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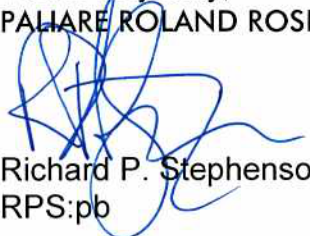
Ms. Kirstin Walli
Board Secretary
Ontario Energy Board
2300 Yonge Street, 27th Floor, P.O. Box 2319
Toronto, ON M4P 1E4

Dear Ms. Walli,

**Re: Hydro One Networks Inc. Application for 2020-2022 Transmission Rates
(EB-2019-0082)**

Attached please find the Power Workers' Union's Submissions in connection with the above-noted proceeding. An electronic copy has been filed through the Board's RESS filing system, and two paper copies will follow by courier delivery.

Yours very truly,
PALIARE ROLAND ROSENBERG ROTHSTEIN LLP


Richard P. Stephenson
RPS:pb

Encl.

Doc 3144212 v1

IN THE MATTER OF the Ontario Energy Board Act, 1998;

AND IN THE MATTER OF an Application by Hydro One Networks Inc. for an order or orders made pursuant to section 78 of the Ontario Energy Board Act approving rates for the transmission of electricity.

Submissions of the Power Workers' Union

1. The following are the Power Workers' Union's ("PWU") submissions on the issues reviewed in the matter of Hydro One Network Inc.'s ("Hydro One") 2020-2022 transmission custom IR application.
2. These submissions do not specifically address all issues on the issues list. Where an issue has not specifically been addressed, the PWU supports the application as filed, and supports and adopts the submissions of Hydro One in support of the application.

B: CUSTOM APPLICATION

5. Are all elements of Hydro One's proposed Custom Incentive Rate framework for the determination of revenue requirement appropriate?

3. Hydro One proposes to use a custom capital factor as part of its custom incentive rate methodology. The custom capital factor is used with a revenue cap index, both of which were approved by the Board in Hydro One's distribution rate application (EB-2017-0049).¹ The custom capital factor represents the incremental capital investments in the second and third years of this Custom IR application.
4. Two incentive regulation factor reports dealing with transmission total factor productivity ("TFP") and benchmark relative cost performance studies were produced for earlier Hydro One Transmission proceedings (EB-2018-0218 & EB-2018-0130). Power

¹ EB-2017-0049 Decision an Order, March 7, 2019, Page 31

Systems Engineering ("PSE") prepared a study for Hydro One and the Pacific Economics Group ("PEG") prepared a study on behalf of Board Staff.

5. The studies differ in methodology, peer group selection, time periods, and overall conclusions. Updates to the results of those studies and the consultants' comments on each other's methodology and conclusions were prepared for this proceeding in PSE's Transmission Study for Hydro One Networks², PEG's Incentive Regulation for Hydro One Transmission report³, and PSE's Reply to PEG's Report.⁴

6. PSE found an industry total factor productivity trend of -1.61%⁵, which has been adjusted to 0% to reflect the Board's policy for LDCs that a negative productivity factor is not appropriate. Adjusting the productivity factor to 0% creates an implicit stretch factor as Hydro One must perform at least 1.61% better than the industry average to achieve its target revenue requirement, without accounting for any stretch factor, inflation, or the progressive productivity improvements contained within the application. PEG found a productivity factor trend of -0.25%.⁶ As PSE notes⁷, both PSE and PEG consider this adjustment to be an implicit stretch factor, the only issue is one of degree.

7. PSE's study found that Hydro One's cost performance is expected to be an average of 26.0% lower than its benchmarked cost from 2004 to 2018 and 32.9%⁸ lower through the rate period. Under the Board's guidelines, costs below 25% of the peer benchmark implies a stretch factor of 0.00%. On the other hand, PEG's study found average relative cost performance as 11.4% lower than benchmark from 2004 to 2018 and 9.0% higher than benchmarked costs through the rate period.

8. PSE's reply points out a number of inconsistencies between PEG's original report and the report it filed as part of this proceeding. In particular, PEG's results show a rapid deterioration in Hydro One's cost performance in recent years that is not reflected in

² Exhibit A, Tab 4, Schedule 1, Attachment 1

³ Exhibit M1, Filed September 5, 2019

⁴ Power System Engineering – Reply to PEG's Report, Filed October 15, 2019

⁵ Power System Engineering – Reply to PEG's Report, October 15, 2019, Page 2

⁶ Exhibit M1, Page 10 of 76

⁷ Power System Engineering – Reply to PEG's Report, October 15, 2019, Page 2

⁸ Power System Engineering – Reply to PEG's Report, October 15, 2019, Page 3

Hydro One's actual costs. Moreover, this trend is present for all utilities included in the peer group.⁹

9. This result reflects a nonsensical scenario in which the average of the peer group's costs is 15% above benchmark costs.¹⁰ PEG's benchmark score results which are used to assign stretch factors are clearly influenced by the productivity factor results that indicate declining cost performance across the industry. This is inconsistent with the objectives of the OEB's incentive regulation mechanism which is designed for the productivity and stretch factors to be determined independently and to serve different purposes.

10. The productivity factor considers overall industry trends to provide a baseline of expected cost efficiency improvements. The stretch factor considers relative cost performance and seeks to incentivize the worst-performing utilities to improve at a faster pace. While the determination of these two factors cannot be entirely separated, an overwhelming influence of one factor on the other negates the function of separate factors.

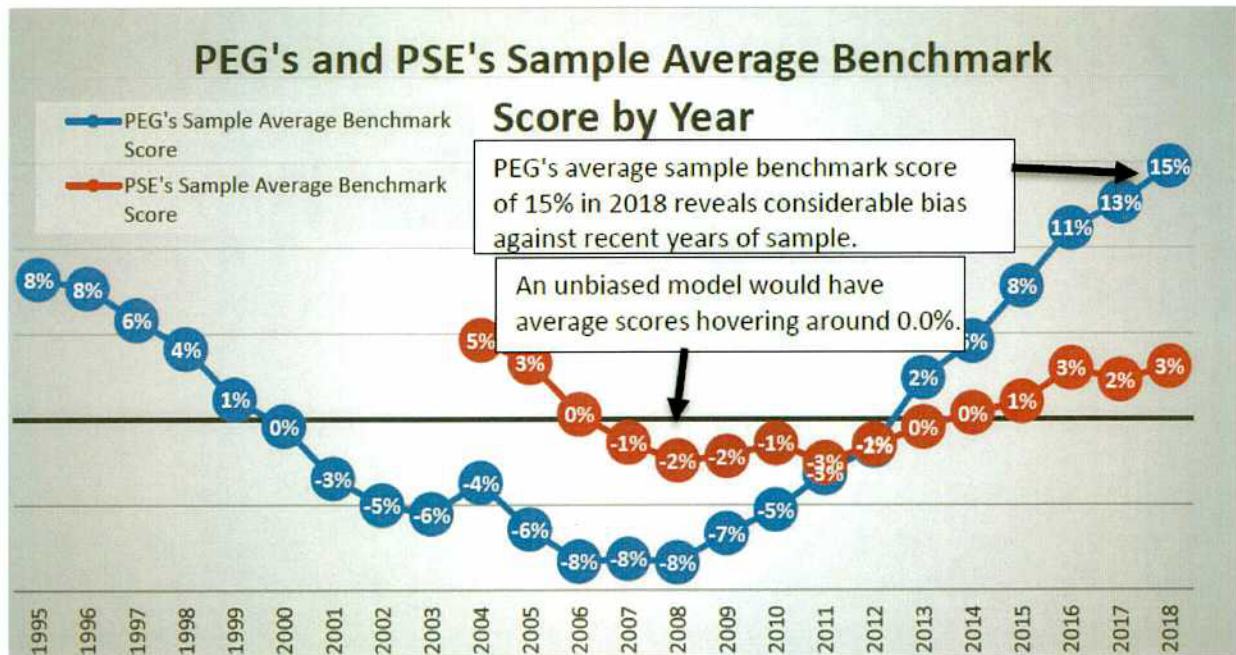
11. Furthermore, the influence of one factor on the other can have the opposite of the intended impact on the total X-factor. PEG's benchmark score is based, in part, on costs in prior years. The costs in prior years can have a significant influence when there is an industry trend that is not taken into consideration. Without an adjustment, such as a quadratic trend variable, the average peer benchmark score becomes significantly greater than zero when industry productivity is declining. The following chart from PSE's reply demonstrates the unintended impact.¹¹

⁹ Power System Engineering – Reply to PEG's Report, October 15, 2019, Page 7

¹⁰ Power System Engineering – Reply to PEG's Report, October 15, 2019, Page 8

¹¹ Power System Engineering – Reply to PEG's Report, October 15, 2019, Page 8

Figure 1 PEG's and PSE's Sample Average Benchmark Score by Year



12. If the industry trend continues it would not be long before PEG's benchmarking score methodology would create a conundrum whereby utilities have worse cost performance than the average utility, culminating in a scenario in which all utilities have a 0.6% X-factor. Contrary to its intended impact, there will be a high X-factor expressly because there is a negative productivity factor. Conversely, if there was a positive productivity factor, all utilities would eventually have a stretch factor of 0.0%.

13. PEG's updated methodology provides counterintuitive results that do not accurately reflect utility cost performance. The PWU submits that the OEB should reject PEG's methodology and approve PSE's 0.0% stretch factor for Hydro One.

C: PRODUCTIVITY IMPROVEMENT AND PERFORMANCE SCORECARD

8. What is the status of Hydro One's joint work with the IESO to explore cost effective transmission line loss reduction opportunities and to report on those initiatives?

14. In its Decision and Order in EB-2016-0160 (Hydro One's 2017-2018 transmission revenue requirements proceeding) the OEB directed Hydro One to report on the following initiatives as part of its next rate application:¹²

- Hydro One should work with the IESO to explore cost effective opportunities for line loss reductions
- Hydro One should explore, as part of its investment decision process, opportunities for economically reducing line losses

15. In the current proceeding, Hydro One and Environmental Defence, an intervenor in this proceeding, agreed to terms of settlement in respect of this Issue 8, as filed with the OEB on October 17, 2019.¹³ Under the terms of the settlement, Hydro One agreed to take five next steps that Hydro One has submitted in its Argument-in-Chief the Board should adopt as a complete resolution of this issue.¹⁴

16. Subject to the comment below relating to one of the five next steps in the terms of the settlement the PWU strongly supports the agreed-on next steps listed in Hydro One's Argument-in-Chief and has confidence that Hydro One will work with the IESO and concerned stakeholders towards their implementation.

17. One of the five next steps in Hydro One's submissions (Step #4) states:

In business cases for projects where transmission line losses are material, Hydro One will include an option analysis and report on transmission line losses. This will be implemented over the course of 2020 for any projects meeting a documented materiality threshold.¹⁵

18. Considering Hydro One's reluctance to address the issue of transmission line losses in any meaningful manner so far and Hydro One's resistance in the past to even the inclusion of line losses in the Issues List, the PWU is concerned that Hydro One could simply use the materiality threshold as an excuse not to pursue cost effective actions that would mitigate line losses. It is important that Hydro One and the IESO ensure their joint report is informed by sound data and analysis used to determine the level of materiality

¹² EB-2016-0160 Decision, p. 33.

¹³ EB-2019-0082 Hydro One Settlement of Issue 8 Letter (October 17, 2019).

¹⁴ Hydro One Argument-in-Chief, Page 40

¹⁵ Hydro One Argument-in-Chief, Page 39

threshold and justification for the appropriateness of the type of materiality threshold chosen.

D: TRANSMISSION SYSTEM PLAN

9. Are the proposed forecast capital expenditures and in-service additions arising from the transmission system plan appropriate, and is the rationale for planning and pacing choices (including consideration of customer preferences, planning criteria, system reliability, asset condition and benchmarking appropriate and adequately explained?

Capital Investment Plan and In-Service Additions

19. Hydro One's transmission system plan (TSP) is developed utilizing a set of robust asset management and investment planning processes. This has resulted in a level of capital expenditures that Hydro One submits is necessary for achieving, on the one hand, outcomes that are valued by customers (e.g. pricing and reliability); and, sustaining a safe and reliable transmission system operations, including responding to deteriorating system and asset condition, on the other.

20. The TSP includes a comprehensive five-year capital expenditure plan organized into four investment categories: System Renewal, System Service, System Access, and General Plant:

2020 – 2024 Capital Expenditures- Forecasts

Investment Category (\$MM)	2020	2021	2022	2023	2024	Total
System Renewal	865.2	1,103.1	1,172.8	1,177.4	1,193.8	5,512.3
System Service	204.1	148.2	151.8	174.3	204.2	882.6
System Access	24.8	11.3	11.7	12.7	4.1	64.6
General Plant	115.4	94.4	94.7	83.6	58.9	447.0
Total ¹⁶	1,188.0	1,312.5	1,364.2	1,364.2	1,364.2	6,593.1

21. Hydro One has proposed a capital expenditure of \$5.5 billion for System Renewal over the 2020-2024 period and this accounts for more than 80% of the forecast total capital expenditure. System Service and System Access, which are non-discretionary

¹⁶ Excluding progressive productivity of \$286 million (-4%)

investments, together account for 14%, and General Plant accounts for about 7% of the total forecast capital expenditures.

22. Hydro One has also proposed the following transmission in-service capital additions for the 2020-2022 test period:¹⁷

(\$MM)	Test period		
	2020	2021	2022
In-Service Capital Additions	1,032.9	1,292.5	1,287.6

23. The PWU's submissions in this section address capital expenditures on System Renewal. The PWU adopts Hydro One's submissions on proposed capital expenditures on System Service, System Access and General Plant as these investments are either non-discretionary or necessary to keep Hydro One's core business functions and operations safe, reliable and efficient.

System Renewal

24. Hydro One's evidence indicates that significant investment in System Renewal is required to address aging and deteriorating transmission infrastructure that is characterized by a large number of assets in high or very high risk condition. Of the \$5.5 billion investment proposed for System Renewal, Hydro One proposes to invest \$3.5 billion in stations investments to address transformers, circuit breakers, protections, control and telecom equipment that are deteriorated as determined by condition assessments. The remaining \$2.0 billion is proposed for lines investments mainly to replace end-of life conductors, defective insulators, and end-of-life wood poles.

25. Hydro One has provided evidence on the key drivers for investments in System Renewal including asset condition, asset demography and reliability impacts of the different asset categories.

26. With respect to asset condition, the evidence is that most of Hydro One's major transmission asset categories have experienced growing numbers of High and Very High

¹⁷ As updated in Undertaking J1.01 Table 7

risk assets. For example, conductors, wood poles, transformers and protection systems in High or Very High risk have increased by 39%, 17%, 13% and 3%, respectively, since EB-2016-0160 (Hydro One 207-2018 Transmission Rates Application).¹⁸

27. Deterioration in asset condition is partly a reflection of Hydro One's aging asset population. Hydro One has submitted that without the proposed replacement, by 2024, transformers, breakers, protection systems and conductors exceeding ESL will increase from 25% to 39%, from 12% to 23%, from 27% to 41%, and from 5% to 13%, respectively.¹⁹

28. Aging and deteriorating assets have adversely affected performance and reliability. As Figure 2 below demonstrates, lines assets account for 45% of delivery point interruptions followed by protection equipment, transformers, and breakers which account for 17%, 13% and 13%, respectively.²⁰

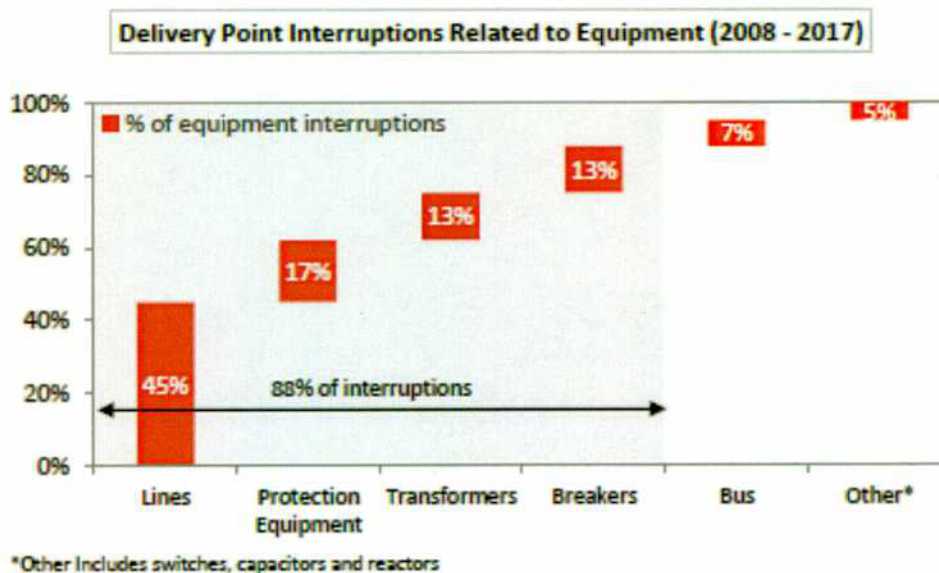


Figure 2 - Delivery Point Interruptions Related to Equipment (2008 through 2017)

29. The PWU submits that the capital expenditures proposed for System Renewal are far below what is required to address asset deterioration and declining reliability.

¹⁸ Undertaking JT1.21

¹⁹ Exhibit B-1-1, TSP Section 3.1, p. 6

²⁰ Exhibit B, TSP Section 2.2, Page 4 of 117

30. Hydro One's evidence indicates that the TSP is informed by asset risk assessment (ARA), investment prioritization and optimization, third party expert reviews, benchmarking studies and customer preferences established through Hydro One's customer engagement. Accordingly, the proposed \$5.5 billion capital expenditure in System Renewal is a result of Hydro One's effort to balance the need for asset replacement as determined by asset condition assessment on the one hand, and customer preferences (impact on rates in particular) on the other.

31. As Table 1 below shows, Hydro One initially identified investment need for System Renewal, based on asset condition, in the amount of over \$6.3 billion; however, due to consideration of rate impact, the amount was reduced by over \$800 million to \$5.5 billion. In other words, the proposed capital expenditures in System Renewal are far short of the amount that Hydro One's system planners would have recommended based on the needs of the system but for consideration of customer preferences with respect to impact on rates.

Table 1: Capital Spending Forecast (Millions)

Category	Investment Planning Process Stage			
	Candidate Investment Development	Prioritization and Optimization	Enterprise Engagement	Develop Final Plan/Review and Approval
System Access	87	85	63	65
System Renewal	6,326	4,989	4,992	5,512
System Service	727	1,027	1,018	883
General Plant	476	439	439	447
Progressive Productivity Placeholder	N/A	N/A	N/A	(286)
Directive Adjustment ¹	N/A	N/A	N/A	(2)
Total	7,616	6,540	6,511	6,619

32. In cross examination, Hydro One's witness testified²¹ that the consideration of rates impact was the major factor behind the \$800 million reduction in System Renewal from the amount originally proposed by Hydro One's system planners:

MR. STEPHENSON: Right. But the major factor, as I understand it, is a concern

²¹ Oral Hearing Transcript, Volume 2, October 22, 2019, Pages 87-88

about rate impact, isn't it? That this is a concern for customers seeing too much rate impact.

MR. JESUS: Too much seeing rate impact from what perspective? Sorry.

MR. STEPHENSON: That if you do 6.3 billion rather than 4.9 billion, that that obviously flows through into rates and that will have -- you are concerned about increasing rates too much.

MR. JESUS: Absolutely. It is a balance between, as I said, making sure that we're prioritizing the investments properly, that we're addressing the customer needs that they have, and listening to our customers.

So the customers told us, you know, 6.6 billion --

MR. STEPHENSON: It's too much.

MR. JESUS: -- and the rates they're willing to accept was 5 percent stable rates. So we delivered what they said they wanted.

33. It is, therefore, clear that the System Renewal investment proposed in the TSP is already significantly below the level that the condition of Hydro One's assets demands. The reality, however, is that assets that were candidates for replacement in the initial plan but not in the final plan are only deferred and will need to be replaced in the future, potentially after they fail.

MR. STEPHENSON: And so just to be clear, though, the consequence of not putting in the plan, in this plan because of your concern for rates, is that they get put forward into a forward period of time, into the next planning period, right?

MR. JESUS: We will consider them for the next planning period, that's correct. We're doing the highest risk -- highest risk replacements during this period.

MR. STEPHENSON: And I take that for granted. My point, however, is a different one. And needless to say, I know you will consider them.

But the point is that it's not just considering as if this is a neutral thing. You made a considered judgment that they needed to be done and leaving aside particular things on the margin, there is no reason at all to believe that in the next planning period, they won't still need to be done. Right?

MR. JESUS: That's correct. There is still a number of assets that have poor condition, that have asset end of life that need to be replaced.

MR. STEPHENSON: Right. And you may have guessed wrong and they may fail in the interim, right? And that would be a failure.

MR. JESUS: That's correct.

34. The ramifications of deferring the replacement of assets in poor condition are many fold. First, Hydro One will have to deal with the deferred projects as well as all other projects that its next TSP identifies as candidates for replacement. This will expose customers to even higher rates in the next application. Secondly, assets in poor condition are more than likely to fail. This would expose customers to not only further deterioration in reliability but also to higher cost because reactive replacement, such as during outages, is typically more expensive than planned replacement. Thirdly, the deferral of capital investments would typically create an upward pressure on OM&A costs. Proactive and strategically paced investments can prevent the pressure on both OM&A and capital costs at the same time.

35. The proposed capital expenditure for System Renewal is below the minimum required since it basically maintains the current level of High/Very High risk assets and that is without considering the discovery of new High/Very High risk assets over the coming years.

36. The following chart presents the share of assets in High/Very High risk conditions assuming the OEB approves Hydro One's proposed asset replacement plan, with no additional High Risk asset discoveries or changes to the asset populations during the plan period:

Share of Station Assets in High and Very High Risk – Current and After Plan²²

Asset Fleet	Current	2022	End of 2024
Transformer	17%	13.8%	10.9%
Circuit Breakers ABCBs (133 in total)	9.6% (IR) 100%	10.0% --	7.1% 22% (100-78%)
Protection Systems	27%	20.6%	16.3%
Overhead Conductors	13%	7.6%	4.9%
Wood Poles	13% (5460 poles)	7% (2940 poles)	3.5% (1470 poles)

37. The chart demonstrates that, assuming the proposed asset replacement plan gets approved by the Board, a significant share of assets in High and High risk condition would still remain in service.

²² See PWU IR #10, Exhibit I, Tab 08, Schedule 10, Page 1 of 3

38. For some asset categories, the proposed level of investment in asset replacement is inconsistent with the objectives set out in the TSP. A case in point is wood poles. In the TSP, the objective of wood poles replacement is set as clearing the backlog of poles in High Risk condition by the end of 2024:

Typically, a wood pole fails a condition assessment due to being rotten and being at the end of its service life. Although failures in this population can occur at any time, the likelihood increases during severe weather events. Therefore, the objective is to clear the existing backlog of high-risk structures by 2024. Furthermore, as a result of the Program, Hydro One will be able to maintain system reliability, and reduce safety risk to its employees and the public associated with failing structures.²³

39. Notwithstanding this stated objective, Hydro One's proposal is to replace 800 wood poles per year (2400 poles by the end of 3 year – 2022) at a cost of \$156 million or 4000 poles by the end of the 5 year plan (2024), at a cost of \$265 million.²⁴ As indicated earlier, under the proposed pole replacement plan, there will be 7% (i.e., over 2,900 poles at High Risk at the end of the 3-year period (2022)) and 3.5% (1,470 poles) at the end of 5-year Plan-2024.

40. Similarly, Figure 2 below shows that, assuming the Board approves the Plan, the share of major assets beyond ESL at the end of the Plan (2024) would be at or slightly higher relative to the share of assets beyond ESL in 2018.²⁵ Without the Plan, 41% of protections, 39% of transformers, 23% of breakers and 13% of conductors would be beyond their ESL by the end of 2024.

²³ ISD SR-21, Page 1 of 10

²⁴ *Ibid.*; also TSP Section 3.1, Page 14 of 24

²⁵ Exhibit B-1-1, TSP Section 3.1, Page 6 of 24

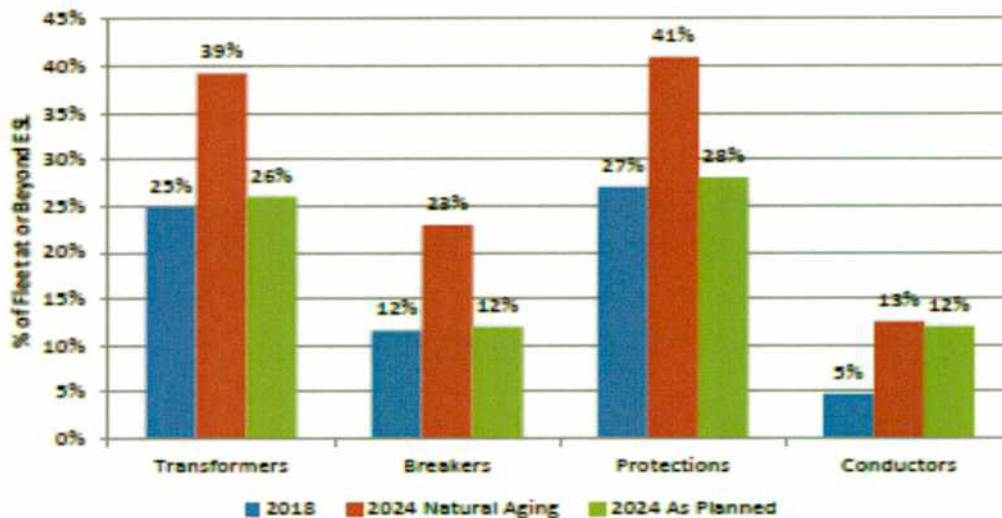


Figure 2 - Assets Operating at or Beyond Expected Service Life

41. In its submission, OEB Staff recommends a reduction of \$318.5 million (10.1%) to the total 2020-2022 capital expenditures on system renewal.²⁶ OEB Staff makes no attempt to justify the quantification of the suggested disallowance. Even assuming that its analyses of the need for some amount of a disallowance were justified (the PWU submits that it is not), there is no attempt on its part at all to make an evidentiary, or even logical nexus between that justification, and the proposed quantum of the disallowance. It is entirely arbitrary. OEB Staff specifically indicates that the reduction proposal is being made on an “envelope” basis. This is a further indication that OEB Staff has no ability to justify any particular amount of disallowance with respect to any particular class of capital spend.

42. OEB Staff’s recommendation relies largely on a suggestion that Hydro One’s pacing of replacement for such assets as transformers, circuit breakers, and overhead conductors is inconsistent (i.e. more rapid) with Electric Power Research Institute (EPRI)’s forecast based on industry best practices.

43. EPRI’s analysis of Hydro One’s historical condition assessment and replacement data can be useful to project expected replacement needs for planning purposes. However, the PWU submits that Board Staff is misapplying EPRI’s study results to

²⁶ OEB Staff Submission, Page 60

support its recommended disallowance. With respect to transformers, for example, OEB Staff cites EPRI's comparison of model and sample cumulative hazard functions for 115kV transformers (Figure 9.2, page 50). Figure 9.2 shows a good fit between the sample data and Hydro One's data for younger transformers (Region 1); however, for older transformers (Region 2), Hydro One's data (black line) result in a steeper replacement rate than EPRI's sample data (red lines).²⁷ OEB Staff appears to believe that Hydro One is replacing older transformers based on ESL, i.e., replacing old transformers prematurely.

44. First, this view is inconsistent with evidence of Hydro One's practice of relying on actual asset condition assessments when making replacement decisions and a determination that the assets to be replaced are at end of life. The steeper replacement rate for older transformers demonstrates, if anything, that there is a nexus between asset age and asset condition. Absent evidence that shows Hydro One is replacing assets based on ESL, the occurrence of steeper replacement rate for older transformers on its own is not indicative of a premature replacement based on the age of transformers.

45. Secondly, OEB Staff fails to mention the fact that the replacement rate for older transformers is steeper than for younger transformers for the comparator utilities as well showing that there is a nexus between age and condition. It is only that Hydro One's is the steepest.

46. Finally, OEB Staff conveniently dismisses Hydro One's explanation that its operation would be much more in line with the red line if its operation was run to failure.²⁸ OEB Staff's reason is that a survey conducted by EPRI concluded that "targeted replacement based upon assessment of transformers utilizing test and inspection data" accounts for 54.8% of transformers replacements among utilities that participated in the survey and that run to failure only represents 21.3% of transformer replacements for those utilities in the survey.²⁹ As a result, the Board concludes that because the highest percentage of transformer replacements falls into the assessment and inspection category, red lines provide reasonable probabilities of removal for the sample utilities that

²⁷ *Ibid.*, Page 51

²⁸ Oral Hearing Transcript, Volume 2 Revised, Page 135

²⁹ OEB Staff Submission, Page 51

conduct condition-based transformers replacements.³⁰ The PWU submits, it is inappropriate to dismiss the impact of the 21.3% run to fail replacements and draw conclusion that the red lines represent condition-based replacements.

47. With respect to conductors, OEB Staff takes the position that the amount that Hydro One is proposing to spend on replacements is disproportionate to the adverse reliability impact on customers from conductor failures.³¹ The PWU submits, because conductors are replaced on a predictive basis (based on condition assessments) as opposed to failures, the number of failures is not a proxy for asset condition, but rather evidence of a failure of Hydro One to accurately predict and replace the asset prior to failure. The real question that OEB Staff should be asking is whether the metric that Hydro One employs in its condition assessment in order for an asset to become a priority replacement is the appropriate one – i.e. is it too “conservative” - a measure, leading to systemic premature replacements? OEB Staff offers no evidence that it is.

48. In summary, if Hydro One is unable to invest in System Renewal at the level set out in the TSP, the result will be an increasing population of deteriorated assets and Hydro One would be forced to defer even more projects, which in turn would result in a significant increase in renewal investments over the long term, leading to a snowplow of capital costs for future customers.

49. The PWU submits that the proposed capital expenditures and in-service additions arising from Hydro One’s TSP represent the minimum required to address Hydro One’s system needs and should be approved.

E: OPERATIONS MAINTENANCE & ADMINISTRATION COSTS

13. Are the proposed 2020 OM&A expenditures appropriate and is the rationale for planning choices appropriate and adequately explained?

50. The proposed 2020 OM&A expenditures are appropriate and well supported in the evidence. Hydro One has made material progress in controlling and reducing OM&A

³⁰ *Ibid.*

³¹ *Ibid*, Page 53-56

costs. This is reflected in the 2020 OM&A budget which is lower than approved and actual OM&A in any year between 2015 and 2018.³²

51. Due to organizational changes at Hydro One in the summer of 2018, the utility deferred its cost of service application for 2019 rates in favour of a mechanistic adjustment to its 2018 revenue. The resulting 2019 revenue requirement necessitated Hydro One to make one-year cuts to its OM&A spending in order to meet its capital program. This was achieved by a one-time extension of its planned asset maintenance cycles, productivity gains, and corporate cost reductions. While the PWU does not agree that deferral was necessarily the appropriate asset management decision, it clearly resulted in lower costs for customers in 2019, and a lower base from which 2020 activities, and costs, are based and considered.

52. Cost reductions related to productivity and efficiency enhancements are sustained in 2020 OM&A spending. Hydro One's planned 2020 OM&A is 10.7%, or \$38 million, lower than planned 2018 OM&A.³³ Over the three-year rate period, Hydro One's ratepayers will save over \$100 million in OM&A as a result of the 2019 cost cutting efforts.

53. The largest increase in forecast 2020 OM&A relative to the 2019 forecast is in the sustainment category. There is a \$13.6 million increase to the sustainment forecast but remains lower than historic levels.³⁴ The increase is necessary for testing and replacing 6,267 components of power equipment, such as transformers and breakers, which contain oil with high concentrations of PCB.³⁵ The program is required to meet federal environmental regulations and should be considered non-discretionary.

54. Hydro One is also planning to resume its capital maintenance program that was deferred in 2019. The 2019 deferral has also exacerbated the maintenance backlog. Asset maintenance is a necessary function of any utility and the costs incurred to resume the target asset maintenance cycle are reasonable.

³² Exhibit F, Tab 1, Schedule 1, Page 3

³³ Exhibit F, Tab 1, Schedule 1, Page 3

³⁴ Exhibit F, Tab 1, Schedule 1, Page 4

³⁵ Exhibit F, Tab 1, Schedule 3, Page 11

55. Development OM&A has increased marginally since the 2017-2018 rate period and 2019 forecast. The increased spending is related to the Transmission Standards Program and the Research, Development, and Demonstration program.³⁶ These programs provide ongoing and long-term benefits to Hydro One's planning and capital execution. The PWU submits that development OM&A is reasonable and should be approved by the Board.

56. Operations OM&A is materially lower than budget and actual operations OM&A from 2015 to 2018 and only marginally higher than 2019. Savings in this category have been achieved by improvements to outage coordination and accelerated controller training.³⁷ Common corporate costs and other costs are also materially lower than historic years. Forecast common corporate costs in 2020 have declined by more than 50% since 2015.³⁸ This has been achieved by reduced spending in many areas, including IT, corporate management, and regulatory affairs.³⁹

57. Actual customer care spending was significantly higher than planned in the 2017-2018 rate period. Hydro One managed to reduce customer care spending in 2019 and forecasts a small increase in 2020. Property taxes & rights payments are largely out of Hydro One's control and costs are increasing marginally due to inflationary pressures.

58. Hydro One's overall OM&A budget is reasonable and demonstrates Hydro One's productivity improvements. OM&A in 2020 is materially lower than any year from 2015 to 2018, which will have material rate benefits for ratepayers through the test period and beyond. Hydro One's cost control is made possible by low annual increases in employee compensation, as described in this submission under issue 17. The PWU submits that the Board should approve Hydro One's proposed budget in full.

59. Board Staff propose a disallowance of \$10.5 million to 2020 OM&A.⁴⁰ This figure is the difference between Hydro One's forecast OM&A and a separate OM&A figure put forward by Board Staff. Board Staff calculate this figure as Hydro One's 2019 forecast

³⁶ Exhibit F, Tab 1, Schedule 4, Pages 3-4

³⁷ Exhibit F, Tab 1, Schedule 5, Page 4

³⁸ Exhibit F, Tab 1, Schedule 1, Page 3

³⁹ Exhibit F, Tab 2, Schedule 2, Pages 1-2

⁴⁰ OEB Staff Submission, Page 82

OM&A budget grossed-up by 2%. This method of deriving a proposed disallowance is not appropriate for any cost of service proceeding, and in particular this proceeding as extenuating circumstances required Hydro One's 2019 OM&A budget to be based on a mechanistic adjustment rather than its cost to serve. Board Staff does not attempt to justify this derivation.

60. Final submissions are not the appropriate avenue for an intervenor to propose an alternate budget. Furthermore, Board Staff's proposed OM&A budget is not, nor does it attempt to be, based on Hydro One's cost to serve. The PWU submits that the approved level of OM&A spending should be based on the evidence in this proceeding.

61. Board Staff provide a number of reasons to support a disallowance. On review, none of these "reasons" justify any disallowance, and in particular the quantum proposed by Board Staff. Actual OM&A in 2016 and 2017 were lower than plan, which to Board Staff "suggest that Hydro One may be over-forecasting its 2020 OM&A."⁴¹ Board Staff, however, do not point out that actual OM&A in 2015 and 2018 were above plan. It is clear the 2016 and 2017, which cover two separate rate periods, were selected because they are the years in which planned spending exceeded actual spending. Over Hydro One's last rate period, from 2017 to 2018, actual spending exceeded planned spending by \$12.2 million.⁴² The notion that Hydro One systemically over-forecasts OM&A is not supported by the evidence.

62. As described earlier in this section, Hydro One's 2019 OM&A budget was low due to extenuating circumstances so the utility took some cost cutting measures which were clearly unsustainable⁴³. Hydro One has maintained some of these cost reductions as its forecast 2020 OM&A budget is 5.1% and 10.8% lower than planned and actual 2018 spending, respectively.⁴⁴ However, costs have increased relative to 2019 as the planned asset maintenance cycle and related spending have appropriately resumed. Deferring the maintenance cycle created an artificially low OM&A budget for 2019.

⁴¹ OEB Staff Submission, Page 83

⁴² Hydro One Argument-in-Chief, Page 85, Table 13-1

⁴³ Much of the cost savings was achieved by deferring work into the current period.

⁴⁴ Hydro One Argument-in-Chief, Page 85, Table 13-1

63. Board Staff's use of the 2019 OM&A budget as the basis of the 2020 OM&A budget presumes that Hydro One's planned asset maintenance cycle can be deferred indefinitely with no adverse consequence to service or future costs. Asset maintenance is clearly an important function performed by all utilities and a one-year deferral of the maintenance cycle does not imply the cost can be avoided. In fact, the contrary is true - the deferral necessitates more asset maintenance in the short run to address the 2019 backlog. The PWU submits that the 2019 OM&A budget is anomalous because it does not include all of Hydro One's ongoing maintenance costs so it should not be used as a basis for disallowing 2020 OM&A.

F: COMPENSATION COSTS

17. Are the compensation related costs appropriate?

64. Hydro One has continued to make considerable progress in controlling compensation levels in recent years. Since the 2015 collective bargaining agreements, Hydro One successfully negotiated lower than inflation wage rate growth and pension cost reductions with the PWU and the Society of United Professionals ("Society"). The low wage growth and reduced pension costs marked a paradigm shift in Hydro One's compensation costs for unionized members that have long term benefits to ratepayers.

65. The PWU and Society received lump sum payments and share grants in the 2015 collective bargaining agreements along with low base wage growth, higher employee pension contributions, and modified pension determinants. These changes did not immediately have a significant impact on Hydro One's compensation costs but put ongoing downward pressure on those costs going forward. The benefits of those efforts are beginning to be realized in this application.

66. Since 2015 compensation per FTE has increased at a rate materially lower than inflation. The following table summarizes the change in compensation per FTE by representation group:⁴⁵

⁴⁵ Compensation and FTE figures from J4.09

	2015 Total Comp/FTE	2022 Total Comp/FTE	Change from 2015 to 2022	Average Annual Change
Unrepresented	\$233,716	\$228,294	-2.32%	0.34%
Society	\$193,657	\$188,542	-2.64%	-0.11%
PWU	\$174,441	\$177,020	1.48%	0.10%
Temporary	\$81,936	\$94,666	15.54%	1.88%

67. Total compensation per PWU FTE is increasing by an average of only 0.1% per year from 2015 through to the end of the rate period. Total compensation per Society FTE is in fact decreasing by 0.11% per year through the same period. The evidence demonstrates strong improvement in Hydro One's compensation costs and the underlying causes of this improvement can be expected to continue into the future.

68. In its submission, Board Staff propose a disallowance partially on the basis that it calculates compensation costs as increasing 2% faster than increases to FTEs.⁴⁶ This calculation relies on out of date compensation data and invalid calculations. Board Staff references a technical conference compendium⁴⁷ that does not include reduced compensation costs. Compensation costs in 2022 declined by 0.99% between the technical conference and the updated compensation data filed on the first day of the oral hearing.⁴⁸

69. Board Staff's derivation of the increase in compensation per FTE relies on specious calculations. Firstly, Board Staff calculate the overall growth from 2018 to 2022 and divide this number by 4 for both total compensation and FTEs. This calculation does not take compounding⁴⁹ into consideration, which is relevant because Board Staff compare the compensation figure to inflation.

70. Secondly, subtracting the compensation growth rate by the FTE growth rate does not provide the growth rate of compensation per FTE. Instead, the compensation growth rate should be divided by the FTE growth rate.⁵⁰ These two errors compound to provide

⁴⁶ OEB Staff Submission, Page 103

⁴⁷ KT2.1

⁴⁸ J-4.09

⁴⁹ Correct calculation: Average Annual Growth Rate = (Compensation²⁰²²/Compensation²⁰¹⁸) ^ (1/4) - 1

⁵⁰ Compensation/FTE Growth Rate = (1 + Compensation Growth Rate) / (1 + FTE Growth Rate) - 1

a figure that is higher than the actual growth rate. The annual growth rate of compensation can instead be calculated more directly using the same data. The following table provides a simplified calculation of compensation per FTE from 2018⁵¹ to 2022.

	2018	2022	Total Change	Average Annual Change
Total Transmission Compensation	\$609,600,282	\$705,720,050		
Transmission FTEs	4,247	4,613		
Compensation / FTE	\$143,537	\$152,984	6.58%	1.61%

71. This calculation based on the latest figures⁵² and correct average annual increase calculation shows that compensation per FTE is increasing by 1.6%, not 2% as proposed by Board Staff. This figure is lower than inflation, and considerably lower than the labour inflation figure of 2.9% used in the calculation of the inflation factor.⁵³ The PWU submits that compensation increases through the rate period are reasonable and lower than inflation.

72. Mercer produced a Compensation Cost Benchmarking Study that evaluates Hydro One's compensation at the individual employee level against industry peers. This type of analysis can provide useful information in one aspect of the level of total compensation. Mercer produced similar studies for Hydro One in 2008, 2011, 2013, and 2016. The 2017 peer group is made up of 17 Canadian companies with similar business characteristics to Hydro One. The compensation levels of various Hydro One employee groups and positions are measured against the median compensation level of the peer group.

73. Mercer's results are based on compensation data as of October 1, 2017.⁵⁴ By definition it is a point-in-time snapshot comparison of what is a dynamic relationship between the relative (and changing) costs of survey participants. Though the study is somewhat out of date it is useful for demonstrating the progress made in recent years. Overall employee remuneration declined from 14% above the peer median to 12% above

⁵¹ The calculations provide a growth rate from 2018 to 2022, but Board Staff erroneously state the range is 2019 to 2022

⁵² J-4.09

⁵³ OEB Staff Submission, Page 18

⁵⁴ Exhibit F, Tab 4, Schedule 1, Attachment 2, Page 14

the median in 2017.⁵⁵ The decline was even more pronounced for PWU-represented employees, which declined from 16% above the median to 12% above the median. The declines relative to the median, 2% overall and 4% for the PWU, represent a single year of improvement.

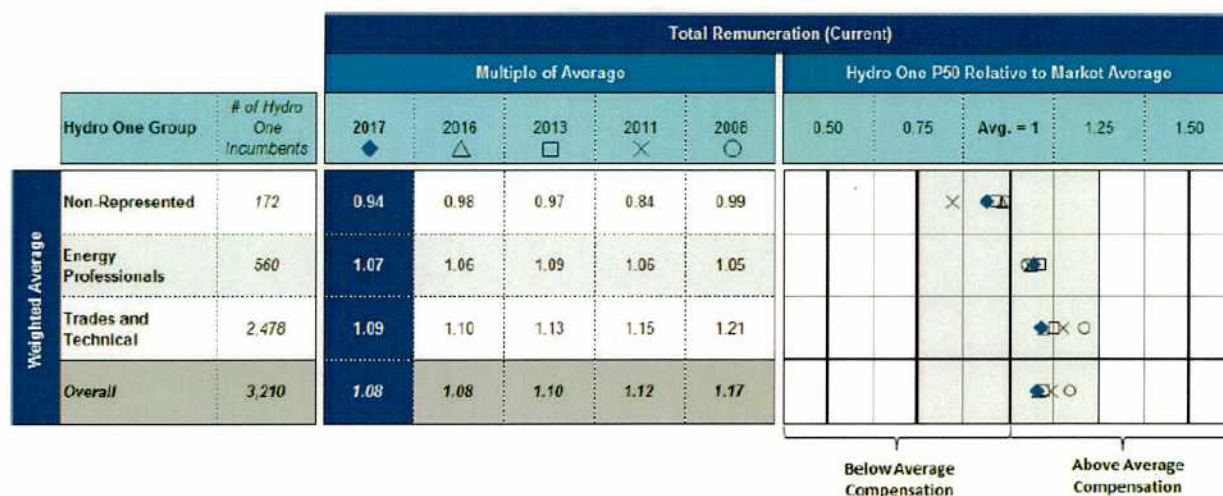
Table 4



74. Low compensation per FTE growth and the one-year change in compensation relative to the median demonstrated in Mercer's study suggest there is a clear trend in Hydro One's compensation costs. This trend is further supported by Mercer's analysis of compensation relative to the market mean. Hydro One's results relative to the market average show compensation has been approaching average peer compensation consistently since the 2008 study for both the PWU and Hydro One as a whole.⁵⁶

⁵⁵ Exhibit F, Tab 4, Schedule 1, Attachment 2, Page 15

⁵⁶ Exhibit F, Tab 4, Schedule 1, Attachment 2, Page 20



75. A compensation benchmarking study of only PWU-represented employees conducted by Willis Towers Watson found similar results. The study, which relied on 2016 data, found that PWU compensation is 7% above the market median on a target total cash basis.⁵⁷ There are no previous Willis Towers Watson studies in which to determine compensation trends.

76. Hydro One compensation has continued, and will continue, to trend towards market median since the 2015 bargaining agreement and 2017 Mercer Study. Given this trend, the 2017 Mercer Study is not reflective of Hydro One's compensation costs in the rate period of 2020 to 2022. The PWU submits that it would be inappropriate to use the results of the 2017 Mercer Study to assess Hydro One's relative cost performance in this proceeding.

77. In their submission, Board Staff propose that the revenue requirement should be reduced by \$1.7 million to reflect the impact of capital-related compensation - being \$24.3 million above the Mercer median.⁵⁸ There is no proposed reduction in OM&A because identified compensation impacts, including pension and OPEB reductions, have in fact reduced OM&A compensation to \$1.2 million below the market median.⁵⁹ Hydro One is not seeking an increase to the revenue requirement for this differential, however, the PWU submits that any reduction made to the revenue requirement as a result of higher

⁵⁷ Exhibit F, Tab 4, Schedule 1, Attachment 3, Page 7

⁵⁸ OEB Staff Submission, Page 108

⁵⁹ OEB Staff Submission, Page 106

than median compensation for capital-related costs should be offset by lower than median compensation costs for OM&A.

78. Board Staff also suggest Hydro One is not sufficiently advancing toward the market median. This contention is supported by the trend in relative compensation from 2013 to 2017, which saw overall compensation relative to the median increase from 10% to 12%. There have been five Mercer studies since 2008 and selecting 2013 as the starting date is the only instance in which the trend to 2017 is positive.

79. The use of a cherry-picked start year shows the limitations of using compensation benchmarking studies in trend analysis. A market median is significantly influenced by the peer group used in the analysis. Analysis of the compensation trend from previous Mercer studies to the current study is not reliable if the median is affected by the change in peer group. The median level of compensation is used as a proxy for the level of compensation within the industry. A changed peer group will move the median in a way that is not reflective of industry trends.

80. As described earlier, Mercer also provides a comparison of Hydro One compensation levels to the mean peer group wage. The median is typically used by compensation studies over the mean because the use of mean can cause the reference measure to be largely influenced by outliers. However, the median is unduly influenced by changes to the peer group to a greater degree than the impact of outliers when considering trends over time. Hydro One compensation relative to the market average has been consistently declining since 2008. This includes a decline from 10% above mean to 8% above mean from 2013 to 2017, the years Board Staff use to demonstrate declining cost performance.

81. The PWU submits that compensation control measures implemented since the Collective Bargaining Agreements and the results of studies since that period should be considered in determining the appropriateness of proposed compensation costs in the test period. The outcomes of future collective bargaining agreements can only benefit from the Board's recognition of progress made in previous negotiations.

I: DEFERRAL/VARIANCE ACCOUNTS

23. Are the proposed new deferral and variance accounts appropriate?

82. Hydro One proposes to establish a new variance account to track any revenue requirement impact from a decision on the allocation of tax benefits arising from its exit of the PILS regime. In this application Hydro One has applied the allocation percentage prescribed in the EB-2016-0160 decision, which was subsequently used in EB-2017-0049. Hydro One's appeal of the EB-2016-0160 decision is currently before the Divisional Court and the ruling may materially impact the allocation of tax benefits.

83. The difference between the revenue requirement if Hydro One's appeal is successful and the revenue requirement as filed is unknown but would certainly be material. A variance account established in this proceeding will facilitate the implementation of any resulting rate impact. The revenue Hydro One would be entitled to in the event of a successful appeal includes amounts since 2017. Any delay to recovering that revenue would necessitate additional carrying costs to be recovered from ratepayers and would exacerbate intertemporal collection issues, extending the time between when the costs were incurred and when the costs are recovered.

84. As it is not known whether Hydro One will be entitled to additional cost recovery, and the potential amount is material, the PWU submits that it is appropriate to establish a variance account.

All of which is respectfully submitted.