations, Operations and Maintenance in 2017 from 2016.

1) In 2017, there was an allocation change described in 4-Staff-43 a) totalling $260K. This was only done for one year.
2) In 2017, WNH had a main tank gasket fail on the T1 power Transformer at ERTS. This resulted in repairs and clean up cost of roughly $41K during Q4 of 2017.
3) In 2017, WNH started seeing underground connections failing in old secondary infrastructure. There were increased costs for contractors, internal labour and trucking in these accounts totalling approximately $60K. In 2020, secondary and primary replacements are done along with WNH rebuild projects to avoid secondary repairs in the future.

4) Lastly, overtime labour increased from 2016 in overhead services due to several tree contacts and outages in October 2017 totalling approximately $32K.

b) The expected OM&A decrease of $19,000 per station consists of savings in multiple areas. These include the reduced need for preventative maintenance, testing, equipment inspections, property inspections, vegetation control, yard clean up, snow removal, insurance and property taxes. The full decrease is expected only once the removal work is complete, and a property has been decommissioned and sold. Prior to this, there are still a portion of savings related to removing the station from service. Items such as preventative maintenance, testing and equipment inspections are no longer required and savings are expected in the Stations Operations and Maintenance Program the year following a station removal. These savings account for roughly 50% of the forecasted $19,000.

4-STAFF-45

Interrogatory:

Overhead/Underground Distribution Operations and Maintenance
Ref 1: Chapter 2 appendices – 2-JC OM&A Programs

The Overhead Distribution Operations and Maintenance program has consistently seen actual spending above the OEB-approved amount with a 57.4% increase between the 2016 OEB-approved amount and 2017 actuals.

a) Please explain the consistently higher than OEB-approved spending and the variance between the 2016 OEB-approved capital budget and 2017 actuals for the Overhead Distribution Operations and Maintenance program.

Response:

a) The 57.4% variance between the 2016 OEB Board Approved amount and the 2017 Actuals is explained as follows:

WNH decided to reduce the number of full time employees in the line department by eliminating one overhead line construction crew. The intent was to reallocate the overhead line construction crew and not replace positions as retirements occurred. In doing this, there was an increase in Powerline Maintainers allocated to the service crew. The service crew primarily works on operating and maintenance jobs instead of capital.

The downsizing in the line department required an early retirement with severance costs.

Two Powerline Maintainers were reassigned from a construction crew to an additional service crew to more effectively complete system operating and maintenance repairs including the reconciliation of a backlog of OEB inspection repairs. The additional service crew better enabled WNH to provide a timelier response to customer appointments, customer initiated service calls and power interruptions.

In 2017 the line department logged more labour hours to maintenance activities and inclement weather days than in 2016.

While there is an increase in 2017, there is a gradual reduction from 2018 to 2021 due to the downsizing of the line crew discussed above. It is important to note that this grouping of accounts can be highly variable year over year depending on storm response and inclement weather.

4-STAFF-46

Interrogatory:

Locates
Ref 1: Chapter 2 appendices – 2-JC OM&A Programs
Ref 2: Exhibit 4 – Program Descriptions, p. 36

Waterloo North Hydro stated that it has seen an increase in the number of locates in the past several years in reference 2 but the OM&A budget in reference 1 between 2019 and 2020 saw a 25% decrease.

Please provide an explanation for the variance in 2020.

Response:

WNH acknowledges that a reduction in 2020 OM&A cost while 2020 locate volumes are estimated to increase is counter intuitive.

As stated in Exhibit 4, p. 36, lines 24 - 25, WNH can confirm an increase in the number of locates provided each year. Specifically, as stated in Exhibit 1, p. 22, line 18, WNH completed 13,648 locates for customers and excavators as part of its Locate program in 2019. Annual locate volumes have more than doubled since 2010. WNH has estimated 14,000 locates for the 2020 Bridge Year in line with year over year increases.

Appendix 2-JC OM&A for the Locates program states a 2019 Actual OM&A at $534,768 and a budgeted 2020 OM&A at $396,845 with a decrease or variance of $137,927.

In June of 2019 WNH chose to outsource all locate scheduling and administration allowing WNH to reduce headcount after the retirement of an Operations Clerk. This is noted in Exhibit 4, p. 27, line 11. This outsourcing has led to the savings above.

4-STAFF-47

Interrogatory:

Vegetation Management

Ref 1: Chapter 2 appendices – 2-JC OM&A Programs

Ref 2: Exhibit 2 – Appendix B – Grid Resiliency, pp. 48-50

Waterloo North Hydro states that the vegetation management cycle is every two and five years for each of the urban and rural areas, respectively. In the 2021 test year, Waterloo North Hydro also included a capital investment called Grid Resiliency to move sections of overhead services to underground services.

a) Please provide the number of kilometers of overhead and underground distribution services for the urban and rural area.

b) If there is a higher percentage of underground services in the urban area than the rural area, then please explain why the urban area requires a higher clearing cycle than the rural area.

c) Please explain how the Grid Resiliency capital investment has affected the vegetation management OM&A budget. If it hasn't, please explain why.

Response:

a)

Overhead rural distribution services	= 209 km
Overhead urban distribution services	= 219 km
Underground rural distribution services	= 275 km
Underground urban distribution services	= 799 km

b) There is a higher percentage of underground (secondary) service kilometers in the urban area as compared to the rural area.

In urban as compared to rural areas, trees are often in closer proximity to the overhead distribution lines and there tends to be less room to avoid tree conflicts. In past consultations, municipalities and WNH customers have expressed a strong desire for WNH to be less impactful in its forestry practices. To that end, WNH has established vegetation management plan in urban areas that removes less tree material, however vegetation management needs to be performed more frequently (two-year cycle) to maintain the adequate clearances required for safety.

In the rural areas, trees tend to be further back from the lines and there tends to be greater room to avoid tree conflicts. WNH's five-year trim cycle has been meeting the needs of both the utility and its rural customers.

c) The WNH Grid Resiliency program will not have a significant impact on the vegetation management program. The vegetation management program includes the inspection and trimming of 1,072km of primary circuit and 428 km of secondary services totalling 1,500 km of circuit trimming.

WNH's Grid Resiliency program will only eliminate approximately 4.2 km (0.28%) of the 1500 km of total overhead line.

4-STAFF-48

Interrogatory:

Purchasing and Fleet

Ref 1: Chapter 2 appendices – 2-JC OM&A Programs

The Purchasing and Fleet budget saw a 70% increase between 2016 and 2017 actuals.

Please explain the variance.

Response:

The expenditures that contribute to the $222,569 variance are described below:

In January 2017, WNH completed the 4kV conversion program which allowed for the removal of related obsolete transformers from inventory. These transformers plus other related materials totaled $61,817 in total obsolete inventory.

Throughout the year, multiple large vehicles required extensive engine and/or transmission repairs requiring higher than normal parts and labour. In addition to these extra costs, a WNH full-time Fleet Technician was on short term disability and required WNH to employ a fully certified contract Fleet Technician for several months. This caused additional costs of $77,413.

A vendor invoice for $53,799 was incorrectly applied to this account and should have been applied to vegetation management program. This corresponds to lower than average costs in 2017 for the vegetation management program.

The fork lift in the stores department required major repairs on the forks, hydraulics and steering, costing a total of $17,949.

4-STAFF-49

Interrogatory:

Communications, Community & Customer Relations
Ref 1: Chapter 2 appendices – 2-JC OM&A Programs
Ref 2: Exhibit 1 – Attachment 1-7 Customer Satisfaction Survey

The 2021 Communications, Community & Customer Relations budget is 2.5 times larger than the 2016 OEB-approved amount. This is due to Waterloo North Hydro retaining two full time employees from the previous CDM function to establish a Key Accounts department. The role of this department is to provide energy management support and

information for customers. Waterloo North Hydro also stated that it proceeded with the Key Accounts department because customers indicated that they would like this service to be provided. Based on the Customer Satisfaction Survey, 77% of customers said they are receiving the right amount of information on energy efficiency.

a) Please provide the roles and accountabilities for the two positions in the Key Accounts department and the services they are providing to customers.
b) If not, please point to evidence in the customer engagement results that indicates that customers are willing to pay for incremental services on energy management.
c) What CDM programs or initiatives will they help to support in 2021, if any?
d) Please explain the appropriateness of funding CDM staffing costs from distribution rates.

Response:

a) The role of the two positions in the Key Accounts department are to primarily work with WNH's business customers to help them use electricity wisely and efficiently. Specifically, WNH would offer the following services to customers:

- Energy Literacy - Assisting customers in understand their bill, their rates, how their home or business uses energy, how they can manage their energy usage
- Energy Coaching – Building internal teams, energy champions, monitoring energy usage, energy hunts, etc.
- Facility and equipment assessments

- Identifying energy efficiency and management projects,
- Metering and monitoring of equipment to understand usage, identify opportunities, provide ongoing monitoring of energy efficiency and energy management projects and programs
- Assistance with building the business case for energy efficiency and management projects,
- Application support for incentives, grants and rebates
- Project management
- Pre and post project evaluation
- Power factor analysis
- Assisting with navigating emerging energy technologies including, but not limited to distributed energy resources and electric vehicle charging infrastructure

b) In the Customer Engagement Survey Phase 2, WNH asked their Residential and GS < 50 kW customers (Attachment 1-9b Phase 2 – WNH_Customer Survey Report_Jan 6 Q6). “Thinking about the next five years, please rate your interest in the following improvements or upgrades, keeping in mind that there will be a cost impact to you as a customer associated with them.”

On p. 8 of the report, telephone results stated that they value WNH educating customers and the public about energy conservation highly at 79%.

On p. 23 of the report, online results stated that they value WNH educating customers and the public about energy conservation highly at 82% and ranked first of the ten options provided to the customers.

The survey results for GS > 50 kW customers were not exclusively included in the report but were mentioned. Please see Attachment 4 – WNH Breakfast – Business

Feedback Results, with the survey responses from the 32 customers that participated in the organized breakfast meeting workshop.

These customers were asked “Q15. Are you interested in utilizing the expertise of WNH Key Account Managers for future programs and incentives to help your company with energy and cost saving initiatives?”

69% of the businesses stated that they are interested, 9% were not sure and 22% were not interested.

The GS > 50 kW customers were also asked, “Q15b. Would your company utilize the Key Account Managers for detailed energy advice at an additional cost?”

31% of the businesses stated that they are willing to utilize Key Account Managers at an additional cost and 44% stated that they were not willing to utilize them for an additional cost, where as 25% were unsure.

It is important to note that 77% of WNH’s customers were happy with the conservation/energy information reviewed and this is a direct result of WNH’s continued activity of promoting energy efficiency. The customer satisfaction in regards to the program would be significantly lower if WNH did not provide any local programs. WNH would not be able to deliver the three local programs (one to residential, one to small and medium businesses and one to large businesses), promote the programs and provide general energy efficiency information to customers if it were not for the human resources dedicated to assist customers.

c) WNH has a small amount of approved wind-down costs that will be funded through the IESO in 2021 totalling $67,277 for the completion of projects from the Conservation First Framework (CFF). The Key Accounts Department will complete

the outstanding customer projects for CFF using this budget and therefore will not use Revenue Requirement for CFF.

d) WNH learned from the Customer Engagement surveys undertaken in 2019, that customers would like to see the utility offer services that would help them in becoming more energy efficient. The survey revealed that 68.8% of large businesses said they were interested in utilizing the expertise of WNH Key Account Managers for future programs and incentives to help their company with energy and cost saving initiatives. In addition, 75.3% of residential customers were interested in making their homes smarter with respect to energy usage. WNH believes that energy efficiency is important to customers and that they would support the cost of these services in distribution rates.

4-STAFF-50

Interrogatory:

Administration and Finance

Ref 1: Exhibit 4 – Program Variance Analysis, p. 44

Waterloo North Hydro states that there are plans for executive recruitment to replace the CEO in 2021.

a) Please provide an update on the status of the recruitment.

b) Please provide details on setting the compensation for any new CEO.

Response:

a) The recruitment was put on hold at the start of the pandemic impact and it remains on hold for now.

b) A Committee of the Independent Board members will determine the compensation. That process is on hold for now.

4-STAFF-51

Interrogatory:

Regulatory

Ref 1: Chapter 2 appendices – 2-JC OM&A Programs

Ref 2: Chapter 2 Appendices – 2-M Regulatory Costs

The test year regulatory costs provided in reference one is $516,027 but the test year regulatory costs provided in reference two is $603,139.

a) Please reconcile the regulatory costs in reference one and two.

b) Please provide a break down of the different types of consultants that make up the costs and the amount spent to date.

c) Please provide the number of intervenors Waterloo North Hydro used to estimate this amount.

Response:

a) The test year regulatory costs in 2-JC OM&A Programs were correct in the Application and the costs in 2-M Appendix Regulatory Cost Schedule filed in the Application had an error and has been updated in the following table.

Appendix 2-M
Regulatory Cost Schedule

	Regulatory Cost Category	USoA Account	USoA Account Balance	2016 Board Approved	Last Rebasing Year (2016 Actual)	Most Current Actuals 2019	2020 Bridge	Annual % Change	2021 Test	Annual % Change
	(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H) = [(G)-(F)]/(F)	(I)	(J) = [(I)-(G)]/(G)
1	OEB Annual Assessment	5655		$ 200,000	$ 200,000	$ 207,489	$ 209,980	1.20%	$ 250,000	19.06%
2	OEB Section 30 Costs (Applicant Originated)	5655		$ -	$ -	$ -	$ -		$ -	
3	OEB Section 30 Costs (OEB-initiated)	5655		$ 7,000	$ 13,594	$ 7,048	$ 7,500	6.41%	$ 7,500	0.00%
4	Legal costs for regulatory matters			$ -	$ -	$ -	$ -		$ -	
5	Consultants' costs for regulatory matters	5655		$ -	$ 5,000	$ -	$ 15,000		$ -	-100.00%
6	Operating expenses associated with staff resources allocated to regulatory matters	5655		$ 272,066	$ 184,080	$ 195,067	$ 207,444	6.34%	$ 128,527	-38.04%
7	Intervenor costs			$ -		$ -	$ -			
8	**Sub-Total Ongoing Costs**			**$ 479,066**	**$ 402,674**	**$ 409,604**	**$ 439,924**	**7.40%**	**$ 386,027**	**-12.25%**
1	Expert Witness costs									
2	Legal costs			$ 100,000	$ 118,030				$ 125,000	
3	Consultants' costs			$ 205,000	$ 249,849				$ 400,000	
4	Incremental operating expenses associated with staff resources allocated to this application.			$ 10,000	$ 5,070				$ 10,000	
5	Incremental operating expenses associated with other resources allocated to this application. 1									
6	Intervenor costs			$ 160,000	$ 102,051				$ 115,000	
7	OEB Section 30 Costs (application-related)								$ -	
8	**Sub-Total One-Time Costs**			**$ 475,000**	**$ 475,000**	**$ -**	**$ -**		**$ 650,000**	
1	**Sub-Total Ongoing Costs 2**			**$ 479,066**	**$ 402,674**	**$ 409,604**	**$ 439,924**	7.40%	**$ 386,027**	-12.25%
2	**Sub-Total One-Time Costs 3**			**$ 475,000**	**$ 475,000**	**$ -**	**$ -**		**$ 650,000**	
3	**Total**			**$ 954,066**	**$ 877,674**	**$ 409,604**	**$ 439,924**	**7.40%**	**$ 516,027**	**17.30%**

Please fill out the following table for all one-time costs related to this cost of service application to be amortized over the test year plus the IRM period.

Application-Related One-Time Costs	Total
Total One-Time Costs Related to Application to be Amortized over IRM Period	650,000
1/5 of Total One-Time Costs	130,000

2-JC OM&A Programs and 2-M Regulatory Costs have been updated based on the union ratification rate change and an increase in intervener costs in the table below. Updated appendices have been included as part of 1-Staff-1.

Appendix 2-M
Regulatory Cost Schedule

	Regulatory Cost Category	USoA Account	USoA Account Balance	2016 Board Approved	Last Rebasing Year (2016 Actual)	Most Current Actuals 2019	2020 Bridge	Annual % Change	2021 Test	Annual % Change
	(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H) = [(G)-(F)]/(F)	(I)	(J) = [(I)-(G)]/(G)
1	OEB Annual Assessment	5655		$ 200,000	$ 200,000	$ 207,489	$ 209,980	1.20%	$ 250,000	19.06%
2	OEB Section 30 Costs (Applicant Originated)	5655		$ -	$ -	$ -	$ -		$ -	
3	OEB Section 30 Costs (OEB-initiated)	5655		$ 7,000	$ 13,594	$ 7,048	$ 7,500	6.41%	$ 7,500	0.00%
4	Legal costs for regulatory matters			$ -	$ -	$ -	$ -		$ -	
5	Consultants' costs for regulatory matters	5655		$ -	$ 5,000	$ -	$ 15,000		$ -	-100.00%
6	Operating expenses associated with staff resources allocated to regulatory matters	5655		$ 272,066	$ 184,080	$ 195,067	$ 207,444	6.34%	$ 131,777	-36.48%
7	Intervenor costs			$ -		$ -	$ -			
8	**Sub-Total Ongoing Costs**			**$ 479,066**	**$ 402,674**	**$ 409,604**	**$ 439,924**	**7.40%**	**$ 389,277**	**-11.51%**
1	Expert Witness costs									
2	Legal costs			$ 100,000	$ 118,030				$ 125,000	
3	Consultants' costs			$ 205,000	$ 249,849				$ 400,000	
4	Incremental operating expenses associated with staff resources allocated to this application.			$ 10,000	$ 5,070				$ 10,000	
5	Incremental operating expenses associated with other resources allocated to this application. 1									
6	Intervenor costs			$ 160,000	$ 102,051				$ 165,000	
7	OEB Section 30 Costs (application-related)								$ -	
8	**Sub-Total One-Time Costs**			**$ 475,000**	**$ 475,000**	**$ -**	**$ -**		**$ 700,000**	
1	**Sub-Total Ongoing Costs 2**			**$ 479,066**	**$ 402,674**	**$ 409,604**	**$ 439,924**	7.40%	**$ 389,277**	-11.51%
2	**Sub-Total One-Time Costs 3**			**$ 475,000**	**$ 475,000**	**$ -**	**$ -**		**$ 700,000**	
3	**Total**			**$ 954,066**	**$ 877,674**	**$ 409,604**	**$ 439,924**	**7.40%**	**$ 529,277**	**20.31%**

Please fill out the following table for all one-time costs related to this cost of service application to be amortized over the test year plus the IRM period.

Application-Related One-Time Costs	Total
Total One-Time Costs Related to Application to be Amortized over IRM Period	700,000
1/5 of Total One-Time Costs	140,000

b) Waterloo North Hydro expects to incur $400,000 in consulting costs for this Application. See the table below for the breakdown of consulting costs.

Consulting	Budget	Cost To-Date
DSP Preparation and IR Responses (DSP) - for the period 2018 - 2020	300,000	278,465
Proof-Reading Review of Application and Communications Assistance	20,000	16,656
Customer Engagement	20,000	18,037
Contractor Costs - to backfill finance	60,000	61,575
Total	400,000	374,733

c) Waterloo North Hydro expects to incur $115,000 in intervenor costs.

WNH projected this cost based on the 2016 COS Application with four intervenors ($25,000/intervenor) plus OEB costs ($15,000). WNH has three new intervenors and one from 2016 not intervening in this Application. Due to the additional two intervenors, WNH is requesting that the one-time regulatory costs (2-M) increase by $50,000 ($10,000/year for five years). This change has been made in the Revenue Requirement and is included in 1-Staff-1.

4-STAFF-52

Interrogatory:

Information Technology Services

Ref 1: Exhibit 4 – Program Variance Analysis, pp. 44-45

Waterloo North Hydro states that due to the additional systems it has adopted additional employees were required to manage these systems. The IT Services Department plans, operates and supports the organization's IT systems and infrastructure requirements, enabling business users to carry out their roles efficiently, productively and securely.

a) Please provide the number of IT tickets that were received by the IT department between 2016 to 2020.

Response:

a) WNH did not operate a ticket system to track work requests until late 2019. The decision to increase technical FTEs by one was based on a variety of workload factors including WNH's plan for compliance with the OEB's CSF (cyber security framework). Even with the addition of one FTE, WNH has estimated that there is

an annual labour deficit in IT of 3,300 hours. This will be made up through overtime, contracted work and assuming additional technical debt.

4-STAFF-53

Interrogatory:

Employee Compensation

Ref 1: Exhibit 4 – Employee Compensation, p. 47

Waterloo North Hydro stated that the current collective agreement with union staff ended March 31, 2020 and a new contract has been negotiated but has not been ratified due to COVID-19. Waterloo North Hydro estimated a wage increase of 1.5% for 2020 and 2.0% for 2021 and requested to update these estimates when the contract is ratified.

a) Please provide a status update on the ratification of the collective agreement.

b) If the estimated wage increases are different from the ratified contract then update the OM&A appendices as required.

Response:

a) A three-year collective agreement was ratified on June 25, 2020. This agreement is for the period April 1, 2020 to March 31, 2023. The agreed annual increases are as follows:

April 1, 2020 – 2.1%
April 1, 2021 – 2.0%
April 1, 2022 – 2.0%

b) The wage increases have been adjusted and included in the OM&A appendices as part of WNH's response to 1-Staff-1.

4-STAFF-54

Interrogatory:

Employee Costs
Ref 1: Chapter 2 Appendices – 2-K Employee Costs
Ref 2: Exhibit 4 – Headcount Year Over Year, pp. 51-52

In reference one, the 2016 OEB-approved FTEs was 132 and a total compensation of $13,975,802. However, the 2016 actuals show an actual FTE count of 130 and a total compensation of $14,508,623. In reference two, Waterloo North Hydro stated that there were retirements at the beginning of 2016, positions that were not filled until late 2016, and positions that remained vacant in 2016.

a) Please explain for 2016 why the actual total compensation is higher than the OEB approved when the number of FTEs were actually lower.

In 2016, the OEB approved 132 FTEs but over the historical period Waterloo North Hydro never reach the OEB-approved number of FTEs. There appears to be a trend of declining FTEs year over year. In 2021, Waterloo North Hydro is requesting 128 FTEs, which is six FTEs more than the 2019 actuals.

b) Please provide a table of the FTEs that were removed, vacant, or filled between 2016 and 2021.

c) Please explain how the OEB can be confident that Waterloo North Hydro will be able to achieve the requested number of FTEs.

Response:

a) There are three reasons for the increase in total compensation. First, due to the LRT project there was a significant amount of work required in a short period of time which required overtime for engineering and lines staff. This made up the largest portion of the increase. Second, there was overtime required for the Customer Information System in order to have an implementation for early 2017. Lastly, there were three major event storms including a three-day ice storm in March, and two large storms in July and August, resulting in significant overtime costs to restore power to customers.

b) The table below provides FTE positions that were removed, vacant or filled between 2016 and 2021. WNH has not included co-op positions because of the continuous staff changes in those positions.

Positions - as of Aug 31, 2020	2016	2017	2018	2019	2020	2021
Operations						
VP Operations			Vacant: Oct Filled: Aug			
Operations Engineer	Removed: Jan					
Executive Assistant Operations			Vacant: Apr Filled: July			
Operations Clerk				Vacant: Jun Removed: Jun		
Line Supervisor			Vacant: Oct Removed: Oct			
Line Supervisor				Vacant: Jan	Filled: Feb	
Powerline Maintainer	Removed: Jan					
Powerline Maintainer			Vacant: Nov Removed: Nov			
Powerline Maintainer		Vacant: Nov Removed: Nov				
Powerline Maintainer						Vacant: Jan
Apprentice System Operator				Filled: Apr		
Facilities Supervisor				Filled: Jan		
Facilities Technician				Removed: Jan		
Vehicle Mechanic					Vacant: May	
Utility Arborist				Vacant: Dec Removed: Dec		
Engineering/Stations						
VP Engineering & Stations			Filled: Sept			
Manager of Distribution			Vacant: Sept			
Asset Management					Vacant: Sept	
Engineering Technologist		Filled: May			Vacant: Oct	
Engineering Technologist					Vacant: July	
Engineering & Operations Project Supervisor				Filled: Jan		
Engineering Supervisor - Stations	Filled: Dec				Vacant: Mar Filled: Mar	
GIS Technician				Vacant: Feb Filled: Apr		
Distribution Designer					Filled: Feb	
Protection & Control Technologist					Vacant: Mar Filled: Oct	
Protection & Control Technologist			Vacant: Jan Filled: Apr Vacant: Sept	Filled: May		
Apprentice Meter Technician			Filled: Sept			

Positions - as of Aug 31, 2020	2016	2017	2018	2019	2020	2021
Finance/Administration						
Human Resources Generalist	Filled: Oct					
Manager of Finance/Regulatory		Filled: Sept				
Manager of Finance		Vacant: Aug Removed: Aug				
Manager of Regulatory	Vacant: Jan 'Filled: Jan	Vacant: Sept Removed: Sept				
Regulatory/Financial Analyst	Vacant: Jan Filled: Jul	Vacant: Oct Filled: Oct				
Financial Analyst		Filled: Feb Vacant: Oct Removed: Oct				
Corp Communications Specialist		Vacant: Jan Filled: Jun				
Billing & Settlement Coordinator				Vacant: Jul Filled: Dec		
Programmer Analyst - CIS		Vacant: July Removed: July				
CIS Support & Training Analyst	Vacant: Apr Removed: Apr					
VP Information Technology Services				Vacant: Feb Filled: Jul		
Programmer Analyst Intermediate		Vacant: Aug Filled: Oct Vacant: Nov	Filled: Feb			
IT Infrastructure Analyst			Filled: Feb			
System Administrator			Vacant: Feb Removed: Feb		Vacant: Apr Filled: Apr	
Manager of Energy Efficiency					Filled: Sept	
Energy Efficiency Advisor					Filled: Aug	
Contracts						
System Operator		Filled: Oct		Vacant: Oct Removed: Oct		
Vehicle Mechanic - Temp	Filled: May Vacant: Dec Removed: Dec					

c) The OEB does not approve an FTE headcount. The OEB approves a test year revenue requirement that is used to establish just and reasonable rates. WNH planned to meet the planned 2016 FTE count however during Settlement there were significant cuts to both OM&A and Capital; therefore, some positions were not filled as was originally anticipated. This is an expected consequence of budget cuts during the Settlement process. WNH has included the FTE count for the 2021 budget provided however it will depend on the outcome of this process to ensure that the head count is met.

4-STAFF-55

Interrogatory:

Employee Benchmarking

Ref 1: Exhibit 4 – Table 4-22 Benchmarking

Waterloo North Hydro prepared a table comparing its number of customer, service area, and FTEs, for similar sized utilities.

Please add in the table the OM&A of each utility, the OM&A/customer, and the OM&A/FTE.

Response:

Please see the updated table below which is Table 4-22 - Benchmarking from the Application to include OM&A, OM&A/customer and OM&A/FTE.

	Waterloo North Hydro Inc.		Waterloo North Hydro Inc.	Kitchener-Wilmot Hydro Inc.	Burlington Hydro Inc.	Energy+ Inc.	Guelph Hydro Electric Systems Inc.	London Hydro Inc.	Oakville Hydro Electricity Distribution Inc.
	2021 Test	2016 Board Approved	2018 Actual	2018 Actual	2018 Actual	2018 Actual	2018 Actual	2018 Actual	2018 Actual
Number of Customers*	58,506	55,812	57,471	96,827	67,940	65,402	55,673	159,039	72,108
Total Service Area (sq km)	683	672	683	425	188	562	93	423	139
Number of FTE	128	132	124	184	92	125	120	324	104
OM&A	16,331,021	13,649,068	15,028,587	19,826,622	18,928,689	17,963,209	16,742,392	39,443,233	18,787,858
Customer/FTE	456	422	463	526	738	523	464	491	693
Service Area/FTE	5	5	6	2	2	4	1	1	1
OM&A/Customer	279	245	261	205	279	275	301	248	261
OM&A/FTE	127,208	103,308	121,198	107,753	205,747	143,706	139,520	121,738	180,652

*Number of customers is average number of customers for 2021 Test and 2016 Board Approved

Please see the updated table below which estimates the 2021 OM&A using the OEB's inflationary IRM index to create a 2021 Calculated OM&A for the comparator utilities.

	Waterloo North Hydro Inc.	Kitchener-Wilmot Hydro Inc.	Burlington Hydro Inc.	Energy+ Inc.	Guelph Hydro Electric Systems Inc.	London Hydro Inc.	Oakville Hydro Electricity Distribution Inc.
	2021 Test	2021 Calculated OM&A	2021 Calculated OM&A	2021 Calculated OM&A	2021 Calculated OM&A	2021 Calculated OM&A	2021 Calculated OM&A
Number of Customers	58,506	96,827	67,940	65,402	55,673	159,039	72,108
Total Service Area (sq km)	683	425	188	562	93	423	139
Number of FTE	128	184	92	125	120	324	104
OM&A	16,331,021	20,405,639	19,481,482	18,487,807	17,231,337	40,595,133	19,336,539
Customer/FTE	456	526	738	523	464	491	693
Service Area/FTE	5	2	2	4	1	1	1
OM&A/Customer	279	211	287	283	310	255	268
OM&A/FTE	127,208	110,900	211,755	147,902	143,594	125,294	185,928

4-STAFF-56

Interrogatory:

Shared Services

Ref 1: Exhibit 4 – Table 4-31 Shared Services and Corporate Cost Allocation

Ref 2: Exhibit 4 – Table 4-32 Charge to Affiliates for Services Provided

Corporate Administration and Finance costs are allocated based on average estimated time spent by Waterloo North Hydro staff who provide management and administrative services to the parent company. Since 2016, the percent of Corporate Administration and Finance costs allocated to the parent company has been steadily declining.

a) Please provide an explanation for the declining percentage.

b) Please provide the methodology used to estimate the time spent by Waterloo North Hydro staff on Corporate Administration and Finance for the parent company.

Response:

a) The % of Corporate Costs Allocated is a percentage of the total department costs, not just those that are directly attributable to the parent company. The total

department costs are rising at a faster rate than those that are directly attributable. As a result, the percentage allocated is declining.

b) Time spent by WNH staff on duties directly associated to the parent company is estimated based on historical averages. This allocation percentage is applied to the employee's cost distribution in the payroll system. At the end of each period WNH assesses the accuracy of the allocation compared to actual hours spent working on the parent company and makes correcting entries to increase or decrease the allocation if necessary.

4-STAFF-57

Interrogatory:

Post Employment Benefits

Ref: Exhibit 4 updated on July 4, 2020, pp. 65-68

Waterloo North Hydro forecasts $358,000 in post-employment benefits in 2021, which is to be recorded on an actual basis. Waterloo North Hydro explains that:

WNH used the estimate of the benefit expense and plan obligation on the basis of IFRS IAS 19 as on December 31, 2019 and extrapolated the results for the 2020 Bridge Year and 2021 Test Year.

OEB staff notes that the 2019 actual post-employment expense is $301,109, which is based on the actuarial report for the post-retirement liability as at December 31, 2019.

Waterloo North Hydro further provides the capital and operating breakdown of the post-employment benefits in Table 4-28 as below:

Table 4-28 Post-Retirement and Other Benefits - Capital and Operating Breakdown

Item	2016 Board Approved	2016 Actual	2017 Actual	2018 Actual	2019 Actual	2020 Bridge	2021 Test
Post-Retirement Benefits	215,873	343,839	347,308	356,413	301,109	358,000	358,000
Operating, Maintenance and Administration		132,683	167,822	181,572	171,225	170,986	170,986
Capital		211,156	179,486	174,841	129,884	187,014	187,014

OEB staff calculates the percentages of the post-retirement expenses that are allocated to OM&A and capital in the table below:

	2016 Approved	2016	2017	2018	2019	2020	2021
Post-Retirement Benefit	215,873	343,839	347,308	356,413	301,109	358,000	358,000
% Allocated to OM&A		39%	48%	51%	57%	48%	48%
% Allocated to Capital		61%	52%	49%	43%	52%	52%

a) Please explain how Waterloo North Hydro extrapolated the 2019 results for 2020 and 2021.

b) Given the current low interest rate environment arising from the COVID-19 pandemic, please explain whether the extrapolation technique referred to above needs to be revised?
   i) If so, please provide a revised 2020 and 2021 extrapolation.
   ii) If not, why not?

c) Please explain why the percentage of post-retirement benefits allocated to OM&A has increased from 39% in 2016 to 48% in 2020 and 2021.

Response:

a) WNH estimated the post-retirement benefits expense consisting of current service cost and interest on obligation based on a three-year historical trend. As demonstrated in Table 4-28, the expense has increased slightly each year between 2016 and 2018 and WNH expected this to continue into 2020 and 2021. The 2020 and 2021 budgets were approved prior to the 2019 actuarial report completion. 2019 had a particularly low current service cost and may not be indicative of service costs in the future. Therefore, WNH did not change the budget for current service cost. Moreover, the interest rate used to calculate post employment benefits in the 2019 report was consistent with historical averages and will not be revised until the next revaluation period (2022). Therefore, WNH did not change the budget for interest on obligation.

b) As described above, WNH's post-employment benefit obligation is revaluated every 3 years with the next revaluation scheduled for December 31, 2022. Therefore, WNH's post-retirement benefits expense for 2020 and 2021 will be extrapolated from the December 31, 2019 report which was created pre-COVID-19. Given the uncertainty around future rates and the fact that interest on obligation is below materiality, WNH does not believe it would be prudent to incur the extra costs associated with a full re-measurement of the obligation.

c) The percentage of post-retirement benefits allocated to OM&A is directly related to the total labour cost allocated to OM&A. As described in Exhibit 2, WNH focused much of its workforce on capital projects related to the LRT project in 2016. As a result, the total labour cost allocated to capital was much higher than usual. WNH estimated 2020 and 2021 based on the labour budgets for each of those years which contain a more typical capital/operating split.

4-STAFF-58

Interrogatory:

PILS

Ref 1: Exhibit 4, pp. 101 and 102

Ref 2: Exhibit 4, pp. 104 and 105

Ref 3: PILs model

Waterloo North Hydro states that:

Table 4-52 below provides a summary of the 2016 through 2018 Actuals, 2019 Forecast and the 2020 Bridge and 2021 Test Year PILs estimates. The historical years' balance represents the actual numbers per the general ledger which are a mix of year-end provision estimates and prior year adjustments made when the tax returns were actually filed.

1 **Table 4-51 Summary of PILs**

Description	2016 Board Approved	2016 Actual	2017 Actual	2018 Actual	2019 Forecast	2020 Bridge	2021 Test
Income taxes (current)	503,738	496,671	411,857	400,077	290,449	-	653,653
Income taxes (prior years)	-	54,778	44,398	32,165	(411,825)	-	-
Total Taxes per GL	**503,738**	**551,449**	**456,255**	**432,242**	**(121,376)**	**-**	**653,653**

OEB staff notes that Waterloo North Hydro did not forecast any income tax in the bridge year of 2020. OEB staff notes from the PILs model that one of the reasons for the loss in 2020 may be the net income before taxes of $6,950,130, which is $1,896,475 (21%) lower than the 2019 net income before taxes of $8,846,605.

With respect to the loss carry forwards expected in the 2021 test year, Waterloo North Hydro states that:

WNH does not have any non-capital loss carryforwards as of 2019. However, due to negative taxable income expected in 2020, a loss carryforward of $417,530 is anticipated. WNH has applied one-fifth of this loss ($83,506) in 2021 to correspond with WNH's next anticipated COS filing.

a) Please explain the $(411,825) income tax for prior years that was recorded in 2019.

b) Please list and quantify the primary drivers for expected net income before taxes in 2020 being significantly lower than 2019.

Response:

a) WNH notes that there was an error in Table 4-51 as initially prepared. The correct income taxes are $38,816 and ($160,192) for current and prior years, respectively. The total amount of ($121,376) is correct. The $38,816 is the amount as prepared by WNH's auditors as part of the year-end tax provision. The ($160,192) primarily relates to a true-up of 2018 actual results. As of December 31, 2018 WNH recorded income tax payable of $99,805. The actual tax filing resulted in a refund of $62,474, a difference of $162,279. The two main reasons for this are due to SRED claim on the filings (not available at time of provision) and a change to the corporate minimum tax application in 2018.

b) 2019 figures are final audited financial statements. The 2020 figures are based off the approved 2020 budget. Please refer to the table below for 2019 Actual and 2020 Budgeted net income for tax purposes.

The 2019 net income before taxes figure of $8,846,605 contains $981,487 of Other income statement items including Unrealized gain/(loss) on derivatives, Reassessment of Employee Future Benefits and Deferred tax expense on

regulatory. Per filed Att 4-5 Waterloo_PILs_Workform_2021_COS_20200630 tab H1 Sch 1 Taxable Income Hist, each of these items is added/deducted to arrive at net income for tax purposes. They are all also non-budgeted items. As a result, these can be ignored.

The remaining difference of $914,988 is primarily due to the expense increase of $1,385,277 and offset by the increase in distribution revenue of $470,289. The primary drivers of the increase are Administrative & General ($639,065) and Depreciation ($782,095). Increases to operating expenses from 2019 to 2020 Bridge Year are described in detail in Exhibit 4 Section 2.4.2. Increase in depreciation expense from 2019 to 2020 Bridge Year is described in Exhibit 4 Section 2.4.4.

WNH notes that the 2020 Bridge Year forecasted PILs have changed due to revisions per 1-Staff-1. Please see the revised PILs model filed as part of this response.

Description	2019 Actual	2020 Bridge	Difference
Revenue			
Revenue Deficiency			
Distribution Revenue	35,895,518	36,429,726	534,208
Other Operating Revenue (Net)	1,825,877	1,761,958	- 63,919
Total Revenue	**37,721,395**	**38,191,684**	**470,289**
Costs and Expenses			
Administrative, General, Billing & Collections	6,495,615	7,134,680	639,065
Operation & Maintenance	7,987,531	7,907,049	- 80,482
Donations - LEAP	42,000	42,000	-
Depreciation & Amortization	9,952,224	10,734,319	782,095
Property Taxes	458,134	462,373	4,239
Interest Expense	4,920,773	4,961,134	40,361
Total Costs and Expenses	**29,856,277**	**31,241,554**	**1,385,277**
Other			
Unrealized gain/(loss) on derivatives	- 1,493,869	-	1,493,869
Reassessment of Employee Future Benefits - net of tax	428,531	-	- 428,531
Deferred tax expense on regulatory	2,046,825	-	- 2,046,825
Total Other	**981,487**	**-**	**- 981,487**
Utility Income Before Income Taxes	**8,846,605**	**6,950,130**	**- 1,896,475**
Reconciliation to net income and comprehensive income per FS			
Current PILs - FS Note 7	- 121,376	-	121,376
Deferred PILs - FS Note 7	1,963,597	-	- 1,963,597
Net income and comprehensive income per FS	**7,004,384**	**6,950,130**	**- 54,254**

4-STAFF-59

Interrogatory:

PILS

Ref 1: Exhibit 4, p. 102

Waterloo North Hydro states that:

At the time of filing this Application, WNH has not filed its 2019 corporate income tax returns. WNH does not expect significant changes between the final 2019 corporate income tax returns and the 2019 forecast income tax provision. WNH will provide a copy of the final 2019 tax returns as soon as they are available and update the Board's Income Tax/PILs Workform model for the 2019 Actuals.

a) Please confirm that Waterloo North Hydro has completed filing its 2019 tax return. If so, please provide a copy of the 2019 return and the updated PILs model. If not, please provide a timeline of when the filing will be made and the Tax/PILs Workform model updated.

Response:

a) Please refer to Attachment 5 a) WNH Annual Tax Return – 2019 and the revised PILs workform submitted as part of WNH's response to 1-Staff-1.

On July 13, 2020 WNH received notice from the Ministry of Finance (MoF) that the PILs audit for the taxation year 01-Jan-2015 to 12-Dec-2015 had been completed. Consistent with the audit results of taxation years 2013 and 2014, the Ministry reclassified Meter capital additions from Class 8 to Class 47, reducing CCA claimed in that taxation year. Please refer to Attachment 5 b) WNH MoF PILs Audit Summary - 2015 for specific details.

WNH had previously filed Notice of Objections to the audit results of 2013 and 2014 in Q4 2018. WNH has not received any communication from the Ministry of Finance related to the objection. WNH plans to file a Notice of Objection to the 2015 audit results in Q4 2020. Although WNH has filed these objections, given the length of time with no response from the 2013/14 objections and the subsequent results from the 2015 audit, WNH does not anticipate a successful overturn of the audit decisions. As a result, WNH has revised Schedule 8 for tax years 2016-2019

in the tables below. The effect has been recorded on H8 Sch 8 CCA Hist of the revised PILs workform submitted as part of WNH's response to 1-Staff-1. WNH confirms that meter additions in 2020 and 2021 have been recorded in CCA Class 47 per the direction of the Ministry.

These changes have been recorded in S.1 Integrity Checks of the revised PILs workform filed as part of WNH's response to 1-Staff-1.

Schedule 8 Per WNH filed T2 - 2015

Class	UCC beg of yr	Cost of Additions	Net Adjustments	Proceeds on disposal	Net additions	UCC	1/2 yr rule	Reduced UCC	Rate	Recapture	CCA claimed	UCC end of yr
1	60,309,605	-			-	60,309,605	-	60,309,605	4%	-	2,412,384.20	57,897,221
1b	19,889,220	222,838			222,838	20,112,058	111,419	20,000,639	6%	-	1,200,038.34	18,912,020
8	8,282,247	1,196,344		137,206	1,059,138	9,341,385	529,569	8,811,816	20%	-	1,762,363.20	7,579,022
10	2,356,558	983,048		27,150	955,898	3,312,456	477,949	2,834,507	30%	-	850,352.10	2,462,104
12	71,554	180,775			180,775	252,329	90,388	161,942	100%	-	161,941.50	90,388
45	35	-			-	35	-	35	45%	-	15.75	19
47	84,657,990	11,955,726		524,808	11,430,918	96,088,908	5,715,459	90,373,449	8%	-	7,229,875.92	88,859,032
50	587,101	496,732			496,732	1,083,833	248,366	835,467	55%	-	459,506.85	624,326
94/95 CWIP	-	2,852,299	3,503,517		6,355,816	6,355,816	3,177,908	3,177,908	0%	-	-	6,355,816
Total	**176,154,310**	**17,887,762**	**3,503,517**	**689,164**	**20,702,115**	**196,856,425**	**10,351,058**	**186,505,368**		**-**	**14,076,478**	**182,779,947**

Schedule 8 Per MoF PILs Audit 2015

Class	UCC beg of yr	Cost of Additions	Net Adjustments	Proceeds on disposal	Net additions	UCC	1/2 yr rule	Reduced UCC	Rate	Recapture	CCA claimed	UCC end of yr
1	60,309,605	-			-	60,309,605	-	60,309,605	4%	-	2,412,384.20	57,897,221
1b	19,889,220	222,838			222,838	20,112,058	111,419	20,000,639	6%	-	1,200,038.34	18,912,020
8	7,351,097	541,096		137,206	403,890	7,754,987	201,945	7,553,042	20%	-	1,510,608.38	6,244,378
10	2,356,558	983,048		27,150	955,898	3,312,456	477,949	2,834,507	30%	-	850,352.10	2,462,104
12	71,554	180,775			180,775	252,329	90,388	161,942	100%	-	161,941.50	90,388
45	35	-			-	35	-	35	45%	-	15.75	19
47	85,351,443	12,610,974		524,808	12,086,166	97,437,609	6,043,083	91,394,526	8%	-	7,311,562.09	90,126,047
50	587,101	496,732			496,732	1,083,833	248,366	835,467	55%	-	459,506.85	624,326
94/95 CWIP	-	2,852,299	3,503,517		6,355,816	6,355,816	3,177,908	3,177,908	0%	-	-	6,355,816
Total	**175,916,613**	**17,887,762**	**3,503,517**	**689,164**	**20,702,115**	**196,618,728**	**10,351,058**	**186,267,671**		**-**	**13,906,409**	**182,712,319**
Difference	**- 237,697**	**-**	**-**	**-**	**-**	**- 237,697**	**-**	**- 237,697**		**-**	**- 170,069**	**- 67,628**

2015 Meter Additions: 655,248

Schedule 8 Per WNH filed T2 - 2016

Class	UCC beg of yr	Cost of Additions	Net Adjustments	Proceeds on disposal	Net additions	UCC	1/2 yr rule	Reduced UCC	Rate	Recapture	CCA claimed	UCC end of yr
1	57,897,221	-			-	57,897,221	-	57,897,221	4%	-	2,315,889	55,581,332
1b	18,912,020	1,389,265			1,389,265	20,301,285	694,633	19,606,652	6%	-	1,176,399	19,124,886
8	7,579,022	922,140		444,319	477,821	8,056,843	238,911	7,817,932	20%	-	1,563,586	6,493,256
10	2,462,104	577,638		11,521	566,117	3,028,221	283,059	2,745,162	30%	-	823,549	2,204,672
12	90,388	171,661			171,661	262,049	85,831	176,218	100%	-	176,218	85,831
45	19				-	19	-	19	45%	-	9	11
47	88,859,032	13,934,291		1,014,761	12,919,530	101,778,562	6,459,765	95,318,797	8%	-	7,625,504	94,153,058
50	624,326	116,494			116,494	740,820	58,247	682,573	55%	-	375,415	365,405
94/95 CWIP	6,355,816		- 17,432		- 17,432	6,338,384	-	6,338,384	0%	-	-	6,338,384
46	-	47,237			47,237	47,237	23,619	23,619	30%	-	7,086	40,151
Total	**182,779,947**	**17,158,726**	**- 17,432**	**1,470,601**	**15,670,693**	**198,450,640**	**7,844,063**	**190,606,578**		**-**	**14,063,654**	**184,386,986**

Schedule 8 Per MoF PILs Audit 2015 - Rolled Forward with Meters Reclassified from Class 8 to 47

Class	UCC beg of yr	Cost of Additions	Net Adjustments	Proceeds on disposal	Net additions	UCC	1/2 yr rule	Reduced UCC	Rate	Recapture	CCA claimed	UCC end of yr
1	57,897,221	-	-	-	-	57,897,221	-	57,897,221	4%	-	2,315,889	55,581,332
1b	18,912,020	1,389,265	-	-	1,389,265	20,301,285	694,633	19,606,652	6%	-	1,176,399	19,124,886
8	6,244,378	316,411	-	444,319	- 127,908	6,116,470	-	6,116,470	20%	-	1,223,294	4,893,176
10	2,462,104	577,638	-	11,521	566,117	3,028,221	283,059	2,745,162	30%	-	823,549	2,204,672
12	90,388	171,661	-	-	171,661	262,049	85,831	176,218	100%	-	176,218	85,831
45	19	-	-	-	-	19	-	19	45%	-	9	11
47	90,126,047	14,540,020	-	1,014,761	13,525,259	103,651,306	6,762,630	96,888,677	8%	-	7,751,094	95,900,212
50	624,326	116,494	-	-	116,494	740,820	58,247	682,573	55%	-	375,415	365,405
94/95 CWIP	6,355,816	-	- 17,432	-	- 17,432	6,338,384	-	6,338,384	0%	-	-	6,338,384
46		47,237	-	-	47,237	47,237	23,619	23,619	30%	-	7,086	40,151
Total	**182,712,319**	**17,158,726**	**- 17,432**	**1,470,601**	**15,670,693**	**198,383,012**	**7,908,017**	**190,474,995**		**-**	**13,848,952**	**184,534,059**

Difference	**- 67,628**	**-**	**-**	**-**	**-**	**- 67,628**	**63,954**	**- 131,582**		**-**	**- 214,702**	**147,074**

2016 Meter Additions: **605,729**

Schedule 8 Per WNH filed T2 - 2017

Class	UCC beg of yr	Cost of Additions	Net Adjustments	Proceeds on disposal	Net additions	UCC	1/2 yr rule	Reduced UCC	Rate	Recapture	CCA claimed	UCC end of yr
1	55,581,332				-	55,581,332	-	55,581,332	4%	-	2,223,253	53,358,079
1b	19,124,886	291,073			291,073	19,415,959	145,537	19,270,422	6%	-	1,156,225	18,259,733
8	6,493,256	839,010		457,131	381,879	6,875,135	190,940	6,684,196	20%	-	1,336,839	5,538,296
10	2,204,672	512,891		11,350	501,541	2,706,213	250,771	2,455,443	30%	-	736,633	1,969,580
12	85,831	114,719			114,719	200,550	57,360	143,190	100%	-	143,190	57,360
45	11				-	11	-	11	45%	-	5	6
47	94,153,058	10,957,255		435,083	10,522,172	104,675,230	5,261,086	99,414,144	8%	-	7,953,132	96,722,099
50	280,947	1,768,397			1,768,397	2,049,344	884,199	1,165,145	55%	-	640,830	1,408,514
94/95 CWIP	6,338,384		- 1,484,661		- 1,484,661	4,853,723	-	4,853,723	0%	-	-	4,853,723
46	40,151				-	40,151	-	40,151	30%	-	12,045	28,106
Total	**184,302,528**	**14,483,345**	**- 1,484,661**	**903,564**	**12,095,120**	**196,397,648**	**6,789,891**	**189,607,757**		**-**	**14,202,152**	**182,195,495**

Schedule 8 Per MoF PILs Audit 2015 - Rolled Forward with Meters Reclassified from Class 8 to 47

Class	UCC beg of yr	Cost of Additions	Net Adjustments	Proceeds on disposal	Net additions	UCC	1/2 yr rule	Reduced UCC	Rate	Recapture	CCA claimed	UCC end of yr
1	55,581,332	-	-	-	-	55,581,332	-	55,581,332	4%	-	2,223,253	53,358,079
1b	19,124,886	291,073	-	-	291,073	19,415,959	145,537	19,270,422	6%	-	1,156,225	18,259,733
8	4,893,176	121,417	-	457,131	- 335,714	4,557,462	-	4,557,462	20%	-	911,492	3,645,969
10	2,204,672	512,891	-	11,350	501,541	2,706,213	250,771	2,455,443	30%	-	736,633	1,969,580
12	85,831	114,719	-	-	114,719	200,550	57,360	143,190	100%	-	143,190	57,360
45	11	-	-	-	-	11	-	11	45%	-	5	6
47	95,900,212	11,674,848	-	435,083	11,239,765	107,139,978	5,619,883	101,520,095	8%	-	8,121,608	99,018,370
50	280,947	1,768,397	-	-	1,768,397	2,049,344	884,199	1,165,145	55%	-	640,830	1,408,514
94/95 CWIP	6,338,384	-	- 1,484,661	-	- 1,484,661	4,853,723	-	4,853,723	0%	-	-	4,853,723
46	40,151	-	-	-	-	40,151	-	40,151	30%	-	12,045	28,106
Total	**184,449,601**	**14,483,345**	**- 1,484,661**	**903,564**	**12,095,120**	**196,544,721**	**6,957,748**	**189,586,974**		**-**	**13,945,282**	**182,599,440**

Difference	**147,074**	**-**	**-**	**-**	**-**	**147,074**	**167,857**	**- 20,784**		**-**	**- 256,871**	**403,944**

Meter Additions: **717,593**

Schedule 8 Per WNH filed T2 - 2018

Class	UCC beg of yr	Cost of Additions	Net Adjustments	Proceeds on disposal	Net additions	UCC	1/2 yr rule	Reduced UCC	Rate	Recapture	CCA claimed	UCC end of yr
1	53,358,079				-	53,358,079	-	53,358,079	4%	-	2,134,323	51,223,756
1b	18,259,733	140,299			140,299	18,400,032	70,150	18,329,883	6%	-	1,099,793	17,300,239
8	5,538,296	1,108,564		447,703	660,861	6,199,157	330,431	5,868,727	20%	-	1,173,745	5,025,412
10	1,969,580	507,012		140,705	366,307	2,335,887	183,154	2,152,734	30%	-	645,820	1,690,067
12	57,360	265,619			265,619	322,979	132,810	190,169	100%	-	190,169	132,810
45	6				-	6	-	6	45%	-	3	3
47	96,722,099	12,576,760		290,014	12,286,746	109,008,845	6,143,373	102,865,472	8%	-	8,229,238	100,779,607
50	1,408,514	540,509			540,509	1,949,023	270,255	1,678,768	55%	-	923,323	1,025,700
94/95 CWIP	4,853,723		- 1,315,445		- 1,315,445	3,538,278	-	3,538,278	0%	-	-	3,538,278
46	28,106				-	28,106	-	28,106	30%	-	8,432	19,674
Total	**182,195,495**	**15,138,763**	**- 1,315,445**	**878,422**	**12,944,896**	**195,140,391**	**7,130,171**	**188,010,221**		**-**	**14,404,845**	**180,735,546**

Schedule 8 Per MoF PILs Audit 2015 - Rolled Forward with Meters Reclassified from Class 8 to 47

Class	UCC beg of yr	Cost of Additions	Net Adjustments	Proceeds on disposal	Net additions	UCC	1/2 yr rule	Reduced UCC	Rate	Recapture	CCA claimed	UCC end of yr
1	53,358,079	-	-	-	-	53,358,079	-	53,358,079	4%	-	2,134,323	51,223,756
1b	18,259,733	140,299	-	-	140,299	18,400,032	70,150	18,329,883	6%	-	1,099,793	17,300,239
8	3,645,969	586,185	-	447,703	138,482	3,784,451	69,241	3,715,210	20%	-	743,042	3,041,409
10	1,969,580	507,012	-	140,705	366,307	2,335,887	183,154	2,152,734	30%	-	645,820	1,690,067
12	57,360	265,619	-	-	265,619	322,979	132,810	190,169	100%	-	190,169	132,810
45	6	-	-	-	-	6	-	6	45%	-	3	3
47	99,018,370	13,099,139	-	290,014	12,809,125	111,827,495	6,404,563	105,422,933	8%	-	8,433,835	103,393,660
50	1,408,514	540,509	-	-	540,509	1,949,023	270,255	1,678,768	55%	-	923,323	1,025,700
94/95 CWIP	4,853,723	-	- 1,315,445	-	- 1,315,445	3,538,278	-	3,538,278	0%	-	-	3,538,278
46	28,106	-	-	-	-	28,106	-	28,106	30%	-	8,432	19,674
Total	**182,599,440**	**15,138,763**	**- 1,315,445**	**878,422**	**12,944,896**	**195,544,336**	**7,130,171**	**188,414,165**		**-**	**14,178,739**	**181,365,597**

Difference	**403,944**	**-**	**-**	**-**	**-**	**403,944**	**-**	**403,944**		**-**	**- 226,106**	**630,051**

Meter Additions: **522,379**

Schedule 8 Per WNH filed T2 - 2019

Class	UCC beg of yr	Cost of Additions	Additions - AIIP	Net Adjustments	Proceeds on disposal	Net additions	UCC	AIIP Factor	UCC adj for AIIP	Adj UCC	Rate	Recapture	CCA claimed	UCC end of yr
1	51,223,756		-			-	51,223,756	0.50	-	51,223,756	4%	-	2,048,950	49,174,805
1b	17,300,239	61,217	61,217			61,217	17,361,456	0.50	30,609	17,392,065	6%	-	1,043,524	16,317,932
8	5,025,412	2,223,545	2,223,545		29,554	2,193,991	7,219,403	0.50	1,096,996	8,316,398	20%	-	1,663,280	5,556,123
10	1,690,067	718,288	718,288			718,288	2,408,355	0.50	359,144	2,767,499	30%	-	830,250	1,578,105
12	132,810	122,559	122,559			122,559	255,369	-	-	255,369	100%	-	255,369	-
45	3		-			-	3	0.50	-	3	45%	-	1	2
47	100,779,607	13,111,489	13,111,489		240,634	12,870,855	113,650,462	0.50	6,435,428	120,085,890	8%	-	9,606,871	104,043,591
50	1,025,700	226,841	226,841			226,841	1,252,541	0.50	113,421	1,365,962	55%	-	751,279	501,262
94/95 CWIP	3,538,278	160,307	160,307			160,307	3,698,585	0.50	80,154	3,778,739	0%	-	-	3,698,585
46	19,674	113,439	113,439			113,439	133,113	0.50	56,720	189,833	30%	-	56,950	76,163
Total	**180,735,546**	**16,737,685**	**16,737,685**	**-**	**270,188**	**16,467,497**	**197,203,043**		**8,172,469**	**205,375,512**		**-**	**16,256,473**	**180,946,570**

Schedule 8 Per MoF PILs Audit 2015 - Rolled Forward with Meters Reclassified from Class 8 to 47

Class	UCC beg of yr	Cost of Additions	Additions - AIIP	Net Adjustments	Proceeds on disposal	Net additions	UCC			Reduced UCC	Rate	Recapture	CCA claimed	UCC end of yr	Difference
1	51,223,756	-	-	-	-	-	51,223,756	0.50	-	51,223,756	4%	-	2,048,950	49,174,805	-
1b	17,300,239	61,217	61,217	-	-	61,217	17,361,456	0.50	30,609	17,392,065	6%	-	1,043,524	16,317,932	-
8	3,041,409	1,039,148	1,039,148	-	29,554	1,009,594	4,051,003	0.50	504,797	4,555,800	20%	-	911,160	3,139,843	- 2,416,280
10	1,690,067	718,288	718,288	-	-	718,288	2,408,355	0.50	359,144	2,767,499	30%	-	830,250	1,578,105	-
12	132,810	122,559	122,559	-	-	122,559	255,369	-	-	255,369	100%	-	255,369	-	-
45	3	-	-	-	-	-	3	0.50	-	3	45%	-	1	2	-
47	103,393,660	14,295,886	14,295,886	-	240,634	14,055,252	117,448,913	0.50	7,027,626	124,476,539	8%	-	9,958,123	107,490,790	3,447,199
50	1,025,700	226,841	226,841	-	-	226,841	1,252,541	0.50	113,421	1,365,962	55%	-	751,279	501,262	-
94/95 CWIP	3,538,278	160,307	160,307	-	-	160,307	3,698,585	0.50	80,154	3,778,739	0%	-	-	3,698,585	-
46	19,674	113,439	113,439	-	-	113,439	133,113	0.50	56,720	189,833	30%	-	56,950	76,163	-
Total	**181,365,597**	**16,737,685**	**16,737,685**	**-**	**270,188**	**16,467,497**	**197,833,094**			**206,005,563**		**-**	**15,855,606**	**181,977,488**	**1,030,919**

Difference	**630,051**	**-**	**-**	**-**	**-**	**-**	**630,051**			**630,051**		**-**	**- 400,868**	**1,030,919**	

Meter Additions: **1,184,397**

4-STAFF-60

Interrogatory:

PILS

Ref 1: PILs model

OEB staff notes from the "T1 Sch 1 Taxable Income Test" tab of the PILs model that Waterloo North has an item under the other additions section for "Lease Inducements Received (ITA 12(1)(x))" and the forecast amount of this addition of $101,361 is equal to the amount for this line item on the schedule 1 in 2019.

a) Please explain the nature of this item and why this item is included in the 2020 T1 in the "other additions" section.

Response:

a) This line is on WNH's T2 Sch. 1 under Miscellaneous other additions in box 295. Please refer to 2019 T2 for reference. The line consists of the following:

- Investment tax credit from apprenticeship job creation expenditures
- Portion of the Ontario research and development tax credit that relates to the prescribed proxy amount (PPA) and portion of the Ontario investment tax credit that relates to contributions made to SR&ED farming organizations
- Ontario co-operative education tax credit
- Ontario apprenticeship training tax credit

Please refer to WNH's response to 1-Staff-1 for a revised version of the PILs workform.

4-STAFF-61

Interrogatory:

Ref 1: PILs Workform, Tab T8
Ref 2: DVA Workform, Tab 2b
Ref 3: the OEB's Letter "Accounting Direction Regarding Bill C-97", July 25, 2019
Ref 4: Exhibit 9, p. 29

Waterloo North Hydro has implemented accelerated CCA in the PILs model as a result of the new Accelerated Investment Incentive Program (AIIP). In the OEB's July 25, 2019 letter Accounting Direction Regarding Bill C-97 and Other Changes in Regulatory or Legislated Tax Rules for Capital Cost Allowance, it states that:

The OEB recognizes that there may be timing differences that could lead to volatility in tax deductions over the rate-setting term. The OEB may consider a smoothing mechanism to address this.

The letter also states that:

The OEB expects Utilities to record the impacts of CCA rule changes in the appropriate account (Account 1592 - PILs and Tax Variances and similar accounts for natural gas utilities and OPG) for the period November 21, 2018 until the effective date of the Utility's next cost-based rate order. For the purposes of increased transparency, the OEB is establishing a separate sub- account of Account 1592 - PILs and Tax Variances – CCA Changes specifically for the purposes of tracking the impact of changes in CCA rules.

In Exhibit 9 regarding the Account 1592 – PILs and Tax Variances, Waterloo North Hydro states that:

WNH did not have any eligible capital additions for 2018 but has calculated this amount for 2019.

OEB staff notes from schedule 8 of the bridge year 2020 and from the test year 2021 in the PILs workform that 100% of the capital additions during the year in 2020 and 2021 are considered the eligible investments under the AIIP.

a) Please confirm that all of Waterloo North's capital additions in the 2021 test year are forecast to be eligible for the AIIP.

b) Please discuss whether Waterloo North Hydro has considered smoothing of accelerated CCA for all its capital additions and what its conclusion is.

c) Please provide a calculation showing how Waterloo North Hydro would smooth CCA over the IRM period, and what the impact to PILs would be under a smoothed and unsmoothed scenario.

d) Please confirm that Waterloo North Hydro did not have any capital additions in 2018 eligible for AIIP because there was no eligible property acquired after November 20, 2018 and placed in service prior to Jan 1, 2019. If that is not the case, please explain.

Response:

a) Confirmed.

b) WNH plans on utilizing Account 1592 for the duration of the rate-setting term and therefore did not propose a smoothing mechanism in this Application. From the Chapter 2 Filing Requirements published May 14, 2020 p. 38, WNH interpreted

that a smoothing mechanism was only required if an applicant wished to discontinue the use of 1592.

c) WNH notes per the CRA website that the phase-out of the AIIP "will begin for property that becomes available for use after 2023. For **eligible property** that **would** normally **be subject to the half-year rule** (or an equivalent rule) and that becomes available for use during the 2024-2027 phase-out period, the incentive will effectively suspend the half-year rule (and equivalent rules). In essence, you'll be able to calculate CCA at the rate relevant to that class without applying the half-year rule."

For the following calculations, WNH assumes that all capital additions will qualify as eligible property and would normally be subject to the half-year rule. Please refer to the table below for a sample calculation of the 2021 Test Year CCA based on the current 1.5 AIIP and then the 1.0 AIIP factor proposed in the 2024-2027 phase-out period. These values are based on revised CCA schedule in the PILs model filed per 1-Staff-1.

By smoothing out the CCA over the 5-year rate-setting period and revising 2021 CCA to reflect that, there would be a $331,739 decrease to CCA in the 2021 Test Year. As a result, this would increase PILs by $87,911, a grossed-up effect on Revenue Requirement of $119,606.

Schedule 8 CCA - 2021 Test Year - 1.5x factor

		2021 Projected without AIIP									Adjustments due to AIIP			
Class	Class Description	UCC Opening Balance	Additions	Disposals (Negative)	UCC Before 1/2 Yr Adjustment	1/2 Year Rule {1/2 Additions Less Disposals}	Reduced UCC	Rate %	CCA	UCC End of Year	CCA on Opening UCC	AIIP Additions (1.5x factor)	Revised CCA	UCC End of Test Year
1	Distribution System - post 1987	$ 47,207,814			$ 47,207,814	$ -	$ 47,207,814	4%	$ 1,888,313	$ 45,319,501	1,888,313	-	1,888,313	45,319,501
1 Enhanced	Non-residential Buildings Reg. 1100(1)(a.1) election	$ 15,338,857			$ 15,338,857	$ -	$ 15,338,857	6%	$ 920,331	$ 14,418,526	920,331	-	920,331	14,418,526
8	General Office/Stores Equip	$ 2,726,051	449,900		$ 3,175,951	$ 224,950	$ 2,951,001	20%	$ 590,200	$ 2,585,751	545,210	134,970	680,180	2,495,771
10	Computer Hardware/ Vehicles	$ 1,380,709	1,008,232		$ 2,388,941	$ 504,116	$ 1,884,825	30%	$ 565,448	$ 1,823,494	414,213	453,704	867,917	1,521,024
12	Computer Software	$ -	646,532		$ 646,532	$ 323,266	$ 323,266	100%	$ 323,266	$ 323,266	-	646,532	646,532	-
45	Computers & Systems Hardware acq'd post Mar 22/04	$ 1			$ 1	$ -	$ 1	45%	$ 0	$ 1	0	-	0	1
46	Data network infrastructure equip and systems acq'd	$ 53,314			$ 53,314	$ -	$ 53,314	30%	$ 15,994	$ 37,320	15,994	-	15,994	37,320
47	Distribution System - post February 2005	$ 111,528,452	14,281,611		$ 125,810,063	$ 7,140,806	$ 118,669,258	8%	$ 9,493,541	$ 116,316,522	8,922,276	1,713,793	10,636,069	115,173,994
50	Data Network Infrastructure Equipment - post Mar 200	$ 284,377	224,935		$ 509,312	$ 112,468	$ 396,845	55%	$ 218,264	$ 291,048	156,407	185,571	341,980	167,332
95	CWIP	$ 2,655,936	405,372		$ 3,061,308	$ 202,686	$ 2,858,622	0%	$ -	$ 3,061,308	-	-	-	3,061,308
	TOTAL	$ 181,175,511	$ 17,016,582	$ -	$ 198,192,093	$ 8,508,291	$ 189,683,802		$ 14,015,357	$ 184,176,736	12,862,745	3,134,571	15,997,317	182,194,776

Difference in CCA due to AIIP	1,981,960
Tax rate	26.50%
Distribution Revenue Effect	525,219
Revenue Effect Grossed Up	714,584

Schedule 8 CCA - 2021 Test Year - 1.0x factor

		2021 Projected without AIIP									Adjustments due to AIIP			
Class	Class Description	UCC Opening Balance	Additions	Disposals (Negative)	UCC Before 1/2 Yr Adjustment	1/2 Year Rule {1/2 Additions Less Disposals}	Reduced UCC	Rate %	CCA	UCC End of Year	CCA on Opening UCC	AIIP Additions (1.0x factor)	Revised CCA	UCC End of Test Year
1	Distribution System - post 1987	$ 47,207,814			$ 47,207,814	$ -	$ 47,207,814	4%	$ 1,888,313	$ 45,319,501	1,888,313	-	1,888,313	45,319,501
1 Enhanced	Non-residential Buildings Reg. 1100(1)(a.1) election	$ 15,338,857			$ 15,338,857	$ -	$ 15,338,857	6%	$ 920,331	$ 14,418,526	920,331	-	920,331	14,418,526
8	General Office/Stores Equip	$ 2,726,051	449,900		$ 3,175,951	$ 224,950	$ 2,951,001	20%	$ 590,200	$ 2,585,751	545,210	89,980	635,190	2,540,761
10	Computer Hardware/ Vehicles	$ 1,380,709	1,008,232		$ 2,388,941	$ 504,116	$ 1,884,825	30%	$ 565,448	$ 1,823,494	414,213	302,470	716,682	1,672,259
12	Computer Software	$ -	646,532		$ 646,532	$ 323,266	$ 323,266	100%	$ 323,266	$ 323,266	-	646,532	646,532	-
45	Computers & Systems Hardware acq'd post Mar 22/04	$ 1			$ 1	$ -	$ 1	45%	$ 0	$ 1	0	-	0	1
46	Data network infrastructure equip and systems acq'd	$ 53,314			$ 53,314	$ -	$ 53,314	30%	$ 15,994	$ 37,320	15,994	-	15,994	37,320
47	Distribution System - post February 2005	$ 111,528,452	14,281,611		$ 125,810,063	$ 7,140,806	$ 118,669,258	8%	$ 9,493,541	$ 116,316,522	8,922,276	1,142,529	10,064,805	115,745,258
50	Data Network Infrastructure Equipment - post Mar 200	$ 284,377	224,935		$ 509,312	$ 112,468	$ 396,845	55%	$ 218,264	$ 291,048	156,407	123,714	280,123	229,189
95	CWIP	$ 2,655,936	405,372		$ 3,061,308	$ 202,686	$ 2,858,622	0%	$ -	$ 3,061,308	-	-	-	3,061,308
	TOTAL	$ 181,175,511	$ 17,016,582	$ -	$ 198,192,093	$ 8,508,291	$ 189,683,802		$ 14,015,357	$ 184,176,736	12,862,745	2,305,225	15,167,971	183,024,122

Difference in CCA due to AIIP	1,152,613
Tax rate	26.50%
Distribution Revenue Effect	305,443
Revenue Effect Grossed Up	415,568

Rate-Setting Year	2021	2022	2023	2024	2025	Total
Applicable AIIP factor	1.5x	1.5x	1.5x	1.0x	1.0x	
CCA without AIIP	$ 14,015,357	$ 14,015,357	$ 14,015,357	$ 14,015,357	$ 14,015,357	$ 70,076,787
CCA with AIIP	15,997,317	15,997,317	15,997,317	15,167,971	15,167,971	78,327,893
CCA Difference	1,981,960	1,981,960	1,981,960	1,152,613	1,152,613	8,251,106
CCA Difference - Smoothed	1,650,221	1,650,221	1,650,221	1,650,221	1,650,221	8,251,106
CCA with AIIP - Smoothed	$ 15,665,579	$ 15,665,579	$ 15,665,579	$ 15,665,579	$ 15,665,579	$ 78,327,893
CCA effect - 2021 Test Year	**-$ 331,739**					
PILs effect - 2021 Test Year	**-$ 87,911**					
PILs effect - 2021 Test Year - Grossed Up	**-$ 119,606**					

d) Confirmed.

EXHIBIT 5 – COST OF CAPITAL

5-STAFF-62

Interrogatory:

Long-Term Debt

Ref 1: Exhibit 5 – Table 5-1 Long-Term Bank Debt with CIBC

Waterloo North Hydro has shown one tranche of principle borrowing on April 1, 2020 for $3.6 million. This is part of the 2019 term loan at an interest rate of 3.271%.

a) Please explain why this principle borrowing is not part of the 2020 term loan at an interest rate of 2.608%.

b) Please also confirm that these are not banker's acceptance but bank debt.

Response:

a) WNH entered into a credit facility agreement dated June 21, 2019 to borrow up to $9.6M which corresponds to WNH's budgeted 2019 borrowings. Subsequently, WNH assessed its financial position and determined that to meet cash flow needs the $9.6M would be best received in two tranches: $6.0M to be received November 1, 2019 and $3.6M to be received April 1, 2020. This specific agreement was entered into on October 24, 2019. Both tranches would be bound to this particular agreement at 3.271%.

b) Each of these are committed term installment loans are hedged by interest rate swaps in order to make them fixed-rate loans. WNH receives the full amount of the loan as specified in the agreement (or in tranches if specified) and repays a fixed monthly rate per the amortization schedule. As part of the loan agreement, the swaps come in the form of banker's acceptances and WNH pays a stamping fee of 1.00%. Therefore, WNH confirms that the underlying borrowings are bank debt, not banker's acceptances.

EXHIBIT 7 – COST ALLOCATION

7-STAFF-63

Interrogatory:

Weighting Factor

Ref 1: Exhibit 7, Weighting Factor for Billing and Collection, p. 7

Waterloo North Hydro states “WNH assigned an allocator to each internal account number that flows into the Billing and Collecting USoA accounts. These accounts were allocated based on the number of customers, number of bills, billing complexity or a delinquency weighting.”

Please provide the described analysis that produced the allocators.

Response:

Please refer to the table below for analysis. The Billing Complexity factor is calculated on the Billing Complexity tab. This analysis takes a full year’s worth (2018) of bills and grosses them up by a complexity factor determined by WNH’s Billing team. All of the other factors are taken from other information used in the Cost Allocation model. The Allocation tab calculates each of the factors and applies them to specific general ledger account balances per the 2021 budget. WNH has removed the account descriptions for confidentiality reasons.

Factor	Description	Cost Allocation Amt	Residential	GS <50	GS>50-Regular	Large Use >5MW	Street Light	Unmetered Scattered Load	Embedded Distributor
Bills	Cost Allocation I6.2 CNB	702,048	620,628	71,868	9,288	12	72	168	12
Customers	Cost Allocation I6.2 CCA	58,504	51,719	5,989	774	1	6	14	1
Bad Debt	Cost Allocation I6.2 BDHA	140,632	91,960	29,751	18,921	-	-	-	-
Billing Complexity	# of bills grossed-up for complexity facto	719,839	621,257	86,187	11,831	72	144	336	12
	Complexity factor		1.00	1.20	1.27	6.00	2.00	2.00	1.00

Factor	Description	Weighting	Residential	GS <50	GS>50-Regular	Large Use >5MW	Street Light	Unmetered Scattered Load	Embedded Distributor
Bills	Cost Allocation I6.2 CNB	100.00%	88.40%	10.24%	1.32%	0.00%	0.01%	0.02%	0.00%
Customers	Cost Allocation I6.2 CCA	100.00%	88.40%	10.24%	1.32%	0.00%	0.01%	0.02%	0.00%
Bad Debt	Cost Allocation I6.2 BDHA	100.00%	65.39%	21.16%	13.45%	0.00%	0.00%	0.00%	0.00%
Billing Complexity	# of bills grossed-up for complexity facto	100.00%	86.30%	11.97%	1.64%	0.01%	0.02%	0.05%	0.00%

Account	Description	2021 Budget Amt	Department	Allocating Factor	Residential	GS <50	GS>50-Regular	Large Use >5MW	Street Light	Unmetered Scattered Load	Embedded Distributor	Total
001-0331-702.10-10		24,317.38	Admin	Customers	21,497.17	2,489.35	321.72	0.42	2.49	5.82	0.42	24,317.38
001-0331-703.10-10		12,158.69	Admin	Customers	10,748.59	1,244.67	160.86	0.21	1.25	2.91	0.21	12,158.69
001-0331-704.10-10		24,317.38	Admin	Customers	21,497.17	2,489.35	321.72	0.42	2.49	5.82	0.42	24,317.38
001-0331-705.10-10		12,158.69	Admin	Customers	10,748.59	1,244.67	160.86	0.21	1.25	2.91	0.21	12,158.69
001-0331-732.10-10		55,517.01	Admin	Customers	49,078.43	5,683.22	734.48	0.95	5.69	13.29	0.95	55,517.01
001-0331-733.10-10		47,573.26	Admin	Customers	42,055.95	4,870.03	629.39	0.81	4.88	11.38	0.81	47,573.26
001-0331-734.10-10		47,573.26	Admin	Customers	42,055.95	4,870.03	629.39	0.81	4.88	11.38	0.81	47,573.26
001-0331-735.10-10		7,854.50	Admin	Customers	6,943.57	804.06	103.91	0.13	0.81	1.88	0.13	7,854.50
001-0333-541.10-10		13,415.86	Billing - Meter Readi	Bills	11,859.96	1,373.37	177.49	0.23	1.38	3.21	0.23	13,415.86
001-0333-541.10-10		19,788.09	Billing - Meter Readi	Bills	17,493.17	2,025.69	261.79	0.34	2.03	4.74	0.34	19,788.09
001-0333-541.10-30		56,124.95	Billing - Meter Readi	Bills	49,615.86	5,745.46	742.53	0.96	5.76	13.43	0.96	56,124.95
001-0333-541.10-30		25,584.40	Billing - Meter Readi	Bills	22,617.25	2,619.05	338.48	0.44	2.62	6.12	0.44	25,584.40
001-0333-541.20-10		1,742.50	Billing - Meter Readi	Bills	1,540.41	178.38	23.05	0.03	0.18	0.42	0.03	1,742.50
001-0333-541.30-10		7,500.00	Billing - Meter Readi	Bills	6,630.19	767.77	99.22	0.13	0.77	1.79	0.13	7,500.00
001-0333-541.40-60		1,100.00	Billing - Meter Readi	Bills	972.43	112.61	14.55	0.02	0.11	0.26	0.02	1,100.00
001-0333-541.80-11		347,000.00	Billing - Meter Readi	Bills	306,756.68	35,522.07	4,590.76	5.93	35.59	83.04	5.93	347,000.00
001-0333-541.80-14		53,000.00	Billing - Meter Readi	Bills	46,853.33	5,425.56	701.18	0.91	5.44	12.68	0.91	53,000.00
001-0333-702.10-10		120,447.92	Billing	Billing Complexity	103,952.54	14,421.34	1,979.67	12.05	24.09	56.22	2.01	120,447.92
001-0333-702.10-10		53,056.96	Billing	Billing Complexity	45,790.79	6,352.56	872.04	5.31	10.61	24.77	0.88	53,056.96
001-0333-702.10-10		79,206.89	Billing	Billing Complexity	68,359.48	9,483.51	1,301.84	7.92	15.84	36.97	1.32	79,206.89
001-0333-702.10-30		224,659.09	Billing	Billing Complexity	193,891.95	26,898.64	3,692.48	22.47	44.94	104.86	3.75	224,659.09
001-0333-702.11-10		600.00	Billing	Billing Complexity	517.83	71.84	9.86	0.06	0.12	0.28	0.01	600.00
001-0333-702.11-11		600.00	Billing	Billing Complexity	517.83	71.84	9.86	0.06	0.12	0.28	0.01	600.00
001-0333-702.11-12		900.00	Billing	Billing Complexity	776.74	107.76	14.79	0.09	0.18	0.42	0.02	900.00
001-0333-702.11-20		1,000.00	Billing	Billing Complexity	863.05	119.73	16.44	0.10	0.20	0.47	0.02	1,000.00
001-0333-702.11-95		600.00	Billing	Billing Complexity	517.83	71.84	9.86	0.06	0.12	0.28	0.01	600.00
001-0333-702.20-20		1,300.00	Billing	Bills	1,149.23	133.08	17.20	0.02	0.13	0.31	0.02	1,300.00
001-0333-702.20-30		2,000.00	Billing	Bills	1,768.05	204.74	26.46	0.03	0.21	0.48	0.03	2,000.00
001-0333-702.20-50		40,800.00	Billing	Bills	36,068.22	4,176.66	539.78	0.70	4.18	9.76	0.70	40,800.00
001-0333-702.30-40		500.00	Billing	Bills	442.01	51.18	6.61	0.01	0.05	0.12	0.01	500.00
001-0333-702.30-50		2,000.00	Billing	Bills	1,768.05	204.74	26.46	0.03	0.21	0.48	0.03	2,000.00
001-0333-702.40-40		400.00	Billing	Bills	353.61	40.95	5.29	0.01	0.04	0.10	0.01	400.00
001-0333-702.40-60		800.00	Billing	Bills	707.22	81.90	10.58	0.01	0.08	0.19	0.01	800.00
001-0333-702.50-30		-	Billing	Bills	-	-	-	-	-	-	-	-
001-0333-702.61-50		15,842.00	Billing	Bills	14,004.72	1,621.73	209.59	0.27	1.62	3.79	0.27	15,842.00
001-0333-702.70-90		421,000.00	Billing	Bills	372,174.54	43,097.38	5,569.77	7.20	43.18	100.75	7.20	421,000.00
001-0333-702.80-12		33,500.00	Billing	Bills	29,614.84	3,429.36	443.20	0.57	3.44	8.02	0.57	33,500.00
001-0333-702.80-13		33,000.00	Billing	Bills	29,172.83	3,378.18	436.59	0.56	3.38	7.90	0.56	33,000.00
001-0333-702.80-14		80,000.00	Billing	Bills	70,722.00	8,189.53	1,058.39	1.37	8.20	19.14	1.37	80,000.00
001-0333-702.80-80		-	Billing	Bills	-	-	-	-	-	-	-	-
001-0334-703.10-10		26,528.48	Call Centre	Bills	23,451.84	2,715.70	350.97	0.45	2.72	6.35	0.45	26,528.48
001-0334-703.10-10		37,568.23	Call Centre	Bills	33,211.26	3,845.82	497.02	0.64	3.85	8.99	0.64	37,568.23
001-0334-703.10-30		422,387.78	Call Centre	Bills	373,401.37	43,239.44	5,588.13	7.22	43.32	101.08	7.22	422,387.78
001-0334-703.10-30		41,735.30	Call Centre	Bills	36,895.05	4,272.40	552.15	0.71	4.28	9.99	0.71	41,735.30
001-0334-703.11-10		1,500.00	Call Centre	Bills	1,326.04	153.55	19.84	0.03	0.15	0.36	0.03	1,500.00
001-0334-703.11-11		500.00	Call Centre	Bills	442.01	51.18	6.61	0.01	0.05	0.12	0.01	500.00
001-0334-703.11-12		500.00	Call Centre	Bills	442.01	51.18	6.61	0.01	0.05	0.12	0.01	500.00
001-0334-703.11-13		300.00	Call Centre	Bills	265.21	30.71	3.97	0.01	0.03	0.07	0.01	300.00
001-0334-703.11-20		3,000.00	Call Centre	Bills	2,652.08	307.11	39.69	0.05	0.31	0.72	0.05	3,000.00
001-0334-703.11-95		250.00	Call Centre	Bills	221.01	25.59	3.31	0.00	0.03	0.06	0.00	250.00
001-0334-703.11-95		500.00	Call Centre	Bills	442.01	51.18	6.61	0.01	0.05	0.12	0.01	500.00
001-0334-703.20-20		2,550.00	Call Centre	Bills	2,254.26	261.04	33.74	0.04	0.26	0.61	0.04	2,550.00
001-0334-703.20-30		1,248.00	Call Centre	Bills	1,103.26	127.76	16.51	0.02	0.13	0.30	0.02	1,248.00
001-0334-703.30-40		300.00	Call Centre	Bills	265.21	30.71	3.97	0.01	0.03	0.07	0.01	300.00
001-0334-703.40-60		680.00	Call Centre	Bills	601.14	69.61	9.00	0.01	0.07	0.16	0.01	680.00
001-0334-703.61-50		10,948.00	Call Centre	Bills	9,678.31	1,120.74	144.84	0.19	1.12	2.62	0.19	10,948.00
001-0334-703.70-30		250.00	Call Centre	Bills	221.01	25.59	3.31	0.00	0.03	0.06	0.00	250.00
001-0335-704.10-10		26,528.48	Collections	Bad Debt	17,347.11	5,612.16	3,569.21	-	-	-	-	26,528.48
001-0335-704.10-10		62,590.74	Collections	Bad Debt	40,928.41	13,241.20	8,421.12	-	-	-	-	62,590.74
001-0335-704.10-30		90,508.11	Collections	Bad Debt	59,183.73	19,147.18	12,177.20	-	-	-	-	90,508.11
001-0335-704.10-30		236,924.80	Collections	Bad Debt	154,926.37	50,121.95	31,876.49	-	-	-	-	236,924.80
001-0335-704.10-30		16,715.14	Collections	Bad Debt	10,930.12	3,536.12	2,248.90	-	-	-	-	16,715.14
001-0335-704.11-11		450.00	Collections	Bad Debt	294.26	95.20	60.54	-	-	-	-	450.00
001-0335-704.11-12		500.00	Collections	Bad Debt	326.95	105.78	67.27	-	-	-	-	500.00
001-0335-704.11-13		500.00	Collections	Bad Debt	326.95	105.78	67.27	-	-	-	-	500.00
001-0335-704.11-20		1,500.00	Collections	Bad Debt	980.86	317.33	201.81	-	-	-	-	1,500.00
001-0335-704.11-95		500.00	Collections	Bad Debt	326.95	105.78	67.27	-	-	-	-	500.00
001-0335-704.20-20		1,458.00	Collections	Bad Debt	953.39	308.44	196.16	-	-	-	-	1,458.00
001-0335-704.20-30		1,000.00	Collections	Bad Debt	653.91	211.55	134.54	-	-	-	-	1,000.00
001-0335-704.20-50		11,071.00	Collections	Bad Debt	7,239.38	2,342.09	1,489.52	-	-	-	-	11,071.00
001-0335-704.20-80		1,565.00	Collections	Bad Debt	1,023.36	331.08	210.56	-	-	-	-	1,565.00
001-0335-704.30-10		22,965.00	Collections	Bad Debt	15,016.93	4,858.29	3,089.77	-	-	-	-	22,965.00
001-0335-704.30-40		200.00	Collections	Bad Debt	130.78	42.31	26.91	-	-	-	-	200.00
001-0335-704.30-50		200.00	Collections	Bad Debt	130.78	42.31	26.91	-	-	-	-	200.00
001-0335-704.40-40		1,500.00	Collections	Bad Debt	980.86	317.33	201.81	-	-	-	-	1,500.00
001-0335-704.40-60		1,550.00	Collections	Bad Debt	1,013.55	327.91	208.54	-	-	-	-	1,550.00
001-0335-704.61-50		13,425.00	Collections	Bad Debt	8,778.68	2,840.09	1,806.23	-	-	-	-	13,425.00
001-0335-704.70-25		190,000.00	Collections	Bad Debt	124,241.99	40,194.91	25,563.10	-	-	-	-	190,000.00
001-0335-704.70-90		28,607.00	Collections	Bad Debt	18,706.27	6,051.87	3,848.86	-	-	-	-	28,607.00
001-0335-704.71-15		500.00	Collections	Bad Debt	326.95	105.78	67.27	-	-	-	-	500.00
001-0335-704.71-80		-	Collections	Bad Debt	-	-	-	-	-	-	-	-
001-0335-704.80-50		6,000.00	Collections	Bad Debt	3,923.43	1,269.31	807.26	-	-	-	-	6,000.00
001-0335-704.80-52		14,600.00	Collections	Bad Debt	9,547.02	3,088.66	1,964.32	-	-	-	-	14,600.00
001-0335-704.80-80		9,200.00	Collections	Bad Debt	6,015.93	1,946.28	1,237.79	-	-	-	-	9,200.00
001-0335-705.10-10		25,022.51	Payment Processing	Bills	22,120.53	2,561.53	331.04	0.43	2.57	5.99	0.43	25,022.51
001-0335-705.10-30		84,851.35	Payment Processing	Bills	75,010.72	8,686.15	1,122.57	1.45	8.70	20.30	1.45	84,851.35
001-0335-705.11-95		500.00	Payment Processing	Bills	442.01	51.18	6.61	0.01	0.05	0.12	0.01	500.00
001-0335-705.20-20		200.00	Payment Processing	Bills	176.81	20.47	2.65	0.00	0.02	0.05	0.00	200.00
001-0335-705.70-20		3,053.00	Payment Processing	Bills	2,698.93	312.53	40.39	0.05	0.31	0.73	0.05	3,053.00
001-0335-705.80-90		1,224.00	Payment Processing	Bills	1,082.05	125.30	16.19	0.02	0.13	0.29	0.02	1,224.00
001-0444-771.11-10		6,000.00	IT - Billing	Bills	5,304.15	614.21	79.38	0.10	0.62	1.44	0.10	6,000.00
001-0444-771.50-30		12,000.00	IT - Billing	Bills	10,608.30	1,228.43	158.76	0.21	1.23	2.87	0.21	12,000.00
001-0444-771.50-30		13,500.00	IT - Billing	Bills	11,934.34	1,381.98	178.60	0.23	1.38	3.23	0.23	13,500.00
001-0444-771.50-30		48,600.00	IT - Billing	Bills	42,963.62	4,975.14	642.97	0.83	4.98	11.63	0.83	48,600.00
Total Billing & Collections		**3,355,193.75**			**2,785,567.48**	**432,676.76**	**135,770.27**	**84.59**	**315.05**	**735.11**	**44.49**	**3,355,193.75**
Cost per customer					**53.86**	**72.25**	**175.41**	**84.59**	**52.51**	**52.51**	**44.49**	
Weighting (Res must be 1.0)					**1.0**	**1.3**	**3.3**	**1.6**	**1.0**	**1.0**	**0.8**	

7-STAFF-64

Interrogatory:

Pole Attachment

Ref 1: Exhibit – 7 - Specific Customer Classes, pp. 11-12

Waterloo North Hydro has not directly allocated costs associated with the embedded distributor, nor does it have demand allocators, or customer connection allocators associated with the customer class. It states that the only customer in the class owns the circuits that cross into Waterloo North Hydro's service territory and that Waterloo North Hydro receives pole rental revenue from the customer. Waterloo North Hydro states that it does not have any capital invested in the Embedded Distributor rate class, only operating costs.

The generic pole attachment charge was set on a generic basis by determining the relative space required for each pole user.

a) Does Waterloo North Hydro maintain the embedded distributor's circuit conductor? If so, how is this compensated?

b) Does the embedded distributor pay the standard pole attachment rate? If not, how is the rate determined?

c) How much pole space is required by the embedded distributor, and how does this compare to a non-electrical pole attachment?

Response:

a) No, WNH does not maintain the embedded distributor's circuit conductor.

b) Hydro One does not pay WNH the standard pole attachment rate.

Both WNH and Hydro One have power conductor attached to the other party's poles. Hydro One charges their embedded distributor pole attachment fee ($86.56/pole) based on OEB approved rate (refer to "EB-2017-0049"), hence WNH charges Hydro One pole attachment fees at the same rate.

c) In WNH's territory the embedded distributor has one three-phase primary 27.6 kV circuit attached to WNH poles. The amount of space for one primary circuit is approximately 3 times more than the amount of space typically allocated to non-electrical attachments.

7-STAFF-65

Interrogatory:

Standby Charge

Ref 1: Exhibit – 7 - Standby Charge, p. 15

Waterloo North Hydro states that it has notified all ten customers, who plan to have load displacement, of the proposed standby charges, that it had meetings with two customers, and has received feedback from one customer.

a) Has Waterloo North Hydro had any further communications, or received any additional feedback from customers regarding standby charges? If so, please provide.

b) Please provide the installation dates and volume reductions (monthly energy and demand reductions) resulting from load displacement generation installed in 2019 or prior years.

c) Please provide a load forecast scenario reflecting energy and demand that would be required in the absence of any load displacement generation. In doing this, please add any load displacement energy to the system purchases prior running the regression. Please also add the load displacement energy and demand reductions back to the applicable rate classes before preparing the rate class forecasts.

Response:

a) WNH received three follow up communications from customers who are installing load displacement generation for the purpose of GA avoidance. Each of these customers noted that since GA avoidance is their sole purpose, they do not anticipate being financially impacted by the Standby Charges. Please see WNH's response to 7-Staff-66 a) for the explanation on how Standby Charge contracts will work for customers installing load displacement generation for GA avoidance only. WNH has not received any further communications from customers who will be charged Standby Charges due to continuous load displacement.

b)

Installation	Installation Date	Monthly Energy Reduction (kWh)	Monthly Demand Reduction (kW)
1	December 2018	7,128	4
2	December 2018	60,588	49
3	August 2019	-	-

Please note that for Installation 3 above, this is a customer who has installed battery storage for GA avoidance and therefore has no volume reductions. Please also refer to 7-Staff-66 a) on WNH's treatment of GA avoidance.

c) Please refer to Attachment 6 – Load Forecast – Load Displacement Modification, which contains a revised load forecast per the above requirements. Load Displacement is presented on a separate tab in the revised model.

7-STAFF-66

Interrogatory:

Standby Charge

Ref 1: Exhibit 7 – Standby Charges, pp. 13-15

Waterloo North Hydro states that it would consult with customers to determine a contracted capacity reserve value, which is the capacity required in the absence of the load displacement generator. If the metered load is below the contracted capacity reserve value, then the standby charge would apply to the difference between the contracted capacity reserve value and the metered load. If the metered load is equal to or greater than the contracted capacity reserve value, then the standby charge would not apply.

a) Please explain how Waterloo North Hydro plans to determine the contracted capacity reserve value.

b) If the methodology is based on historical load profiles of customers, how does Waterloo North Hydro intend to measure the true load moving forward?

c) How often will the contracted capacity reserve value be updated?

d) The affects of the load displacement will be embedded in future load forecasts. How will Waterloo North Hydro account for this when deriving GS>50kW and Large Use distribution rates?

e) Does the standby charge apply to all GS>50kW and Large Use customers with load displacement? Or does it only apply to all GS>50kW and Large Use customers with load displacement generation greater than 1MW with non-renewable generation or 2MW with renewable generation.

f) For storage facilities, is there a size threshold similar to load displacement?

Response:

a) As the first step, discussions with customers need to take place to better understand the following main factors:

- The size, capacity, and intended use of the proposed Load Displacement Generation ("generation") facility;
- The current, historical, and projected peak loads of the customer, in the absence of generation; and,
- Understanding of standby supply capacity requirements and customer's ability to curtail load in absence of generation.

Generation that is installed for the sole purpose of provincial peak (Global Adjustment) avoidance will have their capacity value set equal to the monthly peak load value as measured by the load meter, resulting in 0 kW for standby charges. It is WNH's experience that generators installed for this purpose typically run for short enough periods of time that the full load of the customer materializes at some point in time during the month, hence, the full capacity requirements are reflected

in the value measured by the load meter. To be eligible for this, the customer will be required to install a meter at the output of the generator. Should the customer change their use of the generator, the contract terms will require the customer to notify WNH of this so a new capacity reserve value can be established.

For all other generators, WNH intends to work closely with customers to establish the capacity reserve value in one of two ways:

1) Fixed capacity reserve value

In this approach, the capacity reserve value will be calculated as Historical Load reduced by Load Curtailment.

This approach is best suited for customers with stable and predictable load patterns. Stable and predictable load patterns are defined as those where the variation in the customer's annual peak demand, without generation, over the most recent 3-year period does not exceed +/- 15% from the average over the same period, to a maximum variance of 250kW, and where there is a reasonable expectation that this level of load will continue over the next year. The Historical Load will be calculated as the average of the customer's annual peak demand without generation over the most recent 3 years.

Load Curtailment amount will be established through technical discussions with the customer substantiated by witness testing. For Load Curtailment to be considered, the system must be programmed to automatically (without human intervention) and instantaneously (without intentional delay) reduce the customer's load in case of generation coming off line up to a maximum amount equal to full nameplate of generation. For existing customers, verification of Load Curtailment will be done by a field inspection and

witness testing of automatic load shedding systems. For all future customers, this will be added to an already existing list of field tests that WNH witnesses as part of the generation connection process.

2) Variable capacity reserve value

This approach will be used for those customers that do not meet the stable and predictable historical load criteria, or that choose it as the preferred option. This approach may be better suited for customers that wish to make energy efficiency improvements in the future as the required standby capacity would be expected to decrease over time. On the opposite side of the spectrum, this approach will be required of customers who plan to expand their load to ensure WNH can have proper visibility of actual needs.

In this approach, the capacity reserve value will be calculated by the following formula:
Coincident peak of (Required Load + Generation Level) – Load Curtailment

Required Load will be determined by the customer's load meter.

Generation Level will be determined by a meter installed at the generator output or fixed at full value of generator nameplate, subject to customer's preference. WNH is also willing to consider a lower fixed value than generator nameplate, subject to the customer providing sufficient technical evidence that the generator is not set up to produce full output.

Load Curtailment will be established in the same fashion as in the fixed value approach.

b) If the generation is metered, the true load going forward can be measured by adding the generation amount to the reading from the load meter. If the generation is not metered, then the true load will be approximated by adding the generation nameplate (or lower fixed value agreed to) to the reading from the load meter.

c) The capacity reserve value will be re-evaluated on an annual basis. The process will involve updates to the information initially collected from the customer as well as analysis of the metered data available to WNH. Based on the information collected, the capacity reserve value may be updated as well as moved from Fixed to Variable if stable and predictable load patterns can no longer be substantiated by the customer.

For Global Adjustment avoidance generators that change the way they use the generation facilities, the update in the capacity reserve value may occur earlier than the planned annual review.

d) Given that the majority of the load displacement facilities are expected to be metered, WNH will have sufficient data to determine the exact effects on historic load. WNH would then prepare future load forecasts based on a similar methodology to that suggested by the Board in 7-Staff-65c). Historic load displacement would be added back to system purchases prior to running the regression model and then subtracted from the resulting estimate. Future effects would be predicted based off verified results.

e) The standby charge applies to all GS>50kW and Large Use customer classes.

f) Greater than or equal to 50kW.

7-STAFF-67

Interrogatory:

Customer Count

Ref 1: Cost Allocation Model Sheet I6.2 Customer Data; I7.1 Meter Capital

Waterloo North Hydro has populated the Meter Capital worksheet with fewer meters than customers as indicated in the table below:

	Forecasted Customers per I6.2 Customer Data	Total Meters per I7.1 Meter Capital	Difference
Residential	51,719	51,032	687 (1.3%)
General Service < 50 kW	5,989	5,822	167 (2.8%)
General Service > 50 kW	774	729	45 (5.8%)
Large Use	1	1	-

a) Please reconcile the differences in meter counts to customer counts.

Response:

a) Counts used in I7.1 Meter Capital were based on actual meter counts at the time of filing and did not reflect anticipated customer count increases. The Cost Allocation model has been updated per WNH's response to 1-Staff-1 and reflects projected customer count figures.

EXHIBIT 8 – RATE DESIGN

8-STAFF-68

Interrogatory:

Fixed/Variable Proportion

Ref 1: Exhibit – 8 – Fixed/Variable Proportion, pp. 5-6

Waterloo North Hydro proposes to maintain the fixed/variable proportions. Table 8-5 indicates that General Service < 50 kW, General Service > 50 kW and Large Use all have fixed charges that are already above the Minimum System with Peak Load Carrying Capability (PLCC) Adjustment (the Ceiling Fixed Charge from the Cost Allocation Model), and all are proposed to increase. Also, Unmetered Scattered Load is proposed to increase to a level which exceeds the Minimum System with PLCC Adjustment.

a) Please calculate the variable charges that would result from the scenario where the fixed charges for the General Service < 50 kW, General Service > 50 kW and Large Use classes were held at the existing rates, and the fixed charge for the Unmetered Scattered Load were set to the Minimum System with PLCC Adjustment.

Response:

a) WNH has performed the following analysis based on revised Revenue Requirement per WNH's response to 1-Staff-1. This has provided new existing fixed/variable splits (due to update from the Load Forecast) and new Ceiling Fixed Charges per the revised Cost Allocation.

WNH has included a revised version of the tab 13. Rate Design of the Revenue Requirement Workform (revised version per 1-Staff-1) as Attachment 7 – 2021

RRWF 13. Rate Design Modification, with the above changes made to the monthly fixed and variable charges.

8-STAFF-69

Interrogatory:

Retail Transmission Service Rates

Ref 1: Exhibit – 8 Retail Transmission Service Rates, p. 11

Waterloo North Hydro states "that in accordance with its billing arrangements with its Embedded Distributor, Retail Transmission Rates are not applicable".

a) Does Waterloo North Hydro pay any UTRs, RTSRs, or LV charges with respect to the usage of the embedded distributor?

b) If the answer to a) is yes, please explain the billing arrangements with the embedded distributor that lead to RTSRs not being applied.

Response:

a) WNH does pay RTSRs and LV charges with respect to the usage of the embedded distributor.

b) The billing arrangement with the embedded distributor that leads to RTSRs not being applied is the following:

Wholesale Settlement

- WNH pays IESO Energy charge based on Meter 1 and transmission charge based on Meter 1 minus Meter 2
- Hydro One pays IESO transmission charge based on Meter 2

Retail Settlement

- Hydro One pays WNH energy charge based on Meter 6 minus Meter 7
- WNH pays Hydro One retail transmission and low voltage charges based on Meter 2 minus the difference of Meter 6 minus Meter 7

With the following billing arrangement, WNH does not apply RTSRs and low voltage charges to the embedded distributor. Attachment 8 – WNH – HONI Billing Arrangement, provides a diagram of the billing arrangement.

8-STAFF-70

Interrogatory:

Retail Transmission Service Rates
Ref 1: Retail Transmission Service Rates model
Ref 2: EB-2018-0028, Decision and Final Rate Order, August 1, 2019
Ref 3: EB-2019-0031, Decision and Rate Order, January 23, 2020

In reference 2, the retail transmission rates for Energy+ were implemented August 1, 2019. In the Historical Wholesale tab in reference 1, it appears Waterloo North Hydro was not charged the 2019 retail transmission rate but the 2018.

a) Please confirm if this is correct. If so, please explain why Waterloo North Hydro was charged the 2018 retail transmission rates for august.

Energy+'s 2020 retail transmission rates were effective and implemented on March 1, 2020. In the Current Wholesale tab in reference 1, Waterloo North Hydro applied the 2020 retail transmission rates for all of 2020.

b) Please confirm if this was Waterloo North Hydro's intent or limitations of the model. If it is limitations of the model, please work with OEB staff to update this to reflect the actual effective and implementation date.

Response:

a) There was an error in the RTSR Workform, Historical Wholesale tab which has been updated. Please refer to WNH's response to 1-Staff-1.

b) WNH applied the 2020 retail transmission rates for all of 2020 because it was a limitation of the model. However, EB-2019-0031, Partial Decision and Interim Rate Order, January 2, 2020 effective and implemented January 1, 2020 had the same Retail Transmission Rate - Network Service Rate and Line ($2.4605) and Transformation Connection Service Rate ($1.9627) as EB-2019-0031, Decision and Rate Order, January 23, 2020 effective and implemented on March 1, 2020. Therefore, no changes are required.

8-STAFF-71

Interrogatory:

Retail Transmission Service Rates
Ref 1: Exhibit 8 – 2.8.3 Retail Transmission Service Rates
Ref 2: Exhibit 7 – Standby Charge, pp. 13-15

Waterloo North Hydro requests that the gross load billing methodology for RTSRs apply to any customers in the future that implement load displacement generation.

a) Please confirm if Waterloo North Hydro defines 'any customers' to be all customers that implement load displacement generation that are GS>50kW or Large Use.

b) Please confirm if Waterloo North Hydro communicated the gross load billing methodology for RTSRs to affected customers. If so, please provide details of the communications.

Response:

a) Yes, WNH confirms that 'any customers' was meant to be all customers that implement load displacement generation that are GS>50kW or Large Use.

b) In the Connection Impact Assessment (CIA), WNH includes the following wording to customers who are intending to install generation that would trigger gross load billing, "Once approved by the Ontario Energy Board (OEB), the Generator shall pay to the Distributor a Gross Load Billing (or equivalent) for the capacity that the Distributor must have available to service the full load of the Customer." The customers (or their representatives) are familiar with gross load billing prior to the establishment of the CIA.

8-STAFF-72

Interrogatory:

Standby Charge

Ref 1: Exhibit 8 – Attachment 8-5 - 2021 Proposed Tariff of Rates

Waterloo North Hydro proposes a standby charge for GS>50kW and Large Use customers who install load displacement generation or storage. However, in the 2021 proposed Tariff of Rates and Charges there is no tariff for Standby Power.

a) Please provide the tariff sheet for the Standby Power Service Classification.

Response:

Please see 1-Staff-1 for the updated Tariff Schedule and Bill Impact Model that includes the Rate Order for Standby Power for GS > 50 kW and Large User Customers.

8-STAFF-73

Interrogatory:

Specific Service Charges

Ref 1: Exhibit 8 – Table 8-10 to Table 8-13

Waterloo North Hydro proposes four new charges "to allow for a generic charge to decrease billing and administration for each work request."

a) Has Waterloo North Hydro charged customers for this work in the past? If so, how were the charges determined?

b) For each proposed charges, how many incidents and how much revenue have been recorded for 2017, 2018, and 2019?

c) Where has associated revenue historically been recorded?

Waterloo North Hydro provided the calculations for the new specific service charges and the update to existing specific service charges. Waterloo North Hydro stated that it has several years of history to determine a standard cost based on time for labour and trucking.

d) Please provide the number of historical years used to develop the number of hours required for the specific service charges.

e) Please confirm that the field staff hours have not changed from the previously calculated specific service charges.

f) Please explain why additional hours are required for field staff after regular hours as compared to regular hours.

g) Please provide the labour and truck rates that were used for the development of the previous specific service charges.

Response:

a) As described in Exhibit 8 – p.14, WNH has charged standard rates established in the 2006 EDR in Schedule 11-2. These rates were determined using standard labour and trucking rates and hours as prescribed in the EDR.

b) Please refer to WNH's response to 3-Staff-37 for a breakdown of incidents and revenue recorded for historical years 2017, 2018 and 2019.

c) Per WNH's response to 3-Staff-37 disconnection and reconnection costs and associated revenue offsets have been recorded under USoA 5005 Operation Supervision and Engineering.

d) WNH is only proposing to change the inside staff time. The field staff time remains consistent from the 2006 EDR. WNH considered several years of history to develop the number of inside staff hours required for each disconnect/reconnect type but gave heavier consideration to the three most recent historical years.

e) WNH confirms that field staff hours have not changed from the previously calculated specific service charges per 2006 EDR.

f) Consistent with previous specific service charge calculations in the 2006 EDR, additional field staff time is required for after-hour calls due to travel time consideration. Disconnect/Reconnect requests during regular hours can be managed in a sequence that limits travel time between sites. Requests outside of regular hours must be handled by an on-call employee. This employee requires extra time to travel from their home to the Service Centre, pick up necessary materials and then travel to the job site. This is consistent with WNH's union agreement where any after-hours call has a minimum call-out time of two (2) hours.

For disconnect/reconnect at meter – after regular hours, this minimum call-out time of 2 hours is reflected in the hours/units assuming a single Powerline Maintainer.

For disconnect/reconnect at pole – after regular hours, this minimum call-out time of 2 hours is reflected in the hours/units assuming a two-person line crew.

g) Please see Attachment 9 – 2006_EDR_Handbook_Sch11-2 for an excerpt from the 2006 EDR Schedule 11-2. Labour and truck rates, labour burdens and hours are described for each charge type.

8-STAFF-74

Interrogatory:

Specific Service Charges

Ref: Exhibit – 8 – Specific Service Charges, p. 18

Waterloo North Hydro proposes to increase reconnection at meter charges under non-payment of account from $65 to $130 during regular hours and from $185 to $335 after regular hours. Waterloo North Hydro is also proposing new rates for reconnections at the pole.

a) How have reconnections at the pole under non-payment of account historically been charged?

b) Please provide details of any customer consultation in respect to the proposed changes to the charges.

Response:

a) WNH is not requesting new rates for reconnection due to non-payment. The increase to reconnection at the meter and pole charges are for owner requested disconnections and reconnections only. There is an error in Exhibit 8 on p. 18, Table 8-14 as these requested charges are included under the non-payment header. In Exhibit 8 p. 13 and 14, it is noted that the description is "Owner Requested Disconnection / Reconnection…" for the four new proposed charges. To answer the above question, the reconnections at the pole under non-payment of account have been charged the amount included for the reconnection at the meter on the rate order of $65/during regular hours and $185/after regular hours.

b) There was no customer consultation done specifically for these proposed changes.

8-STAFF-75

Interrogatory:

Low Voltage

Ref 1: Exhibit 8 – Table 8-15 Calculation of LV Expenses

Ref 2: Exhibit 8 – Table 8-15a Low Voltage Charges – Determination of Rates

The volumetric rates for the embedded distributor rate class in the referenced decisions do not match those provided in the table 8-15.

a) Please provide a breakdown of the current LV charges in reference 1.

In reference 2, Waterloo North Hydro used Retail Transmission Connection Rates as part of the calculation.

b) Please update Table 8-15a with the updated Retail Transmission Connection Rates.

Response:

a) Please see below the breakdown for the current LV charges as provided in Table 8-15. To calculate Low voltage charges for 2021, WNH used 2020 Rate Orders for each of the utilities.

1) Energy+:

Energy+	Invoice Period	kW (adjusted demand)	Distribution Wheeling Service Rate 5/18	Rate Rider for Tax Change 05/19	Rate Rider for Deferral / Variance 5/19	Distribution Volumetric Rate 8/19	Low Voltage Service Rate 8/19	Rate Rider for Deferral / Variance until Dec 31, 19	Rate Rider for Deferral Group 2/ Variance until Dec 31,19	Rate Rider for Disp of accts 1575/1576 until Dec 31, 19	R Rider for App of Foregone Rev until Dec 31, 2020	Low Voltage Total
January	1/1/19-2/1/19	10,228	1.9167	-0.5388	0.0368							14,469.16
February	2/1/19-3/1/19	9,862	1.9167	-0.5388	0.0368							13,951.71
March	3/1/19-4/1/19	9,608	1.9167	-0.5388	0.0368							13,591.89
April	4/1/19-5/1/19	8,990	1.9167	-0.5388	0.0368							12,718.29
May	5/1/19-6/1/19	8,291	1.9167									15,890.94
June	6/1/19-7/1/19	9,897	1.9167									18,970.44
July	7/1/19-8/1/19	12,439	1.9167									23,842.73
August	8/1/19-9/1/19	10,337				1.6381	0.1248	-2.2159	0.016	-0.3972	-0.1202	(9,865.86)
September	9/1/19-10/1/19	9,902				1.6381	0.1248	-2.2159	0.016	-0.3972	-0.1202	(9,450.76)
October	10/1/19-11/1/19	10,577				1.6381	0.1248	-2.2159	0.016	-0.3972	-0.1202	(10,094.92)
November	11/1/19-12/1/19	9,463				1.6381	0.1248	-2.2159	0.016	-0.3972	-0.1202	(9,031.67)
December	12/1/19-1/1/20	10,323				1.6381	0.1248	-2.2159	0.016	-0.3972	-0.1202	(9,852.52)
Total		**119,918**										**$ 65,139.44**

		Distribution Volumetric Rate 8/19	Low Voltage Service Rate	RR DV (2020)	RR Forgone Rev Adj until Dec 31, 2020	
Used for 2021:	**EB-2019-0031**	1.6684	0.1248	(0.0644)	(0.1202)	**1.6086**

2) Kitchener Wilmot Hydro Inc.

Kitchener Wilmot Hydro Inc.	Invoice Period	kW (adjusted demand)	Distribution Specific LV Charges 1/19	RR Disp of DV Accounts (2018)	RR Disp of DV Accounts (2019)	Low Voltage Total
January	1/1/19-2/1/19	4,104	2.3687	-0.8549	-0.1889	5,437.68
February	2/1/19-3/1/19	4,461	2.3687	-0.8549	-0.1889	5,909.76
March	3/1/19-4/1/19	3,721	2.3687	-0.8549	-0.1889	4,930.13
April	4/1/19-5/1/19	3,050	2.3687	-0.8549	-0.1889	4,040.53
May	5/1/19-6/1/19	2,293	2.3687		-0.1889	4,997.63
June	6/1/19-7/1/19	3,011	2.3687		-0.1889	6,564.14
July	7/1/19-8/1/19	3,658	2.3687		-0.1889	7,973.62
August	8/1/19-9/1/19	3,250	2.3687		-0.1889	7,084.68
September	9/1/19-10/1/19	3,048	2.3687		-0.1889	6,643.83
October	10/1/19-11/1/19	2,697	2.3687		-0.1889	5,878.14
November	11/1/19-12/1/19	2,799	2.3687		-0.1889	6,101.28
December	12/1/19-1/1/20	2,998	2.3687		-0.1889	6,534.12
Total		**39,089**				**$ 72,095.54**

		Distribution Specific LV Charges 1/20	RR Disp DV (2019)	RR Grp 2 DV (2019)	
Used for 2021:	**EB-2019-0049**	2.4179	0.1306	0.0011	**2.5496**

3) Hydro One Networks Inc. – Pentland Junction

Hydro One Networks Inc. - Pentland Junction	Invoice Period	kW (measured demand)	Rate Riders	Common ST Lines	Monthly Service Charge	Low Voltage Total
January	1/1/19-2/1/19	2,646		1.2052	492.55	3,681.24
February	2/1/19-3/1/19	3,158		1.2052	492.55	4,298.02
March	3/1/19-4/1/19	2,761		1.2052	492.55	3,819.66
April	4/1/19-5/1/19	2,385		1.2052	492.55	3,367.05
May	5/1/19-6/1/19	2,292		1.2052	492.55	3,254.52
June	6/1/19-7/1/19	2,126		1.2052	492.55	3,054.74
July	7/1/19-8/1/19	2,978	0.3285	1.2925	517.11	5,345.23
August	8/1/19-9/1/19	2,846	0.8959	1.4434	559.54	7,217.52
September	9/1/19-10/1/19	2,606	0.8959	1.4434	559.54	6,656.13
October	10/1/19-11/1/19	2,561	0.8959	1.4434	559.54	6,550.37
November	11/1/19-12/1/19	2,508	0.8959	1.4434	559.54	6,426.25
December	12/1/19-1/1/20	2,534	0.8959	1.4434	559.54	6,487.98
Total		**31,401**				**$ 60,158.70**

		RR - Grp 1 DV (2019)	Common ST Lines	
Used for 2021:	**EB-2019-0043**	0.8959	1.4854	**2.3813**

4) Hydro One Networks Inc. – Elmira TS

Hydro One Networks Inc. - Elmira	Invoice Period	kW (measured demand)	Rate Riders	Common ST Lines	Monthly Service Charge	Low Voltage Total
January	1/1/19-2/1/19	2,518		1.2052	2,513.12	5,547.46
February	2/1/19-3/1/19	2,800		1.2052	2,513.12	5,888.03
March	3/1/19-4/1/19	2,627		1.2052	2,513.12	5,679.57
April	4/1/19-5/1/19	2,557		1.2052	2,513.12	5,594.66
May	5/1/19-6/1/19	2,726		1.2052	2,513.12	5,798.99
June	6/1/19-7/1/19	2,584		1.2052	2,513.12	5,627.19
July	7/1/19-8/1/19	3,144	0.3285	1.29254	2,420.79	7,517.14
August	8/1/19-9/1/19	2,971	0.8959	1.4434	2,261.32	9,212.50
September	9/1/19-10/1/19	2,919	0.8959	1.4434	2,261.32	9,089.41
October	10/1/19-11/1/19	2,699	0.8959	1.4434	2,261.32	8,576.14
November	11/1/19-12/1/19	2,862	0.8959	1.4434	2,261.32	8,955.91
December	12/1/19-1/1/20	3,060	0.8959	1.4434	2,261.32	9,420.72
Total		**33,468**				**$ 86,907.72**

		RR - Grp 1 DV (2019)	Common ST Lines	
Used for 2021:	**EB-2019-0043**	0.8959	1.4854	**2.3813**

b) Please see updated Table 8-15a below with the updated Retail Transmission Connection Rates as per RTSR Workform in WNH's response to 1-Staff-1. Please note that the GS > 50 kW Retail Transmission Connection rate used is based on a blended rate using the consumption for GS > 50 kW interval and non-interval customers from the RTSR Workform.

Rate Class	Retail Transmission Connection Rates		Billing Determinants		Allocation of Low Voltage Charges			Billing Determinants	
	Per kWh	Per kW	Annualized kWh or kW	Unit of Measure	Retail Tx Connection Revenue - Basis for Allocation ($)	Allocation Percentages	Allocated $	Low Voltage Rates / kWh	Low Voltage Rates / kW
Residential	$ 0.0025		398,063,895	kWh	995,159.74	28.5%	127,442	0.0003	
GS < 50 kW	$ 0.0023		197,062,409	kWh	453,243.54	13.0%	58,043	0.0003	
GS > 50 kW		$ 1.0378	1,773,376	kW	1,840,410.32	52.7%	235,687		0.1329
Large User		$ 1.1055	170,575	kW	188,571.08	5.4%	24,149		0.1416
Unmetered Scattered Load	$ 0.0023		2,947,114	kWh	6,778.36	0.2%	868	0.0003	
Street Lighting		$ 0.6817	9,302	kW	6,341.28	0.2%	812		0.0873
Embedded Distributor		$ -	103,033	kW	-	0.0%	-		-
Total					**3,490,504**	**100.0%**	**447,000**		

8-STAFF-76

Interrogatory:

Loss Factor

Ref 1: Chapter 2 Appendices – 2-R Loss Factor

Waterloo North Hydro has removed the 4kV system through voltage conversion, but Waterloo North Hydro's total loss factor does not appear to materially improve over the last 5 years.

a) Please explain why the removal of the 4kV system has not improved Waterloo North Hydro's loss factor.

Response:

Removal of the entire 4kV system has improved WNH's loss factor however this work has occurred gradually spanning nearly 20 years. Please refer to table in IR response 2-ED-3 for losses over the historical period. WNH only removed the last remaining components of the 4 kV system over this past historical period. Incrementally this work only represented a small portion of the entire distribution system in terms of equipment and load. Most of the load on the 4 kV system had been previously moved over to the 13.8 kV and 27.6 kV systems as WNH renewed its distribution assets. The stations were at or near zero load as they were taken out of service, thus having minimal impact on system losses over the historical period.

EXHIBIT 9 – DEFERRAL AND VARIANCE ACCOUNTS

9-STAFF-77

Interrogatory:

Deferral and Variance Accounts
Ref 1: Exhibit 9 – Table 9-6 Deferral and Variance Account Balances
Ref 2: Deferral and Variance Account Workform – 2a. Continuity Schedule
Ref 3: Deferral and Variance Account Workform – 2b. Continuity Schedule
Ref 4: EB-2019-0071, Decision and Rate Order, December 12, 2019

The tables provided in reference 1, 2, and 3 do not reconcile.

a) Please reconcile the tables in reference 1, 2, and 3.

In reference 4, the OEB approved the disposition of DVA balances as at December 31, 2018 to be disposed through final rate riders over January 1, 2020 to December 31, 2020. In reference 1, there are no balances recorded in the 'principle disposition during 2020' columns.

b) Please correct or explain why balances have not been included.

Response:

a) There was an error in the Exhibit 9 – Table 9-6 Deferral and Variance Account Balances. The Deferral and Variance Workform (DVA Workform) has been updated (1-Staff-1) and the table below is the updated table which reconciles to the DVA Workform.

Account Descriptions	Account Number	Principal Amounts as of Dec 31, 2019	Carrying Charges to Dec 31, 2019	Principal Disposals Jan 1, 2020 (EB-2019-0071)	Interest Disposals Jan 1, 2020 (EB-2019-0071)	Principal and Interest	Projected Carrying Charges 2020	Total Disposition 2021
Group 1 Accounts								
LV Variance Account	1550	118,335	7,651	103,512	3,655	18,819	1,627	20,446
Smart Metering Entity Charge Variance Account	1551	(62,441)	(1,950)	(67,812)	(1,518)	4,939	(859)	4,080
RSVA - Wholesale Market Service Charge	1580	(711,200)	27,477	(249,343)	13,179	(447,559)	(9,779)	(457,338)
RSVA - Retail Transmission Network Charge	1584	406,818	3,592	155,938	2,773	251,699	5,594	257,293
RSVA - Retail Transmission Connection Charge	1586	245,911	9,359	296,123	9,743	(50,596)	3,381	(47,215)
RSVA - Power (excluding Global Adjustment)	1588	(2,621,628)	(30,520)	865,538	(13,108)	(2,909,462)	8,183	(2,901,279)
RSVA - GA	1589	62,340	(7,747)	(348,978)	3,404	400,167	857	401,024
Disposition and Recovery/Refund of Regulatory Balances (2016)	1595	(50,801)	-			(50,801)		(50,801)
Disposition and Recovery/Refund of Regulatory Balances (2017)	1595	39,743	(141,719)	39,743	(141,531)	(188)	546	
Disposition and Recovery/Refund of Regulatory Balances (2018)	1595	60,545	(63,259)			(2,714)	832	
Disposition and Recovery/Refund of Regulatory Balances (2019)	1595	1,357,723	(1,483,406)			(125,683)	18,669	
Total for Group 1 Accounts		**(1,154,655)**	**(1,680,522)**	**794,721**	**(123,403)**	**(2,911,379)**	**29,051**	**(2,773,790)**
Group 2 and Other Accounts								
Other Regulatory Assets - Sub-Account - OPEB	1508	156,504	5,717			162,221	2,519	164,740
Other Regulatory Assets - Sub-Account - Other - Wireline Attachments	1508	(520,995)	(3,378)			(524,373)	(3,782)	(528,155)
Other Regulatory Assets - Sub-Account - MS Disposition	1508	(465,074)	(25,441)			(490,515)	(6,395)	(496,910)
Other Regulatory Assets - Sub-Account - OEB Fees	1508	193,939	5,392			199,331	3,388	202,719
Retail Cost Variance Account - Retail	1518	(71,547)	(1,154)			(72,701)	(1,053)	(73,754)
Retail Cost Variance Account - STR	1548	(2,038)	(58)			(2,096)	(52)	(2,148)
LRAM Variance Account	1568	1,314,171	65,043			1,379,214	18,070	1,397,284
PILs and Tax Variance for 2006 and Subsequent Years - Recover PILs	1592	(671,416)	-			(671,416)	(4,616)	(676,032)
Total for Group 2 and Other Accounts		**(66,456)**	**46,121**	-	-	**(20,335)**	**8,079**	**(12,256)**
Total Deferral and Variance Account Balances		**(1,221,111)**	**(1,634,401)**	**794,721**	**(123,403)**	**(2,931,714)**	**37,130**	**(2,786,046)**

b) WNH has updated the Deferral and Variance Account Workform as part of 1-Staff-1.

9-STAFF-78

Interrogatory:

LRAMVA

Ref 1: LRAMVA workform, Tabs 5 and 7 (2018 Savings)

Ref 2: 2019 Participation & Cost (P&C) Report, dated April 2019

For the following programs listed below, the 2018 kWh savings claimed in the LRAMVA workform do not match the unverified 2018 savings in the P&C Report. The demand savings in the LRAMVA workform are also provided in the table below:

	P&C report (kWh) – unverified 2018	LRAMVA workform (kWh)	LRAMVA workform (kW)
2018 Save on Energy Retrofit Program	8,887,016	13,671,189	2,008
2018 Save on Energy Small Business Lighting Program	6,162	14,920	4
2018 Save on Energy High Performance New Construction Program	90,528	342,367	359

a) Please explain why the savings in the LRAMVA workform for each of the above noted programs do not match the P&C Report. Please explain where the additional energy savings come from and why they are eligible for lost revenue recovery.

b) Please explain how the demand savings for each of the above noted programs were estimated and confirm assumptions used, such as the kW/kWh conversion factor.

c) Please file all supporting documentation including project level savings data, as applicable, to support a) and b) of this interrogatory.

Response:

a) The kWh filed in the LRAMVA workform includes program savings which were not included in the P&C report. The 2018 program savings estimates have been revised as part of WNH's response to 3-Staff-36 e) and have been included in the CDM Persistence variable of the Load Forecast as filed in WNH's response to 1-Staff-1.

b) Please refer to WNH's response to 3-Staff-36 e).

c) Please refer to WNH's response to 3-Staff-36 e).

9-STAFF-79

Interrogatory:

LRAMVA

Ref 1: LRAMVA workform, Tab 8 (cell F33)

Ref 2: 2019 Participation & Cost (P&C) Report, dated April 2019

Ref 3: 2015-2017 Savings Persistence Report

The following table includes savings information for the 2016 and 2017 Save on Energy Program from the 2017 Savings Persistence Report and 2019 P&C Report. The LRAMVA workform includes savings from the 2017 Savings Persistence Report:

	2019 P&C Report (kWh)	2017 Savings Persistence Report (kWh)
2017 Save on Energy Retrofit Program	14,233,160	14,252,278
2016 Save on Energy Retrofit Program	8,761,493	5,109,557

Please explain why Waterloo North Hydro is claiming savings based on the 2017 Savings Persistence Report as opposed to the 2019 P&C Report, and the appropriateness of doing so.

Response:

For the 2017 Save on Energy Retrofit Program, WNH did not notice the adjustment made in the 2019 P&C Report. An adjustment line has been added to the revised LRAMVA workform Tab 7 filed as part of WNH's response to 1-Staff-1 to match the 2019 P&C

Report. Without specific data on the true-up, WNH has estimated a similar % reduction to 2017 demand savings. Tabs 8 and 5 have also been updated accordingly.

For the 2016 Save on Energy Retrofit Program, WNH first notes that it presented savings on two separate lines on tab 7: 2016 savings per the 2016 Savings Persistence Report (5,109,557 kWh) and 2016 adjustment per the 2017 Savings Persistence Report (3,813,170 kWh) for a total of 8,922,727 kWh. WNH did not notice the adjustment made in the 2019 Report. An adjustment line has been added to the revised LRAMVA workform Tab 7 filed as part of WNH's response to 1-Staff-1 to match the 2019 P&C Report. Without specific data on the true-up, WNH has estimated a similar % reduction to 2017 demand savings. Tabs 8 and 5 have also been updated accordingly.

9-STAFF-80

Interrogatory:

LRAMVA

Ref 1: LRAMVA workform, Tab 6

A prescribed interest rate of 1.38% was used in Q3 and Q4 of 2020 to calculate projected carrying charges on the LRAMVA balance.

In light of the revised OEB letter on July 30, 2020, please discuss whether Waterloo North Hydro agrees to update Table 6 with the updated prescribed interest rate of 0.57% to re-calculate projected carrying charges. If yes, please update Table 6 of the LRAMVA workform.

Response:

WNH agrees and has updated Table 6 of the LRAMVA workform and the DVA continuity submitted as part of WNH's response to 1-Staff-1.

9-STAFF-81

Interrogatory:

LRAMVA

Ref 1: LRAMVA workform, Tab 1-a

a) If Waterloo North Hydro made any changes to the LRAMVA workform as a result of its responses to the above LRAMVA interrogatories, please file an updated LRAMVA workform, and confirm the LRAMVA balance requested for disposition, the disposition period and the revised rate riders.

b) Please confirm any changes to the LRAMVA workform in response to these LRAMVA interrogatories in "Table A-2. Updates to LRAMVA Disposition (Tab 1-a)".

Response:

a) A revised LRAMVA workform has been submitted as part of WNH's response to 1-Staff-1. These revisions have been reflected in the DVA Continuity Schedule.

b) Confirmed.

9-STAFF-82

Interrogatory:

Interest Rates

Ref 1: Exhibit 9, p. 16

Ref 2: The OEB's Prescribed Interest Rates Posted on the Website

Waterloo North Hydro states that it has calculated the carrying charges on the DVAs using the following interest rates in the Table 9-2:

Table 9-2 – Interest Rates Applies to Deferral and Variance Accounts

Period	Rate
Carrying Charge Rate Jan 1, 2016 - Sep 30, 2017	1.10%
Carrying Charge Rate Oct 1, 2017 - Mar 31, 2018	1.50%
Carrying Charge Rate Apr 1, 2018 - Sep 30, 2018	1.89%
Carrying Charge Rate Oct 1, 2018 - Dec 31, 2018	2.17%
Carrying Charge Rate Jan 1, 2019 - Mar 31,2019	2.45%
Carrying Charge Rate Apr 1, 2019 - Jun 30, 2020	2.18%
Carrying Charge Rate Jul 1, 2020 - Dec 31, 2020	1.38%

OEB staff notes that the OEB has amended the DVA prescribed interest rate for 2020 Q3 to 0.57% in its letter issued to all rate-regulated entities and interested parties on July 30, 2020.

a) Please update the forecasted carrying charges for the period of July 1 to December 31, 2020 using the updated interest rate of 0.57% and provide the updated DVA continuity schedule.

Response:

a) The forecasted carrying charges for the period of July 1 to December 31, 2020 using the updated interest rate of 0.57% has been updated in the DVA Continuity Schedule Workform. Please refer to WNH's response to 1-Staff-1.

9-STAFF-83

Interrogatory:

Deferral and Variance Accounts

Ref 1: Exhibit 9, pages 23 and 24

Ref 2: DVA continuity schedule

Waterloo North Hydro states that it has included the residual balances for three 2016 rate riders into the Account 1595 sub-account 2016 as below:

1) Rate riders for Recovery of the Account 1568 LRAMVA – 2016: $(24,273)
2) Rate riders for Recovery of Stranded Meter Assets: $(26,528)
3) Rate riders for Account 1576: $34,187

The Accounting Guidance issued in March 2015 provides the disposition entries for Account 1575 and Account 1576 and states that:

The account balance plus the rate of return is disposed through a separate rate rider, distinct from any other rate rider that may be approved to implement the combined disposition of the remaining Group 1 and Group 2 accounts. As indicated in the July 2012 FAQs, the approved disposition of the account balance for both Account 1575 and Account 1576 would be reflected as an offset to depreciation expense over the approved amortization period.

OEB staff notes from the illustrative journal entries provided in the March 2015 Accounting Guidance that the disposition of Account 1576 does not flow through Account 1595.

a) Please remove the residual balance of $34,187 related to Account 1576 rate riders from Account 1595 sub-account 2016 which is included as part of 1-Staff-1.

Response:

a) WNH has removed the residual balance from the DVA Continuity Schedule as directed.

9-STAFF-84

Interrogatory:

Other Post Employment Benefits

Ref 1: Exhibit 9, pp. 25-26

Ref 2: Report of the OEB: Regulatory Treatment of Pension and Other Post-Employment Benefits (OPEB) Costs, EB-2015-0040, September 14, 2017

Waterloo North Hydro's 2016 OEB-approved settlement agreement provided for a variance account as follows:

A new deferral/variance account 1508 Other Regulatory Asset –Sub-account OPEB, for the purpose of recording the difference in revenue requirement each year, starting in the test year, between both the capitalized and OM&A components of OPEBs accounted for using a cost basis (as to be reflected in rates if this settlement is accepted by the Board) and both capitalized and OM&A components of OPEBs accounted for using an accrual basis **together with related PILs adjustments**. [Emphasis Added]

In this application, Waterloo North requests to include a forecast amount in the Account 1508 sub-account OPEB variance account which was approved in its 2016 CoS decision and order. Waterloo North Hydro states that:

Due to the immaterial and predictable forecast for 2020, WNH is requesting that the 2020 projection also be cleared as part of this Application and the account be discontinued.

Table 9-9 Sub-Account OPEB

OPEB	Cash	Accrual	Variance
2016	236,430	273,735	37,305
2017	285,972	347,307	61,335
2018	302,347	356,413	54,066
2019	287,977	301,109	13,132
2020 - Estimate	331,753	357,996	26,243
			192,081
Closing Interest Balances as of Dec 31-19 Adjusted for Dispositions during 2020			5,717
Projected Interest from Jan 1, 2020 to December 31, 2020 on Dec 31 -19 balance adjusted for disposition during 2020			2,952
Projected Interest from Jan 1, 2020 to December 31, 2020 on Dec 31 -20 balance adjusted for disposition during 2020			467
Total Claim - OPEB			**201,217**

OEB staff notes that the 2018 and 2019 accrual amounts in Table 9-9 match with the net benefit expenses in Note 11 of the 2018 and 2019 audited financial statements.

Appendix C of the OEB's Report for the Pension and OPEB costs, dated September 14, 2017, provides a generic variance account 1522 to track the differences between the forecast accrual amounts recovered in rates and the actual cash payments made for both pension and OPEBs in one account, on a go-forward basis. Page 20 of the report states that "For those utilities with a previously approved variance account, the new account will be effective as of their next approved cost-based rate order, if the accrual numbers for pension and OPEB costs are included in rates at that time".

a) Please explain what "the related PILs adjustments" that were included in the 2016 settlement agreement represent.

b) Please confirm that Waterloo North has included such PILs adjustments in the variance account 1508 sub-account OPEB. If not, why not?

c) Please provide evidence/rationale to support the predictability of the 2020 estimated accrual amount of $357,996 and cash amount of $331,753.

Response:

a) Related PILs adjustments represent the difference in deferred taxes related to the difference between recording employee future benefits expense on an accrual rather than a cash basis.

b) WNH has not included PILs adjustments in 1508 sub-account OPEB due to error. WNH has revised the DVA Continuity Schedule to include PILs adjustments based on a tax rate of 26.5%.

c) Please refer to response 4-Staff-57 for discussion surrounding the predictability of the $357,996 accrual amount. The cash amount of $331,753 was based on historical payments made to WNH's post-employment benefit providers which generally do not vary significantly year-to-year. WNH notes that payments made in 2020 up to August 31, 2020 equal $185,645. Using a straight-line projection, this would imply total cash payments of $278,468. However, this is lower than expected due to COVID-19 pandemic credits received in June, July and August. These were unanticipated at the time of filing and are not expected to continue for the rest of 2020 as most benefit services have resumed operation. Given the expected increase for the remainder of 2020, WNH does not believe the actual cash payments will be materially different than the $331,753 projection.

9-STAFF-85

Interrogatory:

Deferral and Variance Accounts

Ref 1: Exhibit 9, pp. 26-27

Waterloo North Hydro requests to dispose of a credit balance of $529,269 regarding wireline attachments in a sub-account under Account 1508. The requested balance includes the 2020 estimated balance of $(245,919) and is broken down by years as follows:

Table 9-10 Sub-Account - Wireline Attachments

Wireline Attachments	Total	Revenue Claim	Variance
2018	287,317	265,842	(21,475)
2019	525,137	271,536	(253,601)
2020 - Estimate	509,254	263,335	(245,919)
			(520,995)
Closing Interest Balances as of Dec 31-19 Adjusted for Dispositions during 2020			(3,378)
Projected Interest from Jan 1, 2020 to December 31, 2020 on Dec 31 -19 balance adjusted for disposition during 2020			(4,896)
Total Claim - Wireline Attachments			**(529,269)**

a) Please provide the calculation for the “Total” and “Revenue Claim” numbers in the years of 2018 to 2019 by the number of poles multiplied by the $/pole.

b) Please compare the number of poles in 2020 to the number of poles in 2018 and 2019 and explain the variance if the variance is greater than 10%.

Response:

a)

2018:							
		Rates			Total Revenue	Revenue Claim	
Attachment Type	# of Poles	New Jan - Aug	New Sep - Dec	Previous Jan - Dec	(Rev. @ New Rates)	(Rev. @ Previous Rate)	Variance
Regular Attachments	11,215	22.35	28.09	22.35	272,113	250,655 -	21,458
Other Attachments					15,204	15,187 -	17
					287,317	**265,842 -**	**21,475**
2019:							
		Rates			Total Revenue	Revenue Claim	
Attachment Type	# of Poles	New Jan - Dec		Previous Jan - Dec	(Rev. @ New Rates)	(Rev. @ Previous Rate)	Variance
Regular Attachments	11,421	43.63	N/A	22.35	498,298	255,259 -	243,039
Other Attachments					26,839	16,277 -	10,562
					525,137	**271,536 -**	**253,601**
2020:							
		Rates			Total Revenue	Revenue Claim	
Attachment Type	# of Poles	New Jan - Dec		Previous Jan - Dec	(Rev. @ New Rates)	(Rev. @ Previous Rate)	Variance
Regular Attachments	11,168	44.50	N/A	22.35	496,976	249,605 -	247,371
Other Attachments					12,278	13,730	1,452
					509,254	**263,335 -**	**245,919**

b) The number of poles in 2020 differs from 2018 and 2019 by -2.22% and -0.42%.

9-STAFF-86

Interrogatory:

Deferral and Variance Accounts

Ref: Exhibit 9, pp. 27-28

Waterloo North Hydro states that:

In its 2016 COS Application WNH was directed to track the net gains and losses on disposition of various Municipal Station (MS) properties inclusive of remediation costs. Upon disposition, the balance of this account was to be distributed with 75% to customers and 25% to WNH. This account is not symmetrical in the favour of customers if WNH was in an overall loss position. The gains and losses of MSs and applicable carrying charges have been provided below in Table 9-11.

Table 9-11 Sub-Account – MS Disposition

MS Disposition	2016	2017	Total (Gain)/Loss
MS3	(700,068)	(243)	(700,311)
MS4	40,626	4,370	44,996
MS6	(23,816)		(23,816)
MS7		43,563	43,563
MS8	(22,154)		(22,154)
MS9		37,623	37,623
MS10			
			(620,099)
75%			(465,074)
Closing Interest Balances as of Dec 31-19 Adjusted for Dispositions during 2020			(25,441)
Projected Interest from Jan 1, 2020 to December 31, 2020 on Dec 31 -19 balance adjusted for disposition during 2020			(8,278)
Total Claim - MS Disposition			**(498,793)**

a) Please provide the calculation (proceeds and costs) for the net gain of $700,068 for the disposition of MS3 in 2016.

Response:

a) Please see below for the calculation of net gain on disposition of MS3.

MS 3 (King St) Gain Reconciliation	
Cost per General Ledger	
Cost	151,335
Accumulated Depreciation	(136,919)
Net Book Value	14,416
Disposal Cost	285,516
Total Cost	**299,932**
Proceeds on disposition	
Payment #1 (net of legal costs)	(945,200)
Payment #2	(54,800)
Partial refund on disposal costs	(243)
Total Proceeds	**(1,000,243)**
Net (Gain)/Loss on disposition	**(700,311)**

9-STAFF-87

Interrogatory:

Deferral and Variance Accounts

Ref 1: Exhibit 9, pp. 29-30 and p. 36

Ref 2: Exhibit 4, p. 107

Waterloo North Hydro provides the following table to support the claim of $(251,138) in the Account 1592 sub-account PILs and tax variances due to the AIIP in 2019:

Table 9-13 CCA Acceleration

PILs and Tax Variance for 2006 and Subsequent Years - Recover PILs	Total	Claim 50%	Variance
2019	(493,491)	(246,746)	(246,746)
Projected Interest from Jan 1, 2020 to December 31, 2020 on Dec 31 -19 balance adjusted for disposition during 2020			(4,392)
Total Claim - PILs			**(251,138)**

The OEB's letter dated July 25, 2019 regarding the Accounting Direction Regarding Bill C-97 and Other Changes in Regulatory or Legislated Tax Rules for Capital Cost Allowance states that:

Under the Accounting Procedures Handbook, electricity distributors and transmitters are to record the impact of any differences that result from a legislative or regulatory change to the tax rates or rules assumed in the OEB Tax Model **that is used to determine the tax amount that underpins rates**. The impact of any differences **that are not reflected in rates** (due to such factors as timing of known changes) are to be recorded in Account 1592 - PILs and Tax Variances. Natural gas utilities and OPG have similar accounts.

For natural gas utilities and electricity distributors and transmitters, the OEB's long-standing practice with respect to the impact of changes in taxes due to regulatory or legislated tax changes during an incentive rate-setting period has been to share the impacts between Utility shareholders and ratepayers on a 50/50 basis[1]. However, **Utilities should not expect that this practice will necessarily apply in respect of CCA rule changes**, and determinations as to the appropriate disposition methodology will be made at the time of each Utility's cost-based application. The OEB therefore

expects that all Utilities will record the full revenue requirement impact of any changes in CCA rules that are not reflected in base rates. [Emphasis Added]

Waterloo North Hydro proposes the 50/50 sharing of the tax saving from the accelerated investment incentive amount between the shareholder and the ratepayers.

Waterloo North Hydro has not included the 2020 balance in the account and states that: The 1592 – PILS – CCA Changes will continue in 2020 prior to the change in treatment from this Application. WNH has not requested to forecast the 2020 balance for this account as it is material and unpredictable at this time.

a) Please confirm that the calculated amount of $493,491 in 2019 should be grossed-up to calculate the PILs impact on a revenue requirement basis.
   i) If confirmed, please apply the gross-up to both 2019 and 2020 balances.
   ii) If not, please explain why.

b) Please confirm the OEB staff's observation that Waterloo North Hydro calculates the revenue requirement impact of the 2019 differences due to the AIIP using the approved capital additions in its last cost of service application. If so, please explain why.

c) Please provide the calculated 2019 balance in Account 1592 using the 2019 actual capital expenditures and compare this figure with the existing balance recorded in Account 1592.

d) Please provide rationale for Waterloo North Hydro's proposal to only return 50% of the impacts of the AIIP to the utility's ratepayers, with giving due consideration to the OEB's letter dated July 25, 2019 regarding the establishment of this sub-account, which stated that utilities should not necessarily expect that a 50/50 sharing will apply to these impacts.

e) Is Waterloo North Hydro aware of any other circumstances in which the OEB approved refunding 50% of the AIIP impacts to ratepayers? If so, please provide references to the applicable evidence.

Response:

a) i) WNH confirms that the amount should be grossed-up. Please refer to the table below for a calculation of the 2019 and 2020 grossed up amounts of $671,416. Per response to part b), the 2019 and 2020 amounts will be equal since both are calculated based on 2016 approved capital additions in the last Cost of Service Application (EB-2015-0108). WNH has updated the DVA Continuity Schedule for the revised amounts.

Schedule 8 CCA - 2016 Test Year

		2016 Approved CCA Schedule									Adjustments due to AIIP			
Class	Class Description	UCC Test Year Opening Balance	Additions	Disposals (Negative)	UCC Before 1/2 Yr Adjustment	1/2 Year Rule (1/2 Additions Less Disposals)	Reduced UCC	Rate %	Test Year CCA	UCC End of Test Year	CCA on Opening UCC	AIIP Additions	Revised CCA	UCC End of Test Year
1	Distribution System - post 1987	$ 57,897,221			$ 57,897,221	$ -	$ 57,897,221	4%	$ 2,315,889	$ 55,581,332	2,315,889	-	2,315,889	55,581,332
1 Enhanced	Non-residential Buildings Reg. 1100(1)(a.1) election	$ 18,942,105	171,309	-20,536	$ 19,092,878	$ 75,387	$ 19,017,492	6%	$ 1,141,050	$ 17,951,829	1,136,526	13,570	1,150,096	17,942,782
8	General Office/Stores Equip	$ 7,568,102	906,630		$ 8,474,731	$ 453,315	$ 8,021,416	20%	$ 1,604,283	$ 6,870,448	1,513,620	271,989	1,785,609	6,689,122
10	Computer Hardware/ Vehicles	$ 2,027,010	173,361	-21,000	$ 2,179,371	$ 76,180	$ 2,103,191	30%	$ 630,957	$ 1,548,414	608,103	68,562	676,666	1,502,706
12	Computer Software	$ 75,282	57,171		$ 132,453	$ 28,586	$ 103,868	100%	$ 103,868	$ 28,586	75,282	57,171	132,453	-
45	Computers & Systems Software acq'd post Mar 22/04	$ 19			$ 19	$ -	$ 19	45%	$ 9	$ 11	9	-	9	11
47	Distribution System - post February 2005	$ 90,664,236	13,622,281		$ 104,286,517	$ 6,811,140	$ 97,475,377	8%	$ 7,798,030	$ 96,488,487	7,253,139	1,634,674	8,887,813	95,398,704
50	Data Network Infrastructure Equipment - post Mar 200	$ 800,900	923,239		$ 1,724,139	$ 461,620	$ 1,262,519	55%	$ 694,386	$ 1,029,753	440,495	761,672	1,202,167	521,972
		$ -			$ -	$ -	$ -	0%	$ -	$ -	-	-	-	-
	TOTAL	$ 177,974,875	$ 15,853,990	-$ 41,536	$ 193,787,330	$ 7,906,227	$ 185,881,102		$ 14,288,471	$ 179,498,859	13,343,063	2,807,638	16,150,701	177,636,629

Difference in CCA due to AIIP	1,862,230
Tax rate	26.50%
Distribution Revenue Effect	493,491
Revenue Effect Grossed Up	671,416

Schedule 8 CCA - 2019 Actual and Revised

		2019 Filed T2 Calculated without AIIP									Adjustments due to AIIP - Agreed to 2019 Filed T2			
Class	Class Description	UCC Opening Balance	Additions	Disposals (Negative)	UCC Before 1/2 Yr Adjustment	1/2 Year Rule (1/2 Additions Less Disposals)	Reduced UCC	Rate %	CCA	UCC End of Year	CCA on Opening UCC	AIIP Additions	Revised CCA	UCC End of Test Year
1	Distribution System - post 1987	$ 51,223,756			$ 51,223,756	$ -	$ 51,223,756	4%	$ 2,048,950	$ 49,174,806	2,048,950	-	2,048,950	49,174,806
1 Enhanced	Non-residential Buildings Reg. 1100(1)(a.1) election	$ 17,300,240	61,217	0	$ 17,361,457	$ 30,609	$ 17,330,849	6%	$ 1,039,851	$ 16,321,606	1,038,014	5,510	1,043,524	16,317,933
8	General Office/Stores Equip	$ 5,025,413	2,223,545	-29,554	$ 7,219,404	$ 1,096,996	$ 6,122,409	20%	$ 1,224,482	$ 5,994,922	1,005,083	658,197	1,663,280	5,556,124
10	Computer Hardware/ Vehicles	$ 1,690,067	718,288	0	$ 2,408,355	$ 359,144	$ 2,049,211	30%	$ 614,763	$ 1,793,592	507,020	323,230	830,250	1,578,105
12	Computer Software	$ 132,810	122,559		$ 255,369	$ 61,280	$ 194,090	100%	$ 194,090	$ 61,280	132,810	122,559	255,369	-
45	Computers & Systems Hardware acq'd post Mar 22/04	$ 3			$ 3	$ -	$ 3	45%	$ 1	$ 2	1	-	1	2
46	Data network infrastructure equip and systems acq'd	$ 19,674	113,439		$ 133,113	$ 56,720	$ 76,394	30%	$ 22,918	$ 110,195	5,902	51,048	56,950	76,163
47	Distribution System - post February 2005	$ 100,779,606	13,111,489	-240,634	$ 113,650,461	$ 6,435,428	$ 107,215,034	8%	$ 8,577,203	$ 105,073,258	8,062,368	1,544,503	9,606,871	104,043,590
50	Data Network Infrastructure Equipment - post Mar 200	$ 1,025,701	226,841		$ 1,252,542	$ 113,421	$ 1,139,122	55%	$ 626,517	$ 626,025	564,136	187,144	751,280	501,262
95	CWIP	$ 3,538,278	160,307		$ 3,698,585	$ 80,154	$ 3,618,432	0%	$ -	$ 3,698,585	-	-	-	3,698,585
	TOTAL	$ 180,735,548	$ 16,737,685	-$ 270,188	$ 197,203,045	$ 8,233,749	$ 188,969,297		$ 14,348,775	$ 182,854,270	13,364,285	2,892,189	16,256,475	180,946,570

Difference in CCA due to AIIP	1,907,701
Tax rate	26.50%
Distribution Revenue Effect	505,541
Revenue Effect Grossed Up	687,810

Difference 2019 Actual vs. 2016 Test Year	
Difference in CCA due to AIIP	45,471
Tax rate	0.00%
Distribution Revenue Effect	12,050
Revenue Effect Grossed Up	16,394

ii) Not applicable.

b) Per the OEB's letter dated July 25, 2019, 1592 – PILs – CCA Changes is intended to "capture impact of any differences **that are not reflected in rates**" with respect to the tax model that is in effect for the years in question. The most recent Cost of Service Application applicable for the years in question (2019 and 2020) would be WNH's 2016 Application (EB-2015-0108). Therefore, WNH interpreted that the 2016 PILs model should be revised to calculate the impact of the AIIP in 2019 and 2020. This interpretation was corroborated by WNH's auditors and peers.

c) Please see the table above in part a) which compares the 2016 Test Year to 2019 Actuals per the filed 2019 T2. The total grossed up revenue effect is $16,394.

d) WNH acknowledges the wording provided in the OEB's letter dated July 25, 2019 and restated it on p. 30 of Exhibit 9. However, it is stated that "determinations as to the appropriate disposition methodology will be made at the time of each Utility's cost-based application." It appears that a decision has not yet been made by the OEB. WNH is not aware of other utilities who have received a disposition methodology through a COS since this guidance was provided and therefore WNH made a proposal to continue the long-standing practice as part of this Application. As noted WNH is requesting that this tax incentive be shared 50/50 with customers and WNH as the Shareholders have been reinvesting 50% of their profits back into the business each year.

e) WNH is not aware of any other circumstances in which this balance has been cleared since the guidance was provided.

9-STAFF-88

Interrogatory:

Deferral and Variance Accounts

Ref 1: DVA Continuity Schedule, Tab 6.1a and Tab 6.2a

OEB staff notes that Waterloo North Hydro did not enter any figures in the input cell D19 for “Non-RPP consumption less WMP consumption” on Tab 6.1a GA Allocation of the DVA continuity schedule. As a result, the transition customers’ portion of total consumption is a negative 1.15%.

OEB staff also notes that Waterloo North Hydro did not enter any figures in the input cell D19 for “Total consumption less WMP consumption” on Tab 6.2a CBR.B_ Allocation of the DVA continuity schedule.

a) Please confirm the above OEB staff observations.

b) If confirmed, please update these two tabs of the DVA continuity schedule by including the consumption numbers in the relevant input cells.

Response:

a) Confirmed. In the Application, WNH did not enter any figures in the input cell D19 for “Total consumption less WMP consumption” on Tab 6.2a CBR.B_Allocation of the DVA continuity schedule.

b) The DVA Continuity Schedule has been updated to include “Total Consumption less WMP consumption” in the input cell D19 on Tab 6.2a CBR.B._Allocation of the DVA continuity schedule. Please refer to WNH’s response to 1-Staff-1.

9-STAFF-89

Interrogatory:

Global Adjustment

Ref 1: GA Analysis Workform

Ref 2: EB-2019-0071 - GA Analysis Workform

OEB staff notes that Waterloo North Hydro includes a reconciling item #4 of $246,886 for the "Differences in Actual system losses and billed TLFs" on the GA Analysis Workform.

OEB staff also notes that Waterloo North Hydro did not have that reconciling item for the differences in the actual losses and billed TLFs in the GA Analysis Workform for 2017 and 2018 requested for disposition in its 2020 IRM application.

a) Please explain why the differences in losses has resulted in a material reconciling item in this application while did not result in the reconciling item in 2017 and 2018 GA Analysis Workform of 2020 IRM application.

b) Please provide the supporting calculation for the $246,886 adjustment.

Response:

a) WNH submitted unaccounted for energy due to volume differences for 2017 and 2018 as part of the 1588 correction true-up submitted in 2019. This true-up was outside of the IRM application process.

b) Please see the table below which recalculates unaccounted for energy cost due to volume differences between consumption billed and paid.

Class B - Non-RPP		January	February	March	April	May	June	July	August	September	October	November	December	Total
GA Rate Billed ($/kWh)	A	0.0674	0.0966	0.0811	0.0813	0.1286	0.1244	0.1353	0.0721	0.1293	0.1788	0.1073	0.0857	
GA Rate Paid ($/kWh)	B	0.0809	0.0881	0.0804	0.1233	0.1260	0.1373	0.0965	0.1261	0.1226	0.1368	0.0995	0.0932	
Price Difference ($/kWh)		0.0135	-0.0084	-0.0006	0.0420	-0.0026	0.0128	-0.0388	0.0540	-0.0067	-0.0420	-0.0077	0.0075	
Volume (kWh) - billed	C	47,492,250	39,664,656	43,207,136	39,299,213	39,544,130	40,598,273	46,201,148	43,874,946	40,495,913	40,004,177	40,403,445	38,756,772	499,542,059
Volume (kWh) - paid	D	47,370,520	39,538,708	43,005,475	39,203,229	39,431,407	40,412,762	46,145,383	43,399,197	40,227,958	39,716,310	40,153,220	38,640,356	497,244,526
Volume Difference (kWh)		- 121,729	- 125,948	- 201,661	- 95,984	- 112,724	- 185,511	- 55,765	- 475,749	- 267,955	- 287,867	- 250,225	- 116,416	(2,297,533)
Price Variance ($)	E	639,976	- 334,102	- 27,524	1,648,104	- 100,944	518,900	- 1,791,364	2,341,821	- 269,930	- 1,667,291	- 310,786	290,575	937,436
Volume Variance ($)	F	- 8,206	- 12,163	- 16,345	- 7,803	- 14,496	- 23,085	- 7,543	- 34,306	- 34,657	- 51,465	- 26,842	- 9,976	- 246,886
Total Variance ($)		631,770	- 346,265	- 43,868	1,640,301	- 115,441	495,815	- 1,798,907	2,307,514	- 304,587	- 1,718,756	- 337,628	280,600	690,549

Source/Calculation:

- A *Per GA Analysis WorkForm*
- B *Per GA Analysis WorkForm*
- C *Per GA Analysis WorkForm*
- D *Per IESO invoice - non-RPP portion*
- E *Price difference * volume paid*
- F *Volume difference * price billed*

9-STAFF-90

Interrogatory:

Deferral and Variance Accounts
Ref 1: Exhibit 9, pages 13 and 40
Ref 2: The Accounting Procedures Handbook (APH), Article 490
Ref 3: The APH Update – Accounting Guidance on the Commodity Pass-through Accounts 1588 and 1589
Ref 4: DVA continuity schedule
Ref 5: 2021 Filing Requirements, Chapter 3

Waterloo North Hydro states that:

2425 Other Deferred Credits

Included in this account is the new proposed rate rider for Power Liability Variance discussed later in this Exhibit. **WNH acknowledges that this is the not the correct USoA** however WNH wanted to ensure that the amount requested to be refunded to customers was included in the DVA Continuity Schedule. **This account will only be applicable to RPP customers** as discussed in Attachment 9-3 Power Liability Variance Explanation. [Emphasis Added]

OEB staff notes from the updated Exhibit 9 evidence that Waterloo North has changed the account to a sub-account under Account 1508 in the draft accounting order.

The APH Article 490 defines the Account 1588 as:

Account 1588, RSVA Power

This account shall be used monthly to record the net difference between:

i) the energy amount charged to customers, including accruals,

AND

ii) the energy charge to a distributor using the settlement invoice received from the IESO, host distributor or embedded generator, including accruals.

The Accounting Guidance on the Commodity Pass-through Accounts 1588 and 1589 dated February 21, 2019 provides the journal entry examples of the RPP settlement true-ups, which are recorded in Account 4705 and ultimately reflected in Account 1588.

On page 40 of Exhibit 9, Waterloo North Hydro states that the balance in the Power liability variance account is to be disposed to all RPP customers:

WNH is requesting that this balance be disposed of as a separate rate rider for all RPP customers as indicated in the DVA continuity schedule.

OEB staff notes from the DVA continuity schedule that the Power liability account balance is grouped with other Group 2 DVAs in the Group 2 rate riders' calculation.

Chapter 3 of 2021 Filing Requirements, page 10 states that:

On October 31, 2019, the OEB issued a letter[13] to all electricity distributors discussing its approach to address accounting or other errors, in respect of Group 1 DVA, that have previously been disposed of by the OEB on a final basis.

Where an accounting or other error is discovered after the balance in one of the Group 1 accounts has been cleared by a final order of the OEB, a distributor shall refer to this letter for further guidance.

OEB staff notes that Waterloo North Hydro confirmed the implementation of the new accounting guidance in its 2020 IRM application and the OEB had approved the

disposition of the Group 1 DVAs including Account 1588 as at final basis in the 2020 IRM application.

a) Please confirm OEB staff's understanding that the Power Liability Variance Account is to record the adjustments for the errors noted in the past RPP settlements with the IESO. If not, please explain.

b) If a) is confirmed, please confirm that these adjustments should be recorded in Account 1588 and be disposed to all Class B ratepayers.

c) If a) is confirmed, please fill out the "Principal Adjustments" tab in the GA Analysis Workform for the prior period adjustments for Account 1588. Please reflect the adjustments in Account 1588 and refile the DVA continuity schedule accordingly.

d) If a) is confirmed, please discuss Waterloo North's consideration of the OEB's October 31 letter.

Response:

a) Confirmed.

b) Confirmed.

c) WNH has completed the "Principal Adjustments" tab in the GA Analysis Workform and has included a revised DVA continuity schedule as part of the response to 1-Staff-1.

d) WNH has recorded the correcting entries in the Power Liability Variance Account as of December 31, 2019 and has brought it to the OEB's attention as part of this Application.

9-STAFF-91

Interrogatory:

Deferral and Variance Accounts
Ref 1: Exhibit 9, Attachment 9-3 Power Liability Variance Account;
Ref 2: 2020 IRM Application, Table 2.7a

OEB staff notes from the Table 2.7a of the 2020 IRM application that Waterloo North Hydro had included the true-up adjustments related to the RPP settlements in Account 1588 as below:

2017 True-Up (submitted in 2017)	2017 True-up (to be submitted)	2018 True-up (to be submitted)
$398,902	$794,379	$(298,382)

a) Please confirm that Waterloo North submitted these true-up adjustments to the IESO in 2019 and recorded these adjustments (which are an inherent part of the Charge type 1142) in Account 1588 in 2019.

Response:

a) Confirmed.

9-STAFF-92

Interrogatory:

Power Liability Variance
Ref 1: Attachment 9-3 Power Liability Variance Account

With respect to the RPP settlement errors, Waterloo North Hydro states that:

The result is that WNH overstated the cost of RPP GA during the RPP settlement calculations for this period, overstating the amounts claimed from the IESO. The total RPP settlement true-up required is $2,788,012 owing to the IESO and is summarized in Table 2 below. WNH proposes that these amounts be paid to the IESO upon OEB approval. The 2017 and 2018 differences have already been remitted as part of the true-ups submitted in 2019 during the transition to the new settlement process.

Table 2 - RPP Recalculation

Year	RPP Submitted ($)	RPP Recalc ($)	Difference $
2015	(3,392,260)	(929,060)	2,463,200
2016	(1,399,436)	(1,074,623)	324,812
	(4,791,695)	(2,003,683)	**2,788,012**

Waterloo North also provides Table 3 as below:

Table 3 - RPP Settlement Error Effect on Account 4705

	RPP settlement included in 4705			GA Reconciliation Accrual to COP included in 4705					
Year	Submitted	Revised	Difference	Accrued	Revised	Accr. Diff	Rev. in next period	Difference	Total Effect on 4705
2015	(3,392,260)	(929,060)	2,463,200	2,354,388	(108,812)	(2,463,200)	-	(2,463,200)	-
2016	(1,399,436)	(1,074,623)	324,812	3,372,192	584,180	(2,788,012)	2,463,200	(324,812)	-
2017	(12,442,456)	(12,480,698)	(38,241)	4,041,131	1,291,360	(2,749,771)	2,788,012	38,241	-
2018	(21,024,235)	(21,152,377)	(128,143)	3,900,222	1,278,594	(2,621,628)	2,749,771	128,143	-
2019							2,621,628	2,621,628	2,621,628
	(38,258,386)	(35,636,758)	2,621,628	13,667,933	3,045,322	(10,622,610)	10,622,610	-	2,621,628

Waterloo North Hydro states that:

As Table 3 demonstrates, the revised GA Reconciliation Accrual eliminates the effect of the RPP settlement error on account 4705 for 2015-2018 with the exception of the reversal of the final accrual. This last accrual at December 31, 2018 contains the cumulative effect of the RPP settlement differences from 2015-2018. Typically, this

December 31, 2018 accrual would have been reversed on January 1, 2019 and been included as part of Cost of Power in 2019. However, since the new settlement process was adopted as of January 1, 2019 this amount could not be reversed in 2019 to account 4705 and has been kept in Accounts Payable (2205) for disposal. The total amount of $2,621,628 represents an amount owing to WNH RPP customers. WNH requests that the full amount be disposed of along with the 2019 1588 balance.

a) Please confirm the following:
   i) Waterloo North is requesting to pay the $2,788,012 to the IESO with respect to the 2015 and 2016 over-claim of the GA related to the RPP customers and refund the $2,621,628 to the RPP customers
   ii) The $2,621,628 consists of the 2015 and 2016 amount of $2,788,012, 2017 additional true-up amount of $38,241 and 2018 additional true-up amount of $128,143
   iii) The GA reconciliation process that was performed by Waterloo North does not conform to the process under the new accounting guidance issued in February 2019 which requires the monthly accrual of the CT1142 and the RPP portion of the GA in Account 1588

b) If any of the items in a) is not confirmed, please explain why and provide the details.

c) If all items in a) are confirmed and given that the RPP GA accrual and CT 1142 should be both recorded in Account 1588, please explain how the errors in the RPP settlements related to the RPP GA would result in a repayment to the IESO and a refund to the customers at the same time.

Response:

a) i) Confirmed.
   ii) Confirmed.

iii) Confirmed. The new accounting guidelines issued in February 2019 were implemented in August 2019 and retroactively applied to January 1, 2019. The GA reconciliation process performed by WNH ceased at that time.

b) Not applicable as all items have been confirmed.

c) Please refer to explanatory Attachment 10 a) Support – Power Liability Explanation which describes in further detail the RPP submissions and GA reconciliation accrual process which results in both a repayment to the IESO and a refund to customers. In particular, please refer to the Table 3 explanation which explains the cumulative effect of the errors in the GA Reconciliation Accrual which result in the amount owing to customers.

9-STAFF-93

Interrogatory:

Power Liability Variance

Ref 1: Attachment 9-3 Power Liability Variance Account

In Attachment 9-3, Waterloo North Hydro has provided the appendices: App 1.a - IESO Invoice Summary, App 1.b – Class B Non-RPP GA, App 1.c- Class B RPP Settlement – Actual Submissions and App. 1.d – Class B RPP Settlement Recal to support the $2,621,628 Power variance to be disposed to the customers.

a) Please provide the excel versions of these appendices and show how the $2,621,628 is calculated.

b) Please use the month of December 2015 as an example to illustrate the RPP settlement error, resulted adjustment for the month and the impact on Account 1588.

Response:

a) Please refer to Attachment 10 a) Support – Power Liability Explanation along with live Excel model Attachment 10 b) Support – Power Liability Explanation.

b) For this illustration, please refer to Attachment 10 a) Support – Power Liability Explanation.

CONSUMERS COUNCIL OF CANADA (CCC) INTERROGATORIES

EXHIBIT 1 – ADMINISTRATION

1-CCC-1

Interrogatory:

Please provide all materials provided to Waterloo North Hydro Inc's (WNH's) Board of Directors and the holding company's Board of Directors related to this Application.

Response:

Please see Attachment 11 - 2020 & 2021 Operating & Capital Budget. This was provided to the Board of Directors.

1-CCC-2

Interrogatory:

Please provide a list of any impacts on the 2021 revenue requirement resulting from the COVID-19 pandemic. Please provide a list of all of the impacts the COVID-19 pandemic has had on WNH's costs and revenues in 2020. Please indicate if WNH has made any entries to the COVID-19 Account established by the OEB on March 25, 2020 (EB-2020-0133) and if so, please provide the amounts in the Account and the sub-accounts.

Response:

COVID-19 Impacts on 2021 Revenue Requirement:

- For capital expenditure changes (impacting average net book value of fixed assets and depreciation) WNH has revised the 2020 and 2021 CAPEX for COVID-19 impacts in response to 2-Staff-8.

- WNH does not anticipate any changes to the proposed 2021 OM&A budget as a result of COVID-19.
- WNH also notes that due to the capital expenditure changes as noted above, WNH has revised the PILs model per 1-Staff-1 which will in turn impact Revenue Requirement.
- All of the above changes have been included in the revised Revenue Requirement Workform filed in response to 1-Staff-1. Please refer to tab 14. Tracking Sheet.

COVID-19 Impacts on 2020 costs:

- Capital expenditures have been described above.
- Operating expenditure impacts due to COVID-19 are described as part of WNH's response to 4-Staff-40. Please also refer to WNH's response to 4-CCC-31 for 2020 budget compared to projections.

COVID-19 Impacts on 2020 revenues:

- As discussed in response to 3-Staff-32, WNH experienced significant decreases to energy consumption and demand during March, April and May 2020. WNH has chosen not to record any revenue losses due to COVID-19 in the 1509 sub-account since specific accounting guidance has yet to be provided.
- As described in response to 3-Staff-33, WNH plans to utilize the generic 1509 sub-account for losses related to the COVID-19 pandemic for 2020 and 2021.

Entries made to the COVID-19 USoA 1509 Account:

- Please refer to Attachment 12 WNH – Amended-LDC-Liquidity-Reporting-Worksheet_20200828 for the most recent filing of 1509 account and sub-account balances.

1-CCC-3

Interrogatory:

Ex. 1/p. 31

The evidence states that allocated and pending Load Displacement Generation projects are increasing between 2020 and 2025. Please provide a complete list of all LDG projects proposed for the period 2020-2025. What is the projected impact of these projects on WNH's load?

Response:

Please refer to WNH's response to 7-Staff-65 c) for a modified load forecast based on load displacement customers. The Load Displacement tab displays load displacement impacts up to 2021. WNH has not included results for 2022-2025 as these are not yet known and outside the scope of this Application. WNH has not named the projects due to confidentiality concerns. More details are provided on specific projects in WNH's response to 2-CCC-27.

1-CCC-4

Interrogatory:

Ex. 1/p. 33

Please explain what the GridSmartCity Cooperative is and indicate how the joint purchasing arrangements within this group works.

Response:

GridSmart City is a cooperative comprising of fourteen (14) LDCs primarily operating in South-Western Ontario. The GridSmartCity Cooperative bridges the need for innovation

and infrastructure renewal, with the benefits of collaboration and cost efficiency. Operating within a formalized structure, and as a legal cooperative entity, LDC members share resources, insights and systems in several key areas that help them run smarter companies, while advancing innovation, reliability and efficiency across Ontario's electricity grid.

The following LDCs are members of GridSmart City:

- Brantford Power Inc.
- Burlington Hydro Inc.
- Energy+ Inc.
- Enwin Utilities Ltd.
- Erth Power Corp.
- Essex Powerlines Corp.
- Halton Hills Hydro Inc.
- Kingston Hydro Corp.
- Kitchener-Wilmot Hydro Inc.
- Milton Hydro Inc.
- Niagara Peninsula Energy Inc.
- Oakville Hydro Inc.
- Waterloo North Hydro Inc.
- Welland Hydro Electric System Inc.

The GridSmart City group has issued Request for Proposals (RFPs) for materials and services that each utility would source as part of their everyday operations. Such materials and services have included: Poles, Pole Line Hardware, Conductors, and Transformers. The member utility's requirements would be aggregated and tendered to interested vendors who would quote a price based on economies of scale. Each participating utility would be billed individually for its requirements thereby realizing a saving over and beyond single purchases.

1-CCC-5
Interrogatory:

Ex. 1/p. 34

What would be the impact on the 2021 revenue requirement if the number of FTEs remained the same as the 2020 levels? What is the current level of FTEs (September 2020)?

Response:

The impact on the 2021 Revenue Requirement if the numbers of FTEs remained the same as the 2020, with the changes during IRs as per 1-Staff-1, the impact on the 2021 Revenue Requirement is that the Revenue Deficiency reduces from $2,401,037 to $2,116,875 (decrease of $284,162).

Please refer to WNH's response to 1-CCC-6 for the current FTE level.

1-CCC-6
Interrogatory:

Ex. 1/p. 34

The evidence indicates that WNH has worked to reduce staffing levels where there are redundancies such as in Administration and Finance. Please provide a complete list of all employee positions.

Response:

The table below provides a list of all the employee positions as of August 31, 2020.

Positions - as of Aug 31, 2020	# of Positions
Operations	
VP Operations	1
Executive Assistant Operations	1
Line Superintendent	1
Line Supervisor	5
Powerline Maintainer	19
Apprentice Powerline Maintainer	5
Operations Clerk	1
System Operator	5
Apprentice System Operator	2
Operating Supervisor	1
Facilities Supervisor	1
Facilities Maintenance Person	1
Stores Person	1
Stockkeeper	1
Purchasing & Stores Supervisor	1
Vehicle Mechanic	2
Engineering/Stations	
VP Engineering & Stations	1
Engineering Technologist	8
Engineering & Operations Project Supervisor	1
Engineering Supervisor	2
GIS Technician	2
Distribution Designer	1
Stations Designer	1
Technical Supervisor	1
Engineering Clerk	1
Executive Assistant Engineering & Stations	1
Protection & Control Technologist	5
Protection & Control Supervisor	1
Meter Technician	4
Metering Supervisor	1

Continued on following page.

Positions - as of Aug 31, 2020	# of Positions
Finance/Administration	
President & CEO	1
VP Finance & CFO	1
Executive Assistant - CFO	1
Human Resources Generalist	1
HSE Coordinator	1
Manager HSE & Sustainability	1
Accounting Clerk	1
Senior Accounting Clerk	1
Payroll & Confidential Administrator	1
Manager of Finance/Regulatory	1
Senior Financial Analyst	1
Regulatory/Financial Analyst	1
Corp Communications Specialist	1
Billing & Settlement Coordinator	3
Billing & Settlement Supervisor	1
CIS Support Analyst	1
Settlement Analyst	1
Customer Account Rep I	5
Customer Account Rep II	3
Manager of Customer Service	1
Customer Service Rep Collections	1
Customer Service Supervisor	1
VP Information Technology Services	1
Programmer Analyst Intermediate	2
IT Infrastructure Analyst	1
System Administrator	1
Manager of Conservation Demand Management	1
Efficiency Advisor	1
Contract, Co-op and Summer Students	
Executive Assistant to Pres	1
IT Operations Support	1
Customer Account Rep 1*	2
Engineering Technologist II*	1
IT Co-op Student*	1
Co-op Student - Engineering*	2
Co-op Student - Lines*	2
Student - General Maintenance*	1
TOTAL	**126**
* Position hired for part year	

1-CCC-7

Interrogatory:

Ex. 1/p. 36

Please confirm that WNH's actual ROE for the period 2016-2019 averaged 8.46%. What is the expected ROE for 2020?

Response:

Confirmed. WNH's Regulated Rate of Return on Deemed Equity (ROE) for the period 2016-2019 averaged 8.46%.

Indicator	2016	2017	2018	2019	2016-2019 Average
Regulated Rate of Return on Deemed Equity (ROE)	10.13%	8.37%	8.20%	7.13%	8.46%

The expected ROE based on the 2020 Bridge Year Budget is 6.92% which is -2.27% lower than the Deemed ROE of 9.19% as approved in WNH's 2016 COS.

1-CCC-8

Interrogatory:

Ex. 1/p. 37

Please explain the scope of work that is undertaken by Sustainable Waterloo Region. How is it funded? Please describe how WNH is providing energy efficiency and conservation for its customers.

Response:

Sustainable Waterloo Region (SWR) was established in 2008 as a not-for-profit entity with the objective of helping organizations in the Waterloo Region achieve carbon reductions through education and collaboration.

SWR achieves its mandate through a number of programs such as:

- Regional Sustainability Initiative – this program facilitates voluntary target-setting in greenhouse gas, waste, and water reduction by organizations committed to sustainability across Waterloo region.
- TravelWise provides sustainable commuting solutions to employees in Waterloo region with the ultimate goal of reducing the number of single-occupancy vehicles traveling on its roads. In addition to offering discounted public transit passes, TravelWise provides an online carpool matching tool.
- ChargeWR collaborates with organizations in Waterloo region to plan and implement activities that increase the number of electric vehicles (EVs) and charging stations in the region.

SWR is funded by its member organizations and various grants for specific projects. WNH is a founding member of SWR.

As mandated by the OEB, WNH like other LDCs in the province was given a conservation target and funding as part of the Conservation First Framework (CFF) to ensure all customers in Ontario have access to all of the CFF province-wide programs to help save on energy costs and make better energy efficient choices in their homes and businesses. LDCs were required to achieve energy savings for the 2015 to 2020 period. WNH was given a target of 82.38 GWh of which 98.0% was achieved by 2019. Unfortunately, the program was discontinued by the province in 2019, and WNH had to scale down its CDM activities. Some CDM staff were redeployed to other areas of the business and two staff members were retained to continue to help and assist customers with their energy

efficiency needs. With the limited resources available WNH is providing energy efficiency assistance in the following ways:

- Energy Literacy - Assisting customers in understand their bill, their rates, how their home or business uses energy, how they can manage their energy usage
- Energy Coaching – Building internal teams, energy champions, monitoring energy usage, energy hunts, etc.
- Facility and equipment assessments
- Identifying energy efficiency and management projects,
- Metering and monitoring of equipment to understand usage, identify opportunities, provide ongoing monitoring of energy efficiency and energy management projects and programs
- Assistance with building the business case for energy efficiency and management projects,
- Application support for incentives, grants and rebates
- Project management
- Pre and post project evaluation
- Power factor analysis
- Assisting with navigating emerging energy technologies including, but not limited to distributed energy resources and electric vehicle charging infrastructure

1-CCC-9

Interrogatory:

Ex. 1/p. 48

Please provide a complete list of all productivity initiatives being undertaken in 2021. Please include the associated annual savings embedded in the 2021 revenue requirement.

Response:

Please see the DSP p. 236-239 for productivity and efficiency initiatives that WNH is investing in. In most cases the cost savings are not readily calculable. Customer demands and increases in regulations have put a strain on employee resources. With these efficiency initiatives in place, it allows WNH the ability to avoid large increases in staffing requirements (FTEs).

1-CCC-10
Interrogatory:

Ex. 1/pp. 67, 74

The evidence states that developing WNH's budget is a key process as it identifies past successes as well as future initiatives and projections for capital and operating costs. Please provide all directives and documents provided to staff regarding the preparation of the budgets embedded in the Application.

Response:

Attachment 13 – Cost of Service Kick Off and Consensus Meeting, provides the directives and documents provided to staff regarding the preparation of the Cost of Service (COS) and the 2020 and 2021 Budget. Other considerations that were provided to staff regarding the preparation of the budgets were:

- To identify key initiatives/action items from the Business Planning process and costs were incorporated into the department budgets.

- Development of the Customer Engagement Surveys, including estimated expenditures for OM&A and capital expenditures to gauge feedback from customers with respect to the level of expenditures proposed, as well as feedback on specific projects and initiatives being considered.
- Consolidation of the departmental budgets to form the overall 2019 Projections, 2020 and 2021 Budget, and preparation of various levels of analysis in preparation for the COS.
- Incorporating budget revisions to reduce OM&A and Capital expenditure levels based upon review and discussion at the Leadership Team level based on agreed upon priorities.

1-CCC-11

Interrogatory:

Ex. 1/p. 81

WNH is proposing a Standby Charge for the GS>50 kW and large User Classes for load displacement generation or storage. The evidence states that absent a standby rate, other WNH customers will be required to cross-subsidize the costs associated with providing back-up services to customers with load displacement generation. What is the estimated annual impact on WNH's other customers?

Response:

WNH has provided a forecast of lost revenue due to load displacement as part of response to 7-ED-18e). This total amount in 2021 would be approximately $96,770 and would be distributed across all customer classes.

1-CCC-12

Interrogatory:

Ex. 1/p. 87

The evidence states that WNH has proposed in its Application to increase e-billing to 45% of its customers by the end of 2021 and that it has recognized the resulting savings. Please identify the savings and indicate how they have been reflected in the 2021 budgets. Please include all assumptions

Response:

Printing and mailing bills mainly affect three areas of WNH's budget: paper and envelopes, postage, and the outsourcing of bill print. WNH has a total decrease for these accounts in the 2021 budget of $40,900 (7.2%) compared to the 2019 budget. The decrease is due to a projected increase of e-billing customers to 45% by the end of 2021. WNH was at approximately 35% of customers on e-billing at the end of 2019. The increase in e-billing was staggered in throughout 2020 and 2021 to come to a 2021 year ending number of 45%. There is an offset to the cost decreases due to e-billing with annual increases to postage, paper products, customer base, and CPI increases to the outsource of bill print. There are always assumptions included in budgeting such as projected inflationary increases, customer growth and in this case the ability to attract additional customers to e-billing.

1-CCC-13
Interrogatory:

Ex. 1/p. 92

The evidence states that WNH has determine that to best suit customer needs and preferences, it will continue to offer services to help customers with energy planning and demand management through rate base. Please explain what programs and WNH is

currently providing to its customers and what programs it will provide in 2021. Please set out all CDM costs included in the revenue requirement and the allocation of those costs to the rate classes.

Response:

In 2020, WNH is currently providing the following programs:

- Centrally delivered programs through the IESO's Wind-Down Budget including the following: Retrofit, High Performance New Construction (business focus), New Construction Program (residential focus) and the Process and Systems Upgrade Program.
- Locally funded programs (2020 Completion) – Program delivery including administration, marketing, engagement, delivery and reporting of three local programs: Swimming Pool Efficiency program (residential focus), Refrigeration Efficiency Program (GS> 250kW) and Strategic Energy Management (medium to large commercial focus).
- Industrial Conservation Initiative – Outreach, engagement, understanding, etc.
- Energy Management – Helping customers understand their bill, how they use energy, how they can manage their energy usage, identifying energy efficiency and manage projects, building the business case, applying for program incentives, managing the project, completing the post project evaluation and any incentive applications, on going monitoring.
- Energy and Water Benchmark Reporting – Outreach, assistance in obtaining data, understanding the data

WNH has a small amount of approved wind-down costs that will be funded through the IESO in 2021 totalling $67,277 for the completion of projects from the Conservation First Framework (CFF). There are no CDM costs included in the Revenue Requirement for 2021 as this department will cease to exist after the wind-down of CFF. However, as noted above WNH plans to continue to offer services to help customer with energy

planning and demand management as part of the new Key Accounts Department. Please refer to 4-EP-19b) for the programs that will be provided in 2021. It is important to note that 77% of customers were happy with the conservation / energy efficiency information reviewed and WNH believes this is a direct result of WNH's continued activity promoting energy efficiency. If the program no longer existed, WNH believes that this customer satisfaction results would drop. From WNH's 9 years of experience with all types and sizes of customers that a vast majority of customers require outside assistance, that is technology and vendor agnostic, to identify energy management opportunities, build business cases, apply for incentives, implement projects and manage energy use on an ongoing basis. The total budget for the Key Accounts Department included in 2021's Revenue Requirement is $254,568. See the table below for the rate impacts per rate class per month.

Customer Class	Rate Impact / Month	
Residential	$	0.22
GS <50	$	0.55
GS >50-Regular	$	7.57
Large Use >5MW	$	470.92
Street Light	$	0.01
Unmetered Scattered Load	$	0.12
Embedded Distributor	$	1.25

1-CCC-14

Interrogatory:

Ex. 1/p. 100

Please provide the terms of reference for the Brickworks Communications work. What was the cost of the work and how is it to be recovered? Please describe the nature of WNH's involvement in the work and the drafting of the final report. Was this work subject to an RFP process? If not, why not? If not, on what basis was the contractor selected?

Response:

WNH has included both the Phase 1 and Phase 2 WNH Customer Engagement Project Estimate from Brickworks Communications in Attachments 14 a) and b). The total cost of Customer Engagement paid to Brickworks was $18,037 which included both phases. The initial engagement (Phase 1) was completed in early 2019, before the Business Plan and Budget were complete to determine high level customer needs and preferences. Phase 2 included the detailed customer surveys and >50kW customer engagement after the business plan, budget and rate impacts were developed. This cost is included in WNH's One-Time Cost for the Cost of Service (COS) Application (refer to Exhibit 4 section 2.4.3.4). WNH did not complete a formal RFP process however WNH investigated other research firms for Customer Engagement. In 2016, WNH used Innovative Research at a cost of $69,482. WNH was motivated to look for a lower cost option for this COS Application. WNH also contacted Decision Partners and received a quote that was significantly higher than Brickworks Communications with a substantially longer engagement period. WNH decided that it was most cost effective for customers to proceed with Brickworks Communications.

1-CCC-15
Interrogatory:

Ex. 1/pp. 100-106

With respect to the Brickworks Communications work, were customers made aware of the fact that WNH was planning a 7% distribution rate increase for residential customers in 2021? If not, why not? Were customers made aware of the fact that embedded in rates is an allowed return on equity of approximately 9%? If not, why not?

Response:

WNH included the monthly increase of $1.96 with a total bill increase of 1.5% in the residential survey because these are the key points that customers can easily understand. WNH did not include the distribution rate percentage increase. In the residential survey WNH also stated “WNH’s portion of the average residential bill (700 kWh) is 29% of the total bill. These portions are used to maintain and rebuild the system and include a regulated rate of return that is used to reinvest in the system.” WNH did not include the rate of return percentage in its consultations because WNH does believe it could obtain meaningful input on established OEB policies, including cost of capital.

1-CCC-16
Interrogatory:

Ex. 1/p. 106

WNH cut $242,393 from its OM&A budget following its customer engagement activities. Please provide a detailed breakdown of that amount and explain how it was derived.

Response:

As per Exhibit 1 p. 106, the majority of these decreases were in delaying or staggering start dates of new employees due to retirements, removal of one customer service position and adjustments to contracted services that can be brought in-house.

The table below provides a detailed breakdown of the $242,393 cost reduction from its OM&A:

2021 Budget Review Changes	
Reduction in Labour	$ 81,113
Data Storage - Outsouring to In-House	22,132
Delay in Labour Start Dates and Rate Change	50,601
Hire Apprentice PLM in replacement of PLM	50,467
Reduction in Administrative Costs	38,080
TOTAL OM&A Reductions	**242,393**

WNH followed the process of reducing the budget by discussing with the Manager of Finance and Regulatory Affairs and the Executive Team, a review of the overall budgeted expenses, priorities, and customer engagement feedback that were available to reduce operating expenses. The Executive Team then did a detailed review of their budget and found possible reductions that were made to the budget.

1-CCC-17

Interrogatory:

Ex. 1/p. 110

Please provide the 2019 Scorecard.

Response:

Please see draft 2019 Scorecard – Attachment 15 a) - English and b) - French.

1-CCC-18

Interrogatory:

Ex. 1/p. 117

Please provide the 2019 total cost per customer. Please explain why there is a significant increase in total cost per customer from 2017 to 2018. What is the projected total cost per customer for 2020 and 2021?

Response:

The 2019 Total Cost per Customer is $29,241 and the projected Total Cost per Customer for 2020 and 2021 is $30,004 and 30,778, respectively. The increase in Total Cost per Customer from 2017 to 2018 increased due to various reasons such as:

- WNH added a Contract FTE in the Control Room in order to better manage the 24/7 required staffing in 2018.
- There was an increase in maintenance costs and overtime labour in 2018 due to the major storms on April 14 (Ice and Wind Storm) and May 4 (Wind Storm).
- There were more Administrative Credits in 2017 compared to 2018.
- There was an additional Billing Coordinator added in 2018.
- In terms of the Capital Price in the Benchmarking Model, the price in 2017 was $17.0356 whereas the price significantly increased in 2018 to $17.8828 which increased the total cost per customer significantly from 2017 to 2018. This is a formula generated price based on the Benchmarking OEB Model and WNH does not have any direct control of this cost.

1-CCC-19
Interrogatory:

Ex. 1/p. 117

Please provide the 2019 total cost per km of line for 2019. Please explain why there is a significant increase in 2018 relative to 2017. What is the projected total cost per km of line for 2020 and 2021?

Response:

The 2019 Total Cost per Km of Line is $833 and the projected Total Cost per Km of Line for 2020 and 2021 is $853 and $873, respectively. Please see 1-CCC-18 to explain the increase in 2018 relative to 2017.

1-CCC-20
Interrogatory:

Ex. 1/p. 121

Please provide WNH's internal scorecard for 2021. Please provide the targets and results for the years 2014-2019.

Response:

Please see Attachment 16 – 2014-2019 & 2021 WNH Internal Scorecard, for WNH's internal scorecard targets for 2021 and historical results for 2014-2019. WNH creates several targets based on prior year actual results and therefore these targets are not available at this time. For targets that differ from the OEB scorecard, WNH has indicated the source of the target and/or calculation on the scorecard itself. Some calculations differ due to financial accounting balances versus regulatory accounting balances. These are noted on the 2021 scorecard.

1-CCC-21
Interrogatory:

Ex. 1/p. 125

Does WNH have any current plans to acquire or amalgamate with another distributor in the near future?

Response:

WNH is always assessing options for acquisitions and amalgamations. Any such transaction would require formal approval by the municipal shareholders of WNH.

1-CCC-22
Interrogatory:

Ex. 1/Attachment 1-10

When was the 2020-2025 Business Plan completed? When was it approved by the Board of Directors?

Response:

The 2020-2025 Business Plan was completed in June 2019 and was used by the departments as a guiding document to prepare their capital and operating budgets over the summer of 2019. The Business Plan was then taken to the October 24, 2019 Board meeting for final approval.

1-CCC-23
Interrogatory:

Ex. 1/Attachment 1-10 – Business Plan

As set out in the Business Plan WNH has listed a number of things a part of its "Vision":

i. Successfully offering and charging for new services: providing a range of behind-the-meter services, generation and smart home services, supply energy to our customers regardless of source. Please indicate whether these are utility services or services undertaken through an affiliate. Does the 2021 budget include and costs or revenues associated with these services?

ii. Sustaining and growing the dividend? Please provide a table setting out all dividend payments for the period 2014-2019. How does WNH intend to "sustain and grow the dividend" going forward?

Response:

i. These services would be offered through the LDC where allowed by current or future regulation. The 2021 budget does not include any costs or revenues for these services.

ii. Please see Table below:

Year	Dividend Amount
2014	$ 3,639,680
2015	$ 3,567,000
2016	$ 3,515,000
2017	$ 4,175,000
2018	$ 4,175,000
2019	$ 3,776,000

WNH intends to sustain and grow the dividends going forward by continuing to reinvest in the utility and offer new or additional services within the current regulatory mandate to customers.

1-CCC-24

Interrogatory:

Ex. 1/Attachment 1-10 – Business Plan

In the Business Plan WNH has identified the following as a priority for 2020 and 2021 – "research and develop new product offerings and services". Please identify any costs and revenues associated with this priority item included in the 2021 revenue requirement.

Response:

There are no costs or revenues associated with these new services in the 2021 Revenue Requirement.

EXHIBIT 2 – RATE BASE

2-CCC-25

Interrogatory:

Ex. 2, Attachment 2-2

Please indicate what relief WNH is seeing from the OEB with respect to its DSP through this Application.

Response:

See response to 1-SEC-20.

2-CCC-26

Interrogatory:

Ex. 2

WNH filed a Distribution System Plan in its last cost of service application. On p. 25 of that DSP WNH set out its proposed spending for each year of the plan (Table 1-13). Please recast this Table to include actuals for each year. Please comment on the extent to which WNH's actual capital spending was consistent with the DSP presented to the OEB in its last application.

Response:

a) Table 1-13 of the 2015 DSP illustrates the capital spending forecast at the time of application submittal.

OEB Investment Category	Forecast Period					% of Annual Investment	Average Annual Investment
	2016	2017	2018	2019	2020	2016 - 2020	2016 - 2020
System Access	$ 6,622,858	$ 5,892,104	$ 6,020,046	$ 5,946,859	$ 6,085,796	33.1%	$ 6,113,533
System Renewal	$ 8,181,031	$ 8,545,000	$ 9,438,200	$ 8,800,764	$ 8,975,779	47.6%	$ 8,788,155
System Service	$ 2,405,950	$ 1,680,000	$ 1,725,200	$ 1,175,404	$ 1,175,612	8.8%	$ 1,632,433
General Plant	$ 1,869,078	$ 2,813,765	$ 1,661,176	$ 1,670,309	$ 1,649,525	10.5%	$ 1,932,771
Totals	$ 19,078,917	$ 18,930,869	$ 18,844,622	$ 17,593,336	$ 17,886,713	100.0%	$ 18,466,891

Adjustments were made to the plan due to the LRT project impacts of capital spending at the time. The OEB Board approved plan is provided below.

Revised as per Settlement Conference	2016 COS Settlement Forecast	2017 COS Settlement Forecast	2018 COS Settlement Forecast	2019 COS Settlement Forecast	2020 COS Settlement Forecast
System Access	$ 11,171,628	$ 7,520,910	$ 6,020,046	$ 5,946,859	$ 6,085,796
System Renewal	$ 7,360,065	$ 10,001,084	$ 9,438,200	$ 8,800,764	$ 8,975,779
System Service	$ 2,405,950	$ 1,680,000	$ 1,725,200	$ 1,175,404	$ 1,175,612
General Plant	$ 1,869,078	$ 2,813,765	$ 1,661,176	$ 1,670,309	$ 1,649,525
Gross CAPEX	$ 22,806,721	$ 22,015,759	$ 18,844,622	$ 17,593,336	$ 17,886,713
Contributed Capital	$ 6,372,310	$ 2,352,000	$ 1,902,000	$ 1,902,000	$ 1,902,000
Net CAPEX	$ 16,434,411	$ 19,663,759	$ 16,942,622	$ 15,691,336	$ 15,984,713

The following table provides a comparison of WNH actual expenditures to the Board approved plan.

Category	Historical Period								Bridge Year	
OEB Board Approved Plan from Settlement	2016		2017		2018		2019		2020	
	Plan	Actual	Plan	Actual	Plan	Actual	Plan	Actual	Plan	Budget
System Access	$ 11,171,628	$ 17,628,164	$ 7,520,910	$ 6,298,503	$ 6,020,046	$ 6,091,460	$ 5,946,859	$ 6,243,182	$ 6,085,796	$ 5,839,159
System Renewal	$ 7,360,065	$ 7,801,178	$ 10,001,084	$ 9,481,900	$ 9,438,200	$ 8,423,589	$ 8,800,764	$ 9,438,714	$ 8,975,779	$ 8,612,076
System Service	$ 2,405,950	$ 1,742,066	$ 1,680,000	$ 566,843	$ 1,725,200	$ 1,822,412	$ 1,175,404	$ 2,449,054	$ 1,175,612	$ 2,198,991
General Plant	$ 1,869,078	$ 2,288,204	$ 2,813,765	$ 2,264,671	$ 1,661,176	$ 2,030,139	$ 1,670,309	$ 1,810,228	$ 1,649,525	$ 3,554,579
Total Expenditure	$ 22,806,721	$ 29,459,613	$ 22,015,759	$ 18,611,917	$ 18,844,622	$ 18,367,600	$ 17,593,336	$19,941,178	$17,886,713	$20,204,805

Please refer to DSP, s 4.3.3 and 4.3.4 for a fulsome treatment of Historical Plan to actual capital expenses.

2-CCC-27

Interrogatory:

Ex. 2, Attachment 2-2

Please provide an updated Table 1-12 – which includes the most recent forecast of Generation Connections for the years 2020-2025.

Response:

Please refer to the table below for the most recent forecast of Generation Connections for the years 2020-2025 (update to Table 1-12).

	MicroFIT		FIT		Net Metered		Load Displacement		Total		Accumulated Total (kw)
Year	Num	(kW)	Num	(kW)	Num	(kW)	Num	(kW)	Num	(kW)	8476
2015	38	347	11	1,647	3	33	0	0	52	2,027	10,503
2016	35	334	3	650	4	90	0	0	42	1,074	11,577
2017	83	725	5	960	6	47	1*	2,000	95	3,732	15,309
2018	70	511	2	370	8	511	3	587	83	1,979	17,288
2019					14	210	1	2,470	15	2,680	19,968
2020			1	35	5	442	5	6,330	11	6,807	26,775
2021					5	1,300	4	8,190	9	9,490	36,265
2022					9	400	4	4,330	13	4,730	40,995
2023					9	400	5	3,500	14	3,900	44,895
2024					9	400	5	3,500	14	3,900	48,795
2025					9	400	5	3,500	14	3,900	52,695
Total 2015 - 2019	226	1,917	21	3,627	35	891	4	5,057	287	11,492	
Total 2020 - 2025	0	0	1	35	46	3,342	28	29,350	75	32,727	

Note*:This project is not strictly load displacement as it was part of IESO's Phase II Energy Storage Procurement initiative and has a contract with IESO

EXHIBIT 4 – OPERATING EXPENSE

4-CCC-28

Interrogatory:

Ex. 4/p. 7

Please provide a detailed budget for Community Relations and explain why the budget for 2021 is significantly higher than in previous years. Please describe all of the activities carried out as "Community Relations".

Response:

Please see a breakdown of expense categories for Community Relations comparing 2016 to 2021. The majority of this expense increase is the addition of the Key Accounts Department, specifically labour. In addition, in 2016, the majority of the Communications FTE was included in CDM. In 2018, this role moved towards a more corporate focus. WNH has also been promoting e-billing and electrical safety initiatives which increases advertising, website and graphic design and public relations costs. Lastly, WNH has created corporate newsletters in order to increase communications with customers.

	2016	2021
Labour and Staff Expenses	20,165	358,803
Advertising (ex. e-billing / conservation)	13,443	19,400
Customer Newsletters and Information	4,273	25,550
Public Relations and Corporate Promotions	58,879	78,050
Website, Graphic Design and Software Maintenance	6,123	21,450
Office Expenses	1,733	5,311
	104,616	508,564

4-CCC-29

Interrogatory:

Ex. 4/p. 11

What is the current status regarding WNH's Collective Agreement?

Response:

Please refer to 4-Staff-53 for the status of WNH's Collective Agreement.

4-CCC-30

Interrogatory:

Ex. 4/p. 16

Please provide a detailed OM&A IT budget for each of the years 2016-2021.

Response:

The table below provides a detailed IT OM&A spending from 2016 to 2021 Test Year. Other costs include hardware maintenance and an increase due to IT support costs that were allocated to the CDM function which was recoverable as part of the CDM Program Expense.

Expenses	2016 Actual	2017 Actual	2018 Actual	2019 Actual	2020 Bridge	2021 Test
Labour	603,213	590,696	549,749	517,271	738,093	743,417
Software Maintenance	525,470	495,521	631,084	561,805	653,429	626,188
Other (Costs Below Materiality)	39,479	43,664	37,740	29,734	89,220	123,836
Total IT Costs	**1,168,162**	**1,129,881**	**1,218,573**	**1,108,810**	**1,480,742**	**1,493,441**

4-CCC-31

Interrogatory:

Ex.4/p. 19

The evidence states that the 2020 OM&A budget is based on estimates with no actual data included. Please provide an updated OM&A budget based on actual spending to date.

Response:

The table below provides actual spending from January to August 2020 and projections from September to December 2020. The 2020 Updated Budget is approximately $167,000 lower than the 2020 Budget.

Expenses	2020 Budget	2020 Projections
	MIFRS	MIFRS
Distribution Expenses - Operation	6,039,717	5,958,706
Distribution Expenses - Maintenance	1,867,332	1,842,285
Billing and Collecting	3,008,184	3,150,098
Community Relations	347,738	328,501
Administrative and General Expenses	3,778,758	3,594,712
Property Tax	462,373	462,373
LEAP	42,000	42,000
Total	**15,546,102**	**15,378,675**

4-CCC-32

Interrogatory:

Ex. 4/p. 72

What is the annual cost of WNH's Board of Directors included in the 2021 revenue requirement?

Response:

The annual cost of WNH's Board of Directors that is included in the 2021 Revenue Requirement is $101,935 which includes costs such as meeting fees and annual fees.

4-CCC-33

Interrogatory:

Ex. 4/p. 76

Please provide a detailed breakdown of the $650,000 Consulting Services component of Regulatory Costs.

Response:

The total one-time cost for the Cost of Service Application is $650,000 which includes legal costs, consultant costs, intervenor costs and other minor miscellaneous costs. The consultant portion is $400,000. Included in this $400,000 is $300,000 for a WNH Consultant to assist in preparing the DSP and respond to interrogatories related to the DSP from 2018-2020, $62,000 was spent to hire a Financial Analyst Contract position to backfill the Finance Department during the preparation of the Application, $20,000 was paid to a WNH Consultant to assist with preparation and proof reading of the Application

and the remaining $18,000 was spent on Customer Engagement with Brickworks Communications.

EXHIBIT 8 – RATE DESIGN

8-CCC-34

Interrogatory:

Ex. 8/p. 14

Please indicate to what extent WNH undertook any customer engagement regarding the proposed changes to its Specific Service Charges. If no engagement was undertaken please explain why. Has WNH compared these proposed new charges to what other LDCs charge for the same services. If not, why not?

Response:

WNH did not perform customer engagement for changes to Specific Service Charges. WNH requested these charges for cost causality purposes. The costs required to disconnect and reconnect a service at the owner's request is being subsidized through rates, i.e. paid by all customers. WNH decided to make this proposal after the customer engagement was complete. WNH has compared these charges to other utilities. Based on the review, only Hydro One Brampton had similar charges. Several utilities appear to use the reconnection rates for non-payment of account that were established for all utilities for the purpose customer requested disconnect / reconnects (i.e. not non-payment) and others do not charge at all for these services. The reconnection charge for non-payment does not cover the cost of the disconnect / reconnect and therefore, as noted, owner requested disconnect / reconnects are being subsidized by all customers.

ENERGY PROBE (EP) INTERROGATORIES

EXHIBIT 1 – ADMINISTRATIVE DOCUMENTS

1-EP-1

Interrogatory:

References: Exhibit 1, Pages 78/79, Table 1-16

a) Please list the positions to be added in 2020/21.

b) How many of the 6 positions to be added in 2021 have been hired to date.

c) Please provide the year over year amount and percentage increase in Compensation 2020 Bridge to 2021.

Response:

a) The table below provides the list of positions that are to be added in 2020/2021.

Positions 2020/2021	2020	2021	Difference
Vehicle Mechanic	0.7	1.0	0.3
System Administrator	0.7	1.0	0.3
Protection & Control Technologist	0.9	1.0	0.1
Manager of Energy Efficiency	0.4	1.0	0.6
Energy Efficiency Advisor	0.4	1.0	0.6
Asset Management	0.3	1.0	0.7
Engineering Technologist	0.6	1.0	0.4
IT Co-op	0.7	1.0	0.3
Apprentice Powerline Maintainer	0.3	1.0	0.7
Powerline Maintainer	0.0	1.0	1.0
Executive Assistant - President	0.7	1.0	0.3
Customer Account Rep	0.3	1.0	0.7
TOTAL			**6.0**

b) Of the positions that are being added: System Administrator, Protection and Control Technologist, Apprentice Powerline Maintainer, Manager of Energy Efficiency and Energy Efficiency Advisor have been hired to date.

1) System Administrator – Hired April 2020
2) Protection and Control Technologist – Hired October 2020
3) Apprentice Powerline Maintainer – Hired September 2020
4) Manager of Energy Efficiency – This position was not included in the FTE counts in previous years as the Conservation department was funded by the IESO programs. In 2020, partial FTE count was included for this position as a portion of the costs are included in OM&A. In 2021, this position is included as a full FTE.
5) Energy Efficiency Advisor – This position was not included in the FTE counts in previous years as the Conservation department was funded by the IESO programs. In 2020, partial FTE count was included for this position as a portion of the costs are included in OM&A. In 2021, this position is included as a full FTE.
6) The Executive Assistant – President is currently being filled as a part time contract position and in 2021 it will be a full time position that is budgeted for the full year.

c) Based on the Application, the Compensation increase between 2020 Bridge Year and 2021 Test Year is $718,204 which is a 5.9%.

	2020	2021
Total Salary and Wages	12,089,291	12,807,495
Compensation Increase	5.9%	

Based on the updated in the IR (1-Staff-1), the Compensation increase between 2020 Bridge Year and 2021 Test Year is $778,756 which is a 6.4%

	2020	2021
Total Salary and Wages	12,130,721	12,909,477
Compensation Increase	6.4%	

1-EP-2

Interrogatory:

Reference: Exhibit 1, page 79, Table 1-17

Please discuss the reasons for the increase in the percentage of costs allocated to the Residential rate class.

Response:

Allocated costs are taken directly from the Cost Allocation model tab O1 Revenue to Cost line 40. The allocation is based on several cost groups per lines 28 to 33 & 38 of this tab.

All of the above are allocated based on either customer or demand allocators. Each specific cost line item will have a different allocation methodology. Please refer to E4 TB Allocation Details of the Cost Allocation model for more details. These allocators are calculated using various methodologies as described throughout Exhibit 7.

The specific increase to the Residential rate class indicates that the cost to service that particular class has risen at a faster pace relative to the other classes. Please review input tabs I3 to I9 for class-specific inputs which drive the allocators and therefore the relative allocations. The total impact of all of these inputs has resulted in the increase. There is no single input that has driven the rate increase.

The above allocations are then analyzed in the revenue-to-cost ratios as depicted in Exhibit 1, Table 1-19. Although the weighting of costs to the Residential class has increased, the revenue-to-cost ratio has decreased from 102.98% to 100.22%, well within the acceptable range developed by the OEB. Since all revenue-to-cost ratios are within the target ranges, WNH has proposed status quo ratios. As a result, despite the increase in cost allocation to the Residential class, this has no impact on proposed rates.

Please refer to WNH's response to 1-Staff-1 for an updated Cost Allocation model based on changes made in response to all interrogatories.

1-EP-3

Interrogatory:

References: Exhibit 1, Pages 85/86; Exhibit 7, Pages 14/15

Preamble: "WNH is proposing a Standby Charge for the GS > 50 kW and Large User Classes when a customer in the class has load displacement generation or storage. Customers within these classes are increasingly installing load displacement generation facilities that, when in use, reduce the amount of power taken from WNH's distribution system and ultimately impacts the amount of distribution revenue earned by WNH. WNH's proposal would apply to those customers that would continue to require WNH to provide full supply to the customer's facility during periods when the generator is not in service, which could be planned or unplanned."

a) Please confirm WNH has only met with 2 of 10 potential LD customers. When will WNH meet with the others to discuss the new Standby charges?

b) What steps does WNH take to ensure if LD customers have appropriate load management provisions that do not add to system peak?

c) What precedents (including OEB) has WNH used in designing its proposed standby rates? Please provide references.

Response:

a) At the time of the Application, WNH had 10 customers who planned to have load displacement (including battery storage facilities) for January 1, 2021. Five of these customers intended to offset their peak continuously and five were installing generation and storage for the purpose of GA avoidance. One customer who intended to offset their peak continuously has since changed their plan to GA avoidance. WNH provided communications to all 10 customers depending on what their planned purpose of the generation is. The communications are included in 7-ED-18. As noted, WNH met with two customers who intended to offset their peak continuously. WNH also received responses from three of the customers who are installing generation and storage for the purpose of GA avoidance and they noted that due to their plans for GA avoidance they do not see Standby Charges materially impacting them. The remaining customers did not respond to the communication.

b) WNH does not currently take steps to ensure LD customers have appropriate load management provisions that do not add to system peak, however, if Standby Rates are approved as part of this Application, WNH will build provisions into the contract when negotiating with the customer.

c) WNH's proposal is similar to the proposal submitted by Energy + (EB-2018-0028) however there is more customer flexibility and choice as discussed in 7-Staff-66 a). It also has similar considerations as the OEB Staff Report to the Board (EB-2015-0043) released on February 21, 2019. WNH believes that this will allow a smoother transition for customers if the Board eventually pursues this proposal. Other precedents that WNH has considered include: Brantford Power Inc. EB-

2018-0020, Canadian Niagara Power Inc. (EB-2018-0022), Chatham Kent Hydro (now Entegrus Powerlines Inc.) (EB-2018-0024), Enwin Utilities Ltd. (EB-2017-0037), Horizon Utilities Corporation, Hydro One Brampton, PowerStream (now Alectra Utilities Corporation) (EB-2018-0016), (now Alectra Utilities Corporation), Hydro Ottawa (EB-2017-0052), Toronto Hydro-Electric System Limited (EB-2018-0071) and Niagara-on-the-Lake Hydro Inc. (EB-2018-0056).

1-EP-4

Interrogatory:

References: Exhibit 1, page 86, Table 1-24, and page 98, Table 1-26

a) Please discuss the reasons for the proposed 7.1% increase in the Residential distribution bill from 2020 to 2021.

b) Please reconcile the 7.1% increase in the Residential distribution bill with the result of the customer survey where the largest percentage of customers indicated that they were opposed to a rate increase.

c) Does WNH have any suggestions of changes that would reduce the rate increase for residential customers? Please discuss.

Response:

a) WNH notes that Table 1-24 is Group 2 Accounts. It is assumed that this reference is in error so WNH will focus its explanation on Table 1-25 on Exhibit 1, p. 89 which depicts the 7.1% distribution bill impact.

Since the Residential class is an entirely fixed charged, this increase is calculated by comparing the proposed monthly service charge of $34.34 (see Exhibit 1 p.84

Table 1-20) compared to the 2020 approved rate of $32.05.

As described in Exhibit 7 section 2.7.3 on p.17, all of WNH's revenue-to-cost ratios per the cost allocation are within the acceptable ranges and WNH is maintaining status quo allocations. Therefore, the 7.1% is entirely due to the increase in base Revenue Requirement and the change in Residential customer count in which to distribute costs amongst.

Please refer to Exhibit 6, pg. 10 Cost Drivers on Revenue Deficiency for more details related to the overall increase in Revenue Requirement.

Please refer to Exhibit 3, pg. 21 for details on WNH's customer forecast for the Residential class.

b) The largest percentage of customers were not opposed to a rate increase. In fact, 31% stated that the rate increase is reasonable, and 53% stated that they do not like the idea of a rate increase, but agreed it is necessary. Only 14% stated that the rate increase was unreasonable.

c) While 84% of customers agreed that the increase was necessary, WNH acknowledged that cost was important to a large portion of customers and therefore adjusted its budgets to account for this. As noted in Exhibit 1 Section 2.1.7 Customer Engagement p. 109, $242,393 of operating costs were cut from the original plan.

1-EP-5

Interrogatory:

Reference: Exhibit 1, Page 95

Preamble: “WNH believes that locally offering CDM programs allowed for the success of conservation within Ontario as the LDCs used their customer relationships and local knowledge to offer programs and incentives that were best suited for each customer. As shown in the customer engagement results in Attachment 1-9, customers continue to value this relationship with WNH. WNH has determined that to best suit customer needs and preferences, it will continue to offer services to help customers with energy efficiency, energy planning, and demand management through rate base.”

a) Please provide details of the Post Conservation First Framework WNH programs/initiatives that will continue in 2021.

b) Please provide the 2021 related FTEs and staff costs

Response:

a) There is a correction to the original Application in Exhibit 4, p. 58 where WNH stated “In 2021, the Communications and Key Accounts department will have no subsidization by the Wind Down budget of the CDM program and therefore the full FTEs are included in 2021.” WNH has a small amount of approved wind-down costs that will be funded through the IESO in 2021 totalling $67,277 for the completion of projects from the Conservation First Framework (CFF). CDM costs are never included in Revenue Requirement and are not included in 2021 as the wind-down costs are fully recovered by the IESO. Please refer to 4-EP-19b) for the programs that will be provided in 2021 under the Key Accounts Department. These programs are not part of CFF.

b) Please refer to 4-VECC-39 a).

1-EP-6

Interrogatory:

References: Exhibit 1, Page 119, Tables 1-38 and 1-39; Attach. 1-15 OEB WNH Scorecard; DSP 2.3.3.2 and Appendix K

Preamble: “However, WNH has not met its performance target with respect to SAIDI. WNH has and continues to focus a portion of its asset inspection programs and capital expenditures to bring its system reliability in line with OEB targets. Specifically, WNH’s introduction of FLISR and increased number of remotely controlled switching devices in the field, have started to yield results. More detailed information can be found in Section 2.3.3.2 of the DSP and Appendix K – Distribution System Reliability Report (2019).”

a) Please confirm the data in the referenced tables are with LOS and MEDs eliminated.

b) Please update Tables 1-38 and 1-39 for 2019 and provide the forecast targets for 2020 and 2021 in tabular and graphical formats.

c) Please reconcile above to WNH OEB Scorecard.

d) Please provide the latest historical data regarding Cause Codes for interruptions.

e) Please discuss trends in defective equipment outages.

f) Please discuss what measures/investments have been added in the DSP to improve reliability/reduce outages.

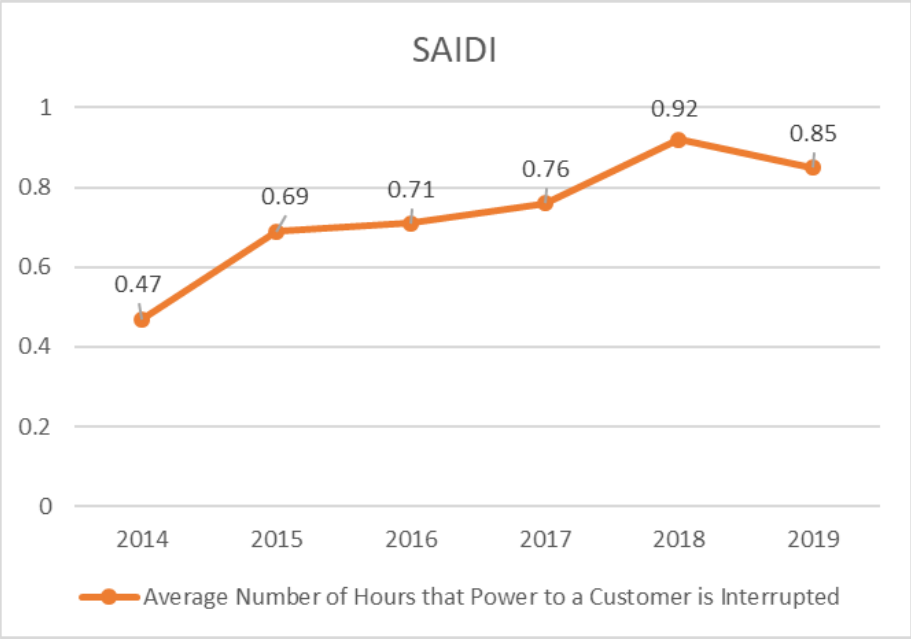
g) When does WNH expect to meet OEB reliability targets?

Response:

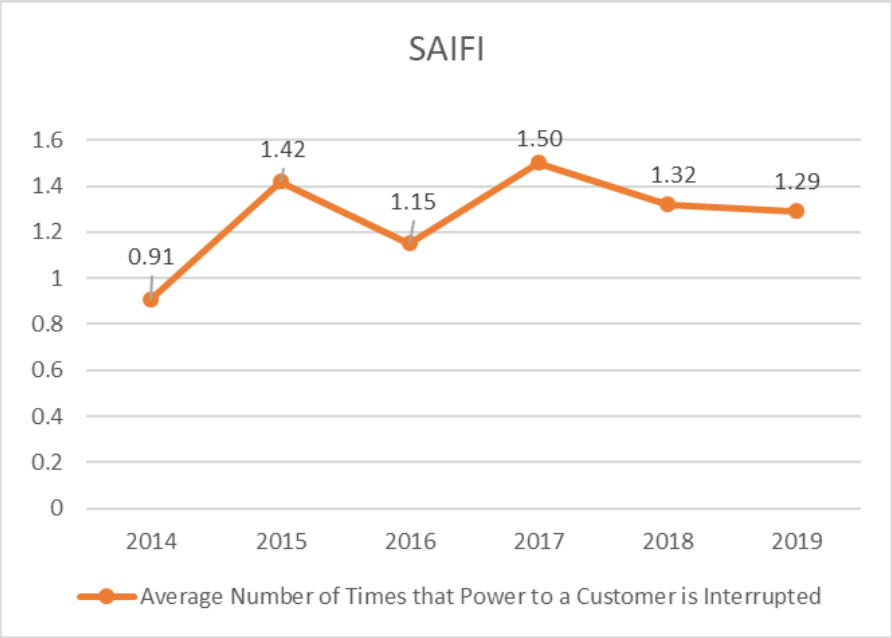
a) Confirmed.

b) WNH believes the references to the question were intended to be Tables 1-37 and 1-38. Please see the tables and charts below.

Indicator	2014	2015	2016	2017	2018	2019	Target	Target
Average Number of Hours that Power to a Customer is Interrupted	0.47	0.69	0.71	0.76	0.92	0.85	0.62	0.62



Indicator	2014	2015	2016	2017	2018	2019	Target	Target
Average Number of Times that Power to a Customer is Interrupted	0.91	1.42	1.15	1.50	1.32	1.29	1.16	1.16



WNH 's reliability targets for 2020 and 2021 were set by the OEB in 2017 using data from 2011 to 2015. They are currently SAIDI 0.62 and SAIFI 1.16. WNH expects the OEB will reset the performance targets in 2022 using 2016 – 2020 data.

c) The 2019 OEB Scorecard is confirmed, reconciled, and WNH understands it is expected to be published on October 13, 2020. SAIDI was improved in 2019.

d) Please see the tables below which contain the latest 2020 YTD data (August 31, 2020).

	Outage	2016	2017	2018	2019	2020 YTD - August 31 2020	Totals
	Cause Code	**Events**	**Events**	**Events**	**Events**	**Events**	**Events**
0	Unknown/Other	27	19	20	20	15	101
1	Scheduled Outage	422	368	403	452	236	1881
2	Loss of Supply	10	5	6	12	2	35
3	Tree Contacts	19	19	28	11	6	83
4	Lightning	30	11	8	12	11	72
5	Defective Equipment	97	111	132	107	65	512
6	Adverse Weather	69	27	20	25	2	143
7	Adverse Environment	3	1	2	-	0	6
8	Human Element	9	5	6	9	4	33
9	Foreign Interference	125	173	161	143	107	709
Total		811	739	786	791	448	3,575

		2016	2017	2018	2019	2020 YTD - August 31 2020	Totals
	Cause Code	**C.M.I.**	**C.M.I.**	**C.M.I.**	**C.M.I.**	**C.M.I.**	**C.M.I.**
0	Unknown/Other	299,768	83,912	363,938	30,183	161,502	939,303
1	Scheduled Outage	677,430	612,599	714,075	605,952	161,873	2,771,929
2	Loss of Supply	887,578	11,136	866,247	161,848	15,674	1,942,483
3	Tree Contacts	46,713	473,567	2,843,234	240,397	442,702	4,046,613
4	Lightning	678,066	13,540	44,907	323,456	92,502	1,152,471
5	Defective Equipment	266,817	535,964	803,865	576,266	463,814	2,646,726
6	Adverse Weather	5,578,173	116,104	388,697	994,459	20,448	7,097,881
7	Adverse Environment	54,778	26	4,969	-	-	59,773
8	Human Element	168,725	3,016	4,607	185,340	2,109	363,797
9	Foreign Interference	922,417	1,080,211	1,122,441	773,201	1,291,031	5,189,301
Total		9,580,465	2,930,075	7,156,980	3,891,102	2,651,655	26,210,277

e) Although in 2019, Defective Equipment ranked 4th, (14.8%) in CMI causes, up from an average ranking of 5th from 2016 – 2018, the Customer Minutes of Interruption (CMI) have decreased from 20% to 9.3% of total CMI over the historical period. Please refer to:

Exhibit 2, Appendix K – WNH Distribution System Reliability Report, Table 3-3, pg. 26

Exhibit 2, Appendix K – WNH Distribution System Reliability Report, s 3.7 Defective Equipment.

f) Please refer to the following:

Ref1, DSP, s 1.4.3, p. 53 – Grid Modernization

Ref1, DSP, s 1.4.3, p. 54 – Grid Enhancement & Grid Resiliency
Exhibit 2, Appendix B – 2021 Capital Investments, p. 41, 44, 48.

g) The OEB sets targets based on the average of the distributor's performance over the previous 5 years, then fixes those targets for the next five years, after which they will be revised again. WNH's current targets of 0.62 SAIDI and 1.16 SAIFI were set using data from 2011 to 2015 that predates WNH's OMS and AMI integration projects which now provides improved accuracy for outage start/end times and customer counts. In 2022 the OEB will recalculate WNH's target for the Forecast period. Although not known at this time, WNH's goal is to meet or exceed its reliability by the end of 2025.

EXHIBIT 2 – RATE BASE

2-EP-7

Interrogatory:

Reference: Exhibit 2, DSP, page 71

Preamble: "While customers largely agreed with the proposed plan and spending, modifying the plan to accommodate the aforementioned customer preferences did increase 2021 forecast capital expenditures by approximately $422,000. To accommodate these preferences and being sensitive to the customer's feedback on cost sensitivity, WNH further adjusted the plan to delay the capital spend for a new Enterprise Resource Planning System (ERP). The original ERP planned spend of $1.25 million in 2021 has been deferred to 2022."

Please file a table that lists specific capital expenditure increases that total $422,000 with explanations of how each expenditure increase is responsive to customer preferences.

Response:

The $422,000 increase was allocated as follows: (The references provide detailed information on the projects.)

1) $200,000 was allocated for Grid Resiliency, Ref, Exhibit 2, Appendix B, p. 48-50.
2) $100,000 was added to Grid Modernization for the purchase of additional equipment, Ref, Exhibit 2, Appendix B, p. 44-47.
3) $122,000 was allocated for customer self-service online tools (interactive website, online chat, comparing usage within a customer's area).

Referring to Exhibit 2, p. 87, Table 2-7, Key themes from Phase One Engagement, these investments are responsive to customer input WNH received from its consultation process, namely priority on reliability, innovative solutions and excellent customer service.

2-EP-8

Interrogatory:

References: Exhibit 2, Page 30, Table 2-19; Exhibit 2, Pages 40 and 42

Preamble: There is a large increase in General Plant asset additions in 2020 ($3,417,615). This is explained in part by several software enhancements, upgrade and implementation projects including CIS-MDM-ODS Enhancements ($311K), Asset Management ($281K), Utility Design Software ($257K) and an RNI Upgrade ($192K). There is a further increase in 2021 ($2,581,661).

a) Please provide a more complete list and explanation for the 2020 and 2021 General Plant additions.

b) Please provide the annual percentage increases in General Plant in 2020 and 2021 relative to and by comparison to historic 2016-2019 average.

Response:

a) Please refer to the table below for a revised version of Tables 2-24 and 2-25 for General Plant. WNH has added columns for capital expenditures (CAPEX) and construction work in progress (CWIP) since these are the drivers of capital additions. WNH has also broken down each USoA category by capital projects as depicted in Table 2-37 Summary of Capital Projects (Appendix 2-AA).

Description	2019 CWIP	2020 CAPEX	2020 Additions	2020 CWIP	2021 CAPEX	2021 Additions	2021 CWIP
1920 - Computer Hardware							
IT Asset Lifecycle - Hardware	-	280,053	280,053	-	224,138	224,138	-
Miscellaneous/Other	-	-	-	-	797	797	-
1920 - Computer Hardware subtotal	**-**	**280,053**	**280,053**	**-**	**224,935**	**224,935**	**-**
1925/1611 - Computer Software							
IT Asset Lifecycle - Software	-	43,838	43,838	-	103,808	103,808	-
IT System Changes & Improvements							
CIS-MDM-ODS Enhancements	-	311,000	311,000	-	-	-	-
RNI upgrade	-	192,000	192,000	-	-	-	-
Other IT System Changes & Improvements	-	353,410	353,410	-	71,819	71,819	-
IT New Systems & Services							
Asset Management	281,000	-	281,000	-	-	-	-
Other IT New Systems & Services	76,790	204,708	204,708	76,790	169,479	169,479	76,790
Operation Technology Software							
Utility Design Software	257,000	-	257,000	-	-	-	-
Other Operation Technology Software	14,422	251,346	190,194	75,574	281,522	71,535	285,561
Miscellaneous/Other	330,930	61,107	216,600	175,437	-	148,836	26,601
1925/1611 - Computer Software subtotal	**960,142**	**1,417,409**	**2,049,750**	**327,801**	**626,628**	**565,477**	**388,952**
1915 - Office Furniture & Equipment							
Building & Furniture - Office	-	152,500	152,500	-	131,500	131,500	-
Miscellaneous/Other	2,566	-	2,566	-	-	-	-
1915 - Office Furniture & Equipment subtotal	**2,566**	**152,500**	**155,066**	**-**	**131,500**	**131,500**	**-**
1930 - Transportation Equipment							
Fleet - Trucks	-	666,740	472,882	193,858	735,187	929,045	-
Miscellaneous/Other	4,629	50,000	-	54,629	114,558	169,187	-
1930 - Transportation Equipment subtotal	**4,629**	**716,740**	**472,882**	**248,487**	**849,745**	**1,098,232**	**-**
1935 - Stores Equipment							
Miscellaneous/Other	-	-	-	-	130,000	130,000	
1935 - Stores Equipment subtotal	**-**	**-**	**-**	**-**	**130,000**	**130,000**	**-**
1940 - Tools, Shop & Garage Equipment							
Miscellaneous/Other	-	35,000	35,000	-	38,000	38,000	
1940 - Tools, Shop & Garage Equipment subtotal	**-**	**35,000**	**35,000**	**-**	**38,000**	**38,000**	**-**
1960 - Miscellaneous Equipment							
Building & Furniture - Miscellaneous	-	147,100	147,100	-	119,200	119,200	-
Miscellaneous/Other	44,129	2,871	47,000	-	-	-	-
1960 - Miscellaneous Equipment subtotal	**44,129**	**149,971**	**194,100**	**-**	**119,200**	**119,200**	**-**
1980 - System Supervisor Equipment							
Miscellaneous/Other	169,411	129,362	230,764	68,009	236,106	274,317	29,798
1980 - System Supervisor Equipment subtotal	**169,411**	**129,362**	**230,764**	**68,009**	**236,106**	**274,317**	**29,798**
Total General Plant	**1,180,877**	**2,881,035**	**3,417,615**	**644,297**	**2,356,114**	**2,581,661**	**418,750**

WNH notes that the capital expenditure project MS/DS Decommissioning does not appear on Table 2-24 or 2-25 since it is excluded from rate base additions. When adjusted for this, the 2020 and 2021 CAPEX agrees to Table 2-37. In cases where the capital expenditure project is split between two or more USoA accounts, WNH has split the capital spend accordingly.

As depicted in the revised table, capital additions are primarily driven by CAPEX and in some cases, carryover CWIP from 2019. WNH will provide analysis of all categories above materiality.

1920 – IT Asset Lifecycle – Hardware 2020 CAPEX $280,053: This amount consists of several smaller hardware replacement projects below the materiality threshold.

1920 – IT Asset Lifecycle – Hardware 2021 CAPEX $224,138: Please refer to Exhibit 2 Appendix B 2021 Material Capital Projects, p.57.

1925/1611 – CIS-MDM-ODS 2020 CAPEX $311,000: This amount consists of several smaller customer-driven software projects to improve the integration between the CIS, MDM and ODS systems all below the materiality threshold.

1925/1611 – RNI 2020 CAPEX $192,000: This amount consists of costs for vendor mandated Smart Meter System (RNI4.X) upgrades.

1925/1611 – Other IT System Changes & Improvements 2020 CAPEX $353,410: This amount consists of several smaller system improvement projects below the materiality threshold.

1925/1611 – Asset Management 2019 CWIP $281,000: This amount consists of the purchase and phase one implementation of METSCO Energy Solutions Inc. (METSCO) Asset Management Software. The system go-live date was in January 2020.

1925/1611 – Other IT New Systems & Services 2020 CAPEX $204,708: This amount consists of several smaller new services projects below the materiality threshold.

1925/1611 – Utility Design Software 2019 CWIP $257,000: This amount consists of the purchase and implementation of Autodesk's AutoCAD Utility Design (AUD) software. Phase 2 spending in 2020 is largely in Other Operation Technology Software below.

1925/1611 – Other Operation Technology Software 2020 CAPEX $251,346: This amount consists of several smaller operational software projects below the materiality threshold.

1925/1611 – Other Operation Technology Software 2021 CAPEX $281,522: Please refer to Exhibit 2 Appendix B 2021 Material Capital Projects, p.60.

1925/1611 – Miscellaneous/Other 2019 CWIP $330,930: This amount consists of several smaller miscellaneous projects below the materiality threshold.

1930 – Fleet – Trucks 2020 CAPEX $666,740: $350,000 of the total amount consists of purchase of a medium-sized Stations vehicle. The remainder is for the purchase of several smaller vehicles below the materiality threshold.

1930 – Fleet – Trucks 2021 CAPEX $735,187: Please refer to Exhibit 2 Appendix B 2021 Material Capital Projects, p.54.

1980 – Miscellaneous/Other 2021 CAPEX $236,106: This amount consists of several smaller miscellaneous projects below the materiality threshold.

b) Please see the table below.

Description	2017 vs. 2016 %	2018 vs. 2017 %	2019 vs. 2018 %	Average 2016-2019	2020 vs. 2019 %	Variance to Average	2021 vs. 2020 %	Variance to Average
General Plant								
1920 - Computer Hardware	2.8%	4.5%	4.9%	4.1%	5.7%	1.7%	4.3%	0.3%
1925/1611 - Computer Software	25.7%	11.4%	2.5%	13.2%	20.9%	7.7%	4.8%	-8.4%
1915 - Office Furniture & Equipment	1.6%	3.6%	2.0%	2.4%	9.0%	6.6%	7.0%	4.6%
1930 - Transportation Equipment	0.9%	-9.1%	8.0%	-0.1%	5.1%	5.2%	11.2%	11.3%
1935 - Stores Equipment	0.2%	6.2%	0.0%	2.1%	0.0%	-2.1%	18.6%	16.5%
1940 - Tools, Shop & Garage Equipment	2.2%	5.6%	4.0%	3.9%	2.1%	-1.9%	2.2%	-1.7%
1945 - Measurement & Testing Equipment	3.1%	3.9%	3.3%	3.4%	0.0%	-3.4%	0.0%	-3.4%
1955 - Communications Equipment	0.0%	0.0%	-35.3%	-11.8%	0.0%	11.8%	0.0%	11.8%
1960 - Miscellaneous Equipment	0.7%	1.5%	0.5%	0.9%	7.1%	6.3%	4.1%	3.2%
1980 - System Supervisor Equipment	0.2%	7.5%	12.8%	6.9%	3.7%	-3.1%	4.3%	-2.6%
Subtotal General Plant	**6.1%**	**2.7%**	**4.5%**	**4.4%**	**8.8%**	**4.4%**	**6.1%**	**1.7%**

2-EP-9

Interrogatory:

Reference: Exhibit 2, page 65

Please file a table all listing 2021 capital projects above the $190,000 materiality threshold in the order of priority with the highest priority projects at the top of the list and the lowest priority projects at the bottom.

Response:

Please refer to Table 4-22, 2021 Material Investments on p. 281 of the DSP filed as Attachment 2-2 of Exhibit 2 for a listing of all 2021 capital projects above $190,000 materiality threshold in order of priority with the highest priority projects at the top of the list and the lowest priority projects at the bottom.

For details on each material project, please refer to Appendix B of the DSP (rather than Appendix G as erroneously stated on p. 65 of Exhibit 2).

2-EP-10

Interrogatory:

Reference: Exhibit 2, Appendix A, Page 12

Does the determination of a Health Index for each asset include an on-site inspection of the condition of that asset? If the answer is no, please explain why not. If the answer is yes, please explain the nature of the on-site inspection and file a copy of a sample report of the inspection.

Response:

Asset	Onsite Inspection	Inspection Data part of HI
TS Station Transformers	YES	YES
TS Switchgear	YES	YES
TS Circuit Breakers	YES	YES
TS Feeder Cables	YES	YES
TS Station Protection Relays	YES	YES
DS Transformers	YES	YES
Wood Poles	YES	YES
Primary Underground Cables	YES	No. At the time of the ACA, WNH was still developing the applications for the electronic field capture of inspection data and import into ENGIN. There were too many assets to manually load data into ENGIN. This will be completed in the next phase of the ACA development.
Distribution Transformers	YES	No. At the time of the ACA, WNH was still developing the applications for the electronic field capture of inspection data and import into ENGIN. There were too many assets to manually load data into ENGIN. This will be completed in the next phase of the ACA development.
Meters	YES	YES. Meters are not inspected individually but by sample group due to the size of the population.
Meter Installations	YES	No. At the time of the ACA, WNH was still developing the applications for the electronic field capture of inspection data and import into ENGIN. There were too many assets to manually load data into ENGIN. This will be completed in the next phase of the ACA development.
Switches	YES	No. At the time of the ACA, WNH was still developing the applications for the electronic field capture of inspection data and import into ENGIN. There were too many assets to manually load data into ENGIN. This will be completed in the next phase of the ACA development.

All assets in the ACA receive on-site inspections. The nature of WNH inspection programs can be found in the DSP, s 3.3.1.3. Due to restricted access on energized equipment, some assets inspections are combined with testing and maintenance activates. Please see Attachment 17 – Sample Inspection Reports, for sample copies of WNH's Inspection documents.

2-EP-11

Interrogatory:

Reference: Exhibit 2, Appendix A, page 22

Preamble: "HMSTS 'B' T3 and T4 have been evaluated to be in Fair condition at approximately two thirds, of their TUL. This is lower than expected and it is recommended that more analysis be performed over the next 5 years to better quantify the rate of health decline in forecasting EOL"

Please provide a more detail explanation of how the Fair condition was determined.

Response:

The power transformer condition was assessed using the criteria found in DSP Table 2-8, pg. 20.

The following factors contributed to the HI being evaluated as Fair instead of Good condition:

1) Dissolved Gas Analysis (DGA) showing elevated levels of Ethylene and Carbon Monoxide in the main tank transformer oil.
2) Lower than average winding insulation power factor.
3) Elevated acid content and reduced interfacial tension of the main tank transformer oil.
4) Elevated water content in the main tank transformer oil.

2-EP-12

Interrogatory:

Reference: Exhibit 2, Appendix A METSCO ACA Report Section 2.8.5 Pages 53/54 Table 2-44

a) Please Provide the Prior ACA recommendation and actual number of Poles replaced/yr 2016-2020.

b) Please provide the average unit cost/pole.

c) Based on the METSCO ACA confirm that ~616 Poles will be replaced in 2021 and each year to 2025.

d) Please provide the forecast unit cost/pole.

Response:

a) The prior recommendation made in WNH's 2015 Distribution plan was to replace 550 – 650 poles per year during the 2016 – 2020 time frame.

The following table provides the total number of actual poles replaced from 2016 to 2020.

2016	2017	2018	2019	2020	Annual Average
638	655	538	547	546	585

b) The average unit cost/pole over the historical period 2016 – 2020 is approximately $11,512 per pole.

c) Based on current analysis, WNH is forecasting to replace approximately 3,694 poles during the period 2020 to 2025 for an average pace of work of approximately 620 poles per year. Actual yearly replacements may vary slightly to accommodate higher priority work programs.

d) WNH forecasts that the average cost per pole over the forecast period will

approximately $12,200 / pole. The increase in the forecasted average cost per pole over the historical average cost per pole is due to inflationary factors in labour and materials.

2-EP-13

Interrogatory:

Reference: Exhibit 2, Appendix A, METSCO ACA Report Section 2.9.5 Pages 62-63 Table 2-52

a) Please Provide the Prior ACA recommendation and actual km of UG cable replaced per year for 2016-2020.

b) Please provide the average unit cost/km.

c) Based on the METSCO ACA confirm that 7.1 km of cable will be replaced in 2021 and each year to 2025.

d) Please provide the forecast unit cost/km.

Response:

a) WNH's 2015 Distribution plan was to replace approximately 7.0 km of underground per year during the 2016 – 2020 time frame.

The following table provides the actual meters of underground replaced due to condition.

Actuals	2016	2017	2018	2019	2020	Annual Average
Cable Replacements (m)	6.3	7.7	9.7	7.6	2.5	6.8

Note 2020 actuals are year to date, and reflect a shift in priority projects away from underground renewal due to COVID-19.

b) The average unit cost for cable replacements over the historical period 2016 – 2020 is approximately $213,000 / km.

c) Based on current analysis, WNH is forecasting to replace on average, 7.1 km of underground annually from 2021 - 2025. Actual yearly replacements may vary slightly to accommodate higher priority work programs.

d) WNH forecasts that the average cost per meter over the forecast period will approximately $226,000. The increase in the forecasted average cost per km over the historical average cost per km is due to inflationary factors in labour and materials.

2-EP-14

Interrogatory:

Reference: Exhibit 2, Appendix H, page 5 and page 20

Preamble: “Scheifele ‘A’ station has reached its short-circuit rating limits at the station’s feeder breakers. The fault contribution from existing connected embedded generation and Hydro One’s transmission system upgrade as part of the Guelph Area Transmission Reinforcement (GATR) have contributed to the increase in short circuit levels. Taking into consideration the amount of generation that is allocated and pending, these short circuit rating limits will be exceeded within the next 12 –36 months. WNH has investigated the problem and has determined that the most cost effective solution will be to upgrade the feeder breakers at the station. WNH is moving forward with the work to reduce the risk of

catastrophic failure of the circuit breakers during a fault clearing event. The project will be executed over 2 years. WNH has included the cost to replace these circuit breakers, $230,244 in 2020 and $209,762 in 2021, in their capital investment program."

a) Please describe the type and rating of the referenced embedded generation.

b) What proportion of the increase in the short circuit levels is due to the customer that owns the embedded generation?

c) Can the customer that owns the embedded generation be charged a contribution in aid of construction for this project. Please explain your answer?

Response:

a) The embedded generation allocated to Scheifele 'A' station consists of 8,082kW of inverter based generation and 2,000kW of non-inverter based generation contributed from 37 generation projects.

b) Total generation increased the total available fault current at the Scheifele 'A' station feeder breakers approximately 4.4%. Of the total increase in available fault current due to generation, approximately 90% was due to embedded generation and 10% due to the transmission system.

c) There is currently insufficient room available to account for increases in short circuit levels from the transmission system. Projects such as transmission line upgrades or transmission connected generation can have a direct impact on the short circuit levels seen at the station, and are largely out of WNH's control. This upgrade is needed to mitigate the risk of catastrophic failure of the circuit breakers during a fault clearing event, regardless of any future additions of embedded generation to WNH's distribution system. This project will also help align the

Scheifele 'A' station with the OEB transmission System Code, specifically Appendix 2 Transmission System Connection Point Performance Standards. For this reason, it is WNH's opinion that it is not appropriate to recover costs from embedded generator proponents for a project that is needed in absence of future generation, and for which existing generation is not a large contributing factor.

2-EP-15

Interrogatory:

Reference: Exhibit 2, Appendix Q, OEB Table 5A

Please add the following two columns to the table: 2020 Estimate and 2021 Forecast.

Response:

The table below includes the 2020 Estimate and 2021 Forecast per OEB Table 5A. Please note that 2019 CAPEX was also updated as there was an error.

Metric Category	Metric	Measures				% Change 2019-2016
		2019	2020	2021	5 Year Average	
Cost	Total Cost per Customer[1]	$ 479	$ 469	$ 487	$ 533	-27%
	Total Cost per km of Line[2]	$ 16,813	$ 16,480	$ 17,146	$ 18,483	-26%
	Total Cost per MW[3]	$ 102,178	$ 96,236	$ 99,659	$ 108,426	-19%
CAPEX	Total CAPEX per Customer	$ 345	$ 333	$ 346	$ 397	-34%
	Total CAPEX per km of Line	$ 12,100	$ 11,696	$ 12,192	$ 13,778	-34%
O&M	Total O&M per Customer	$ 134	$ 136	$ 141	$ 136	3%
	Total O&M per km of Line	$ 4,713	$ 4,784	$ 4,954	$ 4,705	4%

*The 5-year average is based on 2015 – 2019.

EXHIBIT 3 – OPERATING REVENUE

3-EP-16

Interrogatory:

References: Exhibit 3, Pages 16 and 17, Tables 3-8 and 3-9; WNH Application Load Forecast 2021_COVID-19 20200630 (Excel)

Preamble: WNH has prepared a second load forecast that decreases kWh usage by the following: GS < 50kW customers by 10%, GS > 50 by 15% and Large User by 20% in 2021 and customer count decreases as follows: Residential by 1%, GS < 50kW customers by 5% and GS > 50 by 4%.

a) Please provide a version of Table 3-8 that includes Q1/Q2 data for all classes.

b) Why does the spreadsheet show no change to the residential average use?

c) Are the commercial and large user estimates of 10%, 15%,20% placeholders, or informed by customer input?

d) Why is there no change to the Embedded Distributor Load Forecast?

Response:

a) Please see WNH's response to 3-Staff-32 a). WNH has restricted the analysis to rate classes that are billed on kW since this information for rate classes not billed on kW is not readily available.

b) At the time of filing WNH did not predict a persistent effect on Residential average use due to COVID-19.

c) The percentage reductions were based off the best available information at the time.

d) The Embedded Distributor area consists almost entirely of residential homes. Consistent with the response to part b), WNH did not predict a persistent effect on residential average use due to COVID-19.

3-EP-17

Interrogatory:

References: Exhibit 3, Page 16 and 17 and Table 3-10; Exhibit 9, page 41

Preamble: "WNH indicates two options to address COVID-19 Impacts on the Load Forecast;

1. Allow for a special sub-account for WNH of Account 1509-Impacts Arising from the COVID- 19 Emergency which calculates the variance between the load forecast included in this Application and actuals. The details of this sub-account are included in Exhibit 9 of this Application, or
2. Use the revised load forecast included in this Application. WNH has attached the load forecast in live Excel format (Waterloo_Load_Forecast_2021_COVID-19_20200630) in Attachment 3-4."

a) Please confirm that the approach indicated by the OEB (not yet finalized) corresponds to Option 1.

b) Will WNH agree to provide intervenors with further updates on the 2021 Load Forecast during the proceeding of the Application?

Response:

a) Please refer to WNH's response to 3-Staff-33 a).

b) Please refer to 1-Staff-1 for an updated Load Forecast Model. It is not typical to provide numerous continuous updates to the evidence beyond the IR responses. If this were done the evidentiary record would never be complete, and the OEB would not be able to make a decision.

3-EP-18

Interrogatory:

Reference: Exhibit 3, Page 22, Tables 3-15 and 3-16

a) Please provide a table based on data in Tables 3-15 and 3-16 that shows for 2021 the net forecast growth in average use per customer for each rate class.

b) Please provide/reference the billing determinants for each class

Response:

a) Net forecast growth in average use per customer for each rate class is contained within the Load Forecast model under Rate Class Energy Model. WNH has provided this information in the table below.

Year	Residential	GS < 50 kW	GS > 50 kW	Large User	Unmetered Scattered Load	Street Lighting	Embedded Distributor	Direct Market Participant
Annual Growth Rate in Usage per Customer / Connection								
2003 Actual								
2004 Actual	-2.2%	0.9%	6.8%	1.0%	-5.9%	-3.8%		
2005 Actual	2.8%	1.9%	5.0%	6.8%	-1.2%	5.3%		
2006 Actual	-6.0%	-0.1%	5.4%	4.4%	-8.9%	-1.7%		
2007 Actual	1.6%	0.8%	2.5%	4.7%	-15.3%	-1.1%		
2008 Actual	-1.7%	-4.3%	-1.6%	-0.5%	-33.5%	1.7%		
2009 Actual	-3.6%	-4.1%	-1.8%	-0.3%	9.4%	-0.7%		
2010 Actual	2.6%	1.2%	5.3%	8.0%	2.3%	-0.3%		
2011 Actual	-2.6%	0.0%	-1.8%	2.0%	9.8%	-0.5%		
2012 Actual	-1.2%	0.7%	-1.3%	3.0%	16.5%	22.2%	45.6%	
2013 Actual	-1.6%	1.5%	-1.6%	4.0%	-0.6%	-21.6%	-4.2%	97.2%
2014 Actual	-1.1%	0.4%	-2.7%	1.1%	3.4%	0.2%	3.2%	-11.4%
2015 Actual	-2.4%	-1.9%	-2.7%	2.0%	2.0%	-1.3%	5.7%	-8.0%
2016 Actual	-1.4%	-2.8%	-1.9%	2.4%	1.9%	0.1%	0.0%	-8.2%
2017 Actual	-3.2%	-3.0%	-5.9%	-0.1%	-4.4%	-29.2%	2.0%	6.6%
2018 Actual	3.1%	3.2%	2.0%	3.4%	-0.5%	-38.4%	5.3%	-7.9%
2019 Actual	-2.5%	-0.5%	-3.4%	-2.2%	8.0%	-1.0%	8.3%	-10.5%
2020 Projected (Geomean)	-1.2%	-0.4%	0.1%	2.4%	7.1%	-6.3%	4.2%	7.4%
2021 Projected	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%

b) Please refer to the Revenue Requirement Workform (RRWF) 13. Rate Design for billing determinants. These determinants are calculated based off the normalized weather billed energy and demand forecasts in Tables 3-19 and 3-22 per Exhibit 3.

EXHIBIT 4 – OPERATING EXPENSES

4-EP-19

Interrogatory:

Reference: Exhibit 4, Page 58

Preamble:

"In 2021, the Communications and Key Accounts department will have no subsidization by the Wind Down budget of the CDM program and therefore the full FTEs are included in 2021."

a) How many positions and what annual cost will be absorbed by the utility in 2021?

b) What specific duties will these staff perform? Please provide details.

Response:

a) As noted in 1-EP-5, there is a correction to the original Application for the above noted reference as WNH has a small amount of approved wind-down costs that will be funded through the IESO in 2021 totalling $67,277 for the completion of projects from the Conservation First Framework.

There will be two positions absorbed by the utility for the Key Accounts Department. In 2021, there is 82% of one FTE and 90% of the other FTE included in Revenue Requirement. The offset of these percentages are based on the approved IESO wind-down budgets. The total budget for the Key Accounts Department included in 2021's Revenue Requirement is $254,568.

b) **Strategic Energy Management**

- Energy Literacy - Assisting customers to understand their bill, their rates, how their home or business uses energy, how they can manage their energy usage,
- Energy Coaching – Building internal teams, energy champions, monitoring energy usage, energy hunts, etc.
- Facility and equipment assessments
- Identifying energy efficiency and management projects,

- Metering and monitoring of equipment to understand usage, identify opportunities, provide ongoing monitoring of energy efficiency and energy management projects and programs
- Assistance building the business case for energy efficiency and management projects,
- Application support for incentives, grants and rebates
- Project management
- Pre and post project evaluation
- Power factor analysis
- Assisting with navigating emerging energy technologies including, but not limited to distributed energy resources and electric vehicle charging infrastructure

Energy and Water Benchmark Reporting

- Outreach, assistance in obtaining data, understanding the data

Industrial Conservation Initiative

- Outreach, engagement, understanding, support

Completion of Conservation First Framework Projects

- Wind-Down (Funded through IESO, not Revenue Requirement)

EXHIBIT 6 – REVENUE REQUIREMENT

6-EP-20

Interrogatory:

Reference: Exhibit 6, page 10, Table 6-5

Please discuss possible ways that the 2021 Revenue Deficiency of $2,624,364 could be reduced such as possibly delaying some capital expenditures to future years.

Response:

WNH management has done everything possible to reduce the 2021 Revenue Deficiency without compromising the delivery of safe and reliable electricity distribution service. Delaying capital expenditures are not recommended for the reasons outlined in the DSP.

EXHIBIT 7 – COST ALLOCATION

7-EP-21

Interrogatory:

Reference: Exhibit 7, page 17, Table 7-8

Please discuss changes that would be required to bring the revenue to cost ratio for the Residential Rate Class to from 100.22% to 100.00%.

Response:

To decrease the Residential rate class cost ratio down to 100.00%, one would need to increase the allocation to other rate classes. Generally, a direct change to the proposed ratios is only done when one or more class ratios is outside of the Board target range. Alternatively, one can change the inputs in the Cost Allocation model to allocate more from the Residential class to other classes. A summary of allocators can be found on tab E2 Allocators of the Cost Allocation model. If the underlying inputs and assumptions are changed, these allocators will change and that will affect the overall cost allocation and therefore the revenue to cost ratio.

Please note that due to the changes proposed in other areas of the Application, the Cost Allocation has been revised and submitted as part WNH's response to 1-Staff-1.

EXHIBIT 8 – RATE DESIGN

8-EP-22

Interrogatory:

Reference: Exhibit 8, pages 15 to 17, Tables 8-10 to 8-13

a) Please explain the difference in labour and vehicle times for Disconnection / Reconnection at Meter during regular hours and after regular hours.

b) Please explain the differences in labour and vehicle times for Disconnection / Reconnection at Pole Transformer during regular hours and after regular hours 8 hours.

Response:

a) Please refer to WNH's response to 8-Staff-73 e) & f).

b) Please refer to WNH's response to 8-Staff-73 e) & f).

ENVIRONMENTAL DEFENSE (ED) INTERROGATORIES

EXHIBIT 2 – RATE BASE

2-ED-1

Interrogatory:

Transmission Losses

Reference: Exhibit 2, Attachment 2-2, DSP, s. 1.3.6

Preamble:
In a recent undertaking response, Hydro Ottawa stated as follows:

Hydro Ottawa continues to review new and emerging technologies and potential Conservation Voltage Reduction ("CVR") options. In 2019, Hydro Ottawa partnered with a vendor to pilot a Grid Edge Volt/VAr Control ("VVC") solution. The units were deployed on feeders in the Kanata North area at predetermined pole mounted transformer locations as a non-wires alternative to assist with capacity constraints in this area. The primary focus of the project is to reduce energy demand to deliver energy savings and improve power quality at the secondary voltage locations. The units have been fully deployed and six-week voltage reduction testing in the Kanata North area commenced in early July 2020. The pilot project is expected to be completed by the end of 2020.

Questions:

a) Is WNH familiar with this technology?

b) Is WNH willing to commit to explore whether this technology could cost-effectively reduce losses in its system and thus reduce energy bills?

c) If the outcomes of Hydro Ottawa's pilot project are positive and it decides to invest in this technology, is WNH willing to invest in this technology to the extent that it would cost-effectively reduce losses in its system and thus reduce energy bills?

Response:

a) Although not studied in detail, WNH is familiar with Volt/VAR Control technology but not specifically with the details regarding the Hydro Ottawa pilot.

b) WNH would not rule out a future investigation into this technology.

c) WNH cannot formulate any opinion based on the above-referenced information. WNH would first need to study the costs and benefits of this technology as it applies specifically to WNH customers. The cost effectiveness of the investment would then need to be evaluated and prioritized along with other competing WNH capital investments as part of WNH's capital investment planning process. Independent from any decision arrived at another utility, WNH would need to demonstrate to the OEB that the capital expenditure is prudent in order to obtain cost recovery.

2-ED-2

Interrogatory:

Transmission Losses

Reference: Exhibit 2, Attachment 2-2, DSP, s. 1.3.6

Preamble:

Hydro Ottawa's Conservation and Demand Management Annual Reports for 2006 and 2007 describe a project relating to Distribution Loss Reduction as follows:

Description:

The Distribution Loss Reduction Program is a broad network based initiative to drive greater efficiencies within the distribution grid. This program will identify opportunities for system enhancements. Next steps will be to complete the engineering analysis and feasibility studies. Items to be addressed may include the following:

Power Factor Correction - A power factor assessment will be completed which will identify locations for the installation of power factor correction capacitor banks.

Voltage Conversion - Voltage upgrades can save up to 90% of the losses associated with a feeder as higher voltages and lower current results in lower losses. This study will ascertain the locations and value of voltage conversions.

Power System Load Balancing - This program is designed to ascertain where load shifting can occur to improve system efficiency. It is estimated that approximately 5% - 10% of system losses could be saved.

Voltage Profile Management - Changing voltage profiles at the distribution station level can result in a peak reduction at the controllable distribution stations.

Line Loss Reductions - Replacement of conductors can reduce line losses. An evaluation of where such opportunities exist may be undertaken.

Target users:

The results of this program will positively impact all of Hydro Ottawa’s customers.

Benefits:

Reducing electricity distribution system delivery losses will have a number of positive impacts including reducing system demand, relieving network capacity to accommodate growth and reducing the requirement for new generating capacity in the Province. Costs associated with distribution system delivery losses are recovered through electricity distribution charges. Reductions in these costs will therefore benefit all customers

The plan can be found here: EB-2019-0261, Technical Conference Undertakings, Undertaking TC-JT 3.15, Attachment A

The most recent update can be found here: EB-2019-0261, Interrogatory Response, IRR ED-1, Attachment A

Questions:

a) Please review the work completed by Hydro Ottawa with respect to losses and create a chart detailing which items WNH has and has not also completed. Please separately include each of the following areas:
   a. Power Factor Correction
   b. Voltage Conversion
   c. Power System Load Balancing
   d. Voltage Profile Management
   e. Line Loss Reductions

b) If there were three areas that WNH could explore to find the most cost-effective opportunities to reduce losses, what would those be?

Response:

a) The following chart details which items WNH has completed to lower distribution system losses.

Activities Leading to Loss Reduction	Completed
Power Factor Correction	YES
Voltage Conversion	YES
Power System Load Balancing	YES
Voltage Profile Management	YES
Line Loss Reductions	YES
Conductors sizing	YES
Purchasing higher efficiency transformers	YES
Maintaining meter accuracy	YES
Working with local law enforcement to assist with theft of power issues.	YES

b) WNH cannot comment on which areas could be most cost effective. This would need to be studied in detail.

2-ED-3

Interrogatory:

Transmission Losses

Reference: Exhibit 2, Attachment 2-2, DSP, s. 1.3.6

Question:

a) Please provide a table comparing WNH's losses (%) to those of all other Ontario LDC's over the past 5 years.

Response:

a) DSP, s 1.3.6, Table 1-6, Annual System Losses, over the historical period has been updated with 2019 data (2019 OEB Yearbook of Electricity Distributors). 2020 data is not yet available.

Year	Provincial System Losses	WNH System Losses	% Diff
2016	3.6%	3.6%	0.0%
2017	3.9%	3.3%	-0.6%
2018	4.0%	3.6%	-0.4%
2019	3.9%	3.0%	-0.9%

2-ED-4

Interrogatory:

Transmission Losses

Reference: Exhibit 2, Attachment 2-2, DSP, s. 1.3.6

Questions:

a) What are the most important steps that WNH has taken in the past 20 years specifically to reduce distribution system energy losses? Please exclude measures for which loss reductions were merely a side-benefit that did not drive the decision to proceed.

b) Where does WNH believe the greatest opportunities are to make additional reductions in distribution losses in the next 20 years? Please exclude measures for which loss reductions are merely a side-benefit that did not drive the decision to proceed.

c) Does WNH quantify and consider the potential value of distribution loss reductions for different options when procuring equipment (e.g. transformers) and deciding on

the details of demand-driven capital projects (e.g. the type and sizing of conductors)? If yes, please explain how and provide documentation detailing the methodology used.

d) If WNH is considering the value to its customers of distribution loss reductions for planning purposes, how does it calculate the dollar value ($) of said loss reductions (kWh)? Is the value calculated based only on the HOEP or on all-in cost of electricity (e.g. including the GA)?

e) Please list and describe the operational measures that WNH takes to cost-effectively reduce distribution losses.

f) Please provide a table listing the technically available measures to cost-effectively reduce distribution losses and describe for each the respective responsibilities of WNH, the IESO, and Hydro One.

Response:

a) Please refer to DSP 1.3.6 System Losses for measures taken over the historic period of this Application. Loss reduction has not been the main driver for WNH's capital investments, however activities undertaken by WNH have made significant strides to mitigate line losses. WNH believes the most important measures taken have been as a result of voltage conversion.

b) WNH is not planning any capital investments over the forecast period where loss reduction is the driving factor.

c) WNH considers the potential value of losses when procuring distribution transformers. WNH includes a loss evaluation formula as part of the purchasing

specification. When the manufacturers test results are received, the transformers with the lowest evaluated cost, including losses are purchased.

Please refer to Attachment 18 for the Grid Smart City Transformer Purchasing Specifications.

d) The dollar value ($) of the distribution losses is calculated based on the all-in cost of electricity which includes the cost of the global adjustment.

e) WNH performs power system load balancing as an operational measure to reduce distribution losses.

f) Please refer to the table in IR response 2-ED-2. All of the responsibilities belong to WNH. There are no responsibilities belonging to Hydro One or the IESO related to these activities.

2-ED-5

Interrogatory:

Transmission Losses

Reference: Exhibit 2, Attachment 2-2, DSP, s. 1.3.6

Question:

a) Please complete the below table.

Value of WNH's Distribution System Energy Losses - Historic						
	2015	2016	2017	2018	2019	Total
Electricity Purchases (MWh)						
Electricity Sales (MWh)						
Losses (MWh)						
Losses %						
All-In Cost of Electricity in WNH ($/Mwh) – Annual Average						
Cost of Losses ($)						

b) Does WNH anticipate the value of losses on its system to be materially higher or lower over the next five years?

c) Please complete the following table:

Cost and GHG's from Distribution System Energy Losses						
	2015	2016	2017	2018	2019	Total
Forecast Losses (MWh)						
Cost of Losses ($)						
Carbon Intensity of Electricity[2] (CO2e/MWh)						
GHGs (CO2e)						

d) Please complete the following table:

Cost and GHG's from Forecast Distribution System Energy Losses						
	2021	2022	2023	2024	2025	Total
Forecast Losses (MWh)[3]						
Cost of Losses ($)						
Carbon Intensity of Electricity[4] (CO2e/MWh)						
GHGs (CO2e)						

e) Is WNH willing to review its operational measures, investment planning, and other practices to consider whether it could be taking additional measures to cost-effectively reduce the energy losses occurring in its distribution system?

[1] Please base this figure on the IESO's January 2020 Annual Planning Outlook - http://www.ieso.ca/-/media/Files/IESO/Document-Library/planning-forecasts/apo/Annual-Planning-Outlook-Jan2020.pdf?la=en; see also the data tables at http://www.ieso.ca/-/media/Files/IESO/Document-Library/planning-forecasts/apo/Annual-Planning-Outlook-Data-Tables-Jan2020.xlsx?la=en.

[1] If no better numbers are available, the losses from 2019 or the average over 2015 to 2019 could be used for the purpose of this row of this response.

Response:

a)

Value of WNH's Distribution System Energy Losses - Historic						
	2015	**2016**	**2017**	**2018**	**2019**	**Total**
Electricity Purchases (MWh)	1,486,985	1,495,245	1,454,001	1,517,721	1,482,652	7,436,604
Electricity Sales (MWh)	1,441,032	1,444,462	1,409,167	1,467,266	1,438,045	7,199,972
Losses (MWh)	45,953	50,783	44,834	50,455	44,607	236,633
Losses %	3.09%	3.40%	3.08%	3.32%	3.01%	3.18%
All-In Cost of Electricity in WNH ($/Mwh) – Annual Average	100.23	111.78	113.81	110.79	120.62	111.43
Cost of Losses ($)	**4,605,767**	**5,676,513**	**5,102,690**	**5,589,828**	**5,380,753**	**26,367,600**

WNH has completed the above chart based on inputs from Exhibit 8 p.22 Table 8-16 – Loss Factor Calculation – Consistent with Appendix 2-R. It should be noted that the loss calculation will differ slightly since Table 8-16 treats Large Use customers differently. All-In Cost of Electricity was calculated by taking the sum of cost of energy and global adjustment costs from WNH's power invoice (charge types 101, 147 and 148) and dividing by electricity purchases.

b) Waterloo North Hydro expects system losses to be in the current range of 3.0% to 3.3% over the next five years.

c) Please see table below.

Cost and GHG's from Distribution System Energy Losses					
Year	**2015**	**2016**	**2017**	**2018**	**2019**
Actual Losses (MWh)	45,953	50,783	44,834	50,455	44,607
Cost of Losses ($)	$ 4,605,767	$ 5,676,513	$ 5,102,690	$ 5,589,828	$ 5,380,753
Carbon Intensity of Electricity (g/kWh)	46	40	19	29	30
GHGs (CO_2e) Tons	2,113.01	2,038.73	848.49	1,468.85	1,353.73

Since these are historical years, WNH has changed the table provided in the IR to be 'Actual Losses (MWh)' instead of 'Forecast Losses (MWh)'.

d) WNH has not provided estimates for 2021-2025 as the results are outside the scope of this Application.

e) As part of the annual planning and budgeting exercise, WNH reviews all of its investment and operational decisions with respect to reducing line losses.

EXHIBIT 8 – RATE DESIGN

8-ED-6

Interrogatory:

Fixed Versus Variable Charges

Reference: Exhibit 8, p. 8

Preamble:

Table 8-5 - Monthly Service Charge Comparison

Rate Class	Current 2020 Monthly Service Charge	Proposed 2021 Monthly Service Charge	Minimum System with PLCC Adjustment (Ceiling Fixed Charge from Cost Allocation Model)	Customer Unit Cost per Month - Avoided Cost (Floor Fixed Charge from Cost Allocation Model)
Residential	$ 32.05	$ 34.34	$ 23.32	$ 6.19
GS < 50 kW	$ 33.71	$ 36.12	$ 26.74	$ 11.13
GS > 50 kW	$ 125.96	$ 134.98	$ 78.02	$ 43.27
Large User	$ 7,359.96	$ 7,886.68	$ 429.78	$ 210.79
Unmetered Scattered Load	$ 11.20	$ 11.88	$ 11.72	$ 0.53
Street Lighting	$ 0.35	$ 0.38	$ 6.89	$ 0.54
Embedded Distributor	$ -	$ -	$ 114.38	$ 29.14

[1] If no better numbers are available, the losses from 2019 or the average over 2015 to 2019 could be used for the purpose of this row of this response.
[1] Please base this figure on the IESO's January 2020 Annual Planning Outlook - http://www.ieso.ca/-/media/Files/IESO/Document-Library/planning-forecasts/apo/Annual-Planning-Outlook-Jan2020.pdf?la=en; see also the data tables at http://www.ieso.ca/-/media/Files/IESO/Document-Library/planning-forecasts/apo/Annual-Planning-Outlook-Data-Tables-Jan2020.xlsx?la=en.

Question:

a) Does WNH agree that shifting costs for commercial and industrial customers from fixed charges to variable charges would incentivize positive customer behaviour such as shifting load off the peak, installing distributed energy, and implementing energy efficiency? Please explain.

b) Does WNH agree that setting the fixed monthly charges for commercial and industrial customers at the level of avoided cost would represent a shift of costs from fixed charges to variable charges?

c) Does WNH agree with Board Staff that setting fixed monthly charges at the level of avoided costs has benefits, including that avoided costs "are easiest to determine, are subject to minimal judgment and thus more accurate"?

d) Would WNH agree to set its commercial and industrial fixed monthly charges to equal avoided costs going forward? If not, would WNH agree to study and consider this issue for potential implementation in its next annual rate application?

e) Please confirm that WNH has proposed fixed monthly charges for commercial and industrial customers that is above the maximum level.

f) Please explain why WNH is proposing fixed monthly charges for commercial and industrial customers that are above the maximum level. Please include a detailed

breakdown quantifying and explaining for each rate class the difference between the proposed fixed charges and the maximum fixed charges.

g) Please provide the methodology, calculations, and any underlying documentation showing how WNH calculates the fixed monthly charge for its commercial and industrial customers.

h) Please confirm which year WNH first used the OEB's 2006 Cost Allocation model in setting its rates.

i) Please provide a table showing WNH's fixed monthly charges for each commercial and industrial rate class from 2005 (actual) through to 2025 (proposed).

j) Please provide the percent difference between the proposed monthly fixed charge for commercial and industrial customers and the Board minimum and maximum figures (i.e. Customer Unit Cost per month - Avoided Cost; Customer Unit Cost per month - Directly Related; and Customer Unit Cost per month - Minimum System with PLCC Adjustment). Please calculate the percentage based on an average weighted by the number of customers in each class.

k) For the most recent year available, please provide the number of customers in each of the commercial and industrial rate classes.

l) Please complete the following table calculating the total annual amount of fixed charges by customer class (actual and forecast).

Total Fixed Charge Revenue Historic and Forecast				
	GS <50 kW	GS >50 kW	Large User	Total
2018 (actual)				
2019 (actual)				
2020 (forecast)				
2021 (forecast)				
2021-2025 (forecast)				

[1] EB-2007-0667, Board Staff Discussion Paper: On the implications arising from a review of the electricity distributors' cost allocation filings, June 28, 2007, pp. 26-27.

m) Please complete the following table calculating the total fixed charge revenue per the proposed fixed charges versus the OEB floor and ceiling.

Total Fixed Charge Revenue per Proposed Fixed Charges vs. OEB Floor and Ceiling				
	GS <50 kW	GS >50 kW	Large User	Total
Customers in Class[1]				
OEB fixed charge floor				
OEB fixed charge floor ($)[2]				
Total fixed charge revenue (2021-2025) ($)[3]				
OEB fixed charge ceiling				
OEB fixed charge ceiling ($)[4]				
Total fixed charge revenue (2021-2025) ($)				
Proposed fixed charges				
Proposed fixed charges ($)				

[1] Please provide a best estimate. The actuals from 2019 would be sufficient.
[2] Customer Unit Cost per Month - Avoided Cost (Floor Fixed Charge from Cost Allocation Model)
[3] (customers) * (fixed monthly charge) * 12 * 5
[4] Minimum System with PLCC Adjustment (Ceiling Fixed Charge from Cost Allocation Model)

Total fixed charge revenue (2021-2025) ($)				
Difference in revenue between fixed rate amounts				
Proposed versus OEB floor (%)				
Proposed versus OEB ceiling (%)				
Proposed versus halfway between floor and ceiling (%)				

Response:

a), b), c) and d)

The fixed charge represents a small portion (less than 1.0%) of the total electricity bill for the average commercial and industrial customer. It is unlikely that shifting the charge from a fixed charge to a variable charge would be sufficient incentive for a customer to shift load off the peak. It is also unlikely that setting the charge at the avoided cost level would have any meaningful motivation for a commercial or industrial customer to have an incentive to shift load off the peak or implement any other measure to do so.

e) Confirmed – please refer to revised RRWF and Cost Allocation models per 1-Staff-1.

f) WNH is proposing to maintain the fixed/variable split in its current rates. The proposed fixed rates are not cost-specific like the floor and ceiling calculations in the Cost Allocation model. Instead, the fixed/variable split is calculated based on projected revenues at current rates based on the load forecast customer/connection counts and kWh/kW projections.

g) Please see the table below for calculation of fixed monthly charges based on revised inputs per the Cost Allocation and RRWF models as filed in response to 1-Staff-1. WNH has chosen to provide analysis for all rate classes.

8-ED-6 (g):	Per Load Forecast				Current Distribution Rates		Distribution Revenue Calculations				Proposed Fixed Charge Calculation			
Class	Customer / Connections	Annual kWh	Annual kW For Dx	Annualized Customers	Fixed Charge	Volumetric Rate (per kWh or kW)	Fixed	Variable	Transformer Allowance	Total excl. Transformer Allowance	Current Fixed Charge Split	Class Revenue Requirement	Total Fixed Revenue	Proposed Fixed Rate
Residential	51,719	398,063,895		620,628	32.05	-	19,891,127	-		19,891,127	100.00%	21,199,336	21,199,336	34.16
GS <50kW	5,989	197,062,409		71,868	33.71	0.0168	2,422,670	3,310,648	57,458	5,675,861	42.68%	6,049,154	2,582,006	35.93
GS >50kW	774	700,592,715	1,773,377	9,288	125.96	5.3438	1,169,916	9,476,572	545,049	10,101,439	11.58%	10,765,796	1,246,860	134.24
Large Use >5MW	1	96,428,283	170,575	12	7,359.96	4.2410	88,320	723,409		811,728	10.88%	865,114	94,128	7,844.01
Street Lighting	15,005	3,347,727	9,302	180,060	0.35	9.8917	63,021	92,013		155,034	40.65%	165,230	67,166	0.37
Unmetered Scattered Load	540	2,947,114		6,480	11.20	0.0139	72,576	40,965		113,541	63.92%	121,008	77,349	11.94
Embedded Distributor	1	41,857,714	103,033	12	-	0.0211	-	2,174		2,174	0.00%	2,317	-	-
	74,029	**1,440,299,857**	**2,056,287**	**888,348**			**23,707,631**	**13,645,781**	**602,507**	**36,750,904**		**39,167,955**	**25,266,845**	

h) Per WNH's 2011 Cost of Service Application, "On November 15, 2006, the Board issued the Cost Allocation Information Filing Guidelines for Electricity Distributors (the "Guidelines"), the Cost Allocation Model (the "Model") and User Instructions (the "Instructions") for the Model. WNH prepared a cost allocation information filing consistent with WNH's understanding of the Directions, the Guidelines, the Model and the Instructions. WNH submitted this filing to the OEB on February 28, 2007."

i) The table below provides WNH's fixed monthly charges from 2005 (actual) to 2021 (proposed) for GS < 50 kW and GS > 50 kW. The 2022-2025 fixed monthly charges have not been provided as WNH does not know the IPI-GDP factor for the forecast years as this information is provided by the OEB.

Year	GS < 50 kW	GS > 50 kW
2005	$ 29.42	$ 179.01
2006	$ 31.32	$ 189.90
2007	$ 31.59	$ 191.54
2008	$ 31.37	$ 190.20
2009	$ 32.15	$ 191.20
2010	$ 30.63	$ 187.01
2011	$ 30.63	$ 162.82
2012	$ 30.96	$ 139.45
2013	$ 31.11	$ 116.22
2014	$ 31.55	$ 117.85
2015	$ 31.96	$ 119.38
2016	$ 31.96	$ 119.38
2017	$ 32.47	$ 121.29
2018	$ 32.76	$ 122.38
2019	$ 33.15	$ 123.85
2020	$ 33.71	$ 125.96
2021	$ 35.93	$ 134.24
2022-2025	N/A	N/A

j) Please see the table below for comparison of proposed fixed rates vs. avoided, directly related and minimum system with PLCC adjustment rates per Cost Allocation. WNH has provided calculations for all rate classes along with the weighted average of GS<50kW, GS>50kW and Large User.

8-ED-6 (j):		Per Cost Allocation			% Difference		
Class	Proposed Fixed Rate	Avoided Cost	Directly Related	Min. System w. PLCC Adj.	Avoided Cost	Directly Related	Min. System w. PLCC Adj.
Residential	34.16	6.18	8.29	23.31	452.7%	312.0%	46.5%
GS <50kW	35.93	11.06	14.26	26.65	224.8%	151.9%	34.8%
GS >50kW	134.24	44.02	56.16	79.02	205.0%	139.0%	69.9%
Large Use >5MW	7,844.01	186.82	229.80	413.94	4098.7%	3313.4%	1795.0%
Street Lighting	0.37	0.54	0.78	6.83	-30.9%	-52.2%	-94.5%
Unmetered Scattered Load	11.94	0.53	0.81	11.69	2152.2%	1373.7%	2.1%
Embedded Distributor	-	29.13	41.47	117.60	-100.0%	-100.0%	-100.0%
Weighted average of commercial and industrial customers					**223.1%**	**150.9%**	**39.1%**

k) Please refer to WNH's response to 3-VECC-25 for updated customer/connection counts per rate class for January – July 2020.

WNH has not provided estimates for 2022-2025 as the customer count will change and the results are outside the scope of this Application.

l) The table below provides the total annual amount of fixed revenue charges for GS < 50 kW, GS > 50 kW and Large User customer class. 2022-2025 fixed revenue charges have not been provided as WNH does not know the IPI-GDP factor for the forecast years as this is provided by the OEB.

	GS < 50 kW	GS > 50 kW	Large User	Total
2018 (actual)	2,295,824	1,105,356	85,813	3,486,993
2019 (actual)	2,331,083	1,122,082	86,843	3,540,008
2020 (forecast)	2,396,376	1,136,663	88,320	3,621,359
2021 (forecast)	2,582,217	1,241,988	94,128	3,918,333
2022-2025 (forecast)	N/A	N/A	N/A	N/A

m) Please refer to the table below.

8-ED-6 (m):	Customer Count		Fixed Charge Floor		Fixed Charge Ceiling		Fixed Charge Proposed		% Difference		
Class	2021 per Load Forecast	Annualized	Avoided Cost	Total 2021 Revenue	Min. System w. PLCC Adj.	Total 2021 Revenue	Proposed	Total 2021 Revenue	Floor	Ceiling	Halfway Point
GS <50kW	5,989	71,868	11.06	794,860	26.65	1,915,282	35.93	2,582,006	224.8%	34.8%	90.5%
GS >50kW	774	9,288	44.02	408,858	79.02	733,938	134.24	1,246,860	205.0%	69.9%	118.2%
Large Use >5MW	1	12	186.82	2,242	413.94	4,967	7,844.01	94,128	4098.7%	1795.0%	2511.4%
Total	6,764	81,168		1,205,960		2,654,187		3,922,994			

8-ED-7

Interrogatory:

Fixed Versus Variable Charges

Reference: Exhibit 8, p. 8

Preamble:
Table 8-5 - Monthly Service Charge Comparison

We note that shifting costs from fixed rates to variable rates would expose WNH to the risk that a portion of those costs may not be recovered if actual demand is below forecast demand. However, shifting costs from fixed to variable rates would also send positive price signals to customers to encourage efficiency and shifting load off the peak. These questions relate only to commercial and industrial rates.

Questions:

a) If the OEB were to order WNH to drop its fixed charges for commercial and industrial customers to below the OEB ceiling, what rate design or other changes could WNH make or seek to make to offset the modest amount of increased demand forecast risk that would be associated with this change?

b) If intervenors were to ask WNH to drop its fixed charges for commercial and industrial customers to halfway between the OEB floor and ceiling, what rate design or other changes could WNH seek to offset the modest amount of increased demand forecast risk that would be associated with this change?

c) Please discuss other ways in which WNH could ensure revenue recovery and protect itself from demand forecast risk aside from reliance on fixed rates.

d) Please discuss the possibility of a true up as a way to insulate WNH from increased demand forecast risk as an alternative to fixed commercial and industrial rates above the OEB ceiling.

e) Would WNH be open to other ways to protect itself from demand forecast risk aside from reliance on fixed rates?

Response:

a) By dropping the fixed service charge to these customers, WNH would need to increase the variable charge to recover the same class revenue requirement. There are no opportunities within rate design to offset the increased demand forecast risk associated with this change. WNH could attempt to decrease the forecast demand associated with these customers in the load forecast model, but that would contradict the assumptions used in the current load forecast which base growth on historical trends.

b) Please see response to part a).

c) Aside from rate design and model impacts, WNH could propose the creation of a WNH-specific load forecast variance account similar to the one proposed in the initial Application for COVID-19 impacts per Exhibit 3 p.15. Another possibility would be to request a higher return on equity to offset the risk.

d) The variance account described in part c) above could act as a true-up where actual energy consumption or demand differ materially from the load forecast.

e) WNH is open to the discussion of other ways to reduce demand forecast risk.

EXHIBIT 2 – CAPITAL RATE BASE

2-ED-8

Interrogatory:

Integrated Resource Planning

Reference: Exhibit 2, Attachment 2-2, DSP

Questions:

a) Please describe the processes at WNH to implement Integrated Resource Planning, with a particular focus on the consideration of non-wires solutions to system needs. Please file any internal documentation outlining said processes.

b) How does WNH ensure that non-wires options are identified and considered early enough in the planning process to ensure that they can be implemented in lieu of supply-side solutions where cost effective?

c) How does WNH calculate the net costs/benefits of non-wires solutions when comparing them to supply-side option? Please include all kinds of distributed energy resources in your answer, including energy efficiency, demand response, storage, and distributed generation. Please include a description of how avoided energy costs (e.g. the value of future energy savings from energy efficiency) are considered when comparing wires and non-wires solutions.

d) Does WNH always study potential non-wires solutions to system needs in its capital planning processes? If not, please explain the screening criteria that WNH uses to determine whether an assessment of non-wires solutions is warranted.

e) Does WNH agree that it is appropriate in certain circumstances for an LDC to procure or contract for distributed energy resources where doing so would be a more cost-effective alternative in comparison to a traditional supply-wide investment?

f) Does WNH agree that it is appropriate for it to earn a return if it is able to avoid a capital investment in wires or transformers through distributed energy resources such as energy efficiency, demand response, or storage?

g) Does WNH agree that it is important to give LDCs an incentive to adopt non-wires solutions to system needs where those solutions are more cost-effective?

h) Does WNH agree that the difference between the financial returns from wires and non-wires solutions creates a disincentive to implement non-wires solutions?

i) Has WNH sought approval to earn a return for avoiding a capital investment in wires or transformers through distributed energy resources such as energy efficiency, demand response, or storage?

j) How does WNH believe a financial return should be calculated for avoiding a capital investment in traditional supply-side infrastructure through distributed energy resources such as energy efficiency, demand response, or storage?

Response:

a) WNH does not currently have any formal documentation on implementation of Integrated Resource Planning at this time.

As mentioned in Appendix J of Exhibit 2, Attachment 2-2, DSP WNH has no current system capacity constraints and believes that supply and capacity levels are adequate to sustain the forecasted load growth to the end of 2025. Some localized constraints may occur over time, are generally driven by a change in customer demand and will be addressed on a case by case basis.

WNH is currently working with a customer who is considering a large expansion, potentially increasing the feeder loading by approximately 50%. WNH is taking the following steps to work through possible solutions:

- WNH has determined that the existing electrical infrastructure cannot support the forecasted demand from the expansion and increased capacity is required.
- WNH's Key Account Managers have reached out to the customer to discuss energy efficiency and/or possible behind the meter generation opportunities as part of the expansion to limit impact on WNH's distribution system.
- WNH has partnered with Opus One to use their GridOS software to analyze the feasibility of non-wire solutions to address the capacity increase needed for the customer. This software is expected to help WNH evaluate the technical and cost feasibility of a traditional "wires" upgrade, compared to a non-wires solution, as well as a hybrid solution using a mixture of both options. Depending on the results of this analysis, WNH may complete a more in depth study on exact type(s), size, location(s), constructability and implementation timing of non-wires alternatives.
- This should allow WNH to present the customer with economically feasible option(s) to address the capacity increase to allow them to make an informed decision on the best way to service their expansion.

b) WNH's former Conservation and Demand Management department, which has now transitioned into the role of Key Account Managers have developed relationships with many customers in WNH's service territory. This means that generally they are informed of large upcoming projects and can involve other departments within the company as needed. This allows WNH to be part of the project early in the planning stages, which allows more time to examine possible solutions and alternatives. In absence of this function, WNH is often being notified

at a time of new service connection request, at which time usually only traditional “wires” solutions can meet the customer’s timing requirements.

c) As outlined in a), while there is no current formal process for this, one of the key features presented to WNH of Opus One’s GridOS software is the economic feasibility study that it can provide when examining possible non-wire solutions. The software is expected to analyze different ways to alleviate system constraints, examining traditional “wires” solutions, non-wires solutions, or a hybrid of the two. The software is also able to use daily demand profiles to examine if the constraint is short term in nature, in which case energy storage for peak shaving could potentially address the need, or if a more permanent upgrade is required to address longer duration capacity needs. The software also accounts for the ongoing operational cost of the different solutions to determine the run-cost of each scenario over multiple years.

Predicted avoided energy costs (e.g. energy efficiency) would be accounted for when forecasting the facility’s demand increase. Any reductions due to energy efficiency would be captured by reducing the demand increase of the new service.

d) When forming and selecting capital projects, WNH prioritizes those that meet overlapping needs. For example, when possible, WNH attempts to combine capacity upgrades and expansions with depreciated pole line rebuilds to keep the cost of the upgrade portion minimal to the overall cost of the project.

The typical case where WNH would assess the viability of non-wires solutions is if there is a localized large demand increase with no existing infrastructure in place to service the increased load, or if the existing infrastructure is in good condition but of insufficient capacity to service the existing load. For current and future projects that fit this criteria, WNH plans to use the steps in a) to determine the best way to service the load for WNH and the customer.

(e) WNH considers all potential capital investment alternatives, including when applicable, distributed energy resources and evaluates whether or not such capital investments are cost-effective and do not compromise the delivery of a safe and reliable electricity distribution service.

(f) The OEB has an ongoing consultation on Distributed Energy Resources (EB-2018-0288) and Utility Remuneration (EB-2018-0287). These consultations are aimed to develop a regulatory framework that facilitates investment and integration of distributed energy resources and how to remunerate utilities to better support their pursuit of least cost solutions. WNH is closely monitoring these consultations for guidance. WNH believes that the OEB consultation is a more appropriate forum for any comments on generic policy issues.

(g) Please see response to f) above.

(h) Please see response to f) above.

(i) To date, WNH has not sought approval to earn a return for avoiding a capital investment in wires or transformers through distributed energy resources.

(j) Please see response to f) above.

2-ED-9

Interrogatory:

Reference: Exhibit 2, Attachment 2-2, DSP, p. 233
See also Appendix F - KWCG IRRP Scoping Assessment Outcome Report (2019), p. 9-10

“Both Waterloo North Hydro (WNH) and Energy+ have identified the need for new capacity in the next five to 10 years, tied, in part, to demand from development of the “East Side Development Lands.” The two new potential stations for each LDC, as well as Preston TS (if expansion is possible) are all theoretically positioned to service future load growth. New capacity in the area could be optimized to address the growth needs of both LDCs. The integration exercise will also consider Preston TS end-of-life replacement plans and potential optimization with incremental capacity needs. This capacity study will consider whether the Preston TS can be expanded to supply future load growth rather than deferring the end-of-life transformer replacement plans slated to be in service for 2025-2026. The study group recommends that need for new capacity for WNH and Energy+ be addressed in the IRRP in consideration of capacity at Preston TS.”

Questions:

a) Please provide a high-level estimate of the costs for WNH to build or upgrade facilities to meet the above-referenced need.

b) Please provide any studies or internal documents that WNH possesses regarding the above-referenced need.

c) Please discuss the possibility of meeting the above-referenced need via i) renewable generation or storage situated in or around the East Side Development Lands; ii) geothermal heating and cooling, iii) targeted energy efficiency measures; and/or (iv) other non-wires alternatives.

d) Please discuss what role WNH could play with respect to the non-wires solutions mentioned in c) as a means to cost-effectively reduce distribution costs. Please include the possibility of providing financial contributions or incentives that would make a cost-effective non-wires solution possible.

e) Please discuss the lead time that would be associated with the following non-wires solutions to distribution constraints: i) local renewable generation; ii) local energy storage; iii) geothermal heating/cooling; and (iv) targeted energy efficiency measures.

f) If WNH were to pursue one of the non-wires solutions noted above, what OEB approvals would be required? Could WNH seek pre-approval in this proceeding for one of those non-wires solutions on the condition that the cost be less than the distribution investment in question?

Response:

a) As noted in Appendix J of the DSP, WNH System Supply and Capacity Study, there are no system capacity constraints forecasted at this time. The KWCG IRRP is evaluating the total projected long-term needs for the area, which spans both WNH and Energy+'s service territories. An estimate of costs is unknown at this stage. It will be prepared at an appropriate time pending the outcome and recommendations of the KWCG IRRP.

b) The most recent information is publically available on IESO's website as part of the KWCG IRRP. The regional demand forecast can be found in the 2015 KWCG Area IRRP report dated April 28, 2015. This is being revised as part of the current IRRP cycle, however, the updated regional forecast has not been finalized at this time.

c) As discussed above in part a) there are no system capacity constraints forecasted within 2020 – 2025 for which investments in a new station would be required, hence detailed planning activities are not underway at this stage. However, WNH has given some consideration to future needs. Please see below for WNH's current thoughts on each of the individual areas.

i. WNH is currently monitoring the OEB proceedings on this topic as well as the outcome of the IESO York Region NWA Demonstration Project to determine the viability in its service territory should an opportunity arise.

ii. Geothermal heating and cooling is outside the mandate of LDCs and as such WNH has not considered this.

iii. As discussed in 2-ED-8 part a) WNH relies on their Key Account Managers to work with customers to discuss energy efficiency and/or possible behind the meter generation opportunities to limit impact on WNH's distribution system.

iv. As discussed in 2-ED-8 parts a) and c) WNH is currently working with a customer on a possible large expansion, and as part of this, WNH is developing an evaluation process for utilizing non-wires alternatives to meet system needs.

d) WNH does not believe that the current regulatory environment allows for the subsidization of a non-wires solution. In addition, if the non-wires solution was truly cost effective, there would be no need for subsidization.

Please refer to answers above for information on what role WNH could play in non-wires alternatives.

e) As discussed above in part a) there are no system capacity constraints forecasted within 2020 – 2025, therefore WNH does not want to speculate what the lead times could be. In addition to this, WNH does not have experience in sourcing or installing non-wires solutions.

f) Since there are no current needs based on existing system capacity, and therefore, no way to know what an appropriate non-wires solution, if any, could be. WNH does not want to speculate what OEB approvals would be required.

2-ED-10

Interrogatory:

Reference: Exhibit 2, Attachment 2-2, DSP, Appendix H

Question:

a) Please provide a breakdown of the generators connected to the WNH system by type of fuel (gas, solar, wind, etc.), including the total kW of each type.

Response:

a) Please refer to the DSP, s 1.3.9, p. 39, Table 1-11: WNH Generator Connections by Type.

2-ED-11

Interrogatory:

Community Energy Investment Strategy

Reference: Exhibit 2, Attachment 2-2, DSP

Questions:

a) Please file a copy of Waterloo Region's Community Energy Investment Strategy.

b) Please discuss WNH's role, if any, with respect to each of the energy opportunities outlined in Appendix A of Waterloo Region's Community Energy Investment Strategy.

c) Please discuss any commitments that WNH has made (e.g. to Waterloo Region) in relation to its Community Energy Investment Strategy. Please file any associated correspondence.

d) Please file a copy of Waterloo and Waterloo Region's climate commitments.

e) Please discuss WNH's anticipated role in achieving these commitments, if any.

f) Please complete the following table:

WNH Service Area Electricity Demand and GHGs					
	2020	2021	…	2049	2050
Annual Electricity Demand (kWh)					
Carbon Intensity of Electricity (CO2e/kWh)[5]					
GHGs from Electricity Use (CO2e)					

Please make assumptions as necessary and state all assumptions. If the calculations are a challenge, please answer the question on a best-efforts basis and with any caveats as necessary. If certain parts of the answer cannot be estimated, please explain why and complete as much of the answer as possible. If an answer cannot be provided for the complete period, please provide an answer for as far into the future as feasible. If the electricity demand cannot be forecast beyond a certain year (e.g. 2030), please assume that demand remains at that year's levels going forward. With respect to the carbon intensity of electricity,

[5] Per the IESO's January 2020 Annual Planning Outlook.

please assume that it remains constant for years beyond the last year for which an estimate is available.

g) Please discuss whether the figures in the above table are consistent with Canada's and Waterloo Regions' GHG emissions reductions targets. If not, please discuss what steps WNH could take to ensure the gap is addressed as cost-effectively as possible, and whether efforts in that regard should occur over 2021-2025.

Response:

a) This initiative was led by the Region of Waterloo to integrate energy management considerations into wide scale regional planning such as economic development. The Region of Waterloo is not a Shareholder in WNH or any other utilities in the area; WNH has supported the CEIS as part of community relations. Attachment 19 - Community Energy Investment Strategy.

b) WNH's role in the Energy Opportunities in Appendix A of the WR CEIS is mostly to be part of a governance committee that was formed as an outcome of this report, and to share in financial support for a staff person dedicated to the CEIS. Planned support to inform customers about CDM initiatives ended when the government eliminated LDC involvement in CDM. WNH is also monitoring developments in transitioning its fleet to electric vehicles when it is financially and operationally effective. WNH will also assist the staff person to develop educational resources on energy use.

Most of the opportunities are in the Region's, the municipalities', or the unregulated space to implement.

c) WNH committed to three years support for the staff person and associated expenses. The commitment was $21,000 in 2018 to 2020. There are no costs in

the Test Year. In addition, the CEO of WNH is a member of the Governance Committee.

d) The City of Waterloo and the Region of Waterloo climate commitments are contained in the Waterloo Region Climate Action Plan. Collectively all the municipalities in the Region proposed to reduce the community's greenhouse gas (GHG) emissions to 6% below 2010 levels by 2020. Attachment 20 - Community Climate Adaptation Plan.

e) WNH supported the plans through SaveOnEnergy programs and CDM initiatives for customers. Due to the changes by the province, as of 2019 WNH is no longer able to do this. As Climate Action WR transitioned to the CEIS, WNH has provided the support in b) and c) above. Corporately, WNH pledged a commitment to reduce its GHG emissions by 20% over 2010 levels. WNH achieved that commitment.

f)

WNH Service Area Electricity Demand and GHGs		
	2020	**2021**
Annual Electricity Demand (kWh)	1,481,145,611	1,482,761,312
Carbon Intensity of Electricity (CO2e/kWh)[1]	37.4	32.9
GHGs from Electricity Use (CO2e) Megatonnes	0.055	0.049

*(1) Per the IESO's January 2020 Annual Planning Outlook data tables, the following data was used to calculate the carbon intensity.

- Figure 2: Reference Case - Energy Demand (TWh)

- Figure 32: Electricity Sector GHG Emissions, Historical and Forecast (Megatonnes CO2e) Reference Case.

WNH does not have forecasted kWh beyond 2021.

g) Canada's GHG reduction target is housed in Attachment 21 - Pan-Canadian Framework on Clean Growth and Climate Change. The target is to reduce GHG emissions by 30% between 2005 and 2030. WNH believes that the figures above support Canada's and Waterloo Regions' GHG emission reduction targets.

2-ED-12

Interrogatory:

Heat Pumps

Reference: Exhibit 2, Attachment 2-2, DSP

Preamble:
An expert report filed in EB-2016-0004 by Dr. Stanley Reitsma, P. Eng., outlined significant benefits to the electricity system in reducing peak demand. See page 5 to 13. For example, Dr. Reitsma concludes:

"Though geothermal relies on electricity as an input (to power the pump), geothermal system actually reduces electricity demand in the summer, and increases it in the winter, relative to traditional methods of heating and cooling (heating with fossil fuels and cooling

with traditional AC systems). For Ontario, a summer peaking jurisdiction, a greater reliance on geothermal would reduce peaking power needs and also reduce surplus baseload generation. Coincidentally, the load profile of a geo system is similar to the production profiles of Ontario wind energy facilities."

“For the cooling of buildings, Geo HP’s use about half the electricity to operate compared to air source heat pumps and AC systems, and, geo’s electrical demand doesn’t spike as it gets hot outside, since the ground loop temperature remains relatively unchanged. They can reduce the “heat wave” electricity system demand spikes by up to 75%.”

Questions:

a) Does WNH agree with the comments in the above-referenced report regarding the benefits that geothermal systems can provide to the electricity system, including a reduction of peak demand? Please explain.

b) Does WNH agree that the expansion of geothermal systems would reduce peak demand on WNH’s system, on which distribution system capacity is based?

c) Does WNH agree that geothermal systems have the capacity to provide important benefits to the electricity distribution system, especially in comparison to traditional baseboard heating?

d) Does WNH agree that the benefits of geothermal systems are not reflected in the distribution costs paid by residential consumers because those charges do not vary based on coincident peak demand?

e) Does WNH agree that increases in heat pumps would assist Waterloo Region in achieving its GHG reduction targets?

f) Would WNH agree to study the possibility of offering customers with geothermal systems a reduction in their distribution charges that would approximately reflect the benefits those customers provide to the distribution system? Assume the overall rate structure would continue to make WNH whole for its revenue requirement.

g) Please provide WNH's best information on the number and proportion of its customers with i) electrical, ii) natural gas, iii) propane, (iv) oil, (v) wood, and (vi) other kind of space heating.

Response:

a) WNH is unable to opine on the comments in the above-referenced report by Dr. Stanley Reitsma, P. Eng. WNH was not a participant in EB-2016-0004, which was a generic hearing related to cost recovery mechanisms for natural gas expansion to rural and remote communities. WNH has not formulated any opinion on the above-referenced report, its author or the author's expertise. WNH takes no position on the accuracy or inaccuracy of the views expressed in the report as it has not performed and in-depth review of the report and is limited in its ability to do so in accordance with the timelines and context of this proceeding, which is WNH's 2021 Cost of Service Application. In addition, the scope of the excerpted comments relates to the province-wide bulk power system. As such, it would be more appropriate to defer to entities with such expertise, for example, the IESO.

b) WNH is unable to comment on whether or not the expansion of geothermal systems would reduce peak demand on WNH's system as WNH has not conducted relevant studies on the expansion of geothermal systems within the utility's service territory and customer base.

c) WNH is unable to comment on whether or not geothermal systems have the capacity to provide benefits to the electricity distribution system, such as in comparison to traditional baseboard heating as WNH has not conducted relevant studies on geothermal systems' capacity to provide benefits to the electricity distribution system such as in comparison to traditional baseboard heating.

d) WNH has not formulated any opinion on this topic at this time and in addition, the question is not relevant to the matters at issue in this Application.

e) WNH has not formulated any opinion on this topic at this time and in addition, the question is not relevant to the matters at issue in this Application.

f) WNH is reluctant to comment on this question as the question appears to be based on the assumption that offering customers with geothermal systems a reduction in their distribution charges would be compatible with OEB's rate-making principles and rate-setting options. WNH believes that this is a matter more suitable for examination by an OEB generic hearing or policy consultation.

g) WNH does not collect or have access to information on the number and proportion of its customers with different heating types.

2-ED-13

Interrogatory:

Reference: Exhibit 2, Attachment 2-2, DSP

Questions:

a) Please confirm the percent of greenhouse gas emissions in Waterloo Region (or the WNH service territory) that are from the consumption of natural gas.

b) Please describe potential roles that WNH could play in relation to the implementation of electric heat pumps as an alternative to natural gas heating.

c) How many new homes and businesses are forecast to be built in WNH's coverage area in the next 10 years? If available, please provide an annual breakdown.

d) How many new customers does WNH expect to hook up in the next 10 years? If available, please provide an annual breakdown.

e) What assistance could WNH provide to developers to promote the installation of electric heat pumps instead of natural gas furnaces in new construction?

f) Would WNH benefit from regulatory changes in order to play a greater role in promoting the expansion of electric heat pumps in lieu of natural gas? If yes, what are those potential changes?

g) Please comment on the report by Ralph Torrie estimating that electricity demand could decline if all heating was converted to electric heat pumps and energy retrofits were increased: https://www.corporateknights.com/channels/built-environment/recovering-stronger-building-low-carbon-future-green-renovation-wave-15875463/.

Response:

a) WNH does not collect or have access to information regarding natural gas consumption and greenhouse gas emissions in Waterloo Region (or the WNH service territory. In addition, the question is not relevant to the matters at issue in this Application.

b) WNH does not see itself playing a role in the implementation of electric heat pumps as an alternative to natural gas heating.

c) Please refer to DSP, s 2.1.1.2 Key Element - System Access, Table 2-2 Customer Connections. WNH does not have forecasts beyond 2025. The number of

Subdivision Lots and Commercial Services in the table represent forecasted homes and businesses.

d) Please refer to DSP, s 2.1.1.2 Key Element - System Access, Table 2-2 Customer Connections. WNH does not have forecasts beyond 2025.

e) WNH does not believe that it should be subsidizing developers to promote the installation of electric heat pumps instead of natural gas furnaces in new construction.

f) WNH is not able to comment. It has not studied this matter and the particulars of any regulatory changes are unknown at this time.

g) WNH is unable to opine on the comments in the above-referenced report by Ralph Torrie. WNH has not formulated any opinion on the above-referenced report, its author or the author's expertise. WNH takes no position on the accuracy or inaccuracy of the views expressed in the report as it has not performed an in-depth review of the report and is limited in its ability to do so in accordance with the timelines and context of this proceeding, which is WNH's 2021 Cost of Service Application.

2-ED-14

Interrogatory:

Reference: Exhibit 2, Attachment 2-2, DSP, Appendix J, p. 7

Questions:

a) Would WNH have sufficient capacity over 2021-2025 if i) 2% or b) 5% of its customers converted from natural gas to an air-source heat pump for home heating

each year? Please make and state any assumptions needed to answer this question.

b) If not, would WNH ensure that sufficient capacity is put in place?

c) Please comment generally on WNH's readiness for the possibility of a shift in heating from natural gas to electric heat pumps (e.g. driven by federal decarbonization subsidies).

Response:

a) WNH's service area homes are predominantly gas heated. It is not aware of an escalating growth in heat pump adoption by gas customers. Information publically available on the Government of Canada, Canada Energy Regulator /Energy Information/ Market Snapshot website and the Stats Canada Census Profile, 2016 Census websites, supports an annual growth rate in Ontario between 2000 and 2016 at only 0.2% (latest information available). Based on such a low growth rate, WNH has not prioritized the study of heat pump adoption and its impact on WNH's distribution system. WNH does not have enough data regarding the various size ranges, operating characteristics, load profiles, and supplemental heating options to formulate a response.

b) WNH's role as an LDC is to ensure that it serves all of its customer's load requirements in a prudent cost effective manner, consistent with the OEB's, governing codes, rules and regulations.

c) WNH is unable to speculate on the impact of policies that have not even been formulated.

2-ED-15

Interrogatory:

Electric Vehicles

Reference: Exhibit 2, Attachment 2-2, DSP, Appendix J, p. 7

Preamble:

"WNH forecasts sufficient capacity in its population of distribution transformers over the 2021- 2025 forecast period to serve the growing load, including the connection of electric vehicles. Some localized constraints may occur over time and will be addressed on a case by case basis."

Questions:

a) Please elaborate on the above statement.

b) If localized constraints occur, please discuss how long it might take to address them on a case by case basis.

c) Would WNH commit to ensure that none of its customers are prevented or delayed in installing electric vehicle charging stations due to distribution system constraints? If not, what commitments would it be willing to make in this regard?

Response:

a) Referring to Exhibit 2, Attachment 2-2, DSP, s 1.3.5 Energy & Demand, for the period 2020 – 2025, WNH is forecasting an annualized growth rate of 1.0% in summer demand and 0.2% in winter demand. Based on this growth rate and the available distribution transformer capacity illustrated in Exhibit 2, Attachment 2-2, DSP, Appendix J, s 4.6, Figure 4-1, WNH's Distribution Transformer Utilization

(%), the compounded annualized growth rate of 1.0% is forecast to impact approximately 1% of the transformer population over the forecast period. Capacity is location specific and load growth is not expected to be uniform across WNH's customer base, therefore, some localized constraints can be expected to develop.

b) The length of time to address the constraint will be determined by the magnitude and location of the constraint. WNH's underground system has been designed such that a simple transformer change can provide a 50% increase in local customer capacity. WNH's overhead system has equal or greater flexibility when it comes to transformer capacity upgrades. A transformer change may require 7-10 days to complete. If a customer's service wires need to be increased, the delay can be longer due to location, excavation, and weather impacts. New services which require design and construction will take longer depending on site specific conditions.

c) WNH cannot make the commitment that none of its customers will ever be delayed in installing electric vehicle charging stations due to distribution system constraints. Connection of electric charging stations are treated in a fashion similar to all System Access projects which receive the highest priority. Please refer to DSP, s. 4.2.2.3, System Access.

2-ED-16

Interrogatory:

Electric Vehicles

Reference: Exhibit 2, Attachment 2-2, DSP, Appendix J, p. 7

Questions:

a) How many electric vehicle charging stations are installed by WNH customers now and how many are forecast for each year from 2021 to 2025? Please provide a high-end and low-end estimate.

b) Is WNH confident that it is making all the investments needed to facilitate increases in electric vehicles and electric vehicle charging stations even if its high-end forecasts come to fruition?

c) Have any WNH customers been unable to install an electric vehicle charging station (e.g. a level 3 station) due to constraints on WNH's distribution system? If yes, how many customers each year?

d) Have any WNH customers been delayed in installing an electric vehicle charging station (e.g. a level 3 station) due to constraints on WNH's distribution system? If yes, how many customers each year?

e) Is it WNH's goal that all customers will be able to install and use electric vehicle charging stations if they wish to do so? If not, please detail WNH's targets in this regard.

f) Please list and describe the investments that WNH intends to make over 2021-2025 to ensure readiness for electric vehicles.

g) Please list and describe the ways in which WNH is currently able to use the battery in electric vehicles as a distributed energy resource to provide a service that benefits the distribution system.

h) Please list and describe the ways in which it is possible to use the battery in electric vehicles as a distributed energy resource to provide a service that benefits the

distribution system, focusing only on those which WNH is not yet capable of undertaking.

i) Is WNH able to capitalize on the storage capacity of electric vehicles to reduce distribution system costs by: i) communicating directly with charging stations to reduce load during peak periods; ii) communicating directly with charging stations to allow power to be drawn from batteries during peak periods; iii) drawing energy from car batteries connected to charging stations during peak periods; and (iv) communicating directly with charging stations to ensure energy is drawn from the LDC's system at the optimal times? If not, please explain what additional steps WNH is willing to commit to take to explore and implement these things.

j) Is WNH willing to offer customers special rates to encourage the expansion of electric vehicles?

k) Is WNH willing to further explore steps it can take to speed up the implementation of charging stations in hard-to-service locations, such as for on-street parking in Waterloo?

Response:

a) WNH is aware of 51 level-2 and 7 level-3 charging stations installed in its service area. WNH has no data on charging stations installed at private residences.

It is expected that 33 charging stations will be installed across the Region of Waterloo over the next year. Unfortunately, WNH is not yet aware how many will be located within its service territory. WNH has no further information on future installations.

b) WNH constantly monitors its energy and demand growth and is confident that it is making all the investments needed to facilitate all increases in load over the forecast period of which electric vehicles is a part.

c) No.

d) No.

e) Please refer to WNH's response in interrogatory 2-ED-14 b. WNH has not formulated targets with regards to electric vehicle charging stations connections.

f) There are no investments specifically related to electric vehicles over the forecast period in the current DSP. Please refer to WNH's response in interrogatory 2-ED-14 b. and part b) of this IR.

g) WNH is not currently able to use the battery in electric vehicles as a distributed energy resource to provide a service that benefits the distribution system.

h) WNH has not yet studied whether using the battery in electric vehicles as a distributed energy resource is cost beneficial to WNH customers. Also, please refer to WNH's response in interrogatory 2-ED-8 f.

i) WNH has not conducted relevant studies on using the storage capacity of electric vehicles to reduce distribution system costs by methods outlined in parts i) to iv) and whether they are cost beneficial to WNH customers. As such, WNH is not able to commit on these technologies at this time.

j) It is not within the current regulatory framework for WNH to offer customers special rates to encourage the expansion of electric vehicles.

k) WNH's public consultations did not reveal customer interest to speed up the implementation of charging stations and would not invest in doing so at this time.

EXHIBIT 7 – COST ALLOCATION

7-ED-17

Interrogatory:

Standby Charges

Reference: Exhibit 7, p. 13

Preamble:

Staff Discussion Paper, EB-2015-0043, Rate Design for Commercial and Industrial Electricity Customers: Aligning the Interests of Customers and Distributors, March 31, 2016, p. 12:

"Current OEB staff thinking is that the underlying rate design should be readily understandable to the traditional customer and reward the active customer for reducing one of the primary cost drivers i.e. peak capacity. Reducing peak capacity will lower the distributor's investment needs to meet peak capacity and save money over time. Building this driver into the rates will align the interests of the customer and the distributor. The expectation is that a rate design that addresses underlying cost drivers will lead to each customer paying their fair share of the system. The intention is to avoid creating specialized rate classes for load displacement generation and net metered customers and charges like standby rates that can be a barrier to customer choice."

Questions:

a) Please comment on WNH's proposed standby rates in relation to the Board Staff's statement that standby rates "can be a barrier to customer choice."

b) Please confirm that WNH's standby rates mean that customers who assist in reducing peak demand are not fully compensated for the full benefit to the distribution system they provide. If WNH disagrees, please explain.

c) Please confirm that less than 1/5th of Ontario's LDCs have standby rate classes.

d) Please provide a reference to the most recent occasion on which the OEB approved a new LDC standby charge for an LDC that previously had no standby charges.

e) WNH's proposed standby charge would be based on a contracted level every month. Please discuss an alternative option that would recover the capacity payment on average over the year.

Response:

a) Standby rates help to ensure more informed customer decisions on the true cost of the system. WNH will not comment on Board Staff's statement.

b) Standby rates help to ensure more informed customer decisions on the true cost of the system. As noted in Exhibit 7 p. 13, "A Standby Charge is billed by a distributor to a customer with load displacement facilities behind its meter to compensate the distributor for the cost of maintaining the ability to accommodate the total load of the customer at any time." Currently, and over the forecast period, WNH is not expected to have constraints on its distribution system that would benefit from load displacement generation (LDG). Large amounts of LDG on WNH's system could adversely impact distribution system operation, increasing WNH's costs. Customers with LDG are motivated to generate at time of provincial peak, not at the time of WNH system peak. The two are often non coincident. Generation during WNH's non peak times would not be beneficial to WNH.

Constraints if they do occur, are situational and locational. WNH would need the ability to dispatch individual LDG to have any benefit. Not all generation would have an ability provide a benefit to WNH due to connection location on the distribution system.

c) Based on the referenced report, it states “Eleven Ontario distributors currently have standby rate classes. Distributors have applied for these charges only if they felt it was needed in their service area.”

d) WNH notes that the most recent approved standby rates that it is aware of was Niagara-on-the-Lake’s COS Application for May 1, 2019 Rates (EB-2018-0056).

e) WNH did not consider an alternative that would recover the capacity payment on average over the year.

7-ED-18

Interrogatory:

Reference: Exhibit 7, p. 13

Preamble:
“…WNH has determined that there will be ten load displacement customers within its service territory who from time to time require power from WNH, and will require capacity to exist for their load when their generation is off.”

Questions:

a) Please complete the following table i) for the ten customers referenced above and again for ii) the customers that WNH forecasts will install load displacement over 2021-2025 if such a forecast exists.

Load Displacement Customers – Impact on System Peak Demand					
	2015 (actual)	2016	…		2025 (forecast)
Peak Demand (kW)					
Coincident Peak Demand (kW)					
Installed Load Displacement Capacity (kW)					

b) Please provide a breakdown of the total load displacement capacity (kW) of the ten customers referenced above by type (storage, solar, gas, etc.).

c) If it differs from b), please provide a breakdown by of the total load displacement capacity by type (storage, solar, gas, etc.) forecast to be connected to the WNH system by 2025.

d) Please provide quantify and discuss the degree to which WNH's load displacement customers have reduced the peak demand on WNH's system in the past and are forecast to do so in the future when considered in the aggregate.

e) Please provide a forecast of the revenue that WNH believes it will be unable to recover if it does not receive approval for its proposed standby changes. Please make and state all assumptions as necessary. Please provide an estimate for each year from 2021 to 2025 and in total.

f) Please provide copies of the communication from and to customers referred to on page 15 with identifying information redacted.

g) How many WNH customers are considering investments in load displacement via batteries or renewable resources over 2021 to 2025?

h) What impact will WNH's standby charges have on the economics of distributed energy resources?

i) Board Staff has noted that coincident peak demand charges eliminate the need for specialized charges for distributed generation. Would WNH consider implementing a coincident peak demand charges in lieu of standby charges?

j) Please discuss whether WNH could ensure it recovers its revenue requirement by addressing load displacement in its load forecast.

k) Please discuss other options for WNH to recover its revenue requirement while still fully incentivizing customers for the benefits they provide the distribution system by reducing peak demand.

l) If a load displacement customer is able to commit that it will not draw from the system at the time of the system peak (e.g. by scheduling maintenance appropriately), would WNH agree that the customer need not pay a standby charge?

m) Although a single load displacement customer may require electricity from time to time, it is presumably unlikely that this demand would occur from all load displacement customers at the same time. Please discuss whether and how this would impact the capacity requirements associated with load displacement at an aggregate level.

Response:

a) As described in part g) below, at the time of the Application WNH had 10 customers planned to have load displacement facilities. That number has increased to 11 and they are all incorporated into the table below.

The table shows the combined peak load demand of these 11 facilities, the combined load demand of these facilities at time of WNH system peak, and the total installed nameplate load displacement capacity at the end of each year.

Load Displacement Customers - Impact on System Peak Demand							
	2015	**2016**	**2017**	**2018**	**2019**	**2020**	**2021 (forecast)**
Total Peak Demand (kW)	19,624	19,950	18,599	18,903	19,045	17,387	17,565
Total Coincident Peak Demand (kW)	17,628	18,181	17,957	17,902	16,990	15,402	13,742
Installed Load Displacement Capacity (kW)	**0**	**0**	**0**	**587**	**3,057**	**9,387**	**17,577**

b) Solar:412kW
Battery Storage: 13,260 kW
Co-Gen (CHP): 820kW
Organic Rankine Cycle: 125kW
Natural Gas Generator: 2,000kW
Natural Gas Generated Steam: 960kW

c) Please refer to WNH's response to 2-CCC-27.

d) Only one load displacement customer, which was commissioned in 2019, has metered generation output. This allows WNH to confirm that the battery was not in use at the time of the 2019 or the 2020 WNH system peak. The remaining commissioned load displacement projects combined, account for less than 600kW in name plate ratings, and are not currently metered. Therefore, WNH is unable to quantify their impact with absolute certainty. Based on assumed usage across unmetered generation in WNH's service territory, it was estimated to be 273 kW in 2019 (Table 1-8 Appendix H of Exhibit 2, Attachment 2-2, DSP).

Load displacement generation installed for the sole purpose of Global Adjustment avoidance accounts for 15.26 MW or 87% of all forecasted load displacement projects by 2021. While WNH's peak has generally occurred on the same day as many of the IESO top ten peaks since 2016, they have occurred at different times of the day, sometimes as much as 3 hours apart. This means that while it is likely that these customers would run their generation the same day as WNH's peak, there is no certainty that the time of day will overlap. Since battery storage solutions are generally designed to discharge for no more than two hours at full capacity and slowly recharge during periods of light loading, WNH does not expect load displacement customers with battery storage operated for provincial peak avoidance to have a notable impact on the WNH system peak if operated in the manner described.

As more load displacement projects are installed, WNH expects its system peak to be reduced by customers installing solutions that are designed to run continuously to shave the facility's peak, which will inherently lower WNH's peak. In 2021 WNH expects the system peak reduction from load displacement customers to be just under 4MW.

e) Based on the revised load forecast per response to 7-Staff-65, in absence of a standby charge, WNH anticipates specific reductions due to load displacement of

17,052 kW in 2021. This would translate to lost revenues of $96,719 per the table below.

Class	2021 kWh Reductions	2021 kW Reductions	Proposed Variable Rate	Lost Revenues
GS>50kW	12,286,728	17,052	5.6750	96,770

f) WNH has included the two letters for standby rates to customers who A) intended to offset their peak continuously and B) for customers who are installing generation or storage currently for the purpose of GA avoidance in Attachment 22 a) and Attachment 22 b) respectively. The communication received from a customer who received Letter A is included in Exhibit 7 p. 15.

g) At the time of the Application, WNH had 10 customers who plan to have load displacement (including battery storage facilities) for January 1, 2021. Five of these customers intend to offset their peak continuously and five are installing generation and storage for the purpose of GA avoidance. Subsequent to the Application filing date there is an additional customer installing generation and storage for the purpose of GA avoidance. WNH does not know if other customers are considering investments in load displacement via batteries or renewable resources over 2021 to 2025.

h) Standby charges will help customers make informed decisions on the true economics of distributed energy resources.

i) The Staff Discussion Paper referenced above addresses several options that were being considered by OEB Staff in 2016. The more recent Staff Report to the Board on February 21, 2019 does not discuss the option that was referenced above. WNH continues to monitor EB-2015-0043. WNH is requesting standby charges as part of this Application. If the OEB finalizes a new Rate Design for Commercial and

Industrial Electricity Customers, WNH will comply with the policy change at that time.

j) Any approach that attempts to use load forecast adjustments would have the effect of shifting the fixed costs of providing standby power services to customers with load displacement onto other customers in the same rate class, which in WNH's view is neither just nor reasonable.

k) WNH has not considered other options.

l) As part of the proposed methodology, WNH and the customer will determine the contract that can be agreed upon. This may include giving the customer the ability to contract out of standby service, and thereby avoid the standby charge, if they do not actually need WNH to provide standby service.

m) As discussed in d) the load displacement customers whose installation is for the purpose of Global Adjustment avoidance will require electricity the majority of the year as their facility's peak, and in turn, WNH's peak, is not expected to be impacted by their installation, given the limited amount of time these facilities will run each year.

The remaining load displacement customers who intend to continuously offset their demand are located in different areas of WNH's service territory and as a result are generally serviced by different feeders within the distribution system. Hence, the opportunity to capitalize on the diversification of load displacement generation is not applicable at the feeder level.

Furthermore, if a fault occurs on a feeder that has generation, according to standard safety protocols, all generation must come offline at the same time and can only reconnect after the feeder returns to normal for a pre-determined amount

of time. This means that the full load of each facility will be seen by the feeder upon re-energization prior to generation being allowed to come online. If WNH does not keep enough spare capacity on such a feeder for the full load, an overload condition may occur upon feeder energization preventing the feeder from being returned to service and causing a sustained outage.

HYDRO ONE (HONI) INTERROGATORIES

EXHIBIT 9 – DEFFERAL AND VARIANCE ACCOUNTS

9–HONI–1

Interrogatory:

References:

1. **Exhibit 8, Attachment 8-4, 2020 Current Tariff of Rates**
2. **Exhibit 8, Attachment 8-5, 2021 Proposed Tariff of Rates**
3. **Exhibit 8, page 11 of 28, table 8-8**
4. **Exhibit 8, page 19 of 28, table 8-15A**
5. **Exhibit 9, page 31 of 41, table 9-15**

As per reference #5, WNH is proposing to allocate $3,745 of Account 1550 (LV Variance Account) balance, $12,211 of Account 1584 (RSVA – Retail Transmission Network Charge) balance and $7,592 of Account 1586 (RSVA – Retail Transmission Connection Charge) balance to the Embedded Distributor rate class.

As per reference #1, the Embedded Distributor rate class currently (2020) does not pay RTSR and LV charges. As per references #2, #3 and #4, WNH is proposing that the Embedded Distributor rate class will not pay any RTSR and LV charges in 2021.
Given that the Embedded Distributor rate class did not contribute to accounts 1550, 1584 and 1586, please explain why WNH proposes to allocate these account balances to the Embedded Distributor rate class.

Response:

Embedded Distributor rate class does not contribute to accounts 1550, 1584 and 1586 and should not be allocated these accounts balances. Due to the limitations of the OEB

DVA Model, WNH was not able to remove the balances that were allocated to the Embedded Distributor rate class when the Application was submitted. WNH worked with the OEB staff during IRs to update the DVA Model and the Tariff and Bill Impact Model. Please refer to WNH's response to 1-Staff-1.

9–HONI–2

Interrogatory:

References:

6. **Exhibit 9, page 35 of 41, table 9-21**
7. **Exhibit 8, Attachment 8-3, Tariff Schedule and Bill Impact Model, Bill impact table**

As per reference #6, all proposed rate riders are on a $ per kWh basis. As per reference #7, in the detailed bill impact tables for the Embedded Distributor Service Classification and other demand billed rate classes, the bill impact of the "Total Deferral/Variance Account Rate Riders" and the "Additional Volumetric Rate Riders" are calculated using kW Peak Demand (instead of kWh usage).

Please correct the bill impact calculations of the "Total Deferral/Variance Account Rate Riders" and the "Additional Volumetric Rate Riders", or explain why the current calculations are appropriate.

Response:

The bill impact calculations have been updated. Due to the limitation of the OEB Tariff Schedule and Bill Impact Model when submitting the Application, the "Total Deferral/Variance Rate Riders" for 2020 was using kW, and therefore the model used kW instead of kWh for 2021 as well. WNH worked with the OEB staff during IRs to update the Tariff Schedule and Bill Impact Model. Please refer to WNH's response to 1-Staff-1.

9–HONI–3

Interrogatory:

References:

8. **Exhibit 8, Attachment 8-4, 2020 Current Tariff of Rates**
9. **Exhibit 8, Attachment 8-5, 2021 Proposed Tariff of Rates**
10. **Exhibit 8, Attachment 8-3, Tariff Schedule and Bill Impact Model, Bill impact table for Embedded Distributor Service Classification**

As per reference #8, the current (2020) total loss factor for the Embedded Distributor rate class (Primary metered Customer >5,000 kW) is 1.0047. As per reference #9, the proposed total loss factor for the Embedded Distributor rate class (Primary metered Customer >5,000 kW) is 1.0036.
As per reference #10, a current total loss factor of 1.0362 and a proposed loss factor of 1.0353 are used in the bill impact calculations.
Please correct the Embedded Distributor rate class loss factors used in the bill impact calculations or explain why the current calculations are appropriate.

Response:

The Embedded Distributor rate class loss factor has been updated in the Tariff Schedule and Bill Impact Model. Please refer to WNH's response to 1-Staff-1.

SCHOOL ENERGY COALITION (SEC) INTERROGATORIES

EXHIBIT 1 – ADMINISTRATION

1–SEC-1

Interrogatory:

Ex. 1, p. 9

Please describe in detail the plans for the Applicant to enter competitive businesses, or to support/supply resources to affiliates that enter competitive businesses. Please describe how, if at all, the addition of the Key Accounts Department fits into these plans.

Response:

WNH will only enter competitive businesses where allowed currently or in the future by regulation. At present, the business opportunities available to a LDC is limited.
The Key Accounts Department's role is to assist customers with energy efficiency and will work within regulatory guidelines to rollout new services.

1-SEC-2

Interrogatory:

Ex. 1, p. 9

Please provide the Applicant's definition of Utility 2.0.

Response:

WNH's concept of Utility 2.0 is an evolving business model of moving beyond the traditional model of electricity distribution where energy flows one-way from a centralized generating facility through transmission lines and distribution systems directly to the end use consumer to a model of multi-directional power flow on the electrical grid. This multi-directional approach would include distributed energy resources such as wind, solar, gas, electric vehicles, and battery storage along with a smart grid that encompasses an assortment of devices, controls, and intelligence like smart phone apps, and smart appliances to manage energy services and other ways to process and manage energy system information.

1-SEC-3
Interrogatory:

Ex. 1, p. 12, and Attach 1-11, p. 40

Please confirm that the phrase "WNH does not foresee any additional major economic and development growth drivers occurring over the forecast years" does not include the potential impacts of Covid-19 and related government responses. Please provide all internal documents (including but not limited to communications with the auditors] that estimate or assess the potential impacts of Covid-19 and related government responses on the Applicant, including load, local economic development, cost increases or decreases, etc.

Response:

WNH confirms that the phrase "WNH does not foresee any additional major economic and development growth drivers occurring over the forecast years" does not include the potential impacts of Covid-19 and related government responses.

It is still too early to fully estimate or assess the impacts of COVID-19 on utility load, economic development, and cost increases/decreases.

1-SEC-4
Interrogatory:

Ex. 1, p. 15

Please provide the document containing the "industry analysis" that demonstrates that "major storms are becoming more frequent".

Response:

WNH has two supporting documents to provide. The first is the Region of Waterloo's Community Climate Adaptation Plan which is included in Attachment 20. Please refer to Table 5: Summary of projected climatic changes in Waterloo Region on p. 27 where it discusses increases in Extreme Weather.

The second document is from the Canadian Electricity Association's report "Adapting to Climate Change State of Play and Recommendations for the Electricity Sector in Canada". This report is included in Attachment 23. This report details the research done to identify the increase in extreme weather events due to climate change. For example, on p. 14 it states "Climate change will bring two kinds of change: changes in average annual and seasonal variables (relative to historical patterns) as well as increased variability, and especially, increased frequency, intensity and duration of extreme weather events."

1-SEC-5
Interrogatory:

Ex. 1, p. 16

Please provide all evidence in the possession of the Applicant showing that OMS technology has tended to worsen the baseline reliability performance measures.

Response:

OMS contains a connectivity model referencing each customer and removing estimation from the previous manual logging process. Outage start times are electronically captured and do not rely on customer calls, which occurred a few minutes after the outage actually started. Outage minutes from pockets of customers that often remain out of power after larger outage areas are restored, are captured and not missed.

WNH's statement is based on the observations and experiences of its staff; that, due to the very nature of the operation of an OMS the number of customers experiencing an outage, and the start / end times of an outage duration, are more accurately measured and recorded in an automated process such as the OMS, than with a manual process. WNH is not in the possession of any other evidence.

1-SEC-6
Interrogatory:

Ex. 1, p. 16, and Attach 1-19, p. 9

Please provide any actual or forecast cost/benefit analysis of the FLISR software in the Applicant's service territory.

Response:

Implementation of the FLISR software is a component of a long term strategy of investing in Grid Modernization over the last decade. WNH has seen substantial savings in customer outage minutes as a result of installing reclosers and other remotely controlled devices. Please refer to Exhibit 2, Appendix K, Distribution System Reliability Report, s 2.2 Customer Minutes of Interruption Saved, pg. 19.

FLISR software provides centralized intelligence to already deployed grid modernization devices to isolate faulted segments of the distribution system and restore power to healthy portions of the distribution system automatically without human intervention. Hence, it further maximizes the use of previously made investments.

The total installed cost of the FLISR system is $286,613.

1-SEC-7

Interrogatory:

Ex. 1, p. 17

Please provide the original business case for the JOMAR Softcorp CIS.

Response:

The legacy CIS system was installed in 2000 and was based on outdated technology, which was difficult and costly to modify for the frequent changes required by regulatory and public policy initiatives as well as customer driven functionalities. In addition, the American software vendor with only a few Canadian clients was reluctant to invest in updating the product for the Ontario marketplace. Faced with an outdated system and the possibility of no vendor support, WNH issued an RFP in 2015 and selected the JOMAR CIS as the preferred vendor.

JOMAR is a local Ontario company with a number of Ontario utilities as clients and has worked with WNH to develop a system that incorporates current best practice technology and is flexible enough to easily adapt to changing regulations. The implementation and testing was completed in 2017 and the system went live in March of 2017. It is noteworthy to mention that the company that provided the legacy CIS system has since been sold to another software vendor and the company only has one Ontario utility remaining as a client.

1-SEC-8

Interrogatory:

Ex. 1, p. 25 and Ex. 4, p. 14

Please provide any analysis available of the cost savings associated with e-billing for the Applicant. If no analysis has been done, please describe the plans of the Applicant, if any, to carry out such an analysis.

Response:

See the below analysis on approximate cost savings for e-billing. Please note that the costs can change depending on market prices of paper, number of bills per day and postage.

Breakdown - Bill Printed and Mailed	Cost	Notes
Postage	0.86	Varies - rate changes and # of pieces mailed
Doc Processing/Comp	0.00647	Outsource of bill print
Automated Enveloping	0.03785	Rate varies based on printing days and Contract CPI
Cut-Sheet Black Imp.	0.02926	
Daily Set-up	0.03369	
Envelope	0.0259325	Paper Rate per market price at time of order
Envelope - Return	0.0259325	Paper Rate per market price at time of order
Paper	0.0253	Paper Rate per market price at time of order
Cost per paper bill	1.044	
Yearly cost per customer with paper bills (above x 12)	12.53	
e-billing Customers as of September 2020	22,116	
x12 months	265,392	
Yearly e-billing savings base on current e-billing #'s	$ 277,186	

1-SEC-9

Interrogatory:

Ex. 1, p. 44

Please confirm that the rate increases proposed in this Application are not 1.5% for residential and 1.3% for GS<50.

Response:

WNH confirms that the rate increases proposed in this Application are not 1.5% for residential and 1.3% for GS < 50 kW. These were the projected rate increases at the time of Phase 2 Customer Engagement. Please see 1-Staff-1 for the updated Tariff Schedule and Bill Impact Model.

1-SEC-10

Interrogatory:

Ex. 1, p. 54

Please describe the process used by the Applicant to review the executive incentive plans, then develop and approve a new total compensation policy, in one month from November to December 2015.

Response:

Executive compensation was mentioned in the 2016 Settlement Agreement dated November 13, 2015, however, the Board of WNH had already started the process of implementing this initiative. The Executive Compensation plan was developed over the summer and fall of 2015 with final approval in December 2015. The Board engaged the services of a compensation consultant to undertake benchmarking research and to assist with the development of the executive compensation policy.

1-SEC-11
Interrogatory:

Ex. 1, p. 56

Please provide any reports, presentation, or other documentation of the new executive compensation plan.

Response:

Please see the Board approved policy on Executive Compensation - Attachment 24.

1-SEC-12
Interrogatory:

Ex. 1, p. 75 and Ex. 2, p. 5

Please confirm that the Applicant proposes to increase the Net Book Value of Rate Base by 15.7% from 2016 Actual to 2021 Proposed, a compound annual growth rate of 2.9% per year. Please confirm that the Applicant proposes to increase gross fixed assets by $90.6 million from January 1, 2016 to December 31, 2021, an increase of 27.4%, and a compound annual growth rate of more than 4.1% per year. Please reconcile growth in fixed assets and rate base with customer and demand growth.

Response:

WNH is unable to recalculate the figures noted above and assumes that they have been provided in error based on the information provided in Table 2-1 as filed in Exhibit 2, p.5.

WNH notes that information related to customer and demand growth is provided in the DSP in 1.3.3 Service Area & Customer Demographics and 1.3.5 Demand & Energy. However, comparing net fixed asset growth to customer and demand growth alone is an oversimplification of the drivers behind capital expenditures. As indicated in Table 2-30 Capital Expenditure Summary 2016-2025 (App. 2-AB) as filed in Exhibit 2, p.52, the majority of WNH's capital expenditures are not driven by customer or demand growth. The only investment categories related to customer and demand growth would be System Access and System Service which together make up less than 40% of gross capital expenditures in the 2021 Test Year. Moreover, these categories are most often offset by capital contributions which reduce the impact on net book value.

System Renewal makes up the largest portion of capital expenditures (42.5% in 2021 Test Year) and is not related to either customer growth or demand growth. Rather, System Renewal is driven by asset condition and replacement which is described in Appendix A of WNH's filed DSP. This will inevitably lead to higher growth in net fixed assets over time as costs increase due to inflation and other factors.

Although it is generally the smallest investment category, General Plant is also not directly driven by customer or demand growth. These investments are generally caused by external factors and efforts to increase productivity.

1-SEC-13

Interrogatory:

Ex. 1, p. 77

Please identify and quantify all savings in the proposed OM&A budget arising out of past capital spending in excess of depreciation and inflation.

Response:

WNH continually attempts to improve its distribution system to reduce operating and maintenance costs whenever it is cost-effective to do so. The same process applies to General Plant additions where WNH purchases assets to reduce general and administrative costs. To accurately quantify all savings that have resulted from past capital spending would be an arduous process. As discussed in section 4.4.1.2 of the DSP, "These incremental upward and downward pressures on O&M [due to capital investments] are not tracked by WNH. Overall O&M is tracked and WNH attempts to be prudent with its expenditures. WNH's capital investment plans are not expected to have a significant impact on total O&M costs over the forecast period." WNH has summarized 2021 OM&A savings based on OM&A programs per Exhibit 4, p. 32 Table 4-13 (App. 2-JC).

Stations Operations & Maintenance:

- As discussed in section 2.1.3.1 of the DSP, "System Renewal investments made from 2016 – 2019 allowed WNH to retire the last five of its 4.16 kV… and two

8.32 kV municipal transformer stations from service." Please refer to this section for a description of operating and maintenance savings.

Overhead & Underground Distribution Operations and Maintenance:

- As discussed in section 2.1.3.1 of the DSP, System Renewal investments made from 2016 - 2019 allowed WNH to "retire all of the remaining 4.16 kV lines and distribution transformers in the City of Waterloo and the Town of Elmira." Please refer to this section for a description of operating and maintenance savings.
- As discussed in section 2.1.3.3 of the DSP, "the roll out of grid modernization technologies such as an AMI, OMS and other smart devices such as electronic line reclosers and sensors has reduced man-hours and truck rolls required to identify and locate the causes of power outages." Please refer to this section for a description of operating and maintenance savings.

Billing & Customer Service and Collections:

- As discussed in section 4.4.1.2 of the DSP, "New software systems such as WNH's CIS have lowered annual maintenance fees, reduced the manual efforts taken to deal with large amounts of data leading to productivity gains. These investments are also anticipated to be more user configurable, allowing for lower costs of ownership."

In addition to the specific capital investments above, WNH constantly monitors various equipment repairs and maintenance costs when deciding to replace or continue to maintain assets. While this is prevalent across many capital categories, WNH will use Fleet as an example:

WNH constantly monitors the repairs and maintenance for individual vehicles along with their utilization rates. When a vehicle nears the end of its predicted useful life, WNH will compare the cost of replacement vs. the cost of continuing to maintain the asset. When

maintenance costs become greater than the expected depreciation and related inflation, WNH will choose to replace the asset.

1-SEC-14

Interrogatory:

Ex. 1, p. 99, Attach 1-9

Please provide the original and approved proposals, and the agreement, between the Applicant and Brickworks. Please provide any comments provided to Brickworks from the Applicant on the survey questions or on drafts of the report.

Response:

WNH has included both the Phase 1 and Phase 2 WNH Customer Engagement Project Estimate from Brickworks Communications in Attachments 14 a) and b). The total cost of Customer Engagement paid to Brickworks was $18,037 which included two phases. Prior to each of the customer engagement surveys, the two parties met to discuss and develop the questions. WNH provided application specific details for the questions and Brickworks provided professional insight to the survey. Attachment 25 – Brickworks Communication, provides the drafts and comments between WNH and Brickworks. During the survey, Brickworks collected and analyzed the data, keeping all individual responses confidential. WNH was provided the final report by Brickworks and WNH requested only minor formatting changes.

1-SEC-15

Interrogatory:

Ex. 1, p. 100

Please provide the rationale behind conditioning the low cost option with negative impacts, but not conditioning the reliability, safety, innovation and customer service options with negative impacts (i.e. higher costs).

Response:

Table 1-26 of Exhibit 1 that is referenced above, summarizes the results from question 9 of the Phase 1 survey. Questions 6-8 in the same survey provide response options that include a cost associated with the activity, therefore customers were conditioned that there is a cost associated with these activities. Customers need to be aware that there is a trade-off between cost and service/reliability.

1-SEC-16
Interrogatory:

Ex. 1, p. 101, Attach 1-9 p. 4

Please confirm that the biggest single preference in the qualitative results, arising in many of the responses, is cost reduction.

Response:

WNH noted on p. 102 of Exhibit 1 that “reliability and safety is most important however to those that cost is important; it is very important.” This was acknowledged due to 19.2% of the 1,134 (218 comments) qualitative comments discussing that the cost is too high, or they did not want a rate increase. As noted on p. 109 of Exhibit 1, WNH made adjustments to the plan after customer engagement. “While cost is not a number one priority for customers, for some, cost is very important. WNH revisited its OM&A expenses and found opportunities to cut $242,393.” WNH also notes that the survey was completed by 4,355 customers. Of these customers, 29% (approximately 1,263 customers) were

willing to pay more (less than $1 extra per month on bill) to minimize power outages, 31% (approximately 1,350 customers) were willing to pay more (less than $1 extra per month on bill) to invest in smart grid, and 31% (approximately 1,350 customers) were willing to pay more ($1 to $2 extra per month on bill) to maintain and replace aging assets.

1-SEC-17
Interrogatory:

Ex. 1, p. 113

Please provide the 2019 scorecard results.

Response:

Please see draft 2019 Scorecard in Attachment 15 a) – English and 15 b) French.

1-SEC-18
Interrogatory:

Ex. 1, p. 118

Please provide any analyses, including memoranda, presentations, reports, etc., dealing with the proposition “WNH believes it would be very difficult to move into Group 2 or higher”. Please provide a description of the attributes of WNH, relative to those distributors that are in Group 2, that make this statement true. Please confirm that the Board of Directors of the Applicant has approved the decision of management not to seek to move from Group 3 to Group 2.

Response:

Moving to Group 2 is not a decision that WNH has undertaken. It is a belief that WNH is unable to attain a move to Group 2 in the forecast period. Please see 1-CCC-20 which provides internal scorecards for the Board of Directors. In these scorecards the target is noted to be 3.

Using the 2020 Benchmarking Spreadsheet Forecast Model, WNH has provided the following results for demonstration purposes:

Model Input	Three Year Average Performance	One Year Performance Difference	Result
No Capital Additions for 2021	5.70%	2.13%	Remain in group 3
No OM&A for 2021	-4.68%	-29.00%	Remain in group 3
No Capital Additions or OM&A for 2021	-6.73%	-35.15%	Remain in group 3

Due to the service territory size, WNH is required to service 683 square km with the costs being recovered by approximately 58,000 customers. The large service area requires a high level of capital requirements compared to WNH's peers in Group 2.

In addition, WNH has seen limited growth in customer count over the past several years.

1-SEC-19

Interrogatory:

Ex. 1, 127

Please provide the 2019 Consolidated Financial Statements of the Parent Company.

Response:

WNH has provided the financial statements of the utility in the Application, in accordance with Section 2.1.9 of the Chapter 2 Filing Requirements. The Financial Statements of the Parent Company are not required pursuant to the Chapter 2 Filing Requirements because they relate to a non-regulated legal entity and are irrelevant to the Application.

1-SEC-20
Interrogatory:

Ex. 1, App. 2-A

Please describe the nature of the approval requested relative to the Distribution System Plan.

Response:

WNH is seeking approval of its Test Year Revenue Requirement including the Test Year Capital Expenditures as supported by the DSP.

1-SEC-21
Interrogatory:

Ex. 1, Attach 1-10, p. 13

Please provide details of all changes made to the vision, mission and purpose statements in 2019.

Response:

Prior to 2019, WNH's strategic plan did not include a purpose statement. WNH views the purpose statement as the all-encompassing reason for its existence. The Board of

Directors articulated WNH's purpose as: "Delivering electricity efficiently to our customers".

The mission statement was changed from:

"To create value for our customers and shareholders by providing safe and reliable electrical distribution services at competitive rates" to:
"To be of service to our customers by delivering electricity to homes and businesses in our communities – reliably, safely, 24/7.

The vision statement was also changed from:

> "Waterloo North Hydro is recognized as a key partner in contributing to community prosperity and success" to:
> "Our vision is to be the flexible, sustainable distribution platform for connecting consumers and producers of electricity, and be the trusted energy advisor of choice for our customers. We have earned this reputation by:

1. Improving customer relations and loyalty: customers come to us first. They have easy access for changes, questions etc.
2. Becoming a leading edge energy provider and we are known as a leader in Ontario in getting to Utility 2.0 and implementing ADMS.
3. Successfully offering and charging for new services: providing a range of behind-the-meter services, generation and smart home services, supplying energy to our customers regardless of source.
4. Having a high performing and engaged leadership and workforce: we have the right capabilities that enable us to be agile and responsive.
5. Sustaining and growing the dividend.

1-SEC-22

Interrogatory:

Ex. 1, Attach 1-10, p. 15-17

Please provide any roadmap, list, pipeline or other documentation relating to the key priority "Research and develop new product and service offerings". Please provide details on the lessons learned to date from looking at other LDCs.

Response:

New product and service offerings refers to new ways to enhance WNH's service that is of value to customers. These services include but are not limited to: customer education, net metering and virtual net metering, suite metering, solar, electric vehicle charging, battery storage. WNH's investigation of lessons learned from other utilities has not yet been undertaken - this is expected to start in 2021. There is no documentation available.

1-SEC-23

Interrogatory:

Ex. 1, Attach 1-10, p.17

Please provide the evidentiary basis for the statement "Customers indicated that their primary priorities were Reliability (few outages) and Safety".

Response:

In Exhibit 1 Attachment 1-9a, Phase 1 of WNH's Customer Engagement Survey, customers were asked to rank their needs and preferences that are important to them in planning WNH's investments over the next five years. Of the five needs and preferences

that were provided to the customers, WNH provides electricity that is “Reliable” (fewer outages) and WNH provides electricity that is “Safe” ranked the highest based on the chart provided in Attachment 1-9a, p. 5.

1-SEC-24

Interrogatory:

Ex. 1, Attach 1-10, p. 19

Please provide details of the capacity upgrade for UW, and describe in detail how all of the costs of that capacity upgrade are to be allocated.

Response:

There is a requirement for a third point of supply to the UW to main campus for two reasons, of which both benefit UW and WNH.

1) The additional point of supply will allow UW increase load beyond current levels.

2) The UW load, currently on 2 feeders is limiting WNH’s operating capabilities on those two feeders with respect to shifting loads and the providing backup from other feeders.
The costs of the UW capacity upgrade are being split between UW and WNH.
UW is contributing 100% of the cost of the third connection from the internal UW electrical distribution system to the point of connection on the WNH distribution system.
WNH is modifying the point of connection on the WNH distribution system and providing the metering to accommodate the new connection.

1-SEC-25

Interrogatory:

Ex. 1, Attach 1-10, p. 23

Please describe the process being used to select and replace the ERP software.

Response:

Please refer to WNH's response to 1-Staff-3 c).

1-SEC-26
Interrogatory:

Ex. 1, Attach 1-11, p. 29, and Ex. 5, p. 4

Please describe the rationale for paying interest on the affiliate debt at 1.125% above the OEB deemed rate.

Response:

Interest costs above the OEB deemed debt rate for shareholder debt is not included in the Revenue Requirement for this Application. All shareholder debt has been calculated using the OEB deemed rate. Any amount above the deemed rate has no effect on distribution rates charged to WNH's customers.

EXHIBIT 2 – RATE BASE

2-SEC-27

Interrogatory:

Ex. 2, p. 27

Please provide a comparison of the 2016 IT Capital plan against the actual spending on IT over the period 2016 to date.

Response:

Table 2-16 of the Application shows "Detailed Gross Assets" and not capital investments. Details of planned IT capital for 2016 can be found in 2016's Cost of Service Application (EB-2015-0108) in Exhibit 2, Table 2-38, p. 77 which contains the following items planned for 2016:

1. New Customer Information System ($340,779)
2. Asset Management Software Implementation ($277,128)

for a total of $617,907 planned 2016 IT capital. For actual spending 2016 to date see the table below:

Year	Actual Spend
2016	$1,558,532
2017	$999,473
2018	$567,368
2019	$622,067
2020 (As of September 2020)	$510,419

EXHIBIT 3 – OPERATING REVENUE

3-SEC-28

Interrogatory:

Ex. 3, p. 16-18

Please confirm that the information provided on load impacts is on a weather normalized basis. If not confirmed, please provide the same information on a weather normalized basis.

Response:

The information presented in Tables 3-7 and 3-8 has not been weather normalized. In order to compare actual kW and kWh impacts while taking weather into consideration, please refer to WNH's response to 3-Staff-32 for comparison of actual kWh for January to August 2020 compared to weather actual predictions.

3-SEC-29

Interrogatory:

Ex. 3, p. 17 and Ex. 4, p. 1

Please provide details of all adjustments to planned operating and capital spending in 2020 and 2021 implemented or expected to be implemented as a result of the decreases in revenues caused by Covid-19.

Response:

Please refer to WNH's response provided to 2-Staff-8 for all capital spending adjustments in 2020 and 2021 caused by COVID-19.

Please refer to WNH's response provided to 4-Staff-40 for a discussion on operating spending adjustments for 2020 and 2021 as well as a planned versus actual operating spending for March – July 2020. Please also see WNH's response to 4-CCC-31 for 2020 budget and projections.

EXHIBIT 4 – OPERATING EXPENSE

4-SEC-30
Interrogatory:

Ex. 4, p. 9

Please provide details of when the decline in industrial customers started, and when it was largely completed.

Response:

The decline in large industrial customers started in the early 2000s and has decreased over the years through to 2018 when the largest industrial customer declared bankruptcy.

4-SEC-31
Interrogatory:

Ex. 4, p. 11

Please provide details of the planned executive searches for a new CFO and new CEO, and the costs built into the test year budget related to those searches.

Response:

The CFO was scheduled to retire at the end of 2020 and the CEO to retire in 2021. There are funds provided in the 2020 budget for the planned executive search for a replacement CFO, however, due to COVID-19, the retirement of the CFO has been deferred to 2021. An amount of $50,000 has been provided in the 2021 budget test year for the executive search for a replacement CEO.

4-SEC-32
Interrogatory:

Ex. 4, p. 16

Please explain why cloud-based solutions are expected to result in higher costs.

Response:

Please refer to 4-VECC-45 a).

4-SEC-33
Interrogatory:

Ex. 4, p. 20, 22

Please confirm that the Applicant proposes to increase G&A spending per customer by 29.3% from 2016 Actual to 2021 Proposed, a compound annual growth rate of 5.3% per year (an overall increase of 38.7% and a CAGR of 6.7%), while increasing O&M spending per customer by 6.1% over the same period, a compound annual growth rate of less than

1.2% per annum (an overall increase of 11.6% and a CAGR of 2.2%). Please explain in detail the rationale for shifting OM&A priorities away from O&M and in favour of G&A.

Response:

The figures noted are confirmed however, there was no intention to shift priorities away from O&M in favour of G&A. During the historical five-year cycle, several stations were decommissioned which decreased some maintenance costs. In addition, there was less succession planning in engineering and operations required, which in turn required less overlap of trade labour, and less specialized and expensive training due to reduced apprentice positions. These costs still exist, but not to the same extent that they would have five years ago. In G&A, there were several programs that materially increased since 2016 including Billing, Communications, Community and Customer Relations, Administration and Finance and Information Technology Services. The reasons for these increases can be found in Exhibit 4 p. 43-45.

4-SEC-34
Interrogatory:

Ex. 4, p. 30

Please provide details of the CDM costs incurred by the Applicant from 2010 to and including the Test Year, and including the new Key Accounts Department as CDM Costs. Please explain the material changes to the annual costs over time.

Response:

There were no CDM costs that WNH incurred from 2010 to 2018 as WNH received full reimbursement by the IESO. WNH started to incur costs for the new Key Accounts Department in 2020 and 2021. WNH has included costs for two Key Accounts employees

and related expenses in 2020, and is able to recoup some costs through the wind down budget. In 2021, the budget for the department increases as WNH is not able to recoup as much of the costs through the wind down budget. The table below provides a breakdown of the costs with most of the cost being in labour.

CDM Costs	2020 Bridge Year	2021 Test Year
Labour	103,648	248,068
Other Costs	3,000	6,500
Total	**106,648**	**254,568**

4-SEC-35

Interrogatory:

Ex. 4, p. 80, 82

Please restate the full continuity schedule for rate base from 2016 to 2021, as well as Table 4-37, using the half year rule. Please provide this in live Excel format.

Response:

Please see Attachment 26 – Fixed Assets – Half Year Rule Modification, for the live excel model. WNH has restated the Fixed Asset Continuity Schedule (App. 2-BA and Tables 2-9 to 2-14) and Depreciation (Table 4-37) from 2016 to 2021. Please note that in these tables the half year rule has been applied retrospectively to 2016. The discussion in Exhibit 4, p. 81 which outlined Test Year impacts assumed retrospective application of the half year rule to the adoption of IFRS.

4-SEC-36

Interrogatory:

Ex. 4, p. 89, 108

Please restate Table 4-58, and the rate base continuity schedule, on the assumption that the new 10 year depreciation rate for large software was not implemented. Please provide this in live Excel format.

Response:

Table 4-58 Detailed Tax Calculations displays WNH's PILs for 2016-2021. Any change in depreciation rates would have a nil effect on PILs as depreciation is added back to net income and CCA (which would be unchanged) is deducted to arrive at net income for tax purposes. Therefore, no restatement is necessary.

Please see Attachment 27 – Fixed Assets – Software Depreciation Modification where WNH has included the following in live Excel format:

- Table 4-37 Depreciation 2016-2021 revised for a 5-year depreciation rate on CIS/ERP software.

- Table 2-9 to 2-14 Fixed Asset Continuity Schedule 2016-2021 (App. 2-BA) revised for a 5-year depreciation rate on CIS/ERP software.

- Table 2-1 Rate Base 2016-2021 revised for a 5-year depreciation rate on CIS/ERP software.

EXHIBIT 7 – COST ALLOCATION

7-SEC-37

Interrogatory:

Ex. 7, p. 13

Please provide numerical examples of the impact of the proposed standby charges, and all assumptions used in those examples. Please describe the process for negotiating the "contract" demand that will be used as the basis for the standby charge for each customer, and the method proposed for resolving any disputes between the Applicant and the customer relating to the contract demand.

Response:

Please refer to WNH's response to 7-Staff-66 part for a detailed description of the process of establishing a capacity reserve value.

The method for dispute resolution will follow the process described in Section 1.8 of WNH's Conditions of Service. This procedure approaches dispute resolution through internal investigation and discussion with staff who are subject matter experts. If these discussions fail to resolve the matter, the dispute is then escalated to the Vice President responsible for the impacted area. The final recourse for a customer dispute is to seek independent advice from the Ontario Energy Board or a third party agency referred to by the OEB.

Example #1a:

Customer ABC Inc. implements a generation facility November 1, 2020 with the intent of using it for load displacement purposes and chooses to use the fixed capacity reserve value.

Fixed Capacity Reserve Value (FCRV) = Historical Load – Load Curtailment

Historical Load = Average Annual Peak Demand without generation over 3 most recent years:

2017:	1,750.56 kW	+2.8% from average
2018:	1,705.06 kW	+0.1% from average
2019:	1,655.22 kW	-2.8% from average
Average:	1,703.61 kW	

Since historic peak demand is within +/-15% of average and does not exceed +/- 250kW, this customer qualifies for fixed capacity reserve.

Load Curtailment = The automatic and instantaneous reduction of customer's load in response to generation coming offline

This example assumes that field verification showed load curtailment equal to 100kW.

Fixed Capacity Reserve Value (FCRV) = 1,703.61 – 100.00 = 1,603.61 kW

Metered Load for first 3 months of facility use:

November 2020:	1,800.00 kW	> FCRV => No standby
December 2020:	1,550.00 kW	< FCRV => Standby
January 2021:	1,500.00 kW	< FCRV => Standby

Standby Charges = MIN((FCRV-Load), 0)*Volumetric Rate

November 2020:	(0)*5.6750 = $0.00
December 2020:	(1,603.61-1,550.00)*5.6750 = $304.24
January 2021:	(1,603.61-1,500.00)*5.6750 = $587.99

Example #1b:

Customer ABC Inc. implements the same generation facility on November 1, 2020 but chooses a variable capacity reserve value.

Historic Load = same as Example #1a.
Load Curtailment = same as Example #1a.

Metered Generation (assumed at time of coincident peak):
November 2020: 50.00 kW
December 2020: 150.00 kW
January 2021: 200.00 kW

VCRV = Coincident Peak of (Required Load + Generation Level) – Load Curtailment
November 2020: (1,800.00+50.00)-100.00 = 1,750.00 kW < Req. Load => No standby
December 2020: (1,550.00+150.00)-100.00 = 1,600.00 kW > Req. Load => Standby
January 2021: (1,500.00+200.00)-100.00 = 1,600.00 kW > Req. Load => Standby

Standby charges = MIN((VCRV-Load), 0)*Volumetric Rate
November 2020: (0)*5.6750 = $0.00
December 2020: (1,600-1,550)*5.6750 = $283.75
January 2021: (1,600-1,500)*5.6750 = $567.50

Example #2:

Customer XYZ Inc. implements a generation facility November 1, 2020 with the intent of using it for load displacement purposes and chooses to use the variable capacity reserve value. The historical annual peaks differ by more than +/-15% and therefore this customer does not qualify for the fixed capacity reserve value.

Variable Capacity Reserve Value (VCRV) = Coincident Peak of (Required Load + Generation Level) – Load Curtailment

Required Load = Metered Load values (assumed at time of coincident peak):

November 2020: 1,200.00 kW

December 2020: 1,300.00 kW

January 2021: 1,400.00 kW

Generation Level = Metered Generation OR Generator Nameplate

Consider for this example the customer selects the metered generation approach.

Metered Generation (assumed at time of coincident peak):

November 2020: 450.00 kW

December 2020: 500.00 kW

January 2021: 250.00 kW

Load Curtailment = The automatic and instantaneous reduction of customer's load in response to generation coming offline

This example assumes that field verification showed load curtailment equal to 300kW.

VCRV = Coincident Peak of (Required Load + Generation Level) – Load Curtailment

November 2020: (1,200.00+450.00)-300.00 = 1,350.00 kW > Req. Load => Standby

December 2020: (1,300.00+500.00)-300.00 = 1,500.00 kW > Req. Load => Standby

January 2021: (1,400.00+250.00)-300.00 = 1,350.00 kW < Req. Load => No standby

Standby charges = MIN((VCRV-Load), 0)*Volumetric Rate

November 2020: (1,350-1,200)*5.6750 = $851.25

December 2020: (1,500-1,300)*5.6750 = $1,135.00

January 2021: (0)*5.6750 = $0.00

EXHIBIT 8 – RATE DESIGN

8-SEC-38

Interrogatory:

Ex. 8, p. 6

Please explain how the standby charges are factored into the revenue requirement and allocated to the classes.

Response:

Due to the minimal impact of pre-2020 load displacement projects, WNH has not adjusted the historical load forecast for any load displacement amounts. Moreover, the explanatory variables used in the load forecast regression model do not factor in load displacement. As a result, the 2020 and 2021 proposed load forecast does not include any load displacement effects. Therefore, the load forecast, cost allocation and rate design are all calculated as if no load displacement is present. This results in the same distribution revenue which would arise if proposed standby charges replaced the distribution revenue lost by load displacement. It also ensures that any costs related to serving customers who implement load displacement facilities are allocated to the correct customer classes.

VULNERABLE ENERGY CONSUMERS COALITION (VECC) INTERROGATORIES

EXHIBIT 1 – ADMINISTRATION

1-VECC-1

Interrogatory:

Reference: Exhibit 1, page 20 / Exhibit 2 Appendix K

a) Please provide WNH's definition of a "major event" outage (day).

b) Please explain the circumstances of the major event outages in 2016, 2018 and 2019, including the duration of the event which caused the outage(s).

Response:

a) WNH's definition of "major event" outage (day) follows the definition of a "major event" provided in the OEB Electricity Reporting & Record Keeping Requirements Effective March 31, 2020, Definitions (7), p. 10.

"Major Event" is defined as an event that is beyond the control of the distributor and is:

a) unforeseeable;
b) unpredictable;
c) unpreventable; or
d) unavoidable.

Such events disrupt normal business operations and occur so infrequently that it would be uneconomical to take them into account when designing and operating the distribution

system. Such events cause exceptional and/or extensive damage to assets, they take significantly longer than usual to repair, and they affect a substantial number of customers.

“Beyond the control of the distributor” means events that include, but are not limited to, force majeure events and Loss of Supply events.

When assessing whether a substantial number of customers were affected and whether it took significantly longer to restore service than normal, distributors shall follow the Canadian Electricity Association’s Major Event Determination Reference Guide.

As set out in the Guide distributors shall use one of the following approaches:

a) The IEEE Standard 1366 approach (preferred method);
b) The IEEE Standard 1366 approach, using a two-day rolling average; or
c) The fixed percentage approach (i.e., 10% of customers affected).

Distributors shall include all outages that occurred during the Major Event, including those that may be unrelated to the event itself, but occurred at the same time. WNH uses the preferred method - Option a).

b) Below are the explanations of the Major Event outages in 2016, 2018 and 2019 as requested plus 2017. All Major Event Days exceeded the 2.5ß threshold.

2016

March 24, 25, 26, a wide spread freezing rain storm impacted the majority of WNH territory and caused the Loss of Supply of the 115kV D10H Hydro One transmission circuit. The duration of this Major Event was three days. The total of Customers Interruptions on Day 1 was 34,868, Day 2 was 41,653 and Day 3 was 13,160.

July 25, a severe lightning event caused multiple WNH feeders to trip open. The event had an impact of 4,092 Customer Interruptions, the duration of this Major Event was one day.

August 19, a severe lightning event caused 2 WNH feeders to trip open. A recently installed, normally open Electronic Vacuum Recloser (EVR) tie point between the feeders was catastrophically damaged by a direct lightning strike. This Major Event had an impact of 3,966 Customer Interruptions, the duration was one day.

2017

March 30, freezing rain caused a tree to fall into WNH primary lines. This Major Event had an impact of 4,788 Customer Interruptions, the duration was one day.

2018

April 15, freezing rain caused a tree to fall into WNH primary lines and a Loss of Supply of the 115kV D10H Hydro One transmission circuit. This Major Event had an impact of 8,711 Customer Interruptions, the duration was one day.

May 4, Extreme Winds caused tree damage across WNH territory and a Loss of Supply of the 44kV Hydro One 73M7 circuit. This Major Event had an impact of 16,623 Customer Interruptions, the duration was one day.

2019

July 20, 21, Extreme Wind and heavy rain caused tree damage across WNH territory. This Major Event had an impact of 10,998 Customer Interruptions, the duration was two days.

1-VECC-2

Interrogatory:

Reference: Exhibit 1, page 20

a) What is the default billing option for a customer opening an account with WNH?

b) Please provide a breakdown of residential customers who annually (customer x months) make payment by:
   i. In-person;
   ii. Mail –cheque;
   iii. Through a financial institution;
   iv. On-line though the WNH portal;
   v. MoneyGram/Canada Post;
   vi. Pre-authorized payment.

Response:

a) The default billing option for telephone or in person account setups is a paper bill. If the customer opens an account through the online customer portal, the default is an e-bill.

b) WNH has provided the following table which outlines the payment methods for residential customers for 2019 by month.

2019

Payment Methods	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total	% Total
AP (EFT Payment)	114	128	144	144	171	147	137	96	107	138	142	139	**1,607**	**0.3%**
Financial Institution	27,902	26,824	27,712	28,218	28,606	26,839	28,488	27,319	26,971	28,848	26,404	27,954	**332,085**	**62.0%**
In Person	255	206	233	216	380	290	295	290	294	326	232	203	**3,220**	**0.6%**
Mail/Money Gram/Canada Post	1,268	1,348	1,275	1,284	1,253	1,145	1,351	1,411	1,390	1,412	1,397	1,142	**15,676**	**2.9%**
Credit Cards	692	654	674	672	739	641	729	638	614	837	677	687	**8,254**	**1.5%**
Pre-Authorized Payments	13,903	14,570	12,856	14,656	14,660	13,558	14,647	14,041	14,675	14,764	14,113	14,778	**171,221**	**32.0%**
Telpay	529	435	546	566	272	173	172	66	63	129	145	131	**3,227**	**0.6%**
Total	**44,663**	**44,165**	**43,440**	**45,756**	**46,081**	**42,793**	**45,819**	**43,861**	**44,114**	**46,454**	**43,110**	**45,034**	**535,290**	**100%**

1-VECC-3

Interrogatory:

Reference: Exhibit 1, page 110

WNH explains that a "[A]significant group of customers would like more overhead services moved underground. While this is not the majority, WNH determined that this customer group was large enough to make adjustments in the plan."

a) WNH explains at pages 105-105 of Exhibit I WNH explains that customers were not aware of the cost difference between bills delivered by mail or electronically – but that "[A]fter being told of the cost associated with traditional paper billing, they were asked what is preventing them from registering to receive an e-bill. Did WNH provide similar information in respect to the cost of underground and overhead service? That is was the cost differential as between overhead and underground service provided prior to questions as to one's preference for overhead or underground service?

Response:

a) In Phase 1 of the Customer Engagement Survey, WNH received significant qualitative comments that customers would like more overhead services moved to underground. As a result, WNH wanted to inform customers the cost difference between overhead services and underground as applicable. Therefore, in Phase 2 of the Customer Engagement Survey Results per Attachment 1-9b of the Application p. 7, WNH informed the customers that "Underground lines cost approximately 5-10 times more than overhead lines."

1-VECC-4
Interrogatory:

Reference: Exhibit 1, pages 120-122

a) Please update Tables 1-40 and 1-41 (Total Cost per..) to include 2019.

b) Please update Table 1-44 (DSP Implementation) to include 2019 results.

Response:

a)

Indicator	2014	2015	2016*	2017	2018	2019
Total Cost per Customer	$ 760	$ 762	$ 785	$ 773	$ 819	$ 833

Indicator	2014	2015	2016*	2017	2018	2019
Total Cost per Km of Line	$ 26,299	$ 26,109	$ 27,251	$ 26,800	$ 28,499	$ 29,241

b)

Indicator	2014	2015	2016	2017	2018	2019
Distribution System Plan Implementation Progress	99.73%	119.44%	23.05%	41.81%	61.36%	82.07%

1-VECC-5

Interrogatory:

Reference: Exhibit 1, Attachment 1-7 Utility Pulse Summary

a) Please explain the nature of the “National” and “Ontario” and “Ontario LDC” comparative figures. Specifically, please detail the data used as a comparator and the timeframe over which that data was collected.

Response:

a) WNH requested a response to this interrogatory from Utility Pulse as WNH does not have access to this information. The following response was received:

Ontario LDCs

Fourteen LDCs were in the Fall 2018 cohort, making up the "Ontario LDCs" scores/measures. Those fourteen LDCs cover approximately 38% of the Ontario residential and small commercial customer base.

Fieldwork for all fourteen LDCs was September 11 – November 6, 2018.

Fieldwork for Waterloo North Hydro's was September 17 – October 17, 2018.

The findings for each LDC are based on telephone interviews conducted with adults who pay or look after the electricity bills from a list of residential and small and medium-sized business customers supplied by each LDCs.

The sample of phone numbers chosen from a list supplied by each LDC was drawn randomly to ensure each business or residential phone number on the list had an equal chance of being included in the poll.

The sample was stratified so that 85% of the interviews were conducted with residential customers and 15% with commercial customers.

National & Ontario Benchmark

The findings for the Simul/UtilityPULSE National Benchmark and Ontario Benchmark of Electric Utility Customers are based on telephone interviews conducted with adults throughout the country/province who are responsible for paying electric utility bills. The ratio of 85% residential customers and 15% small and medium-sized business customers in the National study reflects the ratios used in the local community surveys. The margin

of error in the National poll is ±2.95 percentage points. The Ontario poll is ±3.70 at the 95% confidence level.

For both the National and Ontario studies, the sample of phone numbers chosen was drawn by recognized probability sampling methods to ensure each region of the country was represented in proportion to its population and by a method that gave all residential telephone numbers, both listed and unlisted, an equal chance of being included in the poll.

The data were weighted in each region of the country/province to match the regional shares of the population.

Fieldwork for the National and Ontario benchmark studies was September 11 - September 29, 2018.

Sid Ridgley
President, UtilityPULSE

1-VECC-6
Interrogatory:

Reference: Exhibit 1, Appendix 1-9, Customer Engagement Survey Report

Brickworks Communications explained to customers in its survey (page 11) that "[F]rom 2015 to 2019, WNH invested approximately $22.4 million annually. WNH's current proposed Plan is similar and is focused on replacing assets in poor condition before they fail (causing reliability and safety issues)."

a) What would the approximate annual capital expenditure of WNH be between 2015 and 2019 if PSWHA and Non-PSWHA relocations were removed.

b) In its customer survey/outreach did WNH explain that a portion of its capital expenditures are not related to plant location moves and only incidentally connected to reliability and safety issues?

Response:

a) The following table shows the historical capital expenditure with the PSWHA and the Non-PSWHA relocation projects removed:

Year	2015	2016	2017	2018	2019
Remaining CapEx	$17,775,960	$16,994,867	$16,906,641	16,012,283	$19,264,283

b) Yes, WNH explained capital expenditures in each of the OEB investment categories. The System Access category included plant relocation and explained that WNH is mandated to respond with appropriate investments.

1-VECC-7

Interrogatory:

Reference: Exhibit 1, Attachment 1-15

Please update the Scorecard to include 2019 results.

Response:

Please see draft 2019 Scorecard in Attachment 15 a) – English and 15 b) – French.

EXHIBIT 2 – RATE BASE

2-VECC-8

Interrogatory:

Reference: Exhibit 2, page 62-63

The 2020 General Plant budget was originally forecast as $1,649,525 (EB-2015-0108 Appendix B Settlement Proposal). The current 2020 forecast for General Plant capital spending is $3,555,000 (Exhibit 2, Table 2-30, page 52), a difference of $1,905,475. WNH provides a list of General Plant projects related to this increase at page 62

a) Please provide the current in-service date for each of the projects listed as a reason for the overspending (as compared to the prior DSP projection) in General Plant capital expenditures in 2020.

Response:

a) Information Technology Systems changes and improvements

Reference	System Improvements	Projected In-Service / Completion Date	Comments
1a)	Improved customer communications	2020-Q4	
1b)	CIS customer requested features	E-Billing (2020-Q4) Summary Billing (2020-Q4) Self-Service Online Tools (2021-Q4)	CIS enhancements have been differed by the effects of COVID-19 on our regulatory, vendor and staff environments.
1c)	Smart meter RNI upgrade	2021-Q2	RNI upgrade has been delayed due to the effects of COVID-19
1d)	New corporate website	2022-Q4	New corporate website has been deferred due to COVID-19
2)	MS/DS disposal costs	2020 work will be paced over 2021 to 2024	Project deferred due to COVID-19
3)	Fleet expenditures	2020-Q4	

2-VECC -9

Interrogatory:

Reference: Exhibit 2, page 40

The General Plant category of capital spending was more than 23% higher than set out in the last Board reviewed Distribution System Plan ($11,948,00 actual compared to $9,664,000 as shown in the EB-2015-0108 DSP).

a) Please explain the reasons the historical GP expenditures averaged $2.39 million whereas the EB-2015-0108 DSP anticipated an average annual spending in this category of $1.932 million.

Response:

a)

General Plant	2016	2017	2018	2019	2020	Total
Actual	$ 2,288,204	$ 2,264,671	$ 2,030,139	$ 1,810,228	$ 3,554,579	$ 11,947,822
2015 Plan (Settlement)	$ 1,869,078	$ 2,813,765	$ 1,661,176	$ 1,670,309	$ 1,649,525	$ 9,663,853
Variance	$ 419,126	$ (549,094)	$ 368,963	$ 139,919	$ 1,905,054	$ 2,283,969
Accumulated Variance		$ (129,968)	$ 238,996	$ 378,915	$ 2,283,969	$ 2,283,969

The components of the total historical variance of $2,283,969 are found in the following table.

2016 - 2020 General Plant Variance from 2015 Plan	Amount
Information Technology	
IT Asset Lifecycle	$ 142,909
IT System Changes and Improvements	$ 747,000
CIS Phase 2	$ 327,499
OT Software - Utility Design Software	$ 257,000
MS/DS Decommissioning	$ 574,000
Projects below Materiality	$ 235,561
Total	$ 2,283,969

- The information technology investments described in DSP, s, 4.3.2.4, p. 256 came in response to customer feedback received in 2019. WNH adjusted the direction of Information Technology capital investments to align to what customers stated they valued most. Also included is an unplanned RNI upgrade ($192k) forced by changes made by the vendor and enhancements made to the CIS ($311k) after initial implementation.
- Utility Design Software was not part of WNH's 2015 plan. Please refer to DSP, s 4.2.5e, Modernization of the Distribution System, p. 237 for more information.
- The increase in MS/DS disposal costs was due increased scope of work.
- Various General Plant projects each under the threshold of materiality.

2-VECC -10

Interrogatory:

Reference: Exhibit 2, page 65

"In 2021 there are three larger projects planned that have caused an increase between 2020 and 2021. Two of the projects are road relocations at the request of the road authority which are changing from overhead to underground. When there is a request/requirement from the road authority that WNH goes underground as part of the rebuild the requesting party funds the cost difference between the overhead and

underground systems, in turn making their capital contribution higher. The third project is service for new commercial development."

a) Please identify the three large projects attracting capital contributions and provide the total project cost and the capital contribution for each project.

Response:

a)

Project Name	Budget	Capital Contributions
Bridgeport Rd - Albert to King (Electrical)	118,425	115,010
Dorset Dr - Bridgeport to Albert (Civil)	305,628	300,675
Platinum Dr - Erb St to Columbia St (Electrical)	470,395	458,735

2-VECC-11

Interrogatory:

Reference: Exhibit 2, page 77

Table 2-42 Major Events

Reporting Year	Cause Code	Number of Interruptions	Number of Customer Interruptions	Number of Hours of Customer Interruptions
2015	Equipment Failure	5	7,167	10,871
2015	Loss of Supply	9	7,060	8,890
2016	Adverse Weather	67	89,681	107,333
2016	Lightning	15	4,092	4,158
2016	Lightning	6	3,966	7,097
2017	Tree Contacts	5	4,788	5,571

2018	Adverse Weather	3	8,711	10,529
2018	Adverse Weather	15	16,623	55,867
2019	Adverse Weather	15	10,998	13,313

a) Please explain the circumstances under which equipment failure was noted as a "major event" interruption

Response:

a) A Major Event Day (MED) on March 16, 2015 was logged as Equipment Failure as it exceeded the 2.5ß threshold. The originating cause was a failed primary insulator on the distribution system. The resulting fault caused a mid-feeder device to operate incorrectly and trip creating a large feeder interruption.

In 2018 the OEB completed a full compliance audit of WNH's 2012 through 2017 MED's. The OEB Staff concluded that WNH recorded, calculated, classified and reported major event outage data accurately under RRR 2.1.4.2 through the e-Filing services system.

2-VECC-12

Interrogatory:

Reference: Exhibit 2, Attachment 2-2, DSP, Table 2-26, pages 133

a) Please recast Table 2-26 to show the variance in contributed capital by capital expenditure category (i.e. System Access/Renewal/Service and General Plant).

Response:

a) Please see an updated version of Table 2-26 showing the variance in contributed capital by capital expenditure category.

CAPEX	2016 - 2019 PLAN CAPEX	2016 - 2019 ACTUAL CAPEX	Variance	% Variance
GROSS	$ 81,260,438	$ 86,380,308	$ 5,119,870	6.3%
Contributed Capital – System Access	$ 12,528,310	$ 21,310,240	$ 8,781,930	70.1%
Contributed Capital – System Renewal	$ -	$ 984,334	$ 984,334	100.0%
Contributed Capital – System Service	$ -	$ -	$ -	-
Contributed Capital – General Plant	$ -	$ -	$ -	-
Contributed Capital - Total	$ 12,528,310	$ 22,294,574	$ 9,766,264	78.0%
NET	$ 68,732,128	$ 64,085,734	$ (4,646,395)	-6.8%

2-VECC-13

Interrogatory:

Reference: Exhibit 2, Attachment 2-2, DSP, page 167 / WNH Distribution System Reliability Report, page 508

Table 3-4: Worst Performing Feeders (2016 - 2019)

Feeder #	2016	2017	2018	2019	3-Year Average	5 Year Average
HS22	56,289	376,305	269,864	476,499	374,223	242,664
3F68	29,779	95,748	144,302	216,539	152,196	100,257
HS20	118,855	215,197	136,402	49,337	133,645	105,488
HS11	8,321	5,849	180,538	183,445	123,277	100,694
3F61	10,337	331,633	24,170	11,919	122,574	77,722

Worst Performing Feeder Ranking	1st	2nd	3rd	4th	5th
Colour Code					

a) What capital projects are proposed in 2021-2025 to address the poor performance of the HS22 feeder?

b) Please provide a table in the format of Table 7-2: Worst Performing Feeder Actions Plans- 2019 that shows WNH's plan for addressing poor performing feeders during the course of the rate plan.

Response:

a) Capital projects involving improvements to the poor performance of HS22 have already been prioritized for construction. A number of projects were completed in 2019 and the remainder will be completed in 2020.
No additional capital projects are proposed for HS 22 in the 2021-2025 timeframe.

b) Annually, WNH reviews its year-end reliability data and formulates an action plan for its Worst Performing Feeders (WPF). These plans are incorporated in the budgeting and approval process for the following year. As can be seen in Table 7-2, order of the WPF's changes from year to year as does WNH's action plans. For these reasons, plans to address WPF's worst performing feeders are not available beyond that provided in this Application.

2-VECC-14

Interrogatory:

Reference: Exhibit 2, Attachment 2-2, DSP, page 66, Table 2-37

Please revise Table 2-37 to show for each year:

i. capital contributions by capital expenditure category;
ii. Under System Access capital contributions by line item.

Response:

Please refer to the table below for a revised Table 2-37.

Projects	2016 Actual	2017 Actual	2018 Actual	2019 Actual	2020 Bridge	2021 Test
Reporting Basis	***MIFRS***	***MIFRS***	***MIFRS***	***MIFRS***	***MIFRS***	***MIFRS***
System Access						
Non-PSWHA Relocations	10,867,476	1,268,988	466,519	159,113	117,212	424,053
Non-PSWHA Relocations - capital contributions	(9,059,706)	(1,232,902)	(475,987)	362,756	-	(415,685)
PSWHA Relocations	1,597,270	512,165	1,888,798	517,782	1,411,093	919,660
PSWHA Relocations - capital contributions	(187,896)	(520,819)	(481,095)	(14,387)	(489,214)	(344,706)
Customer Connections	3,165,292	2,249,709	2,020,785	2,983,265	2,450,707	2,168,379
Customer Connections - capital contributions	(1,641,588)	(1,142,980)	(1,082,914)	(1,217,245)	(958,193)	(954,448)
Expansions (Subdivisions)	967,227	1,015,261	924,406	782,768	644,645	1,081,946
Expansions (Subdivisions) - capital contributions	(1,505,359)	(826,060)	(639,165)	(753,103)	(325,625)	(468,820)
Expansions (Lines)	313,048	663,572	160,030	943,375	458,889	470,395
Expansions (Lines) - capital contributions	(29,431)	(615,658)	(11,587)	(228,688)	(292,774)	(458,735)
Retail Meters	464,804	590,504	621,715	760,887	707,852	664,599
Retail Meters - capital contributions	(3,172)	(2,867)	(387)	-	-	-
Miscellaneous/Other	253,047	(1,924)	4,703	17,077	48,761	111,230
Miscellaneous/Other - capital contributions	-	-	-	-	-	-
Sub-Total	**17,628,164**	**6,298,275**	**6,086,956**	**6,164,267**	**5,839,159**	**5,840,262**
Capital Contributions	**(12,427,152)**	**(4,341,286)**	**(2,691,135)**	**(1,850,667)**	**(2,065,806)**	**(2,642,394)**
Total System Access net of capital contributions	**5,201,012**	**1,956,989**	**3,395,821**	**4,313,600**	**3,773,353**	**3,197,868**
System Renewal						
Overhead Line Renewal	179,585	608,222	514,169	1,117,214	235,928	3,181,346
Underground Line Renewal	1,536,029	1,602,516	1,615,007	1,873,000	1,770,943	1,435,447
Overhead Line Renewal - Failing Conductor	30,618	405,673	312,801	647,791	1,245,812	853,987
Overhead Line Renewal (8kV)	1,514,370	1,527,537	2,148,877	1,970,758	3,252,494	703,076
Overhead Line Renewal (4kV)	2,567,067	3,090,030	1,831,507	1,621,924	-	-
Reactive Renewal	716,750	426,202	364,105	335,469	304,485	286,140
Proactive Renewal	681,056	664,943	882,231	913,294	843,109	752,106
Station Equipment Renewal	160,631	816,425	391,418	438,142	497,041	125,503
Miscellaneous/Other	415,072	340,351	356,712	444,514	462,264	758,164
Sub-Total	**7,801,178**	**9,481,899**	**8,416,827**	**9,362,106**	**8,612,076**	**8,095,769**
Capital Contributions	**(209,052)**	**(237,215)**	**(277,795)**	**(260,273)**	**-**	**-**
Total System Renewal net of capital contributions	**7,592,126**	**9,244,684**	**8,139,032**	**9,101,833**	**8,612,076**	**8,095,769**
System Service						
Contingency Enhancement	282,615	275,248	607,147	1,133,913	615,740	291,280
Grid Modernization	1,133,013	125,488	758,099	909,408	856,313	909,220
Grid Resiliency	-	-	-	-	-	200,000
Stations Equipment Upgrades	46,760	138,426	234,815	239,219	442,961	406,567
Miscellaneous/Other	279,679	27,909	233,617	322,035	283,977	486,538
Sub-Total	**1,742,067**	**567,071**	**1,833,678**	**2,604,575**	**2,198,991**	**2,293,605**
Capital Contributions	**-**	**-**	**-**	**-**	**-**	**-**
Total System Service net of capital contributions	**1,742,067**	**567,071**	**1,833,678**	**2,604,575**	**2,198,991**	**2,293,605**
General Plant						
Fleet - Trucks	406,938	604,043	523,423	331,589	666,740	735,187
IT Asset Lifecycle	111,028	200,116	212,975	198,469	323,891	327,946
IT System Changes and Improvements	73,514	48,901	194,302	136,405	856,410	71,819
IT New Systems and Services	697,082	776,974	155,355	272,793	204,708	169,479
OT Software	76,913	186,511	285,789	305,680	251,346	281,522
Building & Furniture Improvements	175,148	240,318	248,039	215,018	299,600	250,700
MS/DS Decommissioning	488,315	43,546	16,923	96,624	673,544	462,762
Miscellaneous/Other	259,266	164,262	393,334	253,650	278,340	519,461
Sub-Total	**2,288,204**	**2,264,671**	**2,030,140**	**1,810,228**	**3,554,579**	**2,818,876**
Capital Contributions	**-**	**-**	**-**	**-**	**-**	**-**
Total General Plant net of capital contributions	**2,288,204**	**2,264,671**	**2,030,140**	**1,810,228**	**3,554,579**	**2,818,876**
Sub-Total - Gross	**29,459,613**	**18,611,916**	**18,367,601**	**19,941,176**	**20,204,805**	**19,048,512**
Less Renewable Generation Facility Assets and Other Non-Rate-Regulated Utility Assets (input as negative)	(488,315)	(43,546)	(16,923)	(96,624)	(673,544)	(462,762)
Total	**28,971,298**	**18,568,370**	**18,350,678**	**19,844,552**	**19,531,261**	**18,585,750**
Total Capital Contributions	**(12,636,204)**	**(4,578,501)**	**(2,968,930)**	**(2,110,940)**	**(2,065,806)**	**(2,642,394)**
Total net of capital contributions	**16,335,094**	**13,989,869**	**15,381,748**	**17,733,612**	**17,465,455**	**15,943,356**

2-VECC-15

Interrogatory:

Reference: Exhibit 2, Appendix B, page 1, 5.4.3.2

5.4.3.2.A explains "Unlike projects that fall under the Public Service Works on Highways Act (PSWHA) , R.S.O. 1990, CHAPTER P.49, this program includes projects where an alternative cost arrangement is followed. The most common types of project in this category are overhead to underground line conversions driven by a municipality. Where the road authority directs WNH to replace aged overhead plant with underground, the road authority funds the cost difference between overhead and underground systems, typically between 75%-85% of total project cost, otherwise the cost recovery reaches up to 100%."

a) It is unclear whether the projects listed therein ($424,053) are net of any financial contribution. Please clarify.

b) If no contribution is provided please explain what the 75-100% refers to.

Response:

a) The costs listed for the two project categories are gross capital expenditures.

b) The budgeted capital contribution for this project category is $ 415,685 or 98% of the capital expenditure.

2-VECC-16

Interrogatory:

Reference: Exhibit 2, Appendix B, page 1, 5.4.3.2

WNH Project	Sub Project	Project Name	Total
06EN10	24	Waterloo - New Subdivisions	**$152,558**
06EN10	25	Woolwich - New Subdivisions	**$653,486**
06EN10	26	Wellesley - New Subdivisions	**$73,866**
06EN10	27	Waterloo West side Employment Lands (side road loop)	**$202,036**
		Total	**$ 1,081,946**

a) Please provide the estimated electrification (competition) date for each of the listed projects.

Response:

a) WNH expects all of the above projects to be energized by the end of 2021.

2-VECC-17

Interrogatory:

Reference: Exhibit 2, Exhibit 2, Appendix B, page 1, 5.4.3.2

Please explain the significant increase as compared to prior years in proposed capital spending in 2021 under the category “Miscellaneous/Other” (all categories - System Access/Renewal/Service and General Plant). Specifically, explain how cost estimates for this category of spending are derived.

Response:

Please refer to WNH’s response to 2-Staff-19.

2-VECC-18

Interrogatory:

Reference: Exhibit 2, Appendix B, page 1, 5.4.3.2

a) With respect to the project category "Grid Resiliency" please explain how many kilometers of overhead are estimated to be converted to underground for the estimated $200,000 per annum to be spent in this category.

b) What locations have been identified for overhead to underground conversion in 2021?

Response:

a) Please refer to WNH's response to 2-Staff-25.

b) WNH identified the Uptown area of the City of Waterloo as the targeted area for 2021. This area is a heavily treed urban area that experiences damage to customer owned equipment and utility owned assets during ice or wind storms.

2-VECC-19

Interrogatory:

Reference: Exhibit 2, Appendix B, page 1, 5.4.3.2

a) Under the General Plant project "Building and Furniture Improvements" is an amount of $117k for "General Facilities". Please give some examples of what type of capital costs fit into this category.

Response:

a)

#	Capital Item	# Units	Cost
1	Skylight replacement	10	$ 5,000
2	Camera upgrades	3	$ 15,000
3	Heat pump compressors	3	$ 22,500
4	Building Automation System Controller	1	$ 10,000
5	Fuel Filling Station	1	$ 15,000
6	Audio Visual Equip	1	$ 50,000
	Total Cost		$ 117,500

2-VECC-20

Interrogatory:

Reference: Exhibit 2, pages 44-49

OEB Filing Requirements for 2021 Applications (May 14, 2020), Chapter 2, page 16

a) Please confirm that WNH is billed by the IESO for the commodity cost of power of delivered to its Embedded Distributor – HONI. If not confirmed please explain the inclusion of commodity cost associated with the Distributor in the determination of the cost of power for purposes of working capital.

b) Please confirm that WNH is billed by the IESO for the transmission network and connection charges related to the delivery of power to its Market Participants. If not confirmed, please explain the inclusion of transmission network and connection costs associated with the Market Participants in the determination of the cost of power for purposes of working capital.

c) Please explain why the Power Supply expense used in Table 2-26 to determine the 2021 working capital allowance is $199,535,876 as opposed to $169,611,597 (which includes the ORECA credit per the OEB Filing Guidelines).

Response:

a) Confirmed. WNH is billed by the IESO for the commodity cost for its Embedded Distributor – HONI.

b) Confirmed. WNH is billed by the IESO for the transmission network and connection charges related to the delivery of power to its Market Participants.

c) The Power Supply expense used in Table 2-26 to determine the 2021 Working Capital Allowance is $199,535,876 instead of $169,611,597 (which includes the ORECA credit per the OEB Filing), due to consideration of the various changes that have occurred in the cost of power regulations since WNH's last rebasing in 2016. Some of the regulation changes that have occurred since 2016 are:

- Ontario Rebate for Electricity Consumers Act (2016)
- Ontario Electricity Support Program (OESP) (2016)
- Fair Hydro Plan (2017)
- Ontario Electricity Rebate (2019)
- Time of Use Rate Changes (2019)
- Implementation of COVID-19 Time of Use Rates (2020)

In consideration of the uncertainties and unpredictability of cost of power regulation, the Power Supply expense prior to the ORECA credit was used to determine the 2021 Working Capital Allowance.

EXHIBIT 3 - OPERATING REVENUE

3-VECC-21

Interrogatory:

Reference: Exhibit 3, pages 4 and 11

Preamble:
The Application (page 4) states: “The updated regression analysis substituted Number of Customers for Employment in Kitchener-Waterloo-Cambridge”.

a) Please indicate what customer classes were included in Number of Customers variable and why the count for these particular customer classes was used.

Response:

A reconciliation of the customer count by class to the count used in the Purchase Power Model is presented on the Rate Class Customer Model tab. The reconciliation excludes Streetlight (SL) and Unmetered Scattered Load (USL) connection counts and replaces them with the USL customer count. WNH has chosen to do this due to the fact that an additional SL or USL connection would not have the same load impact level as an additional customer.

3-VECC-22
Interrogatory:

Reference: Exhibit 3, page 10 Load Forecast Model (COS), Purchase Power Model Tab

Preamble:
The Application states: “WNH notes that Purchases from the IESO were adjusted by Long-Term Load Transfers (until cessation in 2017), Embedded Generation, Market Participant data and the correction of a Hydro One Networks Inc. (HONI) billing error in which incorrect meters were being attributed to, and purchases were being charged to WNH, by the IESO”.

The Application states: “Data for WNH's total system load is available as far back as January 1996. This provides 288 monthly data points which are a reasonable data set for use in a multiple regression analysis. The average weather conditions over this period are applied in the prediction formula to determine a weather normalized forecast for 2020 and 2021. This analysis assumes weather normal conditions are based on a ten-year average of weather data”.

a) Please confirm that the Wallenstein Adjustment included in the Purchased Power Model Tab (Column C) represents the correction of the HON billing error.

b) Please explain the source of the Long-Term Load Transfers up to 2017 and why the adjustment led to a reduction in purchased power.

c) Page 9 of the Application indicates that the regression is based on data for the period January 1996 to December 2019 (i.e. 24 years). At page 10 the Application states that the average weather conditions over this period were used to determine “weather normal”. However, the Application also states that weather normal conditions are based on a ten-year average. Please reconcile and clarify the basis for “weather normal” as used in the Application.

Response:

a) Confirmed.

b) WNH previously had Long-Term Load Transfers (LTLT) with Kitchener-Wilmot Hydro, Energy+ and Hydro One. Under this process, WNH would bill customers within its boundaries who were served by the other distribution companies’ lines or vice versa. A subsequent settlement would be performed between the distributors. This process ended as of December 31, 2017 with revised boundaries and transferring of customers. As described in Exhibit 3 p.36, the elimination of LTLT

at the end of 2017 resulted in an addition of 116 customers and reduction of 29 customers for WNH. Thus, for the period where LTLT was relevant WNH was billing a greater number of customers than its counterpart distributors were. As a result, the net LTLT customer consumption (per WNH's billing system and/or settlement data) would need to be reduced from the total power purchased as provided by WNH's third party Meter Data Management Provider to arrive at an accurate total purchased kWh for WNH customers.

c) WNH confirms that the regression is based on data from the period of January 1996 to December 2019. However, per OEB filing requirements published May 14, 2020 p. 23 2.3.1.1 Multivariate Regression Model, for weather-normalization methods utilizing Heating Degree Days and Cooling Degree Days (WNH's chosen inputs), applicants must use either a 10-year average or 20-year trend. On the tab Rate Class Energy Model, WNH compared each of these measures and decided to use the 10-year average.

3-VECC-23

Interrogatory:

Reference: Exhibit 3, pages 11-13

a) Please confirm that the -1.89 coefficient for CDM means for every kWh of persisting CDM monthly purchases are reduced by 1.89 kWh.

b) In WNH's view does this result make sense intuitively and, if yes, why?

c) Please provide an alternative purchased power model (i.e., coefficients and statistical results) along with the resulting 2020 and 2021 load forecast where:

a. The monthly purchased power values used to estimate the regression equation are increased by the persisting monthly CDM and the regression equation is estimated using the balance of the explanatory variables as set out in the Application.
b. The 2020 and 2021 monthly purchases are first forecast using this regression model and the forecast values for the explanatory variables per step i).
c. The resulting 2020 and 2021 forecast monthly purchases are reduced by the persisting CDM forecast for each month as set in the Application.

Response:

a) Confirmed. WNH notes that this coefficient has changed in the revised model per response to 1-Staff-1 to -1.91.

b) The Persistent CDM factor is based on actual verified kWh savings per IESO reporting of CDM programs. WNH recognizes that not all energy conservation efforts made by its customers were contracted under the various CDM programs. Therefore, the CDM variable having a coefficient greater than a 1:1 ratio intuitively makes sense since it captures not only the direct savings but other energy conserved outside of formal programs.

c) Please see Attachment 28 – Load Forecast – CDM Persistence Modification tab PPM – 3-VECC-23.

3-VECC-24

Interrogatory:

Reference: Exhibit 3, pages 14-15

Preamble:

The Application states: “To determine the total weather normalized energy billed forecast, the total system weather normalized purchases forecast is adjusted by a historical loss factor. The historical loss factor used is 3.57% which represents the average loss factor from 2003 to 2019 and encompasses all available historical data.”

a) Please explain why an historical loss factor cannot be calculated using the same years (i.e., 1996-2019) as used to estimate the purchased power model.

Response:

a) WNH does not have billed data by rate class in a useable and readily available format prior to 2003. Moreover, calculated loss factors from that time period would not be ideal to use in a predictive model for 2020 and 2021 due to system changes since then. Please refer to WNH’s response to 3-Staff-34 for further detail relating to loss factor application in the load forecast.

3-VECC-25

Interrogatory:

Reference: Exhibit 3, pages 18-21
Load Forecast (COS) Model, Rate Class Customer Model Tab

Preamble:

The Application (page 18) states: “The annual customer/connections data is based on the average count opposed to the end of year count”.

The Application also states (page 20): “WNH chose to apply the trend growth rate to each customer class to forecast 2020 and 2021 customer count. The exception is Direct Market Participant where the customer forecast has been held constant”.

a) Please explain how the “average count” was calculated (e.g., average of 12 monthly values).

b) If the average count is not based on the average of the monthly values, please explain why given that this data is available (i.e., was used in the purchased power model).

c) It is noted that the trend value for the Residential customer growth rate is 0.7% (more specifically 0.65%) and that this is the value used to forecast the class’ customer count. Please explain why this is reasonable when the historical values for the period 1996-2019 are all greater than 0.7%.

d) It is noted that the trend value for the GS>50 customer growth is 2.5% and that this value is used to forecast the class’ customer count. Please explain why this is reasonable when for the historical period used the annual growth rate only exceeded 2.5% three times out of 16.

e) Rather than using the trend in the customer/connection growth rates for each customer class (excluding the Market Participants), please provide a forecast for the 2020 and 2021 customer/connection counts for each class based on a trend analysis of actual customer/connection counts.

f) Please provide the actual customer/connection counts by customer class for June 2020 and July 2020.

Response:

a) As confirmed in response to 3-Staff-31, the average count was calculated using beginning and end of each year.

b) Average count based on beginning and ending counts is consistent with WNH's 2016 Application (EB-2015-0108) and recently approved applications such as Energy+'s 2019 Application.

c) As described in Exhibit 3 p. 20, WNH has observed a noticeable decrease in customer growth rates over recent historical years. This is corroborated by analyzing geometric means over shorter periods of time (see Load Forecast Rate Class Customer Model). WNH expects this decrease to continue and therefore determined that a trend value would be the best predictive measure for future growth.

d) Unlike the Residential growth rate described above, the geometric means with shorter timeframes indicate higher growth in more recent years than the geometric mean over all available data. Therefore, WNH determined that a trend value would be the best predictive measure for future growth.

e) Please see Attachment 29 Customer Count Trend Analysis - tab Trend Analysis.

f) Please see Attachment 29 Customer Count Trend Analysis - tab Customer Count 2020. Additional monthly data was added as per other interrogatory requests.

3-VECC-26

Interrogatory:

Reference: Exhibit 3, pages 18-21
Load Forecast (COS) Model, Rate Class Customer Model Tab

Exhibit 7, Attachment 7-1, Tab I6.2-Customer Data
Exhibit 8, page and Attachment 8-5

Preamble:
Exhibit 3 indicates the number of Street Lighting connections forecast for 2021 is 15,005.

The Cost Allocation model indicates the number of Street Lighting connections forecast for 2021 is 2,072 while the forecast number of devices is 15,005.

Exhibit 8 calculates the monthly service charge for Street Lighting based on 15,005 connections.
The proposed 2021 Street Lighting tariff indicates the monthly service charge is "per connection".

a) Please confirm that the15,005 is the forecast number of devices and not connections for 2021.

i. If confirmed, please explain how the value of 2,072 for the 2021 forecast number of connections was determined.

ii. If not confirmed, please indicate what the correct number of connections and devices is for the purposes of Tab I6.2 and how each were determined.

b) Please clarify whether the billing determinant for the monthly service charges is the number of connections or the number of devices.

i. If the billing determinant is meant to be the number of devices, please confirm that the wording of the 2021 tariff needs to change accordingly.

ii. If the billing determinant is to be the number of connections, please provide an updated derivation of the monthly service charge.

Response:

a) For street lighting customers, WNH bills based on number of individual streetlights (devices) which is projected to be 15,005 in 2021. Although the terminology changes, this is consistent with the treatment for load forecast purposes in Exhibit 3 and service charge calculation purposes in Exhibit 8. WNH has projected the connection count of 2,072 (allocator CCON – Number of Connections) based on information from its Geographic Information System (GIS). As discussed in Exhibit 7 p.12, "A new 'street lighting adjustment factor' will be used to allocate costs to the street lighting rate class for primary and line transformer assets. The 'street lighting adjustment factor' replaces the 'number of connections' allocator. WNH's model has been updated to reflect the street lighting adjustment factor in I6.2.

ii) Not applicable.

b) WNH confirms that the billing determinant for the monthly service charges is the number of devices (15,005) and will change the 2021 tariff wording accordingly.

ii) Not applicable.

3-VECC-27

Interrogatory:

Reference: Exhibit 3, page 23

The Application states: "The weather normalized values in Table 3-19 are exclusive of CDM programs. The impact and persistence of CDM programs has been included as a variable in the purchases regression model and WNH's methodology is described in more detail in 2.3.1.3".

a) Please clarify whether the statement "exclusive of CDM programs" means that the forecast includes or excludes the impact of CDM programs?

Response:

a) The statement specifically relates to the exclusion of CDM programs as a manual adjustment to Load Forecast. WNH confirms that CDM programs are included in the Load Forecast as a variable in the regression model in the Purchased Power Model tab. More discussion on the treatment of CDM programs as a variable is available in WNH's response to 3-Staff-36.

3-VECC-28

Interrogatory:

Reference: Exhibit 3, pages 15-17 and Attachment 3-3
Load Forecast Model (COS), Power Purchased Model Tab

a) Has the IESO prepared any reports/information on the COVI-19 impacts on the electrical system more recent than the April 2020 report provided in Attachment 3-3? If yes, please provide a copy and indicate the most recent information regarding reductions in energy use relative to pre-pandemic conditions.

b) Please update Tables 3-7 and 3-8 to include the months of June, July and August 2020.

c) Please provide a schedule that sets out WNH's actual monthly power purchases for March through August 2020, using the same definition of power purchases as used in the load forecast model (per Exhibit 3, page 10)

d) Please provide the actual monthly Heating Degree Days and Cooling Degree Days for the months March through August 2020.

e) Using the actual Heating and Cooling Degree Days per part d), WNH's purchase power model (per Purchased Power Model Tab), WNH's 2020 forecast for the other explanatory variables please provide the resulting prediction for the power purchased for the months of March through August 2020.

Response:

a) WNH is not aware of any new formal reports/information made available from the IESO with respect to COVID-19 impacts. However, the IESO has continued to release high-level updates of impacts on the system. The most recent media release was made on June 18, 2020. This has been included as Attachment 30 – IESO COVID-19 Impacts on Ontario's Electricity System.

b) Please refer to WNH's response to 3-Staff-32.

c) Please refer to WNH's response to 3-Staff-32.

d) Please refer to WNH's response to 3-Staff-32.

e) Please refer to WNH's response to 3-Staff-32.

3-VECC-29

Interrogatory:

Reference: Exhibit 3, pages 24-25

a) Please explain why the kW/kWh ratio is based a trend analysis as opposed to an historical average (e.g., is the trend statistically significant)?

Response:

As demonstrated in the Load Forecast – Rate Class Load Model tab, WNH examined several averages and trends for kW/kWh ratio. Each of the measures yielded similar values. WNH selected the trend value as it is consistent with the Rate Class Customer Model growth.

3-VECC-30

Interrogatory:

Reference: Exhibit 3, pages 17-18 /Exhibit 9, pages 40-41

The Application states (Exhibit 3, page 17): "Based on this information, WNH has prepared a second load forecast that decreases kWh usage by the following: GS < 50kW customers by 10%, GS > 50 by 15% and Large User by 20% in 2021 and customer count decreases as follows: Residential by 1%, GS < 50kW customers by 5% and GS > 50 by 4%."

The Application states (Exhibit 9, page 41): "WNH is requesting a sub-account under Account 1509 – Impacts Arising from the COVID-19 Emergency that is specific to WNH's situation. WNH is requesting to track all variances from the Load Forecast included in this Application for both customer count and kWh to be cleared through an annual rate rider as part of the annual IRM application".

a) Are the kWh reduction percentages expressed on a per customer basis or for the overall customer class?

b) How were the assumed kWh reduction percentages established for each class?

c) The alternative forecast represents an 11.4% reduction in GWh (per Table 3-9). Please contrast this value with the IESO's most recent information regarding the impact of the pandemic on system load.

d) The Application states that the requested variance account would "track all variances from the Load Forecast included in this Application for both customer count and kWh". Does this mean that the variance account would also include variances arising due to the weather being different from "normal"?
   i. If yes, why is this appropriate?

e) With respect to the proposed variance account, would variances in load and revenues be tracked by customer class and would the resulting variances be recovered by customer class?

f) If weather variations were such that the loads exceeded forecast (even with the pandemic impacts) would customers receive a refund?

g) The OEB is currently undertaking a Consultation on the Deferral Account – Impacts arising from the COVID-19 Emergency (EB-2020-0133). Please explain why WNL needs a utility-specific sub-account as opposed to relying on the Accounting Order issued March 25, 2020 and the results of the OEB's consultation.

h) Does WNH expect the CIVID-19 impacts referenced on page 17 to continue after 2021 and for the balance of its upcoming IRM period?
   i. If yes, why?
   ii. If not, is it appropriate to use the revised forecast as the underpinning for the rates that will be set during WNH's subsequent IRM period?

Response:

a) kWh reduction percentages are expressed on a per customer basis and applied in the Rate Class Energy Model of the submitted COVID-19 adjusted Load Forecast.

b) Reductions were estimated using the best available data at the time of filing.

c) Please see WNH's response to 3-VECC-28. The 11.4% reduction is within the range specified for Small Commercial energy consumption decrease (8-12%) and below the energy consumption decrease of 17% for Large Industrial/Commercial customers per the IESO report. This is further corroborated by GWh reductions per table 3-7.

d) Please refer to WNH's response to 3-Staff-33.

e) Please refer to WNH's response to 3-Staff-33.

f) Please refer to WNH's response to 3-Staff-33.

g) Please refer to WNH's response to 3-Staff-33.

h) Please refer to WNH's response to 3-Staff-33.

3-VECC-31

Interrogatory:

Reference: Exhibit 3, pages 28-29
Load Forecast (COS) Model, CDM Activity Tab

a) Please provide the OPA/IESO reports that support the CDM activity values used for the 2006 to 2010 programs (per CDM Activity Tab, Column B).

b) Please provide a schedule/excel file that for each of the program years 2006 to 2010 sets out the persisting CDM impacts through to 2021 as follows:

Impact of Historical and Forecast CDM					
Calendar Year/ CDM Program Year	2006	Columns for Each Subsequent Year up to 2020			2021
2006 CDM Program Impacts					
Actual CDM impacts for each year to 2009 – one row per year					
2010 CDM Programs Impacts					
Total (Column B in CDM Activity Tab)					

c) Please provide the OPA/IESO reports that support the CDM activity values used for the 2011 to 2014 programs (per CDM Activity Tab, Column C).

d) Please provide a schedule/excel file that for each of the program years 2011 to 2014 sets out the persisting CDM impacts through to 2021 as follows:

Impact of Historical and Forecast CDM					
Calendar Year/ CDM Program Year	2011	Columns for Each Subsequent Year up to 2020			2021
2011 CDM Program Impacts					
Actual CDM impacts for each year to 2013 – one row per year					
2014 CDM Programs Impacts					
Total (Column C in CDM Activity Tab)					

e) The values set out in the CDM Activity Tab (Column G) for the annual impacts of the 2018 CDM programs do not appear to match those reported in the IESO's CDM Participation and Cost Reports for either 2018-12 or 2019-4 provided with the Application. For example, the CDM Activity Tab shows 2020 persisting savings of 16,271,900 kWh while the IESO's 2019-4 report shows savings of 11,612,613 kWh. Please provide the source document for the 2018 CDM activity values for the years 2018-2021 as used in the Application and explain where in the document the values used can be found.

f) Please provide the source document for the 2019 CDM activity values for the years 2019-2021 as used in the Application (CDM Activity Tab, Column H) and explain where in the document the values used can be found.

g) Please explain the basis for the 2020 CDM activity values for the years 2020-2021 as used in the Application (CDM Activity Tab, Column I). In particular, please identify the specific CDM programs assumed to be providing the results and whether they include any CDM programs other than those from the CFF framework.

Response:

a) Please see Attachment 31 a) CDM_WNH_2006-10 Final OPA CDM Results.

b) The requested table above is available on the Summary – LDC tab of Attachment 31 a) – CDM_WNH_2006-10 Final OPA CDM Results.

c) Filed as Att 4-8 in initial filing and included as Attachment 31 b) – CDM_WNH_2011-Program Persistence Results Report.

d) WNH has added a 2011-2014 Summary tab to Attachment 31 b) – CDM_WNH_2011-Program Persistence Results Report which provides the requested information above.

e) Please refer to WNH's response to 3-Staff-36 e).

f) Please refer to WNH's response to 3-Staff-36 e).

g) Please refer to WNH's response to 3-Staff-36 e).

3-VECC-32

Interrogatory:

Reference: Exhibit 3, page 28

The Application states:
"Due to the inclusion of 2019 and 2020 projected net program savings in the Persistent CDM variable used in the regression model, a manual adjustment to the load forecast is not required. CDM results for historical years up to the conclusion of the program in 2019 are inherently included in the actual billed data in Table 3-14. The wind-down of the programs in 2020 is not significant and is sufficiently considered in the forecast usage per customer in Table 3-16.

Furthermore, the calculation of a 2021 threshold for LRAMVA is not necessary due to the lack of new CDM programs. As a result, Appendix 2-I is also not required."

a) Please confirm that WNH will not be making a future LRAM application for lost revenues in 2021 or subsequent years due to CDM savings achieved in 2020.

b) If not confirmed, please explain why a 2021 threshold for LRAMVA is not necessary.

Response:

a) Confirmed. Please refer to WNH's response to 3-Staff-36 for further details.

b) Please refer to WNH's response to 3-Staff-36 for further details.

3-VECC-33
Interrogatory:

Reference: Exhibit 3, page 46

Preamble:

The Application states: “As a part of the review of Customer Service Rules (EB-2017-0183), WNH has taken into Consideration the proposed amendments to the Distribution System Code, Standard Supply Service Code, Unit Submetering Code, and Gas Distribution Access Rule. In light of these proposed amendments, WNH has adjusted its budgeted revenue for the proposed changes”.

a) Please outline the specific adjustments that were made to the forecast 2021 Other Revenue to account for the noted proposed amendments. In doing so please indicate whether any of the adjustments are related to amendments that have actually been approved/implemented by the Board as opposed to those still only a “proposal”.

Response:

In Phase 1 of the Customer Service Rule changes that came into effect on July 1, 2019, there were two financial changes that impacted WNH. First was the Collection of Account Charge which is no longer allowed to be billed to customers. There are no revenues included for 2021 for collection of accounts. Second was the removal of the Disconnect/Reconnect Charge which has been replaced with Reconnection Charge. This change prohibits electricity distributors from applying any charges when disconnecting a customer’s electricity service for non-payment. WNH has budgeted for Reconnection Charges only in 2021. There are no Board ‘proposed’ adjustments impacting Other Revenue as part of this Application.

3-VECC-34

Interrogatory:

Reference: Exhibit 3, pages 46-47

Preamble:

The Application states: “WNH has not proposed any new specific service charges or incorporated new rates or rules that would impact Other Revenue. In Exhibit 8, WNH is requesting new Specific Service Charges for Owner Requested Disconnection and Reconnection however these would be used as an offset to OM&A expenses instead of included in Other Revenue. Also, the changes to Customer Service Rules that were implemented in 2019 and 2020, did not impact Other Revenue and again were an offset to OM&A expenses”.

a) Please indicate where in Exhibit 4 the revenues from the new Specific Service Charge for Owner Requested Disconnection and Reconnection and the 2019 and 2020 changes to Customer Service Rules have been incorporated as an offset to OM&A expenses.

Response:

a) As described in WNH’s response to 3-Staff-37, owner requested disconnect/reconnects offset OM&A costs in USoA 5005 – Operation Supervision and Engineering.
2019 and 2020 changes to Customer Service Rules have been recorded as offsets to Billing & Collecting through USoA 5330 – Collection Charges.

3-VECC-35

Interrogatory:

Reference: Exhibit 3, page 48
Exhibit 1, page 66
Chapter 2 Appendices, Appendix 2-H

Preamble:

In Exhibit 1, the Application states: “WNH established an Embedded Distributor Class in its 2011 COS. HONI owns the circuits that cross into WNH’s service territory and reside on WNH’s poles. WNH receives pole rental revenue from HONI”.

a) Please explain why the revenue from Service Transaction Requests (Acct. 4084) is reported as a positive value such that it reduces Other Revenues.

b) Please explain the basis for the decrease in 2021 in revenues attributed to Retail Services (Acct. 4082) and Service Transaction Requests (Acct. 4084).

c) With respect to the pole rental revenue from HONI, under which account is it included in Other Revenue? For that specific account, please provide a break out of the pole rental revenue received from HONI for the years 2016-2021.

d) How is the rental rate used to charge HONI determined and, in particular, is the methodology consistent with OEB methodology used to determine the pole attachment rate?

Response:

a) The revenue from Service Transaction Requests (USoA 4084) is recorded as positive values because WNH uses the account to track the costs associated with the Retail Services Revenue (USoA 4082). This is done to easily track costs in WNH’s ERP system and clearly see the revenue and costs for Retail Services Revenue. Therefore, the net of USoA 4082 and 4084 provides the revenue from Retail Services Revenue.

b) Please see WNH’s response to 3-Staff-38.

c) Pole rental revenue is tracked in Other Revenue under USoA 4210. The 2020 Bridge and 2021 Test Year budgets are based on an inflation rate of 1.5% annually.

The table below provides the Pole Rental Revenue WNH receives from HONI.

Pole Rental Revenue	2016 Actual	2017 Actual	2018 Actual	2019 Actual	2020 Bridge	2021 Test
HONI	$ 3,408	$ 3,443	$ 8,660	$ 10,301	$ 10,455	$ 10,612

d) The rental rate charged to HONI is based on HONI's specific OEB approved pole attachment charge. WNH has historically charged HONI the same attachment rates as HONI charges WNH. This arrangement is expected to continue into 2021 and beyond.

EXHIBIT 4 – OPERATING EXPENSE

4-VECC-36

Interrogatory:

Reference: Exhibit 4, page 14

a) Please explain the difference between an "Administrative Credit" and a capital contribution.

b) Please amend Table 4-4 (Appendix 2-JA) to show separately for each year any "administrative credits."

Response:

a) An administrative credit is an additional amount which is charged along with a capital contribution to help offset the cost of administrative work generated by

the project request. Capital contributions are calculated based on the direct cost of the construction of underlying assets. WNH charges an administrative charge of up to 15% of the underlying capital contribution to help offset costs such as stationery, communication, coordination, billing, collecting and other administrative costs generated by the project.

b) The table below is an amendment to Application Table 4-4 to show "Administrative Credits" based on the Application OM&A.

Expenses	2016 Board Approved	2016 Actual	2017 Actual	2018 Actual	2019 Actual	2020 Bridge	2021 Test
Customer Count	55,791	56,230	57,041	57,471	57,855	58,272	58,693
Distribution Expenses - Operation	5,689,381	5,818,874	5,949,887	6,021,921	6,269,001	6,039,717	6,310,421
Distribution Expenses - Maintenance	1,613,140	1,543,946	1,608,420	1,963,196	1,497,703	1,867,332	1,903,411
Billing and Collecting	2,802,731	2,728,245	2,823,342	3,100,765	2,966,160	3,008,184	3,137,007
Community Relations	142,200	104,616	129,492	200,330	244,189	347,738	508,564
Administrative and General Expenses	3,457,167	3,705,473	3,926,402	4,051,293	4,058,922	4,280,297	4,479,713
Administrative Credits	(587,285)	(1,121,352)	(871,675)	(827,655)	(576,374)	(501,539)	(610,059)
Property Tax	489,734	471,270	448,350	444,419	458,134	462,373	471,620
LEAP	42,000	42,000	42,000	42,000	42,000	42,000	48,000
Total OM&A	**13,649,068**	**13,293,072**	**14,056,218**	**14,996,269**	**14,959,735**	**15,546,102**	**16,248,677**
OM&A per Customer	**245**	**236**	**246**	**261**	**259**	**267**	**277**

The table below is an update to Application Table 4-4 based on the new collective agreement changes in 2020 and 2021, and an increase to the intervener costs in 2021.

Expenses	2016 Board Approved	2016 Actual	2017 Actual	2018 Actual	2019 Actual	2020 Bridge	2021 Test
Customer Count	55,791	56,230	57,041	57,471	57,855	58,272	58,693
Distribution Expenses - Operation	5,689,381	5,818,874	5,949,887	6,021,921	6,269,001	6,056,220	6,343,243
Distribution Expenses - Maintenance	1,613,140	1,543,946	1,608,420	1,963,196	1,497,703	1,870,346	1,908,962
Billing and Collecting	2,802,731	2,728,245	2,823,342	3,100,765	2,966,160	3,014,171	3,149,683
Community Relations	142,200	104,616	129,492	200,330	244,189	348,581	511,540
Administrative and General Expenses	3,457,167	3,705,473	3,926,402	4,051,293	4,058,922	4,287,675	4,508,032
Administrative Credits	(587,285)	(1,121,352)	(871,675)	(827,655)	(576,374)	(501,539)	(610,059)
Property Tax	489,734	471,270	448,350	444,419	458,134	462,373	471,620
LEAP	42,000	42,000	42,000	42,000	42,000	42,000	48,000
Total OM&A	**13,649,068**	**13,293,072**	**14,056,218**	**14,996,269**	**14,959,735**	**15,579,827**	**16,331,021**
OM&A per Customer	**245**	**236**	**246**	**261**	**259**	**267**	**278**

4-VECC-37

Interrogatory:

Reference: Exhibit 4, page 75

a) If WNH is a member of the EDA please provide the amounts paid and forecast to be paid to the Electricity Distribution Association in the years 2016 through 2021.

Response:

a) Please see the table below for historic and projected payments to the Electricity Distributors Association for membership for the years 2016 to 2021.

	2016 Actual	2017 Actual	2018 Actual	2019 Actual	2020 Bridge Year	2021 Test Year
EDA Membership	77,900	78,700	80,300	81,900	83,500	85,100

4-VECC-38

Interrogatory:

Reference: Exhibit 4, page 13

a) Please explain how the 2021 Bad Debt estimate was calculated.

Response:

a) 2021 Bad Debt expense was estimated based on rounded historical averages over a 4-year period. With the exception of 2018 where a single large customer declared bankruptcy, WNH's write-offs due to non-collectability are relatively predictable. However, this does not include any COVID-19 impacts which would be above and beyond WNH's normal level of bad debts. At the time of filing WNH

anticipated a large increase in this account due to financial hardships caused by the pandemic. However, WNH plans on utilizing USoA 1509 – Impacts Arising from the COVID-19 Emergency, Sub-account Bad Debt to offset any additional charges.

4-VECC-39

Interrogatory:

Reference: Exhibit 4, page 13,16

a) What is the 2021 OM&A cost related to maintain a CDM service for WNH customers?

b) Please clarify what CDM related IT costs are being retained – specifically what service is being provided and at what cost.

Response:

a) The 2021 OM&A cost related to maintain a CDM service for WNH customers is $254,568 which includes costs for two Key Account employees and related expenses.

b) A portion of the IT OM&A costs that were allocated to CDM was to oversee the installation, support and maintenance of computers and network infrastructure that were being utilized by the CDM employees. From 2011 to 2019, approximately 6% of the IT OM&A costs were allocated to CDM for labour, hardware and software expenses. In 2020, a small portion of the cost is recouped through the CDM wind-down budget and in 2021, no IT related costs are budgeted to be recouped. It is important to note that with only two Key Account employees, the IT costs for the department would be lower.

4-VECC-40

Interrogatory:

Reference: Exhibit 4, pages 76

a) WNH last actual OEB assessment cost was approximately $207k. The Utility is forecasting an increase in this cost to 250k in 2021. Please explain the reasons for the increase.

Response:

a) As noted on p. 28 of Exhibit 9, Effective April 1, 2016, the OEB revised its Cost Assessment Model (CAM). In accordance with a Board letter dated February 9, 2016, the OEB established a sub-account of 1508 to record material differences between OEB cost assessments currently built into rates and the application of the new CAM. The total amount paid for OEB Assessment costs in 2019 was $240,754 but only $207,489 was expensed. The remainder was held in the 1508 sub-account. For 2021, WNH will no longer utilize the variance account and has included the full budgeted OEB Assessment costs in the expense line.

4-VECC-41

Interrogatory:

Reference: Exhibit 4, pages 76

a) Please provide an update of the application costs (estimated to be $650,000) incurred to date by the listed categories (i.e. legal, consulting, intervenor and incremental costs).

b) Please list the Consultant Reports and the associated costs incurred in preparation of this application.

Response:

a)

	Cost Estimate	Cost to Date
Legal	125,000	59,811
Consultant	400,000	374,733
Intervenor	115,000	-
Incremental Costs	10,000	7,453
Total	650,000	441,997

b) The only Consultant Reports relate to Customer Engagement which were included in Exhibit 1, Attachment 1-9a and 1-9b.

4-VECC-42

Interrogatory:

Reference: Exhibit 4, pages 27

a) Please list all the positions in 2020 and 2021 for which there is an employee being mentored by an employee expected to retire.

Response:

In order to maintain a competent and skilled workforce and to plan for retirements, WNH has been recruiting employees ahead of pending retirements to allow new employees sufficient time to develop and be mentored by employees who are eligible to retire. These positions include Apprentice Powerline Maintainers, Engineering Technologists, Meter Technologists, and Protection & Control Technologists.

4-VECC-43

Interrogatory:

Reference: Exhibit 4, pages 30

a) How many staff were employed in the CDM area prior to the elimination of the Utility delivered CDM programs? How many of these employees are expected to remain with the Utility throughout 2021 and 2022?

Response:

a) Prior to the elimination of the Utility delivered CDM programs there were four employees. Two of the employees applied for and attained open positions elsewhere in the Utility. The other two employees make up the Key Accounts Department discussed in the Application.

4-VECC-44

Interrogatory:

Reference: Exhibit 4, pages 38 & 43

a) Please explain how the forecast for Communications, Community and Customer Relations 2021 costs was estimated?

Response:

a) The 2021 Communications, Community and Customer Relations costs were forecasted based on the resources and support required to deliver effective customer communications and foster and enhance community and customer relations. Included in the 2021 Communications, Community and Customer

Relations costs are three full time resources including two full time (from the previous CDM function) employees to establish a Key Accounts Department which is part of the 2021 Communications, Community and Customer Relations forecast. In addition, the forecast includes marketing and communication costs for print, radio and digital customer communications and various department expenses.

4-VECC-45

Interrogatory:

Reference: Exhibit 4, page 44

In explaining the increase in IT services costs WNH explains: "There are several reasons for the increase in IT services costs. First, WNH has invested in several new systems since 2016, many being cloud based and therefore have higher operating costs."

a) If cloud-based systems are more expensive than more traditional on-site solutions why is WNH investing in these systems?

b) If the Utility is investing in more cloud-based IT solutions why is it also increasing the number of FTEs in the IT area?

Response:

a) Cloud based systems shift spending from capital to operating but are not always more expensive as there is no asset to own or maintain. Accounting regulations require WNH to record this spending in operating accounts, where it would have previously been in capital accounts.

It is also worth noting that many new software vendors do not have a non-cloud offering and several existing providers are moving away from self-hosted option that would be recorded as capital instead of operating.

WNH will prefer cloud for external facing systems such as a corporate website. For more information on WNH's approach please refer to DSP, Appendix N, Section 5.1.3 items 1-3 on p. 8.

b) WNH does not expect adoption of cloud services to reduce the number of technical staff required but rather the type of work would change from "maintaining on-site hardware" to "maintaining software defined networks".

4-VECC-46

Interrogatory:

Reference: Exhibit 4, pages 47

a) Please provide an update on the status of the ratification of the recently negotiated Collective Agreement.

Response:

a) Please refer to 4-Staff-53 for the status of WNH's Collective Agreement.

4-VECC-47

Interrogatory:

Reference: Exhibit 4, pages 50, Table 4-14 (Appendix 2-K)

a) Please amend Table 4-14 to show the total amount of employee compensation capitalized in each year.

Response:

a) The table below is based on the amended Table 4-14 (Appendix 2-K) to include employee compensation between capital and operating in each year. The 2020 Bridge and 2021 Test Years are updated based on the new Union Collective agreement.

	2016 Board Approved*	2016 Actual	2017 Actual	2018 Actual	2019 Actual	2020 Bridge	2021 Test
Average Number of Employees (FTEs including Part-Time)							
Management (including executive)	26	26	24	22	22	23	24
Non-Management (union and non-union)	106	104	101	102	100	99	104
Total	**132**	**130**	**125**	**124**	**122**	**122**	**128**
Total Salary and Wages including overtime and incentive pay							
Management (including executive) Capital	$ 752,618	$ 970,965	$ 923,391	$ 585,173	$ 563,133	$ 674,058	$ 691,570
Management (including executive) Operating	$ 2,257,852	$ 2,272,316	$ 2,211,379	$ 2,406,730	$ 2,089,958	$ 2,472,045	$ 2,673,517
Non-Management (union and non-union) - Capital	$ 3,127,981	$ 3,231,635	$ 3,104,865	$ 2,999,710	$ 3,341,897	$ 3,260,752	$ 3,463,908
Non-Management (union and non-union) - Operating	$ 5,115,216	$ 5,284,722	$ 5,433,356	$ 5,757,644	$ 5,787,400	$ 5,723,866	$ 6,080,482
Total	**$ 11,253,667**	**$ 11,759,638**	**$ 11,672,991**	**$ 11,749,257**	**$ 11,782,388**	**$ 12,130,721**	**$ 12,909,477**
Total Benefits (Current + Accrued)							
Management (including executive) Capital	$ 175,299	$ 217,706	$ 217,606	$ 135,321	$ 130,904	$ 154,353	$ 154,895
Management (including executive) Operating	$ 525,895	$ 509,489	$ 521,134	$ 556,556	$ 485,823	$ 566,073	$ 598,804
Non-Management (union and non-union) - Capital	$ 766,870	$ 767,193	$ 727,835	$ 687,085	$ 779,578	$ 745,076	$ 795,368
Non-Management (union and non-union) - Operating	$ 1,254,071	$ 1,254,597	$ 1,273,674	$ 1,318,790	$ 1,350,052	$ 1,307,893	$ 1,396,176
Total	**$ 2,722,135**	**$ 2,748,985**	**$ 2,740,249**	**$ 2,697,752**	**$ 2,746,357**	**$ 2,773,395**	**$ 2,945,243**
Total Compensation (Salary, Wages, & Benefits)							
Management (including executive)	$ 3,711,664	$ 3,970,476	$ 3,873,510	$ 3,683,780	$ 3,269,818	$ 3,866,529	$ 4,118,786
Non-Management (union and non-union)	$ 10,264,138	$ 10,538,147	$ 10,539,730	$ 10,763,229	$ 11,258,927	$ 11,037,587	$ 11,735,934
Total	**$ 13,975,802**	**$ 14,508,623**	**$ 14,413,240**	**$ 14,447,009**	**$ 14,528,745**	**$ 14,904,116**	**$ 15,854,720**

4-VECC-48

Interrogatory:

Reference: Exhibit 4, page 74, Table 4-34

a) Please confirm or correct the understanding that the reductions to OM&A as shown in Table 4-34 are offset by an equal cost also charged to OM&A (i.e. the net impact of affiliate activity as shown, for example in Appendix 2-JA, is zero).

Response:

a) Confirmed. The reductions to OM&A as shown in Table 4-34 are offset by an equal cost also charged to OM&A, as shown in Appendix 2-JA.

4-VECC-49

Interrogatory:

Reference: Exhibit 4, page 78

a) What portion of WNH's $42,000 in annual LEAP funding was dispersed in each year 2016 through 2019?

Response:

LEAP Funding	2016	2017	2018	2019
Beginning Balance	$12,711	$9,312	$16,219	$24,090
Paid to Region of Waterloo	$42,000	$42,000	$42,000	$42,000
Total Funds Available	**$54,711**	**$51,312**	**$58,219**	**$66,090**
Disbursements	-$45,399	-$35,093	-$34,129	-$34,204
Ending Balance	$9,312	$16,219	$24,090	$31,886
Portion of LEAP Funding Dispersed	**83%**	**68%**	**59%**	**52%**

EXHIBIT 5 – COST OF CAPITAL

5-VECC-50

Interrogatory:

Reference: Exhibit 1, page 123

a) Please update Table 1-48 (Profitability) to include 2019 results.

Response:

a)

Indicator	2014	2015	2016	2017	2018	2019
Profitability: Regulatory - Deemed (included in rates)	9.58%	9.58%	9.19%	9.19%	9.19%	9.19%

Indicator	2014	2015	2016	2017	2018	2019
Return on Equity - Achieved	7.26%	6.65%	10.13%	8.37%	8.20%	7.13%

5-VECC-51

Interrogatory:

Reference: Exhibit 1, Attachment 1-17, DBRS Morningstar Credit Report

The Report contains the following statement:
DBRS Morningstar (DBRS Morningstar) confirmed the Issuer Rating of Waterloo North Hydro Inc. (Waterloo North or the Company) at A (low) with a Stable trend. The rating reflects the stability of Waterloo North's electricity distribution business operating under a reasonable regulatory framework in a growing franchise area as well as the Company's strong financial risk profile. Waterloo North's rating is one notch lower than its DBRS Morningstar-rated peers in the Ontario electricity distribution sector, largely as a result of the Company's above-average refinancing risk. (emphasis added)

a) Please explain what factors resulted in the above noted "above-average financing risk."

Response:

a) The "above-average refinancing risk" refers to the fact that WNH's CIBC Credit Facility Agreement dated June 21, 2019 lists all credit facilities with maturity dates of June 30, 2021. This is a formality that WNH requests to ensure that the term loans are classified as long-term debt for financial statement purposes. Each year, the agreement is renewed and this date is extended by one year. All term loans listed under the agreement are amortized over several years and are hedged through interest rate swaps. Due to this structure, the derivative liability related to the swaps would be considered a current liability under IFRS if not for the maturity date specification.

5-VECC-52

Interrogatory:

Reference: Exhibit 5, page 4

a) WNH notes that is promissory notes with Waterloo North Hydro Holding Corporation are callable upon 270 days' notice. The Utility intends to apply the Board's long-term debt affiliate rate (now 3.21%) to these notes. WNH was able to obtain a long-term loan starting June 2020 at the rate of 2.61%. Please explain why it would not have been more efficient (less costly) to replace the existing affiliate debt with new loans in 2020.

Response:

a) WNH has applied the OEB's long-term debt deemed rate of 3.21% for rate-making purposes, but still intends to pay out the rates as specified in the promissory notes in Attachment 5-2. The promissory notes are callable upon 270 days' notice by Waterloo North Hydro Holding Corporation, not Waterloo North Hydro Inc. (the LDC). WNH does not have the ability to repay the principal of these loans at its

discretion. As of the date of filing and at the time of securing the long-term loan starting June 2020 Waterloo North Hydro Inc. had not received a repayment demand from Waterloo North Hydro Holding Corporation. A repayment demand is not anticipated anytime prior to December 31, 2021.

EXHIBIT 7 – COST ALLOCATION

7–VECC–53

Interrogatory:

Reference: Exhibit 7, page 6 /Cost Allocation Model, Tab I4

The Application states: "WNH has full costs for Services (USoA (Uniform System of Accounts) 1855) for Residential Customers only; all other classes pay for their own services via Contributed Capital USoA 1995/2440. The amount of contributed capital for GS<50kW customers is based on a flat rate per layout while GS>50kW customers pay actual costs".

a) With respect to Tab I4, please confirm that the asset values set out in Column C are the gross asset values prior to the removal of capital contributions.

b) Tab I4 shows $6,858,140 in contributed capital that is attributed to Services (Acct. 1855). Does this amount represent the actual contributed capital paid by customers for their Services or is it simply based on an allocation of the total contributed capital to assets?

c) If based on an "allocation", please provide the 2021 cumulative value for the contributed capital WNH is forecast to receive as of 2021 for customers' Services.

d) Are the Services assets used to supply GS<50 NS GS>50 customers owned by WNH or the customers themselves?

i. If some or all of the Services assets used to supply GS<50 and GS>50 customers are owned by WNH, is WNH responsible for the ongoing OM&A costs related to these assets?

ii. In the Cost Allocation Model, are there OM&A costs attributed to Services assets that are subsequently allocated to the customer classes? If yes, please indicate where in the CA model this occurs and if the GS<50 and GS>50 classes are attributed a portion OM&A costs for these assets.

iii. If the GS<50 and GS>50 classes are not attributed a portion of the OM&A associated with the Services assets, what is WNH's estimate as to the annual OM&A cost for 2021 related to the Service assets used to supply each of these customer classes?

Response:

a) Confirmed.

b) The $6,585,140 represents actual contributed capital paid by customers for Services.

c) Not applicable as it is based on actual contributions received.

d) The ownership of the assets depends on the specific circumstances of the installation. For the majority of GS<50 services, WNH owns all of the assets up the point of demarcation. GS>50 services are generally owned by the customer.

i. Only the assets that are owned by WNH are maintained by WNH. If a customer-owned asset requires any upgrades or maintenance, it is at the expense of the customer.

ii. The following OM&A USoA accounts relate to Services: 5130 – Maintenance of Overhead Services & 5155 – Maintenance of Underground Services. Per tab E4 TB Allocation Details, each of these accounts is allocated based on the allocator 1855 C (see E1 Categorization) which is directly related to allocator CWCS. CWCS originates from tab I6.2 Customer Data. CWCS is calculated by taking the weighting factor from I5.2 Weighting Factors and applying it to the Secondary Customer Base (CCS) count.

iii. GS<50 is attributed a portion of OM&A per the description in part ii). GS>50 is not attributed a portion of OM&A by virtue of having a 0.0 weighting factor in I5.2. Any maintenance performed by WNH for GS>50 services would be charged directly to the customer. Therefore, no allocation is necessary.

7– VECC–54

Interrogatory:

Reference: Exhibit 7, page 7

a) Please provide the analysis underpinning the weighting factors set out in Table 7-2.

Response:

a) Please see the table below. The weighting factors are determined by allocating specific general ledger budgeted costs to each type of meter. Descriptions have been hidden due to confidentiality.

Factor	Description	Cost Allocation Amt
Customers	Cost Allocation I6.2 CCA	58,484

Factor	Description	Weighting
Customers	Cost Allocation I6.2 CCA	100.00%

	Smart Meter - Res + GS < 50	ESM	Interval
	57,708	606	170

	Smart Meter	ESM	Interval
	98.67%	1.04%	0.29%

Account	Description	2021 Budget Amt	Department	Allocating Factor	Smart Meter	ESM	Interval	Total
001-0333-541.10-10		13,415.86	Billing - Meter Reading	Meter count	13,237.85	139.01	39.00	13,415.86
001-0333-541.10-10		19,788.09	Billing - Meter Reading	Meter count	19,525.53	205.04	57.52	19,788.09
001-0333-541.10-30		56,124.95	Billing - Meter Reading	Meter count	55,380.25	581.56	163.14	56,124.95
001-0333-541.10-30		25,584.40	Billing - Meter Reading	Meter count	25,244.93	265.10	74.37	25,584.40
001-0333-541.20-10		1,742.50	Billing - Meter Reading	Meter count	1,719.38	18.06	5.07	1,742.50
001-0333-541.30-10		7,500.00	Billing - Meter Reading	Meter count	7,400.49	77.71	21.80	7,500.00
001-0333-541.40-60		1,100.00	Billing - Meter Reading	Meter count	1,085.40	11.40	3.20	1,100.00
001-0333-541.80-11		347,000.00	Billing - Meter Reading	SM & ESM only	343,393.97	3,606.03	-	347,000.00
001-0333-541.80-14		53,000.00	Billing - Meter Reading	Interval Only	-	-	53,000.00	53,000.00
Total Meter Reading Costs - Allocated		**525,255.80**			**466,987.80**	**4,903.91**	**53,364.09**	**525,255.80**
Cost per customer					**8.09**	**8.09**	**313.91**	
Weighting (Res must be 1.0)					**1.00**	**1.00**	**38.79**	

7–VECC–55

Interrogatory:

Reference: Exhibit 7, page 8 Cost Allocation Model, Tab I6 – Customer Data and Tab I7.1 - Meter Capital

The Application states: "WNH does not have any costs assigned to the Embedded Distributor rate class as it received the meter from HONI (Hydro One Networks Inc.) when WNH commenced as a Host Distributor in May 2006, thus, WNH has $0 meter costs for this rate class".

a) Please explain why for each of the Residential, GS<50 and GS>50 classes the number of meters in Tab I7.1 is less than the forecast number of customers for the class.

b) Is WNH responsible for the ongoing OM&A costs related to the meter used for HONI?

c) If the response to part b) is yes, in the Cost Allocation Model, are there OM&A costs attributed to Meter assets that are subsequently allocated to the customer classes?

i. If yes, please indicate where in the CA model this occurs and if the Embedded Distributor is attributed a portion OM&A costs for these assets.

ii. If the Embedded Distributor is not attributed a portion of the OM&A associated with the Meter assets, what is WNH's estimate as to the annual OM&A cost for 2021 related to the HONI meter?

Response:

a) Meter counts used in tab I7.1 were based on actual meters in service at the time of filing. Per WNH's response to 1-Staff-1, WNH has updated the meter counts to reflect customer count projections in 2021.

b) Since WNH owns the meter, it bears the cost of reading the meter and other expenses. This is why there is a count of one meter for the Embedded Distributor class in tab I7.2 Meter Reading.

c) i. Tab I7.2 contains the calculation of cost allocator CWMR which is used for allocating OM&A costs related to USoA 5065 Meter Expense & 5310 Meter Reading Expense. USoA 5175 Maintenance of Meters is allocated by 1860 C which is identical to CWMC which is calculated on tab I7.1.

ii. The Embedded Distributor class is attributed a portion of OM&A related to Meter Expense and Meter Reading Expense (5065 and 5310) based on the calculation of CWMR in I7.2. This class is not allocated any OM&A related to Maintenance of Meters or any capital costs from allocator CWMC. This is due to the fact that there was no up-front cost related to

obtaining the meter and it is not due to be replaced or to have major maintenance during the period covered in this Application.

7–VECC–56

Interrogatory:

Reference: Exhibit 7, pages 13-15

The Application (page 14) states: "WNH has not included any load displacement adjustments to the Load Forecast for these customers in Exhibit 3. Since the proposed approach makes the Standby Charge equivalent to the distribution volumetric rate for the applicable rate class, proposed rates in this Application inherently include this Standby Charge. Due to this, Revenue from Standby Charges have not been separated from Distribution Volumetric Revenue".

a) WNH indicates that as of 2021 there will be ten load displacement customers within its service territory who from time to time require power from WNH, and will require capacity to exist for their load when their generation is off.
   i. For each of these customers, what is the expected installed capacity of the load displacement generation?
   ii. How many of these WNH's customers had load displacement generation in each of the years from 2006-2019 and in what customer classes were they?

b) If there were load displacement customers in 2019 and prior years, please confirm that for the period up to the end of 2019: i) WNH did not charge customers a Standby Charge and ii) the historic kW/kWh ratio values used in Exhibit 3 do not include any allowance/recognition of standby requirement other than when a customer's load displacement facilities were off and replacement power was required from WNH.

Response:

a) i. Since filing there has been one additional customer who is planning load displacement generation for GA avoidance. All 11 customers have been included below. (Note: One customer has three installations).

ii. See the in service dates included in i) above. There are four customers that had load displacement generation between 2006 and 2019. All 11 customers in the table are General Service >50kW.

Installations	Purpose	In Service Date	Generator Size (kW)
1	Continuous Load Offset	2018	60
2	Continuous Load Offset	2018	125
3*	GA Avoidance	2018	412
4*	GA Avoidance	2020	2000
5*	GA Avoidance	2021	2000
6	Continuous Load Offset	2020	600
7	Continuous Load Offset	2020	960
8	GA Avoidance	2020	2600
9	GA Avoidance	2021	2028
10	GA Avoidance	2019	2470
11	GA Avoidance	2021	1890
12	Continuous Load Offset	2020	160
13	GA Avoidance	2021	2300
* Three installations relate to one customer			

b)

i) WNH did not charge customers a Standby Charge and WNH has never had a Standby Charge and therefore has not charged one to any customer.

ii) This is confirmed. The amount of displacement 2019 and prior is negligible. WNH's forecast for 2020/21 does not include any allowance/recognition because WNH assumes the same kW for distribution revenue (status quo) as if there were no load displacement. It is important to note that customers who are installing load displacement for GA avoidance will have a minimal impact to the load forecast.

7– VECC–57

Interrogatory:

Reference: Exhibit 7, page 18

The Application states: "The 2021 Cost Allocation Model indicates the Revenue to Cost Ratios for all classes are within the Board's range. The Board has not set a target range for the Embedded Distributor rate class so WNH has assumed a range of 80 - 120%. WNH is proposing to maintain status quo ratios. Slight differences are due to rounding."

a) The Embedded Distributor ratio changes from 110.72% to 105.45%. Please confirm that this difference is entirely due to rounding.

Response:

a) WNH confirms that the difference is entirely due to rounding.

Please refer to WNH's response to 1-Staff-1 where an updated version of the Cost Allocation and RRWF models are attached and rounding differences have been reduced.

EXHIBIT 8 – RATE DESIGN

8–VECC-58

Interrogatory:

Reference: Exhibit 8, pages 5-6

Preamble:
The Board decisions referenced in support of WNH's proposal to maintain the fixed-variable split for all non-Residential customer classes (even those where the monthly service charge exceeds the Board's policy ceiling) were all issued more than seven years ago.

a) Please confirm that the more recent decision by the Board with respect to Hawkesbury's 2014 Cost of Service Application (EB-2013-0139) approved the maintaining the existing monthly service charge for the GS 50-4,999 kW class, as it was already above the ceiling value.

b) Can WNH identify any other more recent Board decision that dealt explicitly with the level of the monthly service charge for non-Residential customers and what the Board's directions were in instances where the current charge exceeded the policy ceiling?

Response:

a) Confirmed.

b) InnPower Corporation 2017 Cost of Service (EB-2016-0085)
Horizon Utilities Corporation 2015 Cost of Service (EB-2014-0002)

In InnPower (EB-2016-0085), the OEB approved InnPower's proposed cost allocation methodology. OEB approved InnPower's proposal to maintain the current fixed-variable split that resulted from 2016 approved rates, which was above the ceiling. The OEB found that maintaining the fixed-variable split results in an increase to the fixed charge which was consistent with the approach approved in past OEB decisions including the Horizons Utilities Corporation 2015 rate decision.

In Horizon Utilities Corporation (EB-2014-0002), the Board approved Horizon's proposed fixed/variable split. A fixed/variable split above the ceiling was approved in Horizon's last cost of service proceeding and in this Application Horizon maintained the fixed/variable split. The Board found that Horizon's proposal to maintain the fixed charges, even though it may move some fixed charges away from the ceiling, was reasonable.

8–VECC-59

Interrogatory:

Reference: Exhibit 8, pages 9-11

Preamble:

The Application (page 9) states: "WNH notes that in accordance with its billing arrangements with its Embedded Distributor, Retail Transmission Rates are not applicable".

The Application also states (page 10): “WNH has three > 50kW customers that will be charged on a gross load billing basis from Hydro One and one from Energy + for wholesale transmission services in 2020 due to load displacement generation greater or equal to 1MW with non-renewable generation and/or equal to or greater than 2 MW for renewable generation (wind, solar, biomass, bio-oil, bio-gas, landfill gas, or water). As a result, WNH proposes to charge the RTSR to these customers on a gross load basis.”

a) Is WNH billed by the IESO for transmission network and connection charges related to its service to the Embedded Distributor? If yes, please explain the basis for the billing arrangements with the Embedded Distributor whereby RTSRs are not applicable to that customer and how, under these arrangements, WNH is held “whole”.

b) Exhibit 8 indicates that WNH expects to have four customers in 2021 with load displacement generation for which gross load billing of the RTSRs will be applicable. Exhibit 7 (page 14) indicates that WNH expects to have a total of 10 customers in 2021 with displacement generation. Please explain the basis on which the other six will not be subject to gross load billing for the RTSRs.

Response:

a) Please refer to WNH’s response to 8-Staff-69 b).

b) Some of the larger Load Displacement sites are using a handful of smaller inverters to achieve their total generating capacity which puts them below the GLB threshold as no single unit is above 1MW. Others have smaller Load Displacement and do not meet the minimum threshold for their total planned generation. Only four of the load displacement generation customers reach the single unit thresholds noted above.

8–VECC-60

Interrogatory:

Reference: Exhibit 8, pages 14-17

a) With respect to the Specific Charge for Owner Requested Disconnection/Reconnection at the Meter, please explain why the hours of time required by field staff increases from 1 hour if the work is performed during regular hour to 2.5 hours if the work is performed after regular hours.

b) With respect to the Specific Charge for Owner Requested Disconnection/Reconnection at the Pole/Transformer, please explain why the hours of time required by field staff increases from 3 hours if the work is performed during regular hour to 5.5 hours if the work is performed after regular hours.

Response:

a) Please refer to WNH's response to 8-Staff-73 e) & f).

b) Please refer to WNH's response to 8-Staff-73 e) & f).

EXHIBIT 9 - DEFERRAL AND VARIANCE ACCOUNTS

9-VECC-61

Interrogatory:

Reference: Exhibit 2, Attachment 2-2, DSP, page 55 / Exhibit 9, page 28

a) Please list all the MS/DS decommissioned sites not yet captured in the Sub-Account – 1508 MS Disposition.

b) If there are remaining sites not yet captured in this account please explain why WNH is proposing to eliminate the MS Group 2 sub-account?

Response:

a) MS1, MS5 and DS34 are out of service and in the process of being decommissioned and being prepared for remediation and environmental cleanup.

b) In WNH's Settlement Agreement (EB-2015-0108) it was stated the balance in the variance account is to be disposed of at WNH's next Cost of Service Filing.

9-VECC-62

Interrogatory:

Reference: Exhibit 9, page 40 /Exhibit 3, page 17

WNH proposes a 1509 sub-account "to track all variances from the Load Forecast included in this Application for both customer count and kWh."

a) If the Board were to grant such an account what reduction in the allowed rate of return is the Utility suggesting in order to compensate ratepayers for the reduced forecast risk?

Response:

a) Please refer to WNH's response to 3-Staff-33 a).