Shepherd Rubenstein

BY EMAIL and RESS

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Ontario Energy Board
2300 Yonge Street
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Toronto, Ontario
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October 26, 2021
Our File: EB20210110

Attn: Christine Long, Registrar

Dear Ms. Long:

Re: EB-2021-0110 – Hydro One Joint Rate Application – SEC Interrogatories

We are counsel to the School Energy Coalition ("SEC"). Attached, please find a copy of SEC's interrogatories in the above-captioned matter.

Yours very truly,
Shepherd Rubenstein P.C.

Mark Rubenstein 2021.10.26 14:34:04-04'00'

Mark Rubenstein

cc: Ted Doherty, SEC (by email)
Applicant and intervenors (by email)

EB-2021-0110

ONTARIO ENERGY BOARD

IN THE MATTER OF the *Ontario Energy Board Act, 1998*, S.O. 1998, c. 15 (Schedule B);

AND IN THE MATTER OF an application by Hydro One Networks Inc. for an order or orders made pursuant to section 78 of the Act, approving or fixing just and reasonable rates for the transmission and distribution of electricity.

INTERROGATORIES ON BEHALF

OF THE

SCHOOL ENERGY COALITION

[Note: In many of its interrogatories, SEC has sought specific 2021 forecast information or revised versions of various tables/information that include 2021 information. In its responses to these interrogatories, SEC requests that the Hydro One provide the most recent 2021 forecast information available to the company, and insofar as that is different from what is contained in the application (or relate to amounts contained within the application), to note it in the response.]

A-SEC-1
[A] Please update the application, as applicable, to reflect any material changes in the 2021 forecast information.

A-SEC-2
[A] Please provide revised version of the following tables showing 2021 year-to-date actuals, as well as year-to-date actuals, on a similar basis at the same point in time in each of 2019 and 2020. Please also provide the responses in Excel format.

a. B-2-1, Section 2.8, Attachment 1 (Appendix 2-AB)
b. B-2-1, Section 2.9, Attachment 1 (Appendix 2-AA)
c. B-3-1, Section 3.8, Attachment 1 (Appendix 2-AB)
d. B-3-1, Section 3.9, Attachment 1 (Appendix 2-AA)
e. B-4-1, Section 4.8, Attachment 1 (Appendix 2-AB)
f. B-4-1, Section 4.9, Attachment 1 (Appendix 2-AA)
g. D-5-1, p.38 (Table E.3)
h. E-2-1, Attachment 1A, p.3 (Appendix 2-JC Transmission)
i. E-3-1, Attachment 1A, p.3 (Appendix 2-JC Distribution)
j. E-7-1, Attachment 2A (Appendix 2-K)

A-SEC-3
[A] SEC seeks to understand the impact of COVID-19 on the information included in the application. Please confirm that all COVID-19 related costs are included or expected to be included in Account 1509. If not confirmed, please identify <u>all</u> COVID-19 related costs contained within the actual and/or forecast cost information included in the application.

A-SEC-4
[A] Please provide a copy of each of Hydro One's 'Team Scorecards' from 2018 to 2021, and provide the year-end result for each measure.

A-SEC-5
[A1] Please provide a copy of all third-party benchmarking analyses, studies, reports, and/or similar documents, undertaken for, or that include Hydro One, since 2017, that are not already included in this application or on the record in EB-2019-0082, regarding any aspect that directly or indirectly relates to a material aspect of Hydro One's business.

A-SEC-6
[A1] Please provide summaries of all internal audit reports conducted since 2017, related to any aspect that directly or indirectly relates to Hydro One's business, their findings, recommendations, and the status of any actions that have or are are to be taken.

A-SEC-7
[A] Please provide a copy of all budget guidance documents that were issued regarding the budgets that underlie the application.

A-SEC-8
[A] After the Board made certain disallowances to the proposed 2020-2022 transmission capital and OM&A budgets in its Decision and Order in EB-2019-0082, please explain how Hydro One modified its capital and OM&A plans to account for the revised amounts approved by the Board. In your response, please not only explain the specific modifications made, but a detailed explanation of the process taken to come to its revised plans. Please also provide a copy of contemporaneous documents outlining the modification to its plans.

A-SEC-9
[A] After the Board made certain disallowances to the proposed 2018-2022 distribution capital and OM&A budgets in its Decision and Order in EB-2017-0049, please explain how Hydro One modified its capital and OM&A plans to account for the revised amounts approved by the Board. In your response, please not only explain the specific modifications made, but a detailed explanation of the process taken to come to its revised plans. Please also provide a copy of contemporaneous documents outlining the modification to its plans.

A-SEC-10
[A-4-1, p.6] In which application does Hydro One expect each of the Distribution CISVA and Transmission CISVA account balances to be examined and cleared?

A-SEC-11
[A-4-1, p.2] Please confirm that the Hydro One proposes to use the Inflation Factor determined by the Board in EB-2021-0212 if it is different from the inflation factor proposed in the Application.

A-SEC-12
[A-4-1, p.4] Please explain why Hydro One proposes to clear the ESM deferral account only once, at the time of rebasing, rather than annually, or simply in accordance with the Board's standard rules for deferral account dispositions.

A-SEC-13
[A-4-1, p. 6] Please describe the methods the Hydro One proposes to use to measure and verify the

amount of productivity gains related to in-service additions.

A-SEC-14
[A-4-1, Attachment 1, p.5] Please explain why Clearspring was engaged "through counsel", rather than directly by Hydro One. Please provide a detailed description of the differences, if any, in those two approaches relative to:

a. The obligations of the expert firm and the individual witnesses to Hydro One, to the Board, and to counsel.
b. The ability of the parties to the proceeding to ask questions of the expert witness, and receive full and complete answers.
c. The documents or categories of documents that would be subject to any kind of confidentiality or privilege, including but not limited to proposals, communications, edits, presentations, and all other documents or tangible work product.
d. Communications between the expert and Hydro One personnel.
e. Instructions and direction by the Applicant to the expert, including determination of the scope of the engagement, and any changes to that scope, editorial advice and commentary relating to the written report, and any other instructions or direction.

A-SEC-15
[A-4-1, Attachment 1, p. 6, 29] Please confirm that Hydro One's transmission TFP is moving in an unfavourable direction relative to the benchmark used by the expert. Please quantify in dollars the increase in Hydro One's costs from 2003 to 2027 (-64.8% to -30.9%) relative to the benchmark.

A-SEC-16
[A-4-1, Attachment 1, p. 7] Please explain why the transmission industry TFP trend in the U.S. is declining since 2000. Please provide evidence that the TFP trend for transmission in Canada is also declining, and if so a) at what rate, and b) for what reasons.

A-SEC-17
[A-4-1, Attachment 1, p. 8] Please confirm that Hydro One's distribution TFP is moving in an unfavourable direction relative to the benchmark used by the expert. Please quantify in dollars the increase in Hydro One's costs from 2003 to 2027 (-24.4% to +10.3%) relative to the benchmark.

A-SEC-18
[A-4-1, Attachment 1, p. 14] Please provide details of all modelling done to assess the impact of the selection of sample period on the benchmark TFP trend. Please confirm that, for transmission, the effect of starting in 2000 rather than 1995 or 1990 is expected to be that the period of increasing productivity in the period prior to 2000 is left out of the model. Please provide graphs, in the same format as Figures 1 and 4, using 1995 as the base year rather than 2000.

A-SEC-19
[A-4-1, Attachment 1, p.16] Please quantify the impact of adding the new voltage variable.

A-SEC-20
[A-4-1, Attachment 1, p.24] With respect to the exclusion of pensions and benefits.

a. Please quantify the impact of excluding pension and benefit expenses.
b. Please provide the percentages of Hydro One's transmission operating costs and capital

costs that are represented by pension and benefit expenses.

c. Please provide an estimate, with citations, of the percentage of operating costs and capital costs of U.S. transmission companies that are represented by pension and benefit expenses.

A-SEC-21
[A-4-1, Attachment 1, p.24] Please describe what tests were carried out by the expert to ensure that the output data from Hydro One was calculated on a comparable basis to FERC Form 1 data.

A-SEC-22
[A-4-1, Attachment 1, p.27] Canadian transmission utilities regularly file public information with their regulators. Please explain why this information could not be used to include Canadian electricity transmitters in the benchmarking sample. Please explain why the expert made no direct efforts (other than through Hydro One) to obtain reliable Canadian information.

A-SEC-23
[A-4-1, Attachment 1, p.32] Please explain why the output variable of distribution service territory was used, rather than kilometers of lines, as with transmission. Please explain how the expert adjusted for relative density of service territory between Hydro One and the comparators.

A-SEC-24
[A-4-1, Attachment 1, p.34] With respect to the decision to exclude of pensions and benefits expenses:

a. Please quantify the impact of excluding pension and benefit expenses.
b. Please provide the percentages of Hydro One's distribution operating costs and capital costs that are represented by pension and benefit expenses.
c. Please provide an estimate, with citations, of the percentage of operating costs and capital costs of U.S. distribution companies that are represented by pension and benefit expenses.

A-SEC-25
[A-4-1, Attachment 1, p.34] With respect to the decision to exclude CSI expenses:

a. Please quantify the impact of excluding CSI expenses.
b. Please provide the percentages of Hydro One's distribution operating costs and capital costs that are represented by CSI expenses.
c. Please provide an estimate, with citations, of the percentage of operating costs and capital costs of U.S. distribution companies that are represented by CSI expenses.

A-SEC-26
[A-4-1, Attachment 1, p.35] Please confirm that the capital costs of overhead lines are typically lower than underground lines, but that the operating costs associated with overhead lines are typically higher. Please describe the overlap, if any, between the overheadxforestation variable and the congested urban variable, and what steps the expert took to ensure that they did not double count the effects they were expressing.

A-SEC-27
[A-4-1, Attachment 1, p.36] Please explain why no Ontario distributors were included in the sample.

A-SEC-28
[A-4-1, Attachment 1, p.38] For each of the companies in the same, please provide the compound annual growth rate of their rates for the period of the benchmarking.

A-SEC-29
[A-4-1, Attachment 1, p.43] Please provide details of the explanatory value the expert is claiming for the combined "cost performance result" of -18.2%. Please specify what conclusions the expert believes the Board can reach based on this piece of data.

A-SEC-30
[A-4-1, Attachment 11, p.46] Please provide the Hydro One data for the period 2003-2017.

A-SEC-31
[A-4-1, Attachment 1, p.47] Please provide details on what tests or other methods were used to validate and/or quantify the statement: "The Company's older transmission capital age is likely one of the main contributors to the Company's strong transmission total cost benchmarking result".

A-SEC-32
[A-4-1, Attachment 1, p.48] Please provide the Hydro one data for the period 2003-2017.

A-SEC-33
[A-4-1, Attachment 1, p.49] Please confirm that the estimate 17.3 vs. 16.2 is a calculation done by the expert. Please provide that calculation.

A-SEC-34
[A-4-1, Attachment 1, p.58] Please provide details of which, if any, of the additional listed outputs have been measured or otherwise tested by the expert.

A-SEC-35
[A-4-1, Attachment 1, p.60-61] Please confirm that the expert's analysis generally shows that OM&A increases as capital age declines. Please explain why this result has occurred.

A-SEC-36
[A-4-2, p.5] Please provide Table 1 in Excel format with all formulas enact.

A-SEC-37
[A-4-2, p.5] Please provide a calculation of the forecast capital-related revenue requirement collected in current rates in 2022, on a comparable basis to the calculations in Table 1.

A-SEC-38
[A-4-2, p.7] Please add a row to Table 3 showing the forecast transmission revenue in 2022.

A-SEC-39
[A-4-3, p.2] Please calculate the stretch factor that would be necessary for Hydro One's costs over the Custom IR term to equal the benchmark, rather than average 7.0% higher.

A-SEC-40
[A-4-3, p.5] Please provide Table 1 in Excel format with all formulas enact.

A-SEC-41
[A-4-3, p.8] Please add a row to Table 3 showing the forecast distribution revenue in 2022.

A-SEC-42
[A-4-1, p.3] Please explain why Hydro One did not undertake an updated distribution TFP study for this application and why it believes the results of the study filed in EB-2017-0049 remain valid.

A-SEC-43
[A-4-3, p.7] Please explain why Hydro One chose revenue and not a price cap approach for its distribution rate framework.

A-SEC-44
[A-6-1, p.10] If the OEB ordered Hydro One to change its accounting standards to IFRS, how long would Hydro One need to implement the change?

A-SEC-45
[A-6-1, p.11] Hydro One notes that it has implemented ASU 2018-15 related to capitalization of hosting costs that are in a service contract:

a. Please provide the value per year of the contract.
b. If the OEB were to determine that the amounts should not be capitalized, please provide the revenue requirement difference per year.

B1-SEC-46
[B-1-1, Section 1.2, p.15] Please provide a table that includes for each year between 2018 and 2027, the total amount of Hydro One's actual and forecast transmission capital expenditures for projects that are included in a Regional Infrastructure Plan (RIP), broken down by category (i.e. system access, renewal, service, etc.). Please provide a similar table on an in-service addition basis.

B1-SEC-47
[B-1-1, Section 1.2, Attachment 1, p.2] Please identify all individual investments included in the application that may be impacted by the IRRP addendum that has yet to be completed.

B1-SEC-48
[B-1-1, Section 1.3, p.2] For each third-party expert report included in the application, if not already included in the evidence, please provide a copy of the retainer letter.

B1-SEC-49
[B-1-1, Section 1.3, p.2] For each third-party report included in the application that was procured through an RFP, please provide: a) a copy of the non-standard terms of the RFP, b) the grading rubric, and c) individual scores of each bid based on the rubric.

B1-SEC-50
[B-1-1, Section 1.4, p.4] For each initiative, please provide the calculation methodology.

B1-SEC-51
[B-1-1, Section 1.4, p.8] Please explain how Hydro One's revised approach to progressive productivity compared to that approved in EB-2019-0082 is a beneficial change to ratepayers.

B1-SEC-52
[B-1-1, Section 1.4, p.9] Notwithstanding the proposed approach to productivity, has Hydro One internally forecast its actual level of productivity it will achieve during the test period? If so, please provide those forecasts.

B1-SEC-53
[B-1-1, Section 1.4, Attachment 1, p.13] With respect to the monthly productivity report:

a. Please provide the most recent monthly productivity report.
b. Please map the specific initiatives included on p.11, to each "Productivity LoB".

B1-SEC-54
[B-1-1, Section 1.4, Attachment 2] With respect to the Concentric, Hydro One Productivity Framework Review:

a. [p.8] The report states that, "Concentric has advised North American regulated utilities on matters related to productivity measurement and reporting, benchmarking, and the quantification of synergies in the context of rate setting proceedings". Please provide details including copies of any reports, analysis, testimony that are on the public record.
b. Did Concentric audit the results of any of the productivity initiatives? If so, please provide details.
c. [p.25] Please list the companies whose information is included in the table.
d. [p.34] Please provide a copy of the "Summaries of Hydro One's productivity initiatives, including descriptions of their methodologies" Concentric reviewed.
e. [p.34] Please describe what specific "Industry and academic literature on productivity, continuous improvement, and utility productivity program" did Concentric review in development of its report.

B1-SEC-55
[B-1-1, Section 1.6, Attachment 1] With respect to the 2023-2027 Draft Investment Plan, please show where customers see the specific cost/bill impact of the various options regarding investment decisions presented in the workbook.

B1-SEC-56
[B-1-1, Section 1.7] Please detail all changes to the investment planning process used for the purposes of the plans presented in EB-2017-0049 and EB-2019-0082 applications.

B1-SEC-57
[B-1-1, Section 1.7, p.21] Please explain the effect of the inclusion of a non-mandatory 'flag' on the prioritization and optimization process. Please provide an illustrative example.

B1-SEC-58
[B-1-1, Section 1.7, p.22] Please identify all programs and projects included in this application that have a "Strategic" or "Political Commitment Flag" and explain the basis of the flag.

B1-SEC-59
[B-1-1] Please provide a table that shows, for each year between 2016 and 2027, the percentage of capital expenditures undertaken (or forecast to be undertaken) by a third-party for Hydro One's: i) combined transmission and distribution business, ii) distribution business, and iii) transmission business. Please comment on any trends.

B2-SEC-60
[B-1; B-2-1, Section 2.2; B-3-1, Section 3.2; B-4-1, Section 4.2] Does Hydro One capitalize any of its asset maintenance and inspection costs? If so, please provide details.

B2-SEC-61
[B-2-1, Section 2.1, p.7-8] Please provide Figure 1 and 2 as separate files in a high-resolution file format.

B2-SEC-62
[B-2-1, Section 2.1, p.15] Please revise Table 4 to include all capital projects that Hydro One expects will be included in the Affiliate Transmission Projects Account approved in EB-2021-0169**.**

B2-SEC-63
[B-2-1, Section 2.1, p.27] Figure 6 compares the quantity of different assets in poor conditions in each of 2016, 2018 and 2020. In EB-2019-0082, Hydro One appears to have a different condition taxonomy which included very low risk, low risk, fair risk, high risk, and very high risk (see for example, EB-2019-0082, Exhibit B, Tsp Section 2.2, p.3, Table 1). Please explain the difference in asset condition taxonomy between this application as compared to EB-2019-0082, and map the information contained in Figure 6 to the information on the record in EB-2019-0082.

B2-SEC-64
[B-2-1, Section 2.1, p.27] Which month in each of 2016, 2018, and 2020 is the asset condition data from?

B2-SEC-65
[B-2-1, Section 2.2] Does Hydro One forecast condition of its assets over time? If so, please provide details and the forecasts.

B2-SEC-66
[B-2-1, Section 2.2] For each major asset type, please provide a table that shows the number of assets replaced (or forecast to be replaced) in each year between 2018 and 2027. Please also provide the table in Excel format.

B2-SEC-67
[B-2-1, Section 2.2] For all assets that were replaced between 2018 and 2021, please provide a table that shows for each major asset type, please provide a table the condition of the asset at the time of replacement.

B2-SEC-68
[B-2-1, Section 2.2; E-6-1, Attachment 1] Has Hydro One updated its ESL information for its assets based on the results of the Alliance Consulting, Electric Utility Plan Depreciation Rate Study filed in this Application? If so, please provide details.

B2-SEC-69
[B-2-1, Section 2.2, p.11] Please detail all changes to Hydro One's transmission asset condition methodology since EB-2019-0082.

B2-SEC-70
[B-2-1, Section 2.2, p.33] Hydro One notes that it sometimes harvests subcomponents from decommissioned breaker units. How often does this occur and how does Hydro One account for this in the rate base?

B2-SEC-71
[B-2-1, Section 2.2] For each major asset type where Hydro One has to make a decision between repair vs. replace:

a. Please provide a full example of the analysis undertaken, including all calculations considered, and explanation of the assumptions made.
b. Please also discuss if, and on what basis, Hydro One would override the results of any economic evaluation undertaken.
c. Please provide the total number of repair vs. replace decisions made, and the number that Hydro One ultimately replaced.

B2-SEC-72
[B-2-1, Section 2.2, p.52] Hydro One states that it is "currently implementing a Transmission Non-Operational Data Management System to decrease costs by reducing maintenance, improve system availability, improve efficiency and automate dispatching of field resources." When is the implementation expected to be essentially completed and what are the expected cost savings?

B2-SEC-73
[B-2-1, Section 2.2, p.124] Please explain what is considered a ROW that is in good, fair, and poor condition.

B2-SEC-74
[B-2-1, Section 2.3, Attachment 1] With respect to the UMS Group, *Transmission Capital Project Exaction Review* Report:

a. [p.3] Is the maturity rating scale a UMS methodology or an external standard (e.g. PMBOK)? Please provide details.
b. [p.7] Please provide details on Hydro One's Transmission Capital Efficiency Initiative.
c. [p.12] For each company in the peer group panel, please provide their total number of kilometers of transmission line, number of transmission stations, and total transmission related revenue requirement.
d. [p.13] Please provide a copy of the open-ended questions that were used by UMS in the peer group panel interviews.
e. [p.13] Please provide a copy of UMS notes from the peer group panel interviews.
f. [p.14] Please provide a copy of the full data that shows each utility and their individual score for each area (Note: It is acceptable to mask the name of each utility with the exception of Hydro One).
g. [p.15] UMS states that Hydro One approach "approach to managing project costs aligns with other industry leaders, "emphasizing (1) an effective project initiation / planning process, (2) prudent application of risk cost contingencies, (3) a well-defined stage gate process to guide the continual refinement of estimates and supporting business cases, and (4) providing actionable reports to Senior Management." Please detail Hydro One's a) project initiation/planning process, b) application of risk cost contingencies, c) stage gate process and continual refinement of estimates and supporting business cases, and d) actionable reports to Senior management.
h. [p.29] Please provide a copy of the listed "Role Kits".
i. [p.29] Please provide a copy of the referenced Hydro One's Construction Performance

Evaluation Process.

j. [p.29] Please provide a copy of the referenced Program and Project Approval Procedure.

B2-SEC-75
[B-2-1, Section 2.3, Attachment 2] With respect to the Guidehouse/First Quartile Consulting's, *Transmission Pole Replacement Benchmarking* Report:

a. Please explain how utilities 34, 40 and 12 have the exact same cost per pole.
b. Please provide a spreadsheet that includes for each utility, all the data provided. (Note: It is acceptable to mask the name of each utility with the exception of Hydro One).

B2-SEC-76
[B-2-1, Section 2.3, Attachment 3, p.1] With respect to the *Power Transformer Condition Assessment* Report, EPRI states that "36 transformers were not deemed to be in poor or marginal condition by PTX based on the main tank data provided and were likely deemed in poor condition by Hydro One based on factors other than the main tank oil test results (consistent with Hydro One's criteria 2 above)". For each of the 36 transformers, please detail the basis of Hydro One's assessment that the transformers were in poor condition.

B2-SEC-77
[B2-1, Section 2.3, Attachment 4, Appendix A] With respect to Hydro One's Transmission Line Loss Guidelines:

a. Did Hydro One undertake any changes to its Transmission Line Loss Guideline as a result of its consultation with stakeholders? If so, please provide details.
b. [p.30] Please explain why Hydro One does not use a net present value (NPV) calculation to compare various options so as to account for the different time horizons.

B2-SEC-78
[B-2-1, Section 2.4, p.9] Please provide a revised version of Table 3 that includes 2018 to 2022 actual/forecast information.

B2-SEC-79
[B-2-1, Section 2.4, p.15] Hydro One states that the CEA Composite Value for 2020 will be available in late Q3 2021. Please update Figures 6-12 for 2020 CEA Composite information when available.

B2-SEC-80
[B-2-1, Section 2.4] Please provide the NATF transmission reliability report for each year since 2018.

B2-SEC-81
[B-2-1, Section 2.4, Attachment 2, p.5] Hydro One states that for "Group and Individual Performance outliers, Hydro One will cover the remedial costs of restoring and sustaining the inherent reliability performance of the existing assets to what was designed originally.":

a. For each year since 2018, how many times has Hydro One undertaken such activities and what was the total annual cost?
b. How much is budgeted for such activities in each year in 2023 and 2027 and under which capital program are the costs contained within?

B2-SEC-82
[B-2-1, Section 2.5, p.2] With respect to Hydro One's Transmission Scorecard, for each of the Transmission Capital Accomplishment Index (TCAI) and OM&A Program Accomplishment (composite index) measures, please provide a breakdown of the calculation for each of the annual targets and actuals.

B2-SEC-83
[B-2-1, Section 2.5, p.2] For each of the Asset & Project Management and Cost Control measures, please provide a forecast 2021 and 2022 score and how the amount is derived.

B2-SEC-84
[B-2-1, Section 2.5, p.13-17] With respect to T-SAIFI-S, T-SAIFI-M, and T-SAIDI, please provide Figures 2, 3, 4 requested in tabular format.

B2-SEC-85
[B-2-1, Section 2.5, p.13-17] With respect to defective equipment contributions to T-SAIFI-S, T-SAIFI-M, and T-SAIDI:

a. Please provide a table that shows for each year between 2016 and 2020, a breakdown of T-SAIFI-S cause by defective equipment by equipment type, both as a percentage and by number of interpretations per delivery point.
b. Please provide a table that shows for each year between 2016 and 2020, a breakdown of T-SAIFI-M cause by defective equipment by equipment type, as a percentage and by number of interpretations per delivery points.
c. Please provide a table that shows for each year between 2016 and 2020, a breakdown of T-SAIDI cause by defective equipment by equipment type, as a percentage and by number of interruption minutes per delivery points.

B2-SEC-86
[B-2-1, Section 2.5, p.19] With respect to System Unavailability, please provide a breakdown of Table 12 by equipment type.

B2-SEC-87
[B-2-1, Section 2.5, p.31] Please explain the significant increase in the line clearing cost per kilometer target between 2022 and 2023.

B2-SEC-88
[B-2-1, Section 2.7] Please provide a table that shows both the total, and for each category of capital expenditures (i.e. system renewal, system service), the number of candidate investments considered/included in each stage of the transmission investment planning process.

B2-SEC-89
[B-2-1, Section 2.7] Please provide a table that shows both the total, and for each category of capital expenditures (i.e. system renewal, system service, etc.), the budget at each stage of the transmission investment planning process.

B2-SEC-90
[B-2-1, Section 2.7] Please explain what overall budget constraints were included in the transmission investment planning process.

B2-SEC-91
[B-2-1, Section 2.7] Please provide a similar graph and table for the proposed 2023-2017 as provided in EB-2019-0082 JT 1.12.

B2-SEC-92
[B-2-1, Section 2.8, Attachment 1] Please provide a version of 2-AB on an in-service additions basis. Please also provide the table in Excel format.

B2-SEC-93
[B-2-1, Section 2.9, Attachment 1] Please provide a mapping of the ISD's to the projects included in Appendix 2-AA.

B2-SEC-94
[B-2-1, Section 2.9, Attachment 1] Please provide a version of 2-AA with additional columns that show the approved expenditures (as calculated for the purposes of the DRO) in each year between, 2018 to 2022. Please also provide the table in Excel format.

B2-SEC-95
[B-2-1, Section 2.9, Attachment 1] Please provide a version of 2-AA that shows the information on an in-service additions basis. Please also provide the table in Excel format.

B2-SEC-96
[B-2-1, Section 2.9, Attachment 2, p.5] Please provide the data underlying Figures 1 and 2 in Excel format.

B2-SEC-97
[B-2-1, Section 2.9, Attachment 2] Please provide Tables 2 and 3 in Excel format.

B2-SEC-98
[B-2-1, Section 2.9, Attachment 2, p.12] In Table 3, are the 2020 Unit DRO Plan and 2020 Actual Unit on ISA or a capital expenditure basis?

B2-SEC-99
[B-2-1, Section 2.9, Attachment 2] Please provide versions of Tables 2 and 3 for 2021 and 2022 based on Hydro One latest forecast. Please also provide the table in Excel format.

B2-SEC-100
[B-2-1, Section 2.10, p.13] Please explain How Hydro One determines the amount of contingency to be included in i) individual capital projects and, ii) held at the portfolio level.

B2-SEC-101
[B-2-1, Section 2.9, Attachment 2, p.13] Please provide the most recent portfolio level review.

B2-SEC-102
[B-2-1, Section 2.9, Attachment 2, p.14] Hydro One states that on a monthly basis its capital work is reviewed and that the "[t]he portfolio is analyzed through a number of different metrics including in month performance, year to date performance and year-end forecast against a trended budget. The portfolio is also reviewed through a project lens comparing project financials and schedules to the project budget and plan". Please provide a copy of the latest review of the portfolio.

B2-SEC-103
[B-2-1, Section 2.10] What percentage of Hydro One's transmission capital work is undertaken by a third-party EPC contractor in each year between 20182021?

B2-SEC-104
[B-2-1, Section 2.10, p.22] Hydro One states that one way it is enhancing a Project Manager's ability to hold a project group accountable, is through Work Package Agreements. Please provide further details and provide an example of a Work Package Agreement.

B2-SEC-105
[B-2-1, Section 2.10, p.24] Please provide a copy of the referenced "technology roadmap".

B2-SEC-106
[B-2-1] Please complete the excel table.

B2-SEC-107
[B-2-1, Section 2.11] Please provide a table that lists each ISD with the forecast spending for 2023 to 2027, and on the same basis, actual/forecast spending, for each year between 2018 and 2027 (i.e. similar to what filed in response to EB02019-0082, I-12-38(a)). Please also provide the response in Excel format.

B2-SEC-108
[B-2-1, Section 2.11, T-SR-04] With respect to Wood Pole Structure Replacement program, please explain why Hydro One does not have wood pole refurbishment program for its transmission poles as it does for its distribution poles (see B-3-1, Section 3.11, ISD D-SR-07).

B2-SEC-109
[B-2-1, Section 2.11, T-SR-06] Tower Foundation Asset/Clean/Coat & Life Extension Program:

a. [p.8] Please revise Table 1 and 2 to include information from 2018 to 2022.
b. [p.9] Please breakdown the annual costs of the program into, i) tower foundation assess/clean/coat program, and ii) tower member refurbishment program, and include similar information for 2018 to 2022.

B2-SEC-110
[B-2-1, Section 2.11, T-SR-06] With respect to the Transmission Line Complete Refurbishment Program, please add a column to Appendix A to show circuit kilometers replaced during 2023 to 2027 only.

B2-SEC-111
[B-2-1, Section 2.11, T-SR-07, p.6,8] With respect to the Transmission Line Shieldwire Replacement Program, please revise Tables 1 and 3 to include information from 2018 to 2022.

B3-SEC-112
[B-3-1, Section 3.2, p.8] Please provide a revised version of Figure 2 that shows the corresponding asset condition of transformers within each age band.

B3-SEC-113
[B-3-1, Section 3.2] Please provide in a single table, for each major asset type, the total number of assets, and the percentage of assets in poor, fair or good condition.

B3-SEC-114
[B-3-1, Section 3.2] Please explain all changes in Hydro One's asset condition assessment methodology since EB-2017-0049.

B3-SEC-115
[B-3-1, Section 3.2] For all assets that were replaced between 2018 and 2021, please provide a table that shows for each major asset type, please provide a table the condition of the asset at the time of replacement.

B3-SEC-116
[B-3-1, Section 3.2; EB-2017-0049, I-24-AMPCO-23, Attachment 1]. Please expand the table provided in response to I-24-AMPCO-23, Attachment 1, to include data from 2018, 2019, 2020, and 2021. Please provide the response also in Excel format.

B3-SEC-117
[B-3-1, Section 3.2] Please provide a list of all major assets that Hydro One runs to failure.

B3-SEC-118
[B-3-1, Section 3.2, p.15] With respect to Hydro One's decision to repair or replace a transformer:

a. Please provide a detailed explanation of Hydro One's repair versus replace decision for a transformer, including any economic analyses that are undertaken.
b. Please provide the average difference in cost between a transformer that is repaired versus replaced.
c. Please also discuss if, and on what basis, Hydro One would override the results of any economic evaluation undertaken.
d. Please provide the total number of repair vs. replace decisions made, and the number that Hydro One ultimately replaced.

B3-SEC-119
[B-3-1, Section 3.2, p.36] How often over the last 3 years has Hydro One used each of its MUS transformers and for how often?

B3-SEC-120
[B-3-1, Section 3.2, p.52] For each year between 2020 to 2027, place provide the number of poles Hydro One has or forecast to i) refurbish by way of refurbishment replacement, ii) refurbish by way of mechanical refurbishment, iii) refurbish by other means, iv) replace.

B3-SEC-121
[B-3-1, Section 3.2, p.62] For each year between 2018 and 2027, please provide the total cost and number of kilometers of underground cable that Hydro One has extended the live via cable injection.

B3-SEC-122
[B-3-1, Section 3.2, p.70-71] Please explain why there is such a large population of overhead and underground transformers for why Hydro One does not have any age data.

B3-SEC-123
[B-3-1, Section 3.2, p.96] Please provide two revised versions of Figure 73. The first that shows the age distribution by year/vendor of meters expected by January 1, 2023, and the second that shows the same information, but as expected on December 31, 2027 based on Hydro One's proposed

replacement plan.

B3-SEC-124
[B-3-1, Section 3.3, Attachment 1] With respect to the Guidehouse/First Quartile Consulting, *Distribution Poles and Substation Benchmarking* Report*:*

a. Please provide all the underlying data used in this report in Excel format. (Note: Please mask the identity of all utilities with the exception of Hydro One).
b. Please list all changes in the methodology used in this report as compared to the similar report filed in EB-2017-0049 (B1-1-1, Section 1.6, Attachment 1).
c. [p.8] Please explain why there are so few Canadian utilities included in the Report.
d. [p.9] Is the 'Customers per Distribution Circuit Km' calculation in Figure 4 based on total circuit kilometers or only overhead circuit kilometers?
e. [p.9] How did the authors calculate each utility's 'square km'? Please provide the specific calculation for Hydro One.
f. [p.15] Is there a common definition for 'List For Replacement' amongst all utilities included in the report? If so, please provide the definition.
g. [p.17] Please explain why Hydro One's pole replacement costs were determined on a 3-year average (2018-2020) but comparator costs were only based on 1-year (2019). Please provide Hydro One's individual data for each year.
h. [p.23] The Report states that "HONI averaged $2.4M (across 4 representative refurbishment projects) compared to the mean of $3.1M". Please explain who and how the 4 projects were chosen and the basis for the claim they are representative.
i. [p.23] Please confirm Figure 23 includes 4 Hydro One projects and 6 non-Hydro One projects.
j. Please provide a copy of the questionnaire provided to all the comparator utilities. Please provide Hydro One's completed response.

B3-SEC-125
[B-3-1, Section 3.3, Attachment 2] With respect to the CNUC, *Hydro One Vegetation Management Study* Report:

a. [p.15] On the same basis as calculated in the report, please provide the forecast Hydro One 'cost per managed distribution pole km' for each year between 2021 to 2027.
b. [p.16] On the same basis as calculated in the report, please provide the forecast Hydro One 'cost/km' for each year between 2021 to 2027.
c. [p.17] Please provide a revised version of Figure 17 that shows contract and in-house staff separately.

B3-SEC-126
[B-3-1, Section 3.3, Attachment 3] With respect to the Clear Path Utility Solutions, *Hydro One Optimal Cycle Protocol (OCP) First Cycle Performance Cycle* Report, for each of Tables 11 and 12, please provide a detailed explanation of the cost variance including a breakdown of the specific components of the variance.

B3-SEC-127
[B-3-1, Section 3.5, Attachment 5] With respect to the Hydro Quebec, *Accelerated life testing of*

FOCUS ALF meters with Gen1 and Gen3 communications boards Report:

a. Please detail Hydro Quebec's experience undertaking similar tests and assessments.
b. [p.10] The Report states "Hydro-Québec's bid was selected because the company had previously performed this kind of testing and presented its results at an international conference on metering." Please provide details regarding the international conference and provide a copy of the report/presentation that was made.
c. [p.57] The Report states that "[t]o simulate a 15-year service life, the temperature and humidity test varies between 155 and 857 hours in conditions of 85°C and 85% relative humidity, depending on the failure modes and geographic location. A 600-hour test was used to cover the majority of cases." Please explain why this simulates a 15-year service life.
d. [p.63] The Report notes that "The test subjected meters to 717 80-minute thermal cycles from -40 to +85°C." Please explain how such a test is representative of the operating conditions the meters would be under anywhere in Hydro One's service territory.
e. [p.83-100] Based on the weibull curves, what is the forecast expected life of the meters? Please explain your response.

B3-SEC-128
[B-3-1, Section 3.5, Attachment 6] With respect to the Guidehouse/First Quartile Consulting, *AMI Benchmarking* Report*:*

i. Please provide all the underlying data used in this report in Excel format. (Note: Please mask the identity of all utilities with the exception of Hydro One).
ii. [p.8[Please explain why there are a significantly larger number of Canadian utilities in the comparison panel compared to that in the Guidehouse/First Quartile Consulting *Distribution Poles and Substation Benchmarking.*
iii. [p.9] Are the utility identification numbers the same as in the Guidehouse/First Quartile Consulting *Distribution Poles and Substation Benchmarking* Report?
iv. [p.20-21] Please revise Figure 17 and 18 to include the mean, Q1, Q2 and Q3, as provided in most other figures in the Report.
v. [p.20] What year is the data from used to calculate Figure 17 and 18?
vi. [p.21] Please explain why labour costs do not include overheads.
vii. Please provide a copy of the questionnaire provided to all the comparator utilities. Please provide Hydro One's completed response.

B3-SEC-129
[B-3-1, Section 3.4, p.5] Please provide a revised version of Table 3 to show total capacity as opposed to number of projects.

B3-SEC-130
[B-3-1, Section 3.5, p.3] Please update Hydro One's OEB scorecard to include 2021 and 2022 forecast results for each measure.

B3-SEC-131
[B-3-1, Section 3.5, p.20-22] With respect to SAIDI and SAIFI, please provide the revised version of Figures 2 and 3 a tabular format.

B3-SEC-132
[B-3-1, Section 3.5, p.20-22] With respect to defective equipment contributions to SAIDI and SAIFI:

d. Please provide a table that shows for each year between 2016 and 2020, a breakdown of SAIDI cause by defective equipment by equipment type, both as a percentage and by hours.
e. Please provide a table that shows for each year between 2016 and 2020, a breakdown of SAIFI cause by defective equipment by equipment type, as a percentage and by number of interpretations.

B3-SEC-133
[B-3-1, Section 3.5, p.35] Please update Hydro One's OEB distribution scorecard to include 2021 and 2022 forecast results for each measure.

B2-SEC-134
[B-3-1, Section 3.7] Please explain what overall budget constraints were included in the distribution investment planning process.

B3-SEC-135
[B-3-1, Section 3.7] Please provide a table that shows both the total, and for each category of capital expenditures (i.e. system renewal, system service), the number of candidate investments considered/include in each stage of the distribution investment planning process.

B3-SEC-136
[B-3-1, Section 3.7] Please provide a table that shows both the total, and for each category of capital expenditures (i.e. system renewal, system service, etc.), the budget at each stage of the distribution investment planning process.

B3-SEC-137
[B-3-1, Section 3.8, p.1] Hydro One has not proposed any progressive productivity for its distribution capital expenditures.

a. Please explain why Hydro One why not proposed any progressive productivity for its distribution capital expenditures, while it has for its transmission capital expenditures.
b. If the Board were to order that Hydro One include progressive productivity as it proposed to do for transmission, please provide Hydro One's views on how that amount should be determined.

B3-SEC-138
[B-3-1, Section 3.8, p.16] Please explain why the Worst Preforming Feeder program is a system service and not a system renewal program.

B3-SEC-139
[B-3-1, Section 3.8, Attachment 1] Please provide Appendix 2-AB on an in-service addition basis. Please also provide in Excel format.

B3-SEC-140
[B-3-1, Section 3.9, p.4] Hydro One notes that it exceeded the multi-year OEB approved capital envelope by $187M:

a. Please explain why Hydro One did not defer/cancel other projects to remain within the

approved capital envelope.

b. If the OEB determines that the entire $187M should be disallowed, please explain how the OEB should make such an adjustment. Please include a detailed breakdown of the calculation.

B3-SEC-141
[B-3-1, Section 3.8, Attachment 1] Please provide a version of 2-AA with additional columns that show the approved expenditures (as calculated for the purposes of the DRO) in each year between, 2018 to 2022. Please also provide the table in Excel format.

B3-SEC-142
[B-3-1, Section 3.8, Attachment 1] Please provide Appendix 2-AA on an in-service addition basis.

B3-SEC-143
[B-3-1, Section 3.9, Attachment 2, Table 4] Are the units in the table on a capital expenditure or ISA basis?

B3-SEC-144
[B-3-1, Section 3.9, Attachment 2] Please provide Tables 4, 5 and 6 in Excel format.

B3-SEC-145
[B-3-1, Section 3.9, Attachment 2, Tables 5, 7] Please provide similar tables for 2018, and forecasts for 2021 and 2022.

B3-SEC-146
[B-3-1, Section 3.9, Attachment 3, p.2] Please expand Table 1 to show forecast expenditures for each year between 2023 and 2027.

B3-SEC-147
[B-3-1, Section 3.11] Please provide a table showing for each major asset type, the number of assets replaced or forecast to be replaced, regardless of program or project, between 2018 and 2027.

B3-SEC-148
[B-3-1, Section 3.11, ISD D-SA-02] With respect to new Load Connections, Upgrade and Cancellations program:

a. [p.3] Please expand Table 1 to include actual/forecast amounts for 2018 to 2022.
b. [p.9] Please provide tables that shows in same format as Table 3, the cost of i) new connections, ii) service upgrades, and iii) service cancellations, for each year between 2018 and 2027.

B3-SEC-149
[B-3-1, Section 3.11, ISD D-SA-04] With respect to Metering Sustainment program, what is the expected useful life of the AMI 2.0 meters.

B3-SEC-150
[B-3-1, Section 3.11, ISD D-SR-05] With respect to Distribution Lines Trouble Call and Storm Damage Response program, Hydro One states: “The forecast expenditures for this demand program are projected from historical costs and trends. Storm response expenditures are based on an inflation-adjusted average of annual expenditures since 2005, with “outlier” years of unusually high expenditures (i.e. due to more severe storms) removed from the forecast – namely, 2006, 2013, and

2018. The expenditures for other categories of activities are guided by an inflation adjusted three-year historical average.

a. Please provide a breakdown of the program by each categories of activities/spending in this program for each between 2018 and 2027.
b. For the demand program category, please provide the total expenditures between 2005 to 2027.
c. Please explain what type of work in this category would require a capital contribution.
d. For each year between 2018 and 2021, and for each category of spending/activities provided in part (a), please detail the number and type of assets replaced.

B3-SEC-151
[B-3-1, Section 3.11, ISD D-SR-07] With respect to the Pole Sustainment Program:

a. [p.1] For each year between 2018 and 2027, please provide a table includes the total cost of the program, broken down each of test and treat, pole refurbishment, and pole replacement.
b. [p.8] Please expand Table 1 to include 2018 to 2022.
c. [p.9] Figure 6 shows the total number of poles in poor condition in each year between 2023 to 2027. Is the Figure based on current poles in poor condition adjusted for the number of poles to be replaced and refurbished during the test period, or does it include poles that are currently not in poor condition but are expected to become poor? If it is the latter, please explain how Hydro One methodology. If a similar methodology exists for other assets, please provide them.
d. [p.12] Did Hydro One consider as an alternative anything between alternatives 1 and 2. For example, addressing on a proactive basis an amount between 0 (alternative 1) and what is proposed in alternative 2.

B3-SEC-152
[B-3-1, Section 3.11, ISD D-SR-09] With respect to Submarine Cable Replacement Program, for each year between 2018 and 2027, please provide the number of kilometers of submarine cables replaced.

B3-SEC-153
[B-3-1, Section 3.11, ISD D-SR-10, p.12] With respect to Distribution Lines Sustainment Initiatives:

a. For the 'Other Projects (<1M)', please provide a breakdown for each year between 2023 and 2027, into, i) relocations, ii) rebuilds, and ii) cable replacements, and for each, provide the total number kilometers of work forecast to be completed.
b. Please provide a similar table as Appendix A showing all projects between 2018 and 2023.

B3-SEC-154
[B-3-1, Section 3.11, ISD D-SR-12] With respect to Advanced Meter Infrastructure 2.0 Program:

a. Please explain the difference in functionality and capabilities between the meters proposed be deployed as part of this program and those previously deployed.
b. [p.20] Please provide an update on the status of the Phase 1 Pre-Deployment RFP.
c. [p.20] Please provide a copy of the material provided to Hydro One's Board of Directors in seeking approval to entire into contract with the selected vendor
d. [p.22] What is the expected life of the meters Hydro One is planning to use as part of the

program.

e. [p.24] Do the new meters require a new different network system and hardware or has the hardware also reached its end of life? Please provide details.
f. [p.30] Please provide the full calculations underlying Figure 12.

B3-SEC-155
[B-3-1, Section 3.11, ISD D-SS-01] With respect to System Upgrade Driven by Load Growth Program:

a. [p.6] Does Hydro One consider the construction of new feeders to a new development to be an expansion or enhancement under the DSC? Please explain your response.
b. [p.14; Appendix A] Please explain why there are no capital contributions associated with any projects listed in Appendix A.

B3-SEC-156
[B-3-1, Section 3.11, ISD D-SS-04] With respect to Energy Storage Solutions Program:

a. [p.5] With respect to the Aroland BESS Pilot Project:
    i. What are the technical specifications of the BESS?
    ii. Hydro One has noted the historic reliability between 2013 and 2017, on the same basis, please provide reliability after the installation of the BESS.
    iii. Please provide all lessons learned related to the Roland BESS Pilot Program.
b. [p.6] With respect to the Residential Reliability Improvement Pilot Project:
    i. Please provide further details regarding the project, and provide a copy of any business case, project plan, and any other similar key documents.
    ii. What are the technical specifications and the cost of each batery?
    iii. Please confirm that these storage projects will be behind the customer's meter.
c. [p.8] Hydro One has a forecast of $115.3M for grid scale storage projects between 2023-2027. For each project that Hydro One is undertaking during the test period, please provide the name, location, storage specifications, cost, in-service date, how Hydro One plans to use the storage system, forecast savings, and a copy of the project business case.

B3-SEC-157
[B-3-1, Section 3.11, ISD D-SS-05] With respect to the Worst Performing Feeder program, please explain why this project is considered a system service as opposed to a system renewal project.

B4-SEC-158
[B-4-1, Section 4.1, p.18, Fn 4] Hydro One notes that it has reclassified 'security investments' from System Renewal to General Plant. Has Hydro One re-classified any other investments between categories? If so, please provide details.

B4-SEC-159
[B-4-1, Section 4.1, p.18, Fn 4] For each year between 2018 and 2022, please provide the total approved and actual/forecast 'security investments' that were previously classified as System Renewal for each of transmission and distribution.

B4-SEC-160
[B-4-1, Section 4.2] Please provide Hydro One's fleet utilization rate (i.e. how often are its vehicles in use) for each year between 2016 and 2021. Please detail the methodology and assumptions use in

the calculation.

B4-SEC-161
[B-4-1, Section 4.1, Attachment 1] With respect to the Utilmarc, 2*019 Fleet Operations Benchmarking Report*:

a. [p.4] Please explain why no Ontario utilities were included in the peer group.
b. [p.5] Please provide a table showing the Vehicle Equivalency for each of Hydro One's major vehicle types and how they are calculated.
c. [p.8] For each cost metric, costs are broken down into three categories (i.e. ownership, operating (net fuel), fuel and support). Please provide a definition of what specific costs are included in each category and how each are calculated.
d. For each metric, please provide Hydro One Quartile Performance by cost category.
e. Please provide a copy of the questionnaire provided to all participants.

B4-SEC-162
[B-4-1, Section 4.3, Attachment 3] With respect to the Gartner, *Enterprise IT spending & Staffing Benchmarking Final Report:*

a. [p.13] Please provide a list of peer group companies.
b. Please provide a copy of the underlying data used for the study collected from the peer group and Hydro One (Note: SEC does not object to the peer group data being anonymized).
c. [p.13] Please provide the number of each of the peer group and ITKMD companies, into the following categories: a) distribution only, b) transmission only, c) distribution and transmission only d) generation only, e) generation and distribution only, f) generation and transmission only, e) generation, transmission and distribution.
d. Please discuss any statistically different results that would be expected based on the type of company identified above.
e. [p.15] With respect to the 'IT Spend as a Percentage of Revenue' metric, does the revenue used for the purpose of this metric include revenue collected as pass-through, or all revenue collected by the entity? For example, is the revenue included for Hydro One all revenue collected or just distribution revenue (collected by the distribution business) and transmission revenue (collected by the transmission business) or does it include other revenue such as cost of power, etc.?
f. If the answer to part (c) is includes revenue collected as a pass-through, please revise the metrics to exclude such revenue.
g. For each metric, please provide the expected Hydro One result based on the forecast information contained in the application for each year between 2022 and 2027.

B4-SEC-163
[B-4-1, Section 4.8, p.23] Hydro One states: "However, new technologies can enable cost savings for another line of business and result in no net OM&A increase to Hydro One". Please provide details of the cost savings associated with these new investments and how they were calculated.

B4-SEC-164
[B-4-1, Section 4.8, p.28] Please explain why Capital Contributions from Hydro One Distribution to Hydro One Transmission are classified as general plan expenditures and not, depending on the

investment, system renewal, access or service expenditures.

B4-SEC-165
[B-4-1, Section 4.9, p.10] Please provide a revised version of Table 3 that includes 'security investments' in the historic/bridge year data on the same basis as now (i.e. proposed to be included as a General Plan expenditure beginning in 2023).

B4-SEC-166
[B-4-1, Section 4.9, Attachment 1] Please provide a mapping of the ISDs to the projects included in Appendix 2-AA.

B4-SEC-167
[B-4-1, Section 4.9, Attachment 1] Please provide Appendix 2-AA on an in-service additions basis. Please also provide the response in Excel format.

B4-SEC-168
[B-4-1, Section 4.9, Attachment 2, p.4] Pease provide a status report on the construction of the Integrated System Operating Centre. Please provide the forecast total costs, and its allocation to transmission and distribution. Please explain any final variances from the costs forecast in EB-2019-0082.

B4-SEC-169
[B-4-1, Section 4.9, Attachment 2] Please provide Tables 2, 5 and 6 in Excel format.

B4-SEC-170
[B-4-1, Section 4.9, Attachment 2] Please provide versions of Tables 2 and 5 in 2018 based on Hydro One's latest forecast. Please also provide the table in Excel format.

B4-SEC-171
[B-4-1, Section 4.9, Attachment 2] Please provide versions of Table 2 and 5 in 2021 and 2022 based on Hydro One's latest forecast. Please also provide the table in Excel format.

B4-SEC-172
[B-4-1, Section 4.11, G-GP-03, p.15] With respect to Facilities and Accommodations:

a. For each of the 'New Facilities & Major Renovations/Upgrades listed in Table 2, please provide the full business case.
b. With respect to the Orillia OC, is Hydro One planning to add the project to its rate base during the plan term? If so, please explain how that is appropriate considering the deferred rebasing term related to approved purchase of OPDC by Hydro One.
c. With respect to the Peterborough OC and Peterborough Fleet Maintenance Garage:
    i. Were any of the buildings listed in Figure 8, previously owned by PDI?
    ii. Does Hydro One currently or expect to use the Peterborough OC or Peterborough Fleet Maintenance Garage to service distribution in the former PDI service territory? If so, please explain how those costs are allocated to the former PDI service territory. If not, please explain why not.

B4-SEC-173
[B-4-1, Section 4.11, G-GP-08, p.15] Please provide a copy of the full business case for updating SAP to S/4HANA.

B4-SEC-174
[B-4-1, Section 4.11, G-GP-21, p.1] Please explain why the TRU Replacement Program is not classified as a System Renewal program.

C-SEC-175
[C] Please complete the attached Excel table.

C-SEC-176
[C-2-1, p.1; C-4-4, p.1] Please reconcile the total annual transmission in-service additions in Table 1 for 2018, with the total additions to rate base in the Fixed Asset Continuity Schedules (Appendix 2-BA).

C-SEC-177
[C-4-4] Please explain how Hydro One previously applied and proposed to apply the annual transmission progressive productivity in-service additions. For example, how has Hydro One determined which USoA to apply to it for purpose inclusion in rate base and to reduce the annual depreciation expense?

C-SEC-178
[C-5-1, Attachment 1] With respect to each of the Guidehouse, *Working Capital Requirements of Hydro One Networks Inc.'s Transmission Business* Report and the *Working Capital Requirements of Hydro One Networks Inc.'s Distribution Business* Report, please detail all changes in the methodology and/or methods of determining the components of the various leads and lags, from similar reports filed in EB-2019-0082 and EB-2017-0049.

C-SEC-179
[C-8-2, p.2] Please provide a copy of Hydro One's capitalization policy. Please detail any differences from the policy since each of the EB-2017-0049 and EB-2019-0082 proceedings.

C-SEC-180
[C-8-2, p.5] Please expand Table 1 to include 2016 to 2022 information.

C-SEC-181
[C-8-2, Attachment 2] With respect to the PWC, *Capitalization of Common Corporate Costs Review:*

a. [p.7] PWC notes issues regarding data comparability. Did PWC contact the various comparator utilities and seek clarification and/or specific data that would have assisted? If not, please explain why not.
b. [p.8-9] For each of the comparator utilities, please identify if they are: i) electricity distribution utility only, ii) electricity transmission utility only, iii) electricity distribution and transmission utility, iv) other.
c. [p.8-9] For each of the metrics utilized, please provide a separate calculation for each of Hydro One's distribution and transmission business.
d. [p.8] PWC states: "In our experience, most US utilities use third-parties to construct capital work, which is in contrast to Hydro One that primarily self-constructs their capital work. As we previously noted, this is one reasonable reason for the disparity noted.":
    i. Please provide quantitative data to validate PWC's view.
    ii. Does PWC's experience include both distribution and transmission utilities or only a sub-set? Please discuss.

e. [p.12] For each of the 7 utilities included in Table 5, please breakdown the information into transmission and distribution only (as applicable).
f. [p.11] With respect to employee pension and benefits:
    i. Please confirm that Hydro One capitalizes a portion of employee pension and benefits.
    ii. Please explain why 'Employee Pension and Benefits' (Account 926) are not included in the calculation of '% of total A&G capitalized'.
    iii. Please recalculate Table 5 and include Account 926 in the 'Total A&G expenses – Capitalization base'.

C-SEC-182
[C-9-2] What is the cumulative impact for each year between the difference between labour rates used to forecast each of the capital costs for distribution in EB-2017-0049 and transmission in EB-2019-0092 and the actual labour rates?

C-SEC-183
[C-9-3] What is the cumulative impact for each year between the difference between fleet rates used to forecast each of the capital costs for distribution in EB-2017-0049 and transmission in EB-2019-0092 and the actual fleet rates?

C-SEC-184
[C-9-4] What is the cumulative impact for each year between the difference between material surcharge rates used to forecast each of the capital costs for distribution in EB-2017-0049 and transmission in EB-2019-0092 and the actual material surcharge rates?

E-SEC-185
[E-2-2, p.3] Please provide any data or reports that helped Hydro One I in selecting project deferrals.

E-SEC-186
[E] PCB remediation costs appeared in various sections of the OM&A application. Please provide an overall review of the PCB remediation program and how Hydro One allocates the cost among various programs.

E-SEC-187
[E-2-2, p.31] Please explain how much of the 2023 Preventive Maintenance OM&A is associated with the new RAS maintenance plans. Please also provide cost details and completion timelines for such programs.

E-SEC-188
[E-2-2, p.33] Please provide forecast information of corrective maintenance OM&A.

E-SEC-189
[E-2-2, p.42] With respect to the JSOC project:

a. Please provide a breakdown of all costs associated with the JSOC project.
b. Please provide the expected annual costs of operating the JSOC after 2023.

E-SEC-190
[E2; EB-2017-0049, I-3-SEC-4, Attachment 4] With respect to vegetation management:

a. Please provided a revised version of Figure 1 showing 2018 to 2021 actuals and 2022 and 2023 forecast information.
b. On the same basis as provided in Table 1, please provide the 2018 to 2020 Forecast Units and Actual budget.

E-SEC-191
[E-2-2, p.61] Given that low-priority demand work has been addressed in the Planned Corrective Maintenance program, please explain the increase in Demand Maintenance in 2023 forecast in comparison to 2021 and 2022.

E-SEC-192
[E-2-2, p.61] With regard to Planned Corrective Maintenance OM&A:

a. 2023 sees a significant increase in Planned Corrective Maintenance OM&A, please explain why Hydro One did not pace the spending in Planned Corrective Maintenance.
b. Please provide cost details and completion timelines of the projects associated with the increase in 2023.

E-SEC-193
[E-2- 3, p.4] With regard to Transmission Standards Program OM&A:

a. Please confirm whether of the program is made up entirely compensation related costs.
b. Please provide the FTE time allocated to Transmission Standards Program in each year from 2018 to 2023.
c. Please provide justification to the material increase in the 2023 forecast.

E-SEC-194
[E-3-3, p.8-9] Please provide cost details and completion timelines for all projects associated with RD&D OM&A in each year of 2021, 2022, and 2023

E-SEC-195
[E-3-4, p.4] Please confirm whether the CTM implementation has been completed. Please provide actual costs incurred.

E-SEC-196
[E-3-4, p.6] With regard to Third Party Support OM&A, please provide cost details and completion timelines related to any project that contributes to the increase in 2021 forecast in comparison to 2020 actual, including without limitation, costs associated with myAccount and outreach activities.

E-SEC-197
[E-4-1, p.3,5] Please provide a breakdown of the 'Other OM&A' contained in Table 2 and Table 3 into the categories discussed on p.5 (capitalized amounts, non-service component of OPEB, environmental pension credit, indirect depreciation credit, and any material unexpected or non-recurring expenses).

E-SEC-198
[E-4-2, p.7] For each of the functions included in Table 3, please provide the total number of allocated FTEs in each year between 2018 and 2023.

E-SEC-199
[E-4-2, Attachment 1] With respect to the UMS Group, *Common Corporate Costs Benchmarking Study*:

a. Please provide a copy of the questionnaire provided to each of the comparator utilities and provide the full response provided by Hydro One.
b. [p.7] For each of the comparator utilities, please identify if they are: i) electricity distribution utility only, ii) electricity transmission utility only, iii) electricity distribution and transmission utility, iv) other.
c. [p.8] Please explain how revenue is defined. Does it include revenue collected as pass-through, or all revenue collected by the entity. For example, is the revenue included for Hydro One all revenue collected or just distribution revenue (collected by the distribution business) and transmission revenue (collected by the transmission business) or does it include other revenue such as cost of power, etc.?
d. [p.10] UMS states: "It should be noted that the Hydro One common corporate costs benchmarked are *pre-allocation costs*; therefore, some of them are borne by Hydro One entities other than Transmission and Distribution, so not all of them go into T&D rates. In addition, investor costs (i.e., those which are borne by shareholders, rather than customers) are also included in the Hydro One benchmark numbers." Please confirm this would be similar for the peer group companies.
e. [p.10] Please add column to Table 5 showing what quartile Hydro One is in.
f. [p.10] On the same basis as Hydro One's 2019 costs are calculated for the purpose of the study, please provide its forecast 2023 costs (normalized) based on the forecast information in this application.

E-SEC-200
[E-4-7, p.4] On the same basis as Table 3, please provide a table that shows the unregulated revenue that Hydro One received as a result of incurring the costs shown in Table 3.

E-SEC-201
[E-6-1, p.14] Please provide a table that shows for each year between 2016 and 2021, the number of FTEs that either were or forecast to be retirement eligible, and the number of that actual did or are forecast to retire.

E-SEC-202
[E- 6-1, p.18, Table 1] Please provide justification to the increase in forecast in each category in each year of 2021, 2022, and 2023.

E-SEC-203
[E-6-1, p.22] What assumptions is Hydro One making for the purpose of the underlying budgets in this application regarding future PWU and SUP collective agreements?

E-SEC-204
[E-6-1, p.22] Please add a row to Tables 2 and 3 to show the value of the share grants over time.

E-SEC-205
[E-6-1, p. 22] Please provide a breakdown of the cost impact (additional cost and/or savings) from all changes in the collective agreements with the PWU and the SUP since EB-2019-0082. Please detail

all assumptions made and the full calculation.

E-SEC-206
[E-6-6, p.26] With respect to STIP:

a. What assumptions did Hydro One make for the purposes of determining the 2023 to 2027 STIP payments? What performance level was assumed?
b. Please provide a table that includes for each year since 2017: a) total maximum amount of STIP that could have been paid, b) actual STIP paid, c) the average performance achieved.

E-SEC-207
[E-6-1, p.27] Please explain in detail how the Long-term Incentive Plan works.

E-SEC-208
[E-6-1, p.27] Have there been any changes to the LTIP, ESOP and STIP since the EB-2019-0082 application.

E-SEC-209
[E-6-1, p.32] Please provide the Pension Contribution Ratio (Employee/Employer) for each of the PWU and SUP in each year between 2013 and 2027.

E-SEC-210
[E-6-1, Attachment 1] With respect to the Mercer, *Compensation Benchmarking Study*:

a. [p.5] Please provide a table that shows for each Hydro One group, the total number of employees benchmarked and total number of employees.
b. [p.5] Please provide a list of all forms of renumeration provided to Hydro One employees and note which ones are or are not included in the study.
c. [p.14] Total Cash Compensation is defined as "Base salary plus most recent short-term incentive, bonus or lump sum paid, where applicable". Over what period is non-base salary cash compensation?
d. [p.11] Mercer states: "After reviewing the survey submissions provided by Black & McDonald and K-Line Maintenance & Ltd in 2017, it was deemed that the business and staffing model of these contractors was not reflective of Hydro One or other organizations in the peer group. In addition, Hydro One does not generally compete for talent with contractors.":
    i. Please explain further what is meant by "these contractors was not reflective of Hydro One or other organizations in the peer group."
    ii. In the 2017 survey, how did Black & McDonald and K-Line Maintenance compare to the rest of the peer group?
    iii. Mercer states: "Hydro One does not generally compete for talent with contractors". Please explain the basis of this statement.
e. Please revise Table 6, 7, and 8 to show dollar figures instead of percentages.

E-SEC-211
[E-6-1, Attachment 1] For each of its major categories of employees, PWU, SUP, and Non-Represented, does Hydro One track what employers it competes for talent with (e.g. companies it has hired employees away from, companies that applicants to open positions are employed by etc)? If so, please provide details and a summary of any data Hydro One has collected.

E-SEC-212
[E-6-1, Attachment 1] With respect to the Mercer, *Compensation Benchmarking Study*, for each of the Non-Represented, PWU and SUP, please provide an estimate of the dollar difference between the weighted average total compensation for Hydro One's employees and the P50 median used in the study. Please provide the amount for the year the study is representative of and for each year between 2023 and 2027. Please provide a step-by-step explanation of how the estimate was reached and include all supporting calculations so the numbers can be verified.

E-SEC-213
[E-6-1, Attachment 1.1] With respect to the Mercer, *Compensation Benchmarking Forecast: Addendum to the Compensation Benchmarking Study Dated July 8th, 2021*:

a. Please provide a step-by-step explanation of how the forecast was determined and include all supporting calculations, including related to all assumptions, so the numbers can be verified.
b. Please show the results by year, by Hydro One group (PWU, SUP and Non-Represented), and by renumeration category (i.e. base, total cash, total compensation).

E-SEC-214
[E-8-1, p.5] For each year between 2018 and 2022, please explain the variance between actual/forecast and OEB approved transmission depreciation expense.

E-SEC-215
[E-8-1, p.6] For each year between 2018 and 2022, please explain the variance between actual/forecast and OEB approved distribution depreciation expense.

E-SEC-216
[E-6-1, Attachment 1] Please list and explain any difference in the methodology used in the Alliance Consulting, Electric Utility Plan Depreciation Rate Study, and the similar study undertaken by Foster Associates Inc. (see EB-2016-0160, C1-7-1, Attachment 1).

E-SEC-217
[E-6-1, Attachment 1, p.10] In the example provided, please explain why the average life is not the intersection of the survivor curve and 50th percentile.

E-SEC-218
[E-9-1, p. 6,12,14] With respect to the Tax Deductible Capitalized Overheads:

a. Please confirm that increasing the deduction of capitalized overheads is a timing difference, and the ultimate amount of tax recoverable from customers in rates over time does not change.
b. Please provide an estimate of the impact on rates in each of 2023-27 as a result of this change in tax filing strategy and the expected savings of $73 million in taxes. Please disaggregate the impact of refunds for the period 2016-2022 and the impact of lower taxes initially filed in 2023-2027.
c. Please provide a more detailed explanation of Hydro One's technical and legal position regarding the deduction of Tax Deductible Capitalized Overheads.

E-SEC-219
[E-10-1] With respect to application costs, using the categories as Tables 1/2, please provide the total costs of each of EB-2016-0160, EB-2017-0049, EB-2019-0082, and the forecast total costs for EB-

2021-0110.

F-SEC-220
[F-5-1, p.4] For each year since 2014, and for each of the transmission and distribution business, please provide, i) regulated ROE, and ii) regulated net income.

G-SEC-221
[G-1] For each of the transmission and distribution business, please provide in a table that includes the following information for each DVA: i) account number, ii) account name, iii) principal balance at the end of December 31, 2020, iv) total balance including interest /carrying charges, and v) the balance requested for disposition in this application.

G-SEC-222
[G-1-1, p.29] Please provide the full 2020 ESM calculation.

G-SEC-223
[G-1-1, Attachment 5] Please provide forecast, including similar supporting information as provided in Attachment 5, for 2021 and 2022.

G-SEC-224
[G-1-2, p.8] Based on the guidelines set out in the OEB' Report of the Ontario Energy Board: Regulatory Treatment of Impacts Arising from the COVID-19 Emergency, what is the current balance in Hydro One's transmission and distribution COVID-19 Emergency Deferral Account (Account 1509)?

G-SEC-225
[G-1-2, p.14] Please provide a similar calculation as provided for 2016 for each until 2022, for each of the distribution and transmission business.

G-SEC-226
[G-1-2, p.15] For each of the distribution and transmission business, please provide the forecast difference between the updated approach to Capitalized Overheads Tax Variance and the previous approach. Please provide a similar table to that shown on p.14 for each year.

G-SEC-227
[G-1-2, p.17] With respect to the proposed Externally Driven Transmission Project Variance Account:

a. What is considered direction from the IESO for the purpose of this account?
b. Would projects recommended as part of the regional planning process be eligible for inclusion in this account?
c. If this account had been in-place since 2016, which projects would it have captured and what would their actual/forecast in-service additions be, not included in base revenue requirement?

G-SEC-228
[G-1-2, p.20] With respect to the proposed modifications to the Capital In-Service Variance Account (Transmission):

a. Please provide a full numerical example (i.e. showing revenue requirement impacts and calculations) of how the account would work under the proposed revised operation of the

account, and how it would work under the current approved approach.

b. Hydro One states: "This modification would remove the incentive to complete projects in December of any given year when it would be more appropriate and cost-effective to instead complete such projects in January of the following year, which is an issue that is particularly significant for the Transmission business where projects are large in scale and multi-year in nature. This ensures that funding is being used in the most prudent manner." Please provide further details including an example of the referenced circumstance.
c. Hydro One states: "Additionally, this modification ensures that if there are projects that are delayed outside of Hydro One's control, Hydro One is not unfairly penalized." Is Hydro One proposing that the revised approach would only apply to delays "outside of Hydro One's control"?

G-SEC-229
[G-1-2, p.17] With respect to the proposed Externally Driven Distribution Project Variance Account:

a. If this account had been in-place since 201, and what projects would have been included, and what would the balance of the account be at the end of 2022.
b. Is Hydro One aware of any other Ontario utility that has a similar variance account to capture DER connections, and service upgrades?
c. Would projects recommended as part of the regional planning process be eligible for inclusion in this account?

G-SEC-230
[G-1-2, p.40] With respect to the proposed AMI 2.0 Variance Account:

a. Hydro One states that this is required because its "cost estimates currently reflect a significant degree of uncertainty." Please explain how and based on what assumption, Hydro One forecast the AMI 2.0 programs costs for this application.
b. Hydro One states that the program schedule contemplates obtaining Board of Director approval to enter into a contract with a preferred AMI 2.0 equipment vendor in Q3, 2021. Please provide an update on the Board of Director approval, the contract with its preferred AMI 2.0 equipment vendor. Please also provide a copy of the material provided to the Board of Directors related to approval of the contract.

H-SEC-231
[H-10-1, p.4] Please revise Table 1 to include, ii) a column that shows the number of kilometers of transmission lines per province, ii) a separate row for Hydro One only.

H-SEC-232
[H-10-1, Attachment 1, p.2] The IESO has proposed in EB-2021-0134 that the ETS rate be set at $0. Please revise Table 2 to remove any revenue from the ETS rate.

L-SEC-233
[L-1-3, p.7] Please explain why the meter costs for the six new acquired classes are significantly different from the meter costs for the comparable legacy classes. Please detail the extent, if any, to which direct allocation has an impact on those differences.

L-SEC-234
[L-1-3, p.11] Please provide a calculation, for each of the acquired rate classes, of the GFA that is

being “subsequently redistributed to all other rate classes.”

L-SEC-235
[L-1-3, p.12] Please provide a calculation, for each of the acquired rate classes, of the NFA and NFA ECC that is being “subsequently redistributed to all other rate classes.”

L-SEC-236
[L-1-3, p.13] Please confirm that the unadjusted depreciation allocated to the acquired classes is $19.2 million, but that is reduced to $9.9 million through direct allocation, leaving $9.3 million to be “redistributed to all other rate classes”.

L-SEC-237
[L-2-1, p.3] Please confirm that, for a demand billed customer with 100 kW of monthly billable demand, the following are the monthly distribution bills (fixed plus volumetric) estimated for 2022, proposed for 2023, and forecast for 2027:

Demand Billed with 100 kW of Demand - Monthly Dx Bills							
Existing Rate Class	***New Rate Class***	***2022 estimated***	***2023 proposed***	***Increase/ Decrease***	***2027 forecast***	***Increase from 2022***	***Increase from 2023***
UGd	UGd	$1,210.37	$1,158.37	-4.3%	$1,372.63	13.4%	18.5%
GSd	GSd	$2,032.47	$1,941.54	-4.5%	$2,302.34	13.3%	18.6%
NPDI GS>50	AGSd	$674.52	$580.06	-14.0%	$711.15	5.4%	22.6%
HCHI GS>50	AGSd	$493.83	$580.06	17.5%	$711.15	44.0%	22.6%
WHSI GS>50	AUGd	$411.77	$396.22	-3.8%	$476.73	15.8%	20.3%

L-SEC-238
[L-2-1, p.3] With respect to the relative rate changes being proposed for the demand-billed general service customers:

a. Please explain why it costs almost three times as much to serve a customer in a legacy urban zone than a similar customer in Woodstock. In replying, please adjust for the impact of revenue to cost ratios.
b. Please explain why the costs to serve a legacy urban customer are expected in increase more slowly than the costs to serve a Woodstock customer.
c. Please explain why it costs more than three times as much to serve a legacy customer billed in GSd relative to a similar customer in Haldimand or Norfolk. In replying, please adjust for the impact of revenue to cost ratios.
d. Please explain why the costs to serve a legacy GSd customer are expected to increase more slowly than a Norfolk or Haldimand customer.

L-SEC-239
[L/2/1, p. 27] Please explain why the network and connection charges for the acquired classes are not the same as the charges for the comparable legacy classes.

L-SEC-240
[L-3-1, Attachment. 1] Please confirm that, in calculating rate base, Hydro One has assumed each of the following:

a. Norfolk rate base would have increased from 2013 to 2023 at a CAGR of 3.1%.
b. Haldimand rate base would have increased from 2014 to 2023 at a CAGR of 5.8%.
c. Woodstock rate base would have increased from 2014 to 2023 at a CAGR of 1.8%.

Respectfully submitted on behalf of the School Energy Coalition this October 26, 2021.

Mark Rubenstein
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