EB-2018-0165

ONTARIO ENERGY BOARD

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

AND IN THE MATTER OF an Application by Toronto Hydro-Electric System Limited for an Order or Orders approving or fixing just and reasonable distribution rates and other charges, effective January 1, 2020 to December 31, 2024.

Toronto Hydro 2020 to 2024 Rates Application

Argument Submission of

Energy Probe Research Foundation

August 28, 2019

Executive Summary

This is a Custom Incentive Regulation application with not much incentive in it and virtually no accountability for the outcome of management decisions. It will not deliver the outcomes that Toronto Hydro's ratepayers expect unless there are significant adjustments.

In its argument, Energy Probe proposes that the OEB consider making a number of adjustments in its decision.

As recommended by PEG and Board Staff, the following adjustments should be made to the factors: 0.45% stretch factor in the CPCI formula, 0.64% incremental stretch factor on capital in the CPCI formula and a 0.25% growth factor in the CPCI formula.

If the OEB does not make the adjustments to increase productivity incentives through larger stretch factors it should consider reducing Toronto Hydro's ROE.

Energy Probe recommends that the OEB reject Toronto Hydro's proposed symmetrical OM&A based ESM and impose an asymmetrical ESM based on ROE similar to what other electricity and gas distributors have.

The OEB should direct Toronto Hydro to produce a Scorecard with numerical baseline and numerical targets.

Regarding reliability, Energy Probe recommends that the Board require the following

- Toronto Hydro provide specific targets for SAIFI SAIDI and MAIFI during the CIR Plan
- Provide Specific Subset Targets related to improving System Reliability due to Defective Equipment
- Provide disaggregation and reporting of System Reliability Indices/performance for areas that in 2018 had worse than average interruptions
- Provide a plan to Improve MAIFI performance.

- Toronto Hydro should file this evidence at the first annual review of the CIR Plan and/or along with the filing of the 2019 EDS Scorecard

Energy Probe recommends that the Board provide direction on scoping System Reliability and Total Cost benchmark studies in future to reduce the disparity in key assumptions and resulting incomparability of the results.

The OEB should not approve Toronto Hydro's application to include in utility rate base behind the meter energy storage assets.

Energy Probe agrees with Board Staff that from 2020-2024, Fleet utilization is reduced, requiring fewer vehicles.

In addition, the Board should reduce Fleet Capital by $1 million to $41.5 million to match the LCA option, and the annual fleet OM&A by $1 million/year also to match the LCA option. However, the Fleet Capital amount should be ceiling of $41.5 million over 5 years.

In the 2025 rebasing case, the Board should direct Toronto Hydro to benchmark its Fleet Replacement Capital and Operating costs and Fleet profile against similar North American utilities, including large Ontario utilities, such as Alectra and Hydro One.

Regarding IT/OT expenditures, Toronto Hydro has not supported the level of expenses for the ERP Phase II or the CIS. Energy Probe offers two options for the Board's consideration.

i) Constrain 2020-2024 IT Budgets to 2013-2018 levels, i.e. a reduction of $6.5 million a year for a total $50 million comprising a reduction of $32.5 million over the CIR Period.

ii) Accept inflationary increases for some costs over the CIR Plan period i.e. accept the 2020 base year spend including a built-in inflator of 2.5% above the historic average of $49.7 million This results in a $54.8 million approved spend in 2020.

Energy Probe believes that Toronto Hydro has not justified the need for a fully functioning dual control centre.

Energy Probe believes that Toronto Hydro's forecast of declining load is not credible in view of its growing customer base and the expected large growth in electric vehicle use. Energy Probe

proposes that the OEB freeze the load forecast at the 2018 Bridge Year level of 24,139.9 GWh and 40,817.4 MVA for the duration of the 2020 to 2024 period.

Regarding compensation, for the Non-Management/ Non-Union employees group a reduction should be made to reflect a 2.5% maximum average annual increase (2018 actual to 2020) that is in line with negotiated Union and Society compensation increases. This amounts to a reduction in base year TC –related OM&A relative to 2018 of ~$5 million.

Energy Probe submits that the Board indicate to Toronto Hydro that it will not allow recovery in rates of Incentive pay in excess of 40% of base salary in 2020 and beyond and that a prudence review will occur upon rebasing in 2025. The savings to Ratepayers from 2020-2024 are ~$0.75 million/year starting in 2020.

Energy Probe proposes that the Residential Revenue to Cost ratio should remain at current levels, or if adjustments are needed that 100% is an appropriate ceiling.

Submissions on Issues

As requested by the OEB Hearing Panel Chair, Energy Probe's argument submissions are organized as responses to the questions posed by issues on the Issues List.

1.0 General

Issue 1.1 Has Toronto Hydro responded appropriately to all relevant OEB directions from previous proceedings?

Energy Probe believes that Toronto Hydro has responded appropriately to all relevant OEB directions from previous proceedings.

Issue 1.2 Is the proposed effective date of January 1, 2020 appropriate?

Energy Probe believes that the proposed effective date of January 1, 2020 is appropriate.

Issue 1.3 Are the rates and bill impacts resulting from Toronto Hydro's application appropriate?

In its argument in chief Toronto Hydro made the following statement. "Toronto Hydro's plan results in an average annual increase of 3.0% to base distribution rates for a typical residential customer using 750 kWh. When rate riders are included, the total bill impact is 1.1%, which is below the inflation rate." Energy Probe believes that when looking at Toronto Hydro's forecast of performance over the 2020 to 2024 period, one should not include rate riders because they are not a reflection of Toronto Hydro's own performance. An average annual increase of 3%[1] is higher than inflation is an indication that Toronto Hydro is expecting to not find productivity savings or new revenues that would offset the impact of inflationary pressures. The basic model of OEB regulation of distributors is the I-X formula, that is inflation minus productivity, referred to as the PCI or price cap index formula. The formula is intended to provide an incentive to distributors to find productivity savings. However, distributors are allowed to propose their own custom incentive regulation formula, which Toronto Hydro has done. The expectation is that utility's own custom IR should provide the same level of incentive as the OEB's PCI formula. By Toronto Hydro's own admission, it does not. Energy Probe submits that the rates and bill impacts resulting from Toronto Hydro's application are not appropriate and that they need to be reduced.

2.0 Custom Incentive Rate-setting

Issue 2.1 Are all elements of Toronto Hydro's Custom Incentive Rate-setting proposal for the determination of rates appropriate?

<u>Proposed CIR is similar to Custom Cost of Service</u>

In its 2015 decision rejecting the Custom IR plan of Hydro One.[2] he OEB characterized the Custom IR plan of Hydro One as being "Custom Cost of Service". Toronto Hydro's Custom IR

[1] J7.4
[2] EB-2013-0416/EB-2014-247

is provides Toronto Hydro with as much ratepayer funding for capital as Cost of Service would have.[3] Toronto Hydro's Custom IR if approved by the OEB would provide Toronto Hydro with $284 million more in capital than a straight price cap IRM.[4] It also has a low productivity stretch and does not meet the OEB's expectation for a Custom IR index as explained in the Rate Handbook.[5] Taken together, Toronto Hydro's Custom IR does not provide adequate incentives for productivity improvements. Considering its decision in the Hydro One case, the OEB should not accept Toronto Hydro's Custom IR as filed. The Board can either reject the proposed Custom IR and impose a different model with a shorter term as it did in the 2015 Hydro One decision, or it can make adjustments to the model as suggested by Board Staff in its Argument. Energy Probe believes that adjustments would be less disruptive and supports that approach. Board Staff proposes a 0.45% stretch factor in the CPCI formula, a 0.64% incremental stretch factor on capital in the CPCI formula and a 0.25% growth factor in the CPCI formula and Energy Probe agrees with the proposal.

Proposed Earnings Sharing Mechanism is not Appropriate

Toronto Hydro's ESM is unlike that of any other Ontario utility. It is symmetrical and only deals with comparing Toronto Hydro's actual OM&A to OM&A in rates and revenue offsets[6]. The ESM's of other utilities that were approved by the OEB compared the actual ROE to the ROE underpinning rates and were asymmetrical. Energy Probe believes that the OEB should reject Toronto Hydro's proposed ESM and impose a symmetrical ESM based on ROE.

Proposed Custom IR Transfers Risk to Ratepayers

Proposed Custom IR provides Toronto Hydro with more money from ratepayers for capital expenditures than it would get with ICM that other distributors use.[7] Its proposed CRRVA even gives Toronto Hydro more ratepayer money through capital top-up. These two elements of the proposed Custom IR reduce the risk to Toronto Hydro by transferring capital risk to ratepayers. On top of that, the proposed ESM is symmetrical and based on OM&A which transfers the risk

[3] Tr. Vol. 6 p. 77
[4] Tr. Vol. 6, page 106
[5] Tr. Vol. 7, pages 147-149
[6] Tr. Vol. 7, pages 156 to 159
[7] Tr. Vol. 8, pages 76-86

of OM&A overspending to ratepayers. [8] As a result, Toronto Hydro has lower risk than other Ontario distributors.

Benchmarking Evidence does not Support Custom IR Plan

Toronto Hydro has supported its 2020-2024 CIR Plan and Costs with several Benchmarking Studies. Energy Probe has reviewed this evidence and supporting Studies and disagrees with Toronto Hydro's claims and the associated increased costs to ratepayers.

In its Argument in Chief Toronto Hydro highlights the importance of benchmarking[9].
"Benchmarking is a fundamental requirement of a CIR application, and Toronto Hydro submits that its evidence demonstrably meets and exceeds the standard. Toronto Hydro filed 21 external assessments and reports, six of which are benchmarking analyses, to support the proposed plans and programs, demonstrate continuous improvement and offer the OEB an independent perspective of Toronto Hydro's needs, costs, and performance[10]."

"Individually and collectively, the external benchmarking analyses illustrate Toronto Hydro's strong performance relative to its peers[11]. *This includes performance on specific measures like SAIDI in reliability benchmarking[12], cost performance on specific elements of the utility's business (e.g. IT/OT budgets[13] and compensation and benefits)[14], total cost performance (i.e. the PSE econometric benchmarking study),* as well as unit cost performance on capital construction and maintenance activities (i.e. the UMS unit cost study)[15].
"The utility improved its performance (Over the 2014-2018 CIR Plan period) in a number of key areas (Past tense!), ranging from how frequently and how long its customers experience outages, to answering customer calls and resolving their issues[16]."

[8] Tr. Vol. 6, Page 153
[9] AIC Para. 37
[10] AIC, App. A
[11] AIC Para. 38
[12] Ex. 1B, Tab 4, Sch. 2.
[13] Ex. 2B, Sec. E8.4, App. A
[14] Ex. 4A, Tab 4, Sch. 5
[15] Ex.1B, Tab 2, Sch. 1, App. B.
[16] AIC Para. 75

In its Argument in Chief, Toronto Hydro points out the linkage between performance targets and customer needs and preferences[17]:

"*Toronto Hydro's proposed targets are appropriate. The targets are directly tied to the investment plan and reflect consideration of customer needs and preferences. For example, recognizing that customers are satisfied with current service levels and expect Toronto Hydro to keep prices as low as possible, the utility developed a plan and set related targets to maintain reliability in line with historical performance, and make targeted improvements in areas experiencing below average service.[18]*"

Energy Probe finds that the above claims are not accurate, or are not supported by the evidence on customer preferences. For example, regarding System Reliability customers were given no information regarding Toronto Hydro system reliability upon which to formulate their responses. Energy Probe provides its submissions on appropriate actions resulting from a review of the benchmarking evidence provided by Toronto Hydro under the relevant issues in its argument submissions. The cost consequences for customers are material and are also discussed.

<u>System Reliability is Not Improving</u>

System reliability/quality of power is very important to customers. However, the customer survey provided no benchmarks to the respondents and as a result placed id lower than price[19]. TH frequency and duration of system Interruptions has slightly improved over the last 5 years[20], mainly as a result of reduction of outages attributed to replacing defective equipment under the massive Capital program that will continue in the next CIR Plan[21].

	Improvements	2014	2018
SAIDI	9%	0.89	0.92
SAIFI	3%	1.18	0.81
CAIDI	6%	0.75	0.71

[17] AIC Para 35
[18] Evidence Overview Presentation Tr. pages 38-39; Tr. Vol. 1, page 102
[19] Ex. 1B, Tab 3 Sched 1 App. A Phase 1 Toronto Hydro Customer Priorities
[20] Ex. U, Tab 1B Sched 1 page 2; 1B-SEC-17
[21] J3.2

TH is still a poor performer for frequency of interruptions (SAIDI) relative to its Ontario Peer Group[22], and also to a US peer group, as indicated by PSE and PEG in their System Reliability Benchmark Comparisons[23]. Momentary Interruptions Index (MAIFI) has not improved and is becoming worse[24].

System reliability rates highly in the Toronto Hydro Customer Survey. System Reliability is a high priority for all customer groups even higher than price for larger customers. The customer survey was severely flawed in that it provided no information regarding how Toronto Hydro performed/rated to other Ontario[25], or US Utilities[26]. If this information had been provided, we suggest the response would have increased the customer ranking of SR by several percentage points.

The major issue is that Toronto Hydro *is not committing to continue to improve its System Reliability over the 2020-2024 CIR Plan.* Rather it will only maintain the current levels of SR. Accordingly despite being asked to by intervenors, it will not set System Reliability Targets for the CIR Plan, except as part of its internal scorecard as related to defective equipment, that is as noted above now a much lower cause of outages[27]. This is not acceptable, for two reasons:

- other utilities embarking into 5-year Custom Incentive Regulation plans have set System Reliability targets
- the CIR Plan seeks to continue massive 5-year Capital Plan that should result in further System Reliability improvements[28].

Simply maintaining System Reliability is not an outcome that is line with customer preferences and expectations (had the customer survey been properly conducted).
What should the SR Targets be during the CIR Plan? There are several sets of data depending on SR definitions used. Energy Probe believes for comparability purposes the OEB Appendix 2 G

[22] U-EP-64
[23] K3.1, Tr. Vol. 3, pages 2-22
[24] Ex. 1B, Tab 2, Sch. 2, page 18, Fig 2; 2B-EP-32.
[25] U-EP-64; JTC 2.9
[26] Ex. 1B, Tab 4 Sch. 2, PSE Report, pages 40-41; Ex. M1, PEG Report, page 8
[27] Ex. 2B Sec. C2.3 Table 4; Ex 2B, Section E.2.3.1.1 pages 48-49 Table 10
[28] 2B-EP-33

data should be used up to 2018. For the 2020-2024 CIR period TH projects a freeze in SAIDI at 2017-2018 levels ~1.20 outages > 1 minute and similar for SAIDI at 53 minutes duration per outage. The table below shows the historic System Reliability data and the projection provided in evidence[29].

	2013	2014	2015	2016	2017	2018		*2019*	*2020*	*2021*	*2022*	*2023*	*2024*	*EP target 2018-2024 % improvement*
SAIFI	1.34	1.18	1.34	1.28	1.18	1.14		*1.19*	*1.21*	*1.21*	*1.20*	*1.20*	*1.19*	*3%*
SAIFI	0.95	0.92	0.97	0.93	0.94	0.94		*0.92*	*0.92*	*0.91*	*0.91*	*0.91*	*0.91*	*3%*
SAIDI	1.12	0.89	0.99	0.91	0.91	0.81		*0.88*	*0.90*	*0.90*	*0.90*	*0.90*	*0.90*	*10%*
SAIDI	1.12	0.98	1.03	0.93	0.96	0.97		*1.01*	*1.01*	*1.01*	*1.01*	*1.01*	*1.01*	*10%*

The 2019-2024 projection is inconsistent with historic improvements and trends and has no stretch component. Accordingly, Energy Probe proposes that the Board require the following:

- Toronto Hydro provide specific targets for SAIFI SAIDI and MAIFI during the CIR Plan
- Provide Specific Subset Targets related to improving System Reliability due to Defective Equipment
- Provide disaggregation and reporting of System Reliability Indices/performance for areas of the service are that in 2018, had worse than average interruptions
- Provide a plan to Improve MAIFI performance.
- Toronto Hydro should file this evidence at the first annual review of the CIR Plan and/or along with the filing of the 2019 EDS Scorecard.

<u>Total Cost Benchmarking</u>

In parallel with their Total Cost Benchmark Comparison, both PSE and PEG provided Reliability Benchmarking Evidence[30] that compared Toronto Hydro to US distributors. Toronto Hydro provided the consultants with a consistent data set for SAIDI and SAIFI as Toronto Hydro historic and projected system reliability filed under RRR are consistent and comparable to the Ontario 2017 data filed in response to an interrogatory[31] but not to the projected data provided to

[29] (2013-18)- OEB App. 2G; 2018 J3.2; (2019-24); U-SEC 105, JTC 2.10 App. A.

[30] K9.3 and Tr. Vol. 9, pages 107-111, Vol. 10, pages 16-38

[31] U-SEC-105

PEG and PSE. Toronto Hydro has not clarified how the dataset of historical and projections for 2005-2024 provided to PSE and PEG[32] was constructed and has not provided an "apples to apples" comparison to its other evidence such as in the DSP, despite being asked for this in interrogatories and at the Technical Conference. Accordingly, neither intervenors, nor the Board have comparable data to that TH reports under the RRR filings.

The second problem with the US Reliability Benchmarks is that the US Data set used by both PSE[33] and PEG contains missing data and different SR definitions[34]. Both PSE and PEG acknowledge this, but did not indicate how they "fixed the problem" Therefore there is another significant difference in the evidence provided to support the TH SR US Benchmark. In addition, there is the inconsistent use of the Congested Urban Variable (CUV) by PEG and PSE[35]. This variable, in the SR model has a high Coefficient (if included) like the comparable CUV in the Total Cost Benchmark Model. It is important to note that this may explain the differences in the SR Benchmark Score from the PEG and PSE SR Models. PSE have developed both a SAIFI SR model, t*hat does not include the CUV and a CAIDI SR model that includes a CUV.* For SAIFI the PSE Model produces a Benchmark score of about 150%[36]. PEG has only provided a SAIFI Benchmark Model that takes the same US dataset used by PSE and uses multiple regression analysis to compare this dataset to TH, to produce a SAIFI Benchmark Score For TH.[37] The result is 169.7% above the US Peer Group. PEG has included a CUV in its SAIFI Model. Energy Probe believes this inconsistency may be significant. Dr. Lowry acknowledged this was a material difference that he attributed to the CUV.

Just as in the case of the Total Cost Benchmark Model, the PEG and PSE SAIFI Benchmark Models have used different assumptions and cannot be compared. As a result, one cannot put any weight on the results from either Model and can only conclude that directionally, Toronto Hydro SAIDI is worse than the US Utilities in the Sample (same sample used by both PEG and PSE).As is the case with the Total Cost Benchmark Scores, the non- alignment of input assumptions and

[32] JTC 2.10, App. A
[33] PSE Reliability Data set Final Reliability Data L
[34] 1B-EP-14 (a)
[35] L3-EP-75 (f)
[36] Exhibit L, PSE Benchmarking Report. pages 9/10 Figures 2 and 3
[37] Exhibit M1, PEG Report P 31/32 Tables 3 and 4 and Figure 8

model assumptions has resulted in a SAIDI Benchmark range for TH of about 150-170%. This type of disparity is the same as in the Total Cost Benchmark Models.

Energy Probe recommends that the Board provide direction on Scoping Benchmark studies in future to reduce the disparity in key assumptions and resulting incomparability of the results. Total Factor Productivity and Total Cost Benchmarking are key area of evidence that determine the appropriate IRM or Custom CIR Formula Factor under a Price Cap (or Revenue Cap)[38]. One of the outcomes from Incentive Regulation is that Regulators have relied on Experts to inform their decisions regarding the IRM formula parameters. Energy Probe's consultants have been involved regulation proceedings across Canada and have noted that often the Regulator is provided with two (or more) expert, often different opinions supported by their analyses. Energy Probe's approach has been to understand the data sample, inputs and methodological differences between the Toronto Hydro and Board Staff's US Consultants and how these key differences may result in the different analysis results. Expert opinion is not a matter that Energy Probe has any comment upon, only the analysis. Energy Probe explored the differences with PSE in interrogatories[39] and with Mr. Fenrick and Dr. Lowry in the Hearing.

[38] K9.3; K10.1; Tr. Vol. 9, pages 107-147; Vol 10, pages 16-30
[39] L3-EP-73

		IRM-4	Exhibit M1 (Revised)	PSE
Sample	Region of sampled Utilities	Ontario	U.S., Ontario (THESL only)	U.S., Ontario (6 utilities)
	Sample Size	73	84	90
	Sample Period	2002-2012	1995-2017	2002-2016
Cost Definition	Distribution O&M	Included	Included	Included
	Sales Expenses	Included	Included	Included
	Customer Accounts (less uncollectible)	Included	Included	Included
	Customer Service and Information	Included	Excluded	Excluded
	Pensions and Benefits	Included	Excluded	Included
	Capital Benchmark Year	1989 or 2002	1964 (U.S.), 1989 (THESL)[2]	1989 (U.S.), 2002 (Ontario)
	Contributions in Aid of Construction	Included	Excluded	Excluded
	High Voltage Expenses	Excluded	Included	Included
Price Indexes	Labor Price Index	Ontario AWE	Regionalized ECI[4] (US), Ontario AWE (THESL)	ECI (US), ECI*PPP[6] (Ontario)
	Materials Price Index	Canada GDP-IPI	Canada GDP-PI (US), GDP-IPI (THESL)	GDP-PI (US), GDP-PI*PPP (Ontario)
	Construction Cost Trend Index	EUCPI[3]	HW (US), Custom[5] (THESL)	HW (US), HW*PPP (Ontario)
	O&M Cost Share Weights	Fixed	Varied	Fixed
Function	Translog Treatment of Scale Variables	Yes	Yes	Yes
Estimation Procedure	Cost-share equations, SUR[7]	Yes	No	No
	Composite price index, one equation	No	Yes	Yes
	Correction for Autocorrelation	Yes	Yes	No
	Correction for Heteroskedasticity	Yes	Yes	Yes
Total Cost Model Variables	Number of Customers	Yes	Yes	Yes
	Ratcheted Maximum Peak Demand	Yes	Yes	Yes
	Retail Deliveries	Yes	No	No
	Average Line Length	Yes	No	No
	Customer Growth over 10 Years	Yes	No	No
	Percent Congested Urban	Yes	Yes	Yes
	Percent of Plant Underground	Yes	No	Yes
	Area Not Congested Urban	No	Yes	No
	Percent Forested	No	Yes	Yes
	Percent of Customers Electric	No	Yes	Yes
	Percent of Customers with AMI	No	Yes	Yes
	Elevation Deviation	No	Yes	Yes
	Trend	Yes	Yes	Yes
	Ontario Binary Variable	No	No	Yes
	%UG*%CU	No	No	Yes
	Percent Plant Overhead	No	Yes	No

The Board has focused on the Congested Urban Variable, a major change from last Total Cost Models. Therefore, TC benchmark Model runs without the CUV were provided. However, there are other material differences in Data Sample, Input and Output assumption and methodology that will affect the Total Cost Benchmark Scores resulting in the different recommendations of PEG and PSE. The same is the case for the Reliability Benchmarks as noted above, Energy Probe has summarized the key differences noted by PEG in the EP IR Response and added where available, the comments from Mr. Fenrick and Dr. Lowry.

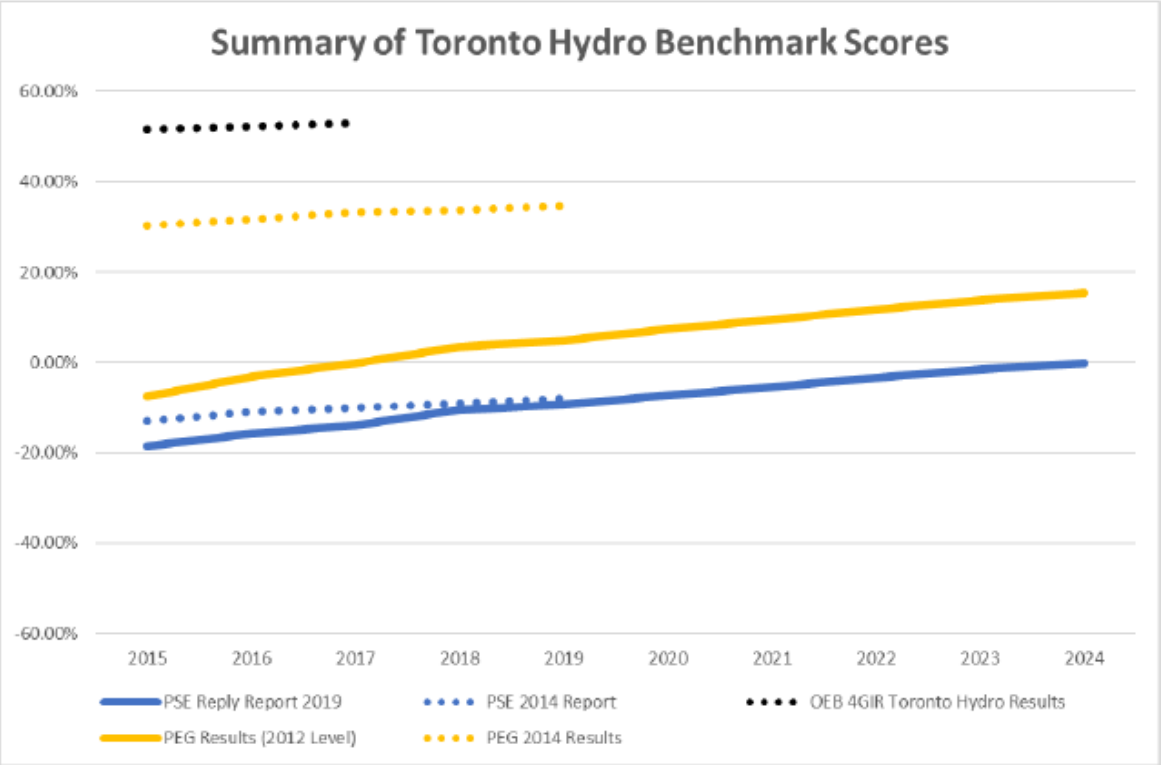
EP Summary and Comments on PSE and PEG Benchmarking Studies

Parameter	PSE	PEG	Result PSE Commentary	Result PEG Commentary
Ontario Distributors	Yes	Yes	reduced TH Score)	Cost of Ontario Utilities worse than US
Pensions Benefits	Included	Excluded	reduced TH Score (increased TH costs)	Should leave out due to volatility
Capital Benchmark Year	1989 US 2002 Ont.	1964 US 1989 TH	Unknown	PEG is correct-longer period
OM&A cost Shares	Fixed	Variable	Minimum impact	No Comment
Ratcheted Peak Demand	US Max	TH post 2002	reduced TH Score	Not Important difference
% Plant Underground	Yes	No	reduced Score	In part captured by CUV
% Plant Overhead	No	Yes	No Comment	No Comment
Area Not Congested Urban Variable	Excluded	Included	TH costs would increase	No Comment
Congested Urban Variable	Included	Included	No Comment	Used but not verified

Dr. Lowry's Comments below are relevant to the Total cost Analyses of PSE and PEG and the resulting recommendations on the Stretch Factor[40].

> DR. HIGGIN: Okay, thank you. So just to conclude this part, you are staying with your 0.45 stretch factor for the CIR Plan, despite his comments and attempt to change that?
>
> DR. LOWRY: Yes, we are. And I would note that, you know, if anything, this could be a generous appraisal, because his -- *we are using his congested urban variable, which definitely helps the company's performance.*
> *We, again, weren't inclined to* ***not*** *use it because we couldn't quite verify it, because it was hard to verify. And if anything, I feel that it is overly generous to the company.*
> That being said, this is our run, and it is -- and it does put the company in a better light than in the prior IRM proceeding, the prior custom IR proceeding.
> I mean, the company now is not viewed by Staff's witness as being an egregiously bad performer. And indeed, it has also been shown to be a good O&M performer.

[40] Tr. Vol. 10, page 29



As noted above, from this evidence the following conclusion can be made:

Significant differences exist in dataset, assumptions and model formulation (especially the CUV) used in the Studies completed by PSE for Toronto Hydro and PEG for Board Staff. These may have contributed to the different results now before the Board. The Use of the CUV in the models is not verified and has a significant effect on the results for both PSE and PEG.

If the CUV Variable is removed from the PSE and PEG models Toronto Hydro's Score relative to the US (+ Ontario PSE) sample indicates that Toronto Hydro is a worse performer.[41]

The Board must therefore as usual, use its judgement to determine if TH Total cost is/is not worse or better than the US Peer group and the implications for the CIR Formula for 2020-2024.

<u>Stretch and Capital Factors are not Appropriate</u>

The crux of the issue is whether the Board should include a Stretch Factor in the Toronto Hydro's CIRM Formula. Energy Probe believes that a stretch factor should be included. TH has not provided clear evidence that its historic and future performance Total Cost performance is better than the US Sample.

[41] J9.3

The second question is "What is the appropriate Stretch Factor"? PSE says 0.3% PEG recommends 0.45%. Most Ontario Utilities are under the 4GIRM framework for setting Stretch factors. Several have sought Custom IRMs and recently some have received decisions with Stretch Factors from 0-0.3. Toronto Hydro has improved its TC Benchmark slightly from 2014 and Energy Probe supports Dr. Lowry's recommendation of 0.45 %.[42]

Another concern is that the Capital Factor is continuing to provide major increases to the cost of capital and offsetting reductions in other cost increases should continue. Toronto Hydro is not providing 5-year Targets for Cost/Customer or Cost Per km of line, so there is no offsetting cost reductions/targets set out in the CIR plan. PEG has carried out an analysis to determine an appropriate adjustment factor for the C-factor to ensure that it does not over-fund incremental capital spending[43]. PEG's calculations demonstrate that an additional capital stretch factor of 0.64% is required for Toronto Hydro to ensure that, the C-factor at least reflects the 10% threshold in the equivalent ICM/ACM formula. Energy Probe recommends that the Board provide direction on Scoping future Benchmark studies in to reduce the disparity in key assumptions and resulting incomparability of the results.

2.2 Is Toronto Hydro's proposed custom scorecard appropriate?

<u>The Proposed Custom Scorecard is Not Appropriate</u>

The scorecard has no numerical objectives or targets[44] . There are no baseline numbers or numerical targets, only the word "improve"[45]. For capital expenditures, the scorecard measures capital spent, not results achieved because it does not track in-service additions[46]. It will be difficult to evaluate Toronto Hydro's performance without knowing whether it has improved without baseline performance. The OEB should direct Toronto Hydro to produce a Scorecard with numerical baseline and numerical targets.

[42] Ex. M1, Revised, page 9; IRR L1, Tab 2, Schedule 5
[43] J10.5,
[44] Ex. 1B, Tab 2, Sch. 1, App. A
[45] Tr. Vol. 7, pages 178-191
[46] Tr. Vol.7, page 187

3.0 Rate Base and Capital Plan

3.1 Are the proposed 2020-2024 rate base amounts (including the working capital allowance amounts) reasonable?

Energy Probe believes that there are significant omissions and deficiencies in the rate base and capital plan. For example, business cases lack proper numerical benefit cost analyses.

Behind the Meter Assets Should not be In Rate Base

Toronto Hydro is requesting approval to include in rate base the energy storage facility that is located behind the meter on Metrolinx property.[47] Toronto Hydro claims that it will operate the facility and that for that reason it should be in rate base. The agreement between Toronto Hydro and Metrolinx does not support that claim[48]. The main user of the energy storage facility will be Metrolinx not Toronto Hydro. The facility is on Metrolinx property, behind Metrolinx meter and on Metrolinx land. The OEB is well aware of past decisions[49] that confirmed the principle that behind the meter assets are unregulated and therefore not part of utility rate base. From the agreement with Metrolinx it is not clear what costs Toronto Hydro wants to include in rate base. Metrolinx has paid Toronto Hydro $36.7 million[50]. That number does not agree with a number provided in response to an undertaking. [51] Whatever amount was paid by was paid by Metrolinx can not be recovered from ratepayers and according to Toronto Hydro evidence it will completely offset the rate base value of the asset so that its rate base will be $0 [52] and ratepayers should not be concerned. Energy Probe is concerned that when these assets are in rate base, ratepayers will have to pay for maintenance and operation. Moreover, a bad precedent will be set that contravenes past OEB decisions. Behind the meter assets should not be in rate base.

[47] Tr. Vol.2, pages 73-78
[48] 1C-EP-19
[49] EB-2009-0180, 0181, 0182, 0183; EB-201-0004, Supplemental Report on Smart Grid
[50] 1C-EP-19, Att. page 9
[51] JTC1.13
[52] Ex. 2B, Sec. E7.2, page 4

Potential Impact of Sidewalk Labs not Addressed

A major capital project in the 2020 to 2024 period are not addressed in the evidence. From reports in the media[53] major capital investments of up to $500 million for an "advanced power grid" have been proposed by Sidewalk Labs. Toronto Hydro witnesses were unable to provide any information regarding capital investments required by Toronto Hydro nor any impacts on loads[54]. This is hard to believe considering that Toronto Hydro is a member of the CUTRIC organization, and the head of that organization is on the Sidewalk Labs advisory committee[55].

Projects Not Justified by Severe Weather Claims

Toronto Hydro evidence claims that it expects to incur higher capital and OM&A costs due to increased frequency of severe weather. It provides no evidence to support that claim other than a report from consultants who Toronto Hydro refused to put on the stand[56]. There is however evidence from Environment and Climate Change Canada, including a letter from the Minister Catherine McKenna, that there is no increased frequency of severe weather (K2.4, K2.5. K2.6). Standard and Poor independent rating agency did not identify risk from severe weather in its report.[57] When asked what it was doing differently as a result of severe weather, Toronto Hydro could not say. [58] The only item it could point out was stainless steel submersible transformers[59].

Box Construction Evidence Unconvincing

At Presentation Day, Toronto Hydro singled out "box construction" as being a critical problem and presented a slide with several photographs to illustrate it[60]. During the hearing, Toronto Hydro's witnesses could not explain why box construction was a problem apart from being "legacy type of installation" [61] that posed "significant risks". The also could not identify box

[53] K2.2
[54] Tr. Vol 2, page 39, June 28
[55] K2.3
[56] Ex. 2B, Sec. D, App. D
[57] Ex. 1C, Tab 3, Sch. 8, App. B, p. 6; 1C-EP-18
[58] Tr. Presentation Day, pages 41-44
[59] Tr. Vol 2, page 70
[60] Exh. 2B, Sec. E6.1, page 15
[61] Tr. Vol. 2, page 54

construction in the photographs[62]. They were also unable to explain[63] the discrepancy between the number of poles replaced provided in responses to two interrogatories.[64]

Copeland Station over Budget and Behind Schedule

Copeland Station was over budget and behind schedule. The exhibit that was provided by Toronto Hydro uses the reduction in Hydro One costs as a saving that is attributable to the project. In a response to an interrogatory[65] Toronto Hydro indicated that the current forecast is $204.0 which it compares to OEB Approved total of $195.0, claiming that it is only 4.7% over budget. However, the current OEB approved includes $39.9 million of Hydro One costs while the current forecast includes $60.4 million. When Hydro One Costs are excluded, it is clear that Phase 1 project is $29.5 million over the OEB approved budget, or 21.9%. The $28 million performance bond[66] posted by the contractor Carillion Group, if Toronto Hydro cashes it, would reduce the variance to $1.5 million over budget[67]. Toronto Hydro indicated that it is in litigation with Carillion. Energy Probe expressed concerns during the hearing[68] that ratepayers may not benefit from any financial recovery from litigation. The financial impact of the litigation should be recorded in the proposed Carillion Insolvency Payments Receivable Account and credited to ratepayers at a future date as outlined in the Board Staff argument.

As Toronto Hydro has not provided any credible explanation for the variance that would absolve its management, the cost overage over the OEB approved budget is Toronto Hydro management's responsibility and the OEB should hold it accountable by disallowing $29.5 million overage amount from rate base.

[62] Tr. Vol 2, page 56
[63] Tr. Vol. 2, page 55
[64] U-AMPCO-112, U-SEC-100
[65] 2B-Staff-95, page 4
[66] 1C-EP-26
[67] Tr. Vol. 1, page 165
[68] Tr. Vol.8, pages 24-30

3.2 Is the level of proposed 2020-2024 capital expenditures and capital in-service additions arising from the distribution system plan appropriate, and is the rationale for planning and pacing choices, including trade-offs between capital and operating costs, appropriate and adequately explained?

No Clear Accountability for Capital Expenditures

The issue is posed as a question and Energy Probe submits that the answer must be no. Toronto Hydro did not file numerical repair vs replace analyses that would provide the OEB with evidence of meaningful trade-offs between capital and operating costs. It appears that senior management have no clear responsibilities or objectives that would make them accountable for capital project approvals, completion, or cost control. Despite a number of requests for this information, Toronto Hydro was unable or unwilling to provide it[69]. Toronto Hydro's metric designed to influence management behavior only measures the money spent, not the results achieved. Managers are rewarded for spending an amount of money on capital projects in order to build rate base. They are not evaluated on how and if those projects produce the desired results in reliability or service quality or capacity[70].

Rear Lot Conversion costs are Overstated

Energy Probe supports the position of Board Staff as set out in the Board Staff argument.

Underground Renewal Project will Not Improve Reliability

Replacement of 2,135 underground transformers will not result in improved reliability.[71] Energy Probe supports the position of Board Staff.

General Plant Expenditures are Excessive

Toronto Hydro General Plant Assets have increased from $354 million in 2015 to $817.4 million in the Test Year or a 230% increase[72]. Energy Probe believes that this is excessive, and the associated Revenue Requirement Impact is large. The increase in Total Distribution Plant assets

[69] Tr. Technical Conference, February 19, 2019, pages 94 - 98
[70] Tr. Vol. 7, pages 39 to 42.
[71] Tr. Vol.3, page 35; U-EP-64
[72] U-Staff-168 App. B, Table 4

was 164% over the period, (under the massive Toronto Hydro capital renewal/replacement program). General Plant represented 10.4% of Gross Fixed Assets in 2015 and now is 15% of GFA in 2020[73].

This represents a large "overhead cost" that adds to the costs of Toronto Hydro capital programs and Cost of Service. As noted above, increases in both General Plant Capital and Operating Costs and this will continue with increases during the CIR plan that are in our view unreasonable and should not be accepted.

The table below summarizes the changes in General Plant Budgets 2015-2024[74][75]

General Plant	2015-2018 GP Spend/DSP	2020 Fixed Assets	2020-2024 GP Spend/DSP
Transportation Equipment Fleet	$19 M	$45.7 M	$42.5 M
Computer Hardware and Software	$231.2 M	$378.8M	$281.4 M

The underlying increases in General Plant up to 2020 are Computer Software and Hardware, Buildings and Fixtures and Transportation Equipment (Fleet).

At the Technical Conference and in the Hearing, Energy Probe focussed on Fleet Management Services Capital and Operations and IT/OT Services Capital and Operating Costs.

<u>Fleet Management Services Costs are Excessive</u>

This is a complex and difficult area to explore and has taken Energy Probe considerable time at the TC and Hearing. The lack of complete evidence on the previous CIR plan costs, status quo of fleet assets, has added to difficulty in establishing a baseline from which to discuss this major Component of the 2020-2024 DSP. In our view Toronto Hydro has proposed a Fleet management Program that is a Fleet Managers Dream! To assist the Board we have condensed the Fleet data we compiled in Exhibit K.4.8 into a summary format.

[73] K4.7; Tr. Vol. 4, pages 164-188; Tr. Vol. 5, pages 1 to 24
[74] Ex. 2B, DSP Section E.8.3.1, Table 1 and Table 4
[75] U-EP-64

Fleet Services Options:

Source *Exhibit EP 4. 8*	*Fleet Services Capital and Operating Costs -Comparison* *2015-2019 to 2020-2024*			
		CIR Plan 2015-2019 Historic	2017 LCA Analysis	*CIR Plan* 2020-2024 Forecast
Fleet Program				
Capex $M	Total	$19.10	$41.5 M	$42.5 M
Opex $M	Total	?	$22.3M	$27.2M
Fleet Profile	Total Vehicles	567		463
	Trailers	51		51
Age of Vehicles avg.	Light Duty	5.8 yrs	8-10 yrs	4.8 yrs
	Heavy Duty	7.6 yrs	8-16 yrs	5.9 years
		?	20 yrs	?
FLEET REPLACEMENT OPTIONS				
Scenario I-Run to Fail	CAPEX	$8-28M		
	OPEX	$51 -75M		
Scenario II- Managed Fleet	CAPEX			$42.5M;
	OPEX			$27.2M
Scenario IIi-LIFE CYCLE (FAR 20)	CAPEX		$41.5M*	
	OPEX		$22.3M	
* $ 56.5 million over 7 years including 2018 and 2019 Capital Investment $15 million				

Toronto Hydro supports its Fleet Management Plan by filing a Consultants Life Cycle Analysis (LCA) completed in 2017[76]. This LCA Analysis replaces vehicles based on the optimal life cycle cost (Capital and Operating costs). The analysis can be considered conservative since, since the actual asset condition may range from "poor" to good at the time for replacement. If a vehicle is in good condition it will still be replaced. The Capital costs associated with the LCA are $56.5 million 2018-2024[77] and under the CIR Plan 2020-2024 $41.5 million[78].

Toronto Hydro claims its proposed "Managed Fleet" option does not replace vehicles based on life cycle, but based on condition.[79] Toronto Hydro also claims that when comparing options for 2020-2024, the consultants Far 20 Life Cycle Analysis must include the 2018 and 2019 capital for a total of 56M 41.5+15M= $56. 5 million to be comparable. Energy Probe disagrees. Toronto Hydro has spent its 2018 and 2019 Fleet Capital budget prior to the 2020 rebasing year. Under

[76] 1B-SEC-3, App. E, Comprehensive Fleet Review
[77] Ibid 15 Table 4.6
[78] Ibid 14
[79] TC Transcript Feb. 21, 2019, page119

the LCA option 99 vehicles were to be replaced in 2018/19 and another 221 from 2020-2024. However, Toronto Hydro asserts that only 43 vehicles were replaced in 2018/2019. Therefore 270 vehicles would be replaced under the LCA option[80]

Under the Toronto Hydro Managed Fleet option, from 2020-2024 Toronto Hydro will replace approximately 263 vehicles at a capital cost of $ $41.5 million.

In 2024 the Toronto Hydro Fleet will have replaced the above vehicles[81] and the average vehicle age in 2024 will average 4.8 years (Light Duty) and 5.6 years old (Heavy duty.) This compares to the fleet profile at the end of the prior CIR Plan. 5.8 years and 7.6 years, i.e. 1 year and 2 years newer.

> DR. HIGGIN: Yes.
>
> MR. NAHYAAN: Toronto Hydro's decision-making, in terms of managing its overall fleet, is condition-based, and we -- all of the replacement decisions are based on condition.
>
> So in some scenarios it could be going past its recommended LCA life from the consultant because the condition is good, versus in some scenarios equipment might have to be -- our fleet might have to be disposed because their condition has reached "poor", previous to that recommended age.
>
> If you are looking at average age only, the projected average age for the fleet does go down, and there is a direct relationship in terms of age of vehicle, condition of vehicle, and ongoing operational costs as well.
>
> And LCA report talks about that in depth, in terms of optimal replacement years and the need to manage operational costs as well.
>
> DR. HIGGIN: Right. So in round numbers you are going to replace 263 vehicles -- 260, sorry, corrected -- and -- which is very close to half of the fleet. And you will have newer vehicles at the end of 2024, on average, in the fleet.
>
> MR. NAHYAAN: Again, on an average basis you are just looking at age, yes, the age is projected to go down.[82]

[80] J5.1
[81] J5.1
[82] Tr. Vol 8, Page 29

The Managed Fleet option will cost ratepayers $41.5 million in capital over the CIR Plan. However, the annual O&M costs will be approximately $4 million for the Life Cycle Analysis option compared to ~$5 million for the Managed Fleet option[83].

What conclusions should the Board reach?

- The Utilization Rate for vehicles will reduce to 50%[84]
- Toronto Hydro has proposed a Fleet Replacement Program at a cost of $42.5 million compared to $19.1 million in the last CIR Plan
- Toronto Hydro rejected the consultants LCA-based strategy in favor of a "Managed Fleet option that will result in a higher Capital cost replacement program with higher resulting annual operating costs.
- in 2024 Toronto Hydro would end up with a much newer fleet than at present or the LCA option[85]
- The Managed Fleet option is not an optimal use of ratepayers' money. The LCA option seeks to optimize Fleet capital and operating costs, as is the case for other distribution assets.
- However, like all assets if the condition is "Good" it should not be replaced prematurely.
- Accordingly, Energy Probe does not accept the LCA analysis without the above caveat regarding asset condition.

Toronto Hydro has not indicated that customers will be harmed by adopting the Fleet LCA Strategy provided by its consultants. It has not adequately justified the Managed Fleet Option and its massively increased (220%) Fleet Budget in the DSP (relative to the last CIR Plan)

For these reasons, the Managed Fleet Replacement component and associated costs in the DSP should not be accepted by the Board.

What alternatives are available? One alternative is to reduce the 2020-2024 Fleet Program costs to historic multi-year levels similar to the last CIR Plan, resulting in less replacements and lower cost to ratepayers than the proposed Managed Fleet Option.

[83] 4A- EP-52 (d) Figures 1 and 2
[84] 4A-AMPCO-94 (b)
[85] Ex 2B, Sec. E8.3, page 10 "2020-2024, The average age for LDV decreases 20% from 6.0-4.8 yrs. HDV from 7.5-5.9 years"

The difficulty arising from this approach is the lack of supporting evidence. The only supporting evidence for the CIR period is the consultants' 2017 Far 20 Life Cycle Analysis. Adopting the consultants' LCA scenario is an option, but as noted by Toronto Hydro above, it may result in premature replacement of vehicles in good condition. However, it is the only supported reasonable alternative at this point.

Therefore, Energy Probe suggests that the Board reduce the 2020-2024 Fleet replacement Capital budget by $1 million to $41.5 million to match the LCA option, and the annual fleet OM&A by $1 million/year also to match the LCA option. However, the Capital amount should be ceiling of $41.5 million over 5 years.

In the 2025 rebasing case, the Board should direct TH to benchmark its Fleet Replacement Capital and Operating costs and Fleet profile against similar North American utilities, including large Ontario utilities, such as Alectra and Hydro One.

IT and OT Program Costs are Excessive

Over the historic/test year period 2015-2020 Computer Software gross assets will increase from $100 million to $289 million and Computer Hardware from $27 to $90 million[86]. It is unclear whether 2015-2019 IT program Costs are $217.7 million[87] or $231.2 million[88]

Over the 2020 to 2024 period, Toronto Hydro forecasts spending $281.4 million across the IT/OT Program segments. This represents an increase of $50.2 million (or approximately 22 percent) compared to 2015 to 2019 spending,

The IT/OT program results in a major cost increase that needs to be justified/supported by Toronto Hydro.

Toronto Hydro has provided an IT Benchmark Study prepared by Gartner[89].

Energy Probe has major concerns about the Gartner Benchmark study, including the comparator sample and the cost benchmarks used by the consultants. Energy Probe attempted to explore these concerns at the Technical Conference and in the Hearing, but was met with resistance and refusals to providing further information by Toronto Hydro. The purpose of the benchmarking study is to position Toronto Hydro's IT/OT costs against a peer group.

[86] U-Staff-168, App. B, Table 4
[87] U-Staff-166, Table 1
[88] Ex. 2B, DSP, Sec. E8.4.1, page 28
[89] Ex. 2B DSP, Sec. E8.4 App. A, Gartner IT/OT Budget Benchmarking Report

Gartner's Findings are:

- For 2017, THESL IT Spending as a Percentage of Revenue and of Operational Expense are both lower than the peer group (2.2% vs 2.5% and 2.4% vs 3.1% respectively).
  – Infrastructure support cost is also less than other peer organizations would spend to support the same workload – $32.4M compared to $37.1M (12.6% or 4.5M less).
- Distribution of spending by cost category, investment category and functional area are all comparable to the peer group, with some variation but no significant issues identified.

However, the TH 2017 IT spend used was $32.4 million, not $55 million as shown in the evidence[90]

Toronto Hydro also provided Gartner a forecast for 2020 spending and staffing in addition to 2017 data.

- Results of the comparison of the 2020 forecast to the 2017 peer group show similar results.
  For 2020, Toronto Hydro IT Spending as a percentage of revenue and of operational expense are both lower than the peer group (2.3% vs 2.5% and 2.7% vs 3.1% respectively).
- As in 2017, the distribution of spending by cost category, investment category and functional area are all comparable to the peer group, with some variation but no significant issues identified.
- Toronto Hydro did not forecast infrastructure workload or users, so Gartner did not calculate comparable infrastructure efficiency or employee-based metrics for 2020 data.
- Toronto Hydro provided a forecast for business and IT measures for 2020.
- Gartner has compared these forecasts to the IT spending and staffing metrics for the 2017 peer group.
  Gartner does not have comparable forecasts for the peers.

[90] Ex. 2B, Sec. E 8.4.5 and Sec. 8.4.4, Table 5

- Results for this forecast may differ from actual results for Toronto Hydro based on the accuracy of the forecast.
- Not all measures were forecast, so not all metrics for the projected 2020 period can be reported.

  Infrastructure workload measures were not forecast for 2020 so no comparison of efficiency for infrastructure support is provided.

  User count was not forecast for 2020. As discussed in 2017 results, Toronto Hydro has a comparatively low number of employees (relative to the peer group) which skews results for employee-based metrics. As such, Gartner has not calculated or reported results for revenue per employee and per user, IT spending per employee and per User, or IT FTEs as a percentage of employees and users.

The Benchmarks used by Gartner were the following:

- Revenue: The enterprise revenue associated with the business units supported by the IT organization.
- Operational Expense: Enterprise expense equals the expense associated with the business units supported by the IT organization.
- IT Budget /Spend: The best estimate of total spend, at the end of the twelve month budget period for information technology to support the enterprise.

Toronto Hydro was asked to provide more information on the peer group and why other cost components were excluded[91] and to provide additional benchmarks:[92]
IT cost/gross assets (size), IT cost/ customer, and IT cost/employee.

The response was:

i) Gartner does not have a value for "Gross Assets" from Toronto Hydro nor for the members of the peer group, and so cannot calculate this metric.

ii) Gartner does not have a value for "customers" from Toronto Hydro nor for the members of the peer group, and so cannot calculate this metric.

[91] 2B-SEC-72 (e)
[92] 2B-EP-49 (e)

iii) 2017 IT spending per employee is on slide 21 of the Gartner report. 2017 IT Spending for Toronto Hydro is equal to IT Budget**,** so slide 21 provides this benchmark metric.

The conclusion of the Gartner Report is that in 2017 on a Revenue/ IT cost Toronto Hydro is within the median. However, on an employee/IT cost Toronto Hydro is 2.6 x the median.

In 2020 based on the 2 of 4 commonly used benchmarks Toronto Hydro is within the median on (revenue) but significantly worse (per employee).

The Toronto Hydro witness suggested in the hearing that that rather than cost/employee, cost/user is a better indicator. If that is the case, why did not Toronto Hydro specify a different benchmark? There is no data to support Toronto Hydro positioning on a per user basis in 2020.

Energy Probe suggests the Garner benchmark study is flawed in failing to select appropriate benchmarks, the 2020 comparison in particular, is inconclusive and misleading. It cannot be accepted in support of Toronto Hydro IT/OT costs going forward.

As noted above, Toronto Hydro was asked to provide the other normal industry benchmarks and declined to do so.[93]

Therefore, in Energy Probe's view, Toronto Hydro has not met the onus of proof that its 2020-2024 IT/OT Program costs and the ~50% increase are reasonable. Specifically, Toronto Hydro has not provided the benefits of Phase II of the ERP[94] or the new CIS[95].

The question is how to address this increased IT/OT spend without credible benchmarks.

[93] TC Tr. Feb 21, 2019, page 102
[94] J6.5 App. A
[95] Ex. 2B Sec. E8.4, page 18

E8.4.4 Expenditure Plan

Table 5: Historical & Forecast Program Costs ($ Millions)

Segments	Actual			Bridge		Forecast				
	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
IT Hardware	7.5	9.3	10.1	7.8	7.8	11.5	10.3	11.6	14.0	14.5
IT Software	14.8	21.7	40.3	50.8	19.7	41.0	43.0	35.8	40.5	48.2
Communication Infrastructure	6.1	17.6	4.9	6.0	6.9	2.2	2.4	2.1	2.1	2.1
Total	**28.4**	**48.6**	**55.4**	**64.6**	**34.4**	**54.8**	**55.7**	**49.5**	**56.6**	**64.8**

Examination of historic IT spend shows the following *average* annual spend

IT Hardware $8.7 million

IT Software $32 million

Comm. IS $8.7 million

TOTAL $49.7 million

2020-2024 $56.3 million (projection)

Energy Probe offers two options for the Board's consideration.

iii) Constrain 2020-2024 IT Budgets to 2013-2018 levels, i.e. a reduction of $6.5 million a year for a total $50 million comprising a reduction of $32.5 million over the CIR Period.

iv) Accept inflationary increases for some costs over the CIR Plan period i.e. accept the 2020 base year spend including a built-in inflator of 2.5% above the historic average of $49.7 million This results in a $54.8 million approved spend in 2020.

Option ii) addresses the issue of constraining IT costs up front. Although, if the reduced 2020 IT spend is accepted by the Board, it should also indicate to Toronto Hydro that $54.8 million average annual spend is a ceiling that will be subject to prudence review upon rebasing.

Dual Control Centre not Justified

Based on the evidence, Toronto Hydro has not justified the need for a $40.2 million new control centre. The LEI study[96] that Toronto Hydro field in support demonstrates that very few

[96] Ex.2B, Sec. E8.1, App. A

distributors actually have a fully functioning dual control centre. Energy Probe agrees with the positions of Board Staff and SEC on this issue.

3.3 Is the proposed treatment of renewable enabling improvement investments appropriate?

Toronto Hydro has not provided any details on how it intends to enable renewable investments. There is no specific project that would allow the OEB to evaluate its benefits and costs. Unlike Alectra Utilities that provided evidence on specific issues that can arise from renewable investments[97], Toronto Hydro has not provided anything. Alectra evidence identifies a number of potential issues that can arise from the integration of renewables or Distributed Energy Resources ("DERs"): Ramping and Variability, Reactive Power, Frequency Ride-Through, System Protection, Visibility and Control, Interconnection Requirement, Potential Risks to Reliability, and Voltage Fluctuation. Dealing with these issues will cost money. Toronto Hydro does not present a proposal on how to deal with these issues. There is a section in the London Economics report on the dual distribution control centre that deals with DER integration[98] but there is no evidence what Toronto Hydro is doing about it beyond using it to justify the dual control centre. By not filing evidence or proposing any plans, Toronto Hydro is preventing the OEB from conducting a prudence review in the future.

DRC Evidence

The Distributed Resource Coalition ("DRC") filed a report, answered interrogatories and provided a witness to speak to the report. Energy Probe objected to the witness, Dr. Josipa Petrunic, being accepted as an expert witness on the grounds that as a registered lobbyist for commercial interests, the witness could not provide impartial testimony.

Dr. Petrunic is a lobbyist registered with the Office of the Integrity Commissioner of Ontario, a fact that she did not deny. Dr. Petrunic is a Senior Officer of Canadian Urban Transit Research and Innovation Consortium (CUTRIC). Membership of CUTRIC includes manufacturers and suppliers of rechargeable battery powered vehicles, rechargeable batteries, battery charging

[97] K8.1, pages 003 to 008
[98] Ex. 2B, Section E8.1, App. A, pages 15-20

equipment, contractors that build charging stations, and engineering companies that design them. These commercial entities would profit from large scale adoption of rechargeable battery powered vehicles. Dr. Petrunic promotes their commercial interests at industry conferences and lobbies on their behalf various Ontario government ministries, including the Ministry of Energy, Northern Development and Mines.

Membership of CUTRIC also includes Toronto Hydro. It is not clear to what degree Dr. Petrunic is lobbying at Queens Park on behalf of Toronto Hydro, but there is a possibility that she is.

Dr. Petrunic is on the Advisory Committee for Sidewalk Labs. From reports in the media[99], Sidewalk Labs is proposing an Advanced Power Grid that could cost up to $510 million and would involve Toronto Hydro.

The membership of Toronto Hydro in Dr. Petrunic's organization, CUTRIC, raises questions about Dr. Petrunic's independence as witness in a Toronto Hydro proceeding.

According to Rule 13A.02 of the OEB Rules of Practice and Procedure, an expert witness *"…shall assist the Board impartially by giving evidence that is fair and objective."* It is difficult to see how a paid lobbyist representing the applicant utility in a regulatory proceeding, and commercial interests that hope to profit from the outcome of the decision in the proceeding, could give impartial evidence that is fair and objective.

The counsel for DRC suggested during the hearing that this was "*one of the first and few instances where a female expert witness has been qualified by this Board*"[100]. As the OEB knows, there were other female expert witnesses in OEB proceedings. The consultant for Energy Probe mentioned Ms. Kathleen McShane[101] of Foster Associates who appeared in numerous proceedings as a cost of capital witness. Her last appearance was in an OPG proceeding[102]. Other female expert witnesses that the consultant for Energy Probe worked with were Ms. Julia

[99] K2.2
[100] Tr. Vol. 11, page 34
[101] Tr. Vol. 11, page 34-35
[102] EB-2010-0008

Frayer of London Economics, who appeared as an expert witness on incentive regulation and productivity benchmarking in Enbridge[103] and OPG[104] proceedings, and Dr. Patricia Galloway of Pegasus, who appeared as an expert witness in the management of major capital projects in an OPG proceeding[105]. The implication of the statement by the DRC counsel is that Energy Probe is opposed to female expert witnesses in general, which is false. The President and Chair of the Board of Directors of Energy Probe is Patricia Adams and there are three women on its Board of Directors.

Despite the objection from Energy Probe, the OEB allowed Dr. Petrunic to testify as an expert witness. From her testimony it was clear that she does not have any expertise in setting rates for electricity distributors[106]. It seems that the only thing Dr. Petrunic wanted was for the OEB to direct Toronto Hydro to provide her organization, CUTRIC, with more information for its research[107]. Considering that Toronto Hydro is a member of CUTRIC, it is not clear why the OEB should do that. Members of CUTRIC should be able to exchange information without involving the OEB. It seems to Energy Probe that DRC and CUTRIC ought not to use the OEB regulatory process for that purpose.

4.0 Load and Other Revenue Forecast

4.1 Is Toronto Hydro's 2020-2024 load forecast reasonable?

Energy Probe believes that the load forecast is too low. The load forecast does not agree with the load prediction for capital purposes. For rate setting the load forecast is lowballed and to justify capital expenditures load prediction is highballed. For rate setting purposes load is flat or declining[108] which was confirmed by Toronto Hydro[109]. However, another exhibit indicates that the load is growing[110]. It seems that the exhibit with the flat and declining load is a forecast and

[103] EB-2012-0359
[104] EB-2014-0152
[105] EB-2014-0152
[106] Tr. Vol. 11, page 20
[107] Tr. Vol. 11, pages 85-90
[108] 3-Staff-106
[109] Tr. Technical Conference, Feb. 22, 2019, page 89
[110] 2B-EP-40

the exhibit with the increasing load is a projection. This is simply a semantic difference. Taken together the two exhibits indicate that during the IR period the load is declining and then it starts to increase after the IR period. Toronto Hydro was unable to explain why and when this increase will happen[111]. During the 2020 to 2024 period Toronto Hydro' rate base will increase by 22.73%. It is hard to believe that the large growth in rate base, some of which includes costs for adding thousands of new condominium apartment units and increasing adoption of electric vehicles would not result in load growth instead of a decline in load as Toronto Hydro is forecasting. Energy Probe believes that Toronto Hydro's forecast numbers are simply not credible.[112] Energy Probe proposes that the OEB freeze the load forecast at the 2018 Bridge Year level of 24,139.9 GWh and 40,817.4 MVA for the duration of the 2020 to 2024 period.[113]

4.2 Are Toronto Hydro's 2020 other revenue and shared services forecasts reasonable?

Energy Probe supports the position of Board Staff.

5.0 Operations, Maintenance and Administration (OM&A) Costs, Depreciation Expenses and Payments in Lieu of Taxes (PILs) Amounts

5.1 Is the level of proposed 2020 OM&A expenditures appropriate and is the rationale for planning choices appropriate and adequately explained?

Energy Probe submission on this issue is grouped around the topics of Compensation Benchmarking, and Executive Incentive Pay.

<u>Benchmarking Shows that Compensation Increases are Not Appropriate</u>

Energy Probe's concerns relate to the 2020 base year compensation following the previous CIR Plan and the proposed increases for 2020-2024[114]. These concerns are general across all employee groups, since there is no evidence of mitigation in Total Compensation costs, therefore

[111] Tr. Tech Conf, Feb. 22, 2019, Page 90
[112] Tr. Vol. 6, page 117
[113] 3-Staff-106
[114] K4.7, Tr. Vol.4, pages 164-188

resulting both in historic and proposed increases that are excessive. Since the Society and PWU are under recent collective bargaining agreements, this portion of the Total Compensation is in essence "frozen" from 2020 -2024.

The focus of Energy Probe' review and submissions is the Non-Management/Non-Union in Group of employees. The review of Total Compensation shows that increases for the Non-Management/ Non-Union employee group are above normal and unreasonable[115].

Regarding historic increases, as noted in the response to Energy Probe Interrogatory 72 (b)[116]:

> "From 2015 to 2020 the total compensation for the Non-Management group has increased by 38 percent, which represents a compounded annual growth rate of 6.7 percent; however, once the data has been normalized for the yearly growth of the average number of FTEs and yearly average changes to benefits, the average increase in compensation costs for the Non-Management group is 13.2 percent, which represents a compounded annual growth rate of 2.5 percent. When compared to market conditions for salaries and wages in this group, the rate of growth in this category is reasonable and aligned with Toronto Hydro's compensation strategy of maintaining market competitive salary and wages, as discussed in Exhibit 4A, Tab 4, Schedule 4. Furthermore, part of the growth in compensation from 2015 to 2020 is driven by a modest FTE increase."

Energy Probe does not agree with this assessment. The result of the five year sustained increases in Total Compensation is that the Base year Average TC for this group are above the norm.

Summary of the 2018 -2020 period and 2020-2024 CIR Plan normalized Total Compensation/FTE increases are shown in the following table.

[115]Ex. U, Tab 4A, Sch. 5, App. B, Updated, JTC 3.22; Exh. U, Tab 4A, Sch. 3, App. A, OEB App. 2-K
[116] EP-72 (b)

Actual and Normalized Compensation Non-Management Non-Union Employees Group

Non-Management Non Union Group	2018 Actual	2020 Test Year	2024 CIR Plan	2020 Increase over 2018 based on Actual [117]	2024 Increase over 2018 Actual
#FTE	564	603	610		46
Total Comp.	$82,371,631	$95,640,075	$109,489,675	4.6%	$27,118
Avg. TC/FTE	$146,049	$158,607	$179,490		$33,441
% Increase/FTE Annualized	-	4.3%	-	6.9% 3.5%	22.90% 3.8%
TC/FTE - Annualized increase @ 2.5%	-	$153,443	$169,372		$23.323

This table demonstrates that normalized Total Compensation has increased by 4.6%, or normalized /FTE at 3.5 %/yr. for 2018-2020. Over the period 2018-2024 will increase by normalized 3.8% /yr.

Two points to note:

1. The last Mercer TC Benchmark Study (2017) showed that this Employee Group was significantly above the median,
2. There are no Union/Society negotiations affecting increases for this Group.

Evidence[118] shows that this Group, from 2018-2020 is continuing to get 6.9% normalized increases (over two years) that are well above inflation and above the negotiated increases for other Union and Society employees. We suggest this level of TC increase is excessive. Toronto Hydro has not provided an updated Mercer Study or other evidence to support the proposed TC increases.

The proposed increases are a decision totally within management control and not supported with appropriate evidence. Accordingly, the Board should sanction Toronto Hydro for charging ratepayers the cost consequences of this excessive compensation practice.

[117] J4.11
[118] J4.11

Energy Probe does not accept that the 2020 Base year normalized level of TC/employee is appropriate. A reduction should be made to reflect a 2.5% maximum average annual increase (2018 actual to 2020) that is in line with negotiated Union and Society compensation increases. This amounts to a reduction in base year TC –related OM&A relative to 2018 of ~$5 million. If not constrained to a reasonable annual increase, Toronto Hydro is projecting that ratepayers will pay a further $10 million in excess compensation up to 2024. The Board should indicate to TH that increases in TC for the Non-Management/Non-Union group over the CIR plan will be subject to a prudence review upon rebasing in 2025.

Executive Incentive Pay is Excessive

Energy Probe has no concerns about 2020 TH Executive Base Pay levels. However, Energy Probe does have major concerns about the levels of *Executive Incentive Pay*[119].

Annual Information Form - Summary Compensation Table

NEO Name and Principal Position	Salary	Non-Equity Incentive Plan Compensation	All Other Compensation	Total Compensation	Incentive Pay as Percentage of Total Compensation	Incentive Pay as Percentage of Salary
Anthony Haines President and Chief Executive Officer, Toronto Hydro Corporation	583,999	570,068	16,053	1,170,120	49%	98%
Sean Bovingdon Former Executive Vice-President and Chief Financial Officer, Toronto Hydro Corporation	262,632	153,273	1,727	417,632	37%	58%
Aida Cipolla Executive Vice-President and Chief Financial Officer Toronto Hydro Corporation	215,668	111,400	1,560	328,628	34%	52%
Dino Priore Executive Vice-President and Chief Engineering and Construction Officer Toronto Hydro-Electric System Limited	377,561	224,808	4,580	606,949	37%	60%
Ben La Pianta Executive Vice-President and Chief Customer Care and Electric Operations Officer, Toronto Hydro-Electric System Limited	346,704	207,482	9,133	563,319	37%	60%
Amanda Klein Executive Vice-President, Public and Regulatory Affairs and Chief Legal Officer Toronto Hydro-Electric System Limited	283,000	169,800	2,863	455,663	37%	60%

[119] U-EP-68, App. A, Annual Information Form

In 2018, the TH Board of Directors awarded Executive Incentive Payments ranging from ~60% of base salary to ~100% of base salary. i.e. in the latter case TC is 2x Base Salary plus benefits.[120] Toronto Hydro has not provided any evidence in support of this Incentive Pay policy, such as benchmarking We have made a comparison to both Hydro One (EB-2019-0082 [121]) and to IESO (EB-2019-0002[122])

The Willis Towers Watson study for Hydro One Transmission shows Total Cash Compensation vs Base Salary range of ~30-40% i.e. incentive pay is 30-40% of base salary. The 2018 Summary Compensation Table in the IESO Financial Statements shows IESO Executive Variable/Incentive pay of ~ 8-10% of Base Salary. There are two reasons the Board should not accept the result of Toronto Hydro Executive Incentive Pay Policy in rates:

- The precedential signals provided to other Ontario utilities and the current unfairness to executives in those utilities and the IESO,
- If the current Toronto Hydro Executive incentive pay policy was to continue over the 2020-2024 period, Toronto Hydro would pay out approximately $7.2 million in Executive incentive pay, not taking into account further base salary increases, and expect to recover this in rates.

With a reasonable incentive pay level of up to 40% of base salary, the cost to ratepayers would be approximately $4 million 2020-2024 i.e. ~$3million less. Accordingly, Energy Probe submits that the Board sanction Toronto Hydro, by indicating it will not allow recovery in rates of Incentive pay in excess of 40% of base salary in 2020 and beyond and that a prudence review will occur upon rebasing in 2025. The savings to Ratepayers from 2020-2024 are ~$0.75 million/year starting in 2020.

[120] IB-SEC-3,
[121] EB-2019-0082 Exhibit F-4-1, att. 1
[122] EB-2019-0002, Exhibit A-3-1, page 39

5.2 Are Toronto Hydro's proposed depreciation expenses (including decommissioning provision and derecognition) for 2020-2024 appropriate?

Energy Probe supports the position of Board Staff.

5.3 Are Toronto Hydro's proposed PILs and other tax amounts for 20202024 appropriate?

Energy Probe supports the Position of Board Staff.

6.0 Cost of Capital

6.1 Are Toronto Hydro's proposed 2020-2024 cost of capital amounts (interest on debt and return on equity) appropriate?

Toronto Hydro's CIR plan as proposed reduces risk for Toronto Hydro compared to other distributors. Proposed Custom IR provides Toronto Hydro with more money from ratepayers for capital expenditures than it would get with ICM that other distributors use.[123] Its proposed CRRVA even gives Toronto Hydro more ratepayer money through capital top-up. These two elements of the proposed Custom IR reduce the risk to Toronto Hydro by transferring capital risk to ratepayers. As a result, Toronto Hydro has lower risk than other Ontario distributors.
If the OEB does not make the adjustments to increase productivity incentives through larger stretch factors it should consider reducing Toronto Hydro's ROE.

7.0 Cost Allocation and Rate Design

7.1 Are Toronto Hydro's cost allocation and revenue-to-cost ratio proposals appropriate?

Revenue/Cost Ratios 2020

[123] Tr. Vol. 8, pages 76-86

Proposed Revenue to Cost Ratio Increase for Residential Class is not Appropriate

Energy Probe has significant concerns about the Cost Allocation Model Results for the Residential Class. The current Residential R/C Ratio is about 97 %. The Proposed 2020 Residential R/C Ratio is 100.3 %[124]

Energy Probe asked an interrogatory asking what would be the result of setting Residential and CSMUR rates at R/C ratio of 100%[125]. In the Hearing Energy Probe asked for the impact of the difference between 100% R/C and proposed 100.3% and received the following explanation.

> "If the residential class revenue for 2020 is set at 100 percent revenue to cost ratio, the revenue for this class would be $10.4 million less than what Toronto Hydro has proposed However, Toronto Hydro notes that a reduction to the residential revenue cost ratio would increase the revenue to cost ratios, and therefore the revenue, for the other classes."[126]

The explanation does not sit well with residential customers who are facing significant rate increases over the 5-year CIR Plan. The Over-collection from residential customers at 2020 cost over the 2020-2024 CIR Plan will be at least $52 million.

Energy Probe proposes that the Residential R/C ratio should remain at current levels, or if adjustments are needed that 100% is an appropriate ceiling. Energy Probe notes note that the Board has directed Toronto Hydro to set the CSMUR R/C ratio at 1.00 rather than 1.014[127]

7.2 Are Toronto Hydro's proposals for rate design (including, but not limited to, fixed / variable split, loss factors, retail transmission service rates, specific and other service charges) appropriate?

Energy Probe supports the position of Board Staff on this issue.

[124] 7-EP-60; Ex. 6, Tab 1, Sch. 6, pages 11-12, Ex. 1, Tab1, Sch. 3, page 5
[125] 8-EP-61; Ex. 8, Tab1, Sch. 1, Original, page 3
[126] J8.4
[127] 8-EP-61; Ex 8, Tab1, Sch. 1, Original, page 3

7.3 Is Toronto Hydro's approach to cost responsibility for customer service charges under its conditions of service appropriate?

Energy Probe supports the position of Board Staff on this issue.

8.0 Accounting and Deferral and Variance Accounts

8.1 Have the impacts of any changes in accounting standards, policies, estimates and adjustments been properly identified and recorded, and is the rate treatment of each of these impacts appropriate?

Energy Probe supports the position of Board Staff on this issue.

8.2 Are Toronto Hydro's proposals for the disposition of balances in existing deferral and variance accounts and other amounts appropriate?

Energy Probe supports the position of Board Staff on this issue.

8.3 Are Toronto Hydro's proposals for the establishment of new accounts, closing of existing accounts or continuation of existing accounts appropriate?

Energy Probe supports the position of Board Staff on this issue.

Conclusion

Ever since the OEB allowed utilities to propose a Custom IR under the 4th Generation IRM, every Custom IR plan that has come before the Board was an attempt to extract more money from ratepayers than would be possible under straight Price Cap IRM with ICM/ACM. Toronto Hydro's Custom IR is no different in that regard. Where it differs from Custom IR plans of other utilities is its proposal to transfer virtually all of capital and OM&A risk to ratepayers. Toronto Hydro's proposal is a risk-free plan for its shareholder and a high-risk plan for its ratepayers. It also is designed to allow management to avoid accountability for mismanagement. Toronto Hydro has customized most of the Incentive out of its Custom Incentive Regulation proposal. Toronto Hydro is asking the OEB to give it ratepayer's money with no accountability for

outcomes. Energy Probe urges the OEB to restore accountability, incentive, and risk balance in its decision.

Costs

Energy Probe has focussed its participation and collaborated with other intervenors. This was a complex and challenging case and Energy Probe has divided the topics between consultants to constrain costs. Energy Probe respectfully requests recovery of its legitimately incurred costs.

Respectfully Submitted,

Roger Higgin and Tom Ladanyi
Consultants to Energy Probe