EB-2013-0116

Ontario Energy Board

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

AND IN THE MATTER OF an application by Toronto Hydro-Electric System Limited for an order approving just and reasonable rates and other charges for electricity distribution to be effective May 1, 2015 and for each following year effective January 1 through to December 31, 2019.

Interrogatories of

Energy Probe Research Foundation

October 15, 2014

Toronto Hydro Electric System CIR Plan

Interrogatories of Energy Probe Research Foundation

1B-Energy Probe-1

Ref: Exhibit 1B, Tab 2, Schedule 4, Appendix B

Preamble: This exhibit is Navigant's Independent Assessment of Toronto Hydro's Distribution System Plan and Business Cases. On page 13 the Feeder Investment Model (FIM) is described as "a series of distribution simulation and analytical tools designed to predict asset performance and equipment loading under a range of operating conditions". Energy Probe has understood the FIM to be an analytical tool for evaluating when an asset should be replaced but not as a simulation tool for predicting asset performance and equipment loading.

Please explain how the FIM performs asset performance and equipment loading analyses.

1B-Energy Probe-2

Ref: Exhibit 1B, Tab 2, Schedule 5, Appendix B, PSE Report, Pages 3-5 and Figure 3 and Table1 page 13

Preamble: Figure 1 illustrates the vast differences between Toronto Hydro and the rest of the Ontario distributors, in terms of number of customers served. Related to this difference is the fact that Toronto Hydro also serves a large urban core (the Toronto area). Serving a large urban core presents unique cost challenges that are discussed further in another PSE report attached as an Appendix to this report entitled, "Capital Requirements for Serving Developed Environments."

a) **Confirm TH customer base in 2019.**

b) **Please indicate whether Customer base data for benchmarking is customers, bills or connections.**

c) **Discuss the differences in the context of benchmarking costs.**

d) **Please indicate how Load Density influences costs for benchmarking.**

e) **Please indicate whether the TH cohort cut off is 800,000 customers, 1,000,000 or another number. Modify the response to parts b & c accordingly.**

f) Please provide the list of Canadian Utilities in the 400,000-800,000 customer data set.

g) Please provide the # and list of US utilities in the 400,000-800,000 customer data set.

h) Please indicate how many of cohort have predominantly an Urban customer base (>50%).

i) Please indicate # and list of Urban centres (>100,000 population) in the cohort(s).

j) Please indicate why the TH line in Figure 3 rises to over 1,000,000.

1B-Energy Probe-3

Ref: Exhibit 1B, Tab 2, Schedule 5, Appendix B, PSE Report, Pages 7-8 and Figures 4&5

Preamble: PSE's reliability benchmarking analysis indicates the following findings.
1. Historical SAIFI metrics for Toronto Hydro are higher than the benchmark values.
2. Projected SAIFI metrics converge towards the benchmark values through 2019.
3. Historical SAIDI metrics for Toronto Hydro are lower than the benchmark values.

a) Please confirm the historic and projected SAIDI and SAIFI chart data set are
- **with or without LoS;**
- **with or without MEDs;**
- **with or without scheduled maintenance; and,**
- **with or without sustained outage (excluding MAIFI outages<1min).**

b) Please provide a data set that uses identical data as projections set out in the TH DSP (Exhibit 2B Section C3 Figure 7 and Figure 8 CHECK without LoS and MEDs.

c) Please revise Figures 4 and 5 to be consistent the SAIDI/SAIFI charts in the DSP.

d) Confirm/amend your conclusions.

e) Please amend Figures 6 and 7, if required.

1B-Energy Probe-4

Ref: Exhibit 1B, Tab 2, Schedule 5, Appendix B, PSE Report, Pgs. 7-8

Preamble: Toronto Hydro's capital infrastructure seems to be producing a higher than expected number of outages. The company's average 2010-2012 SAIFI is 73% above benchmark expectations. This implies Toronto Hydro customers experience 73% more outages then (sic) our models predict. The SAIFI projections, assuming full funding, move the company towards the benchmark SAIFI value, reducing the number of outages experienced

by customers. Thus, the company's plan to increase capital spending to address SAIFI is, in our opinion, reasonable from a benchmarking perspective.

Toronto Hydro's response to outages, measured by SAIDI, is quite strong and is projected to continue to be strong. The company's 2010-2012 average is 48% below benchmark expectations. This implies that Toronto Hydro customers experience 48% fewer outage minutes than our models predict. By 2015, the company's SAIDI is projected to be nearly 84% below benchmark expectations.

a) **Please discuss whether SAIDI or SAIFI is a "better" measure from a customer satisfaction perspective, taking into account economic and other factors.**

b) **In PSE's view why is TH SAIFI so bad relative to peer group cohort? Please discuss.**

c) **Is a comparison with major urban utilities with extensive underground infrastructure available?**

d) **If so, provide a copy.**

e) **If MAIFI events were included/removed from the data, in PSEs view would this change the picture?**

1B-Energy Probe-5

Ref: Exhibit 1B, Tab 2, Schedule 5, Appendix B, PSE Report, Page 19, Table 2

a) **Please explain why only 3years if date were used to provide the average rather than a normal 5+ years.**

b) **Please compare the Input Parameters in Table 2 and in particular Ontario Sample to those in the PEG Report (Table).**

c) **Please provide a Tabulation of the TH data in Table 2 and provide sources and explanations for each of the values.**

d) **In particular, please explain in more detail the following:**
   - **Price of Capital Services**
   - **Price of OM&A inputs**
   - **Percentage Electric customers in Gas and Electric Customers(also explain Ontario)**

1B-Energy Probe-6

Ref: Exhibit 1B, Tab 2, Schedule 5, Appendix B, PSE Report, Page 19 Table 6

Preamble: It is our understanding that around 2006 or 2007 the company increased its capital investments. This has moved the company's total cost performance from 30% below benchmark to 17% below by 2013. This movement to invest more in capital during that time frame is a reason why Toronto Hydro's total factor productivity ("TFP") declined in the recent past.

a) **Confirm data results in Table 6 have been adjusted for US/Can $ exchange rates.**

b) **If not, indicate if the difference is material and if this be corrected?**

c) **Please provide a chart based on Table 6 that shows for TH its total cost percentage below cohort benchmark and actual costs from 2002-2013A and 2014-2019F**

1B-Energy Probe-7

Ref: Exhibit 1B, Tab 2, Schedule 6, Page 4 of 4

Preamble:
Performance Metrics
Toronto Hydro proposes to file an annual update on these metrics in the second quarter of the year, following the release of its annual financial statements. The nature of the update is described in further detail in Section C of the DSP, Exhibit 2B.

Annual Distribution Rates
Toronto Hydro's proposed rate framework for the CIR application uses a custom Price Cap Index ("PCI") as the annual adjustment mechanism for its base distribution rates in 2016 to 2019. The custom PCI employs the OEB's inflation factor as an input to the formula. Accordingly, Toronto Hydro proposes to submit a distribution rate adjustment on an annual basis followings OEB's determination of the newest inflation factor (which typically occurs later in the calendar year) and at a date prior to when those rates are to come into effect.

a) **In the context of the above Reporting regimes please indicate where the Stakeholder/Ratepayer Engagement Plan(s)/Processes are filed in the evidence.**

b) **If not filed, please provide a copy and in particular a summary of the engagement with TH ratepayers related to the above Performance Metrics and Annual Distribution Rates during the CIR Plan.**

2A-Energy Probe-8

Ref: Exhibit 2A, Tab 10, Schedule 2, Pages 1&2, Figures 1 and 2

Preamble: Scenarios 1 and 2 provide SAIFI and SAIDI in the filing manner required by OEB Appendix 2-G (Exhibit 2A, Tab 10, Schedule 3). Scenarios 3 and 4 provide SAIFI and SAIDI values by excluding additional externalities and controllable outages, to give a more normalized reflection of total system reliability. Each of these values provides valuable information as to the causes, duration, and frequency of outages within Toronto Hydro's distribution system.

a) **Confirm SAIDI and SAIFI are Metrics contained in the new OEB RRFE Scorecard for Electricity Distributors.**

b) **Please provide a historic SAIDI, SAIFI and CAIDI charts without LOS and MEDS, but including SOs.**

c) **Provide a forecast of SAIDI, SAIFI and CAIDI for the period 2014-2019 including the CIR period 2016-2019, excluding LOS and MEDs, but including SOs.**

d) **Please provide the 5 year average SAIDI and SAIFI for the CIR Plan and Compare to Appendix 2-G historical Average**

2A-Energy Probe-9

Ref: Exhibit 2A, Tab 10, Schedule 2, Page 10/11, Figures 10&11 &
Exhibit 2B, Section C4.1, Page 28

Preamble: Defective Equipment and Tree contacts are two of the primary causes of outage.

a) **Please provide a chart showing <u>both</u> historic 2009-2013 and forecast 2014-2019 contributions to SAIFI and SAIDI from Defective Equipment excluding MEDs.**

b) **Please provide chart showing <u>both</u> historic and forecast 2014-2019 contributions to SAIFI and SAIDI Tree Contacts excluding MEDs.**

c) **Please indicate clearly how the forecast was derived, including reference to types of equipment in Figures 16 and 17 pages 15/16 of the main Reference.**

d) **Please provide Charts Similar to Figures 11 in the second reference showing forecasts and trends for outages caused by Defective Equipment.**

e) Please comment whether reduction in SAIDI/SAIFI due outages from Defective Equipment and Tree Contacts are reasonable Metrics to judge the Outcomes of Equipment Refurbishment/Replacement and Vegetation Management Programs.

f) Please comment on whether THESL would commit to the forecast targets as a Metric for assessing its Capital Equipment Refurbishment/Replacement and Vegetation Management Programs over the CIR Plan period.

g) If not, please provide a full explanation.

2A-Energy Probe-10

Ref: Exhibit 2A, Tab 10, Schedule 1, Page 2, Table 1

Preamble:The Distribution System Code outlines certain obligations regarding missed and rescheduled appointments with customers in section 7.5.1.
Section 7.5.2 of the Code requires that distributors meet that obligation 100 percent of the time, It requires that if the appointments are to be missed, a distributor must attempt to inform the customer beforehand and reschedule the appointment.

a) Confirm THESL has not met this requirement in three of the past 5 years and in 2013 dropped to a 93% Rescheduling ESQR.

b) Please provide an explanation of factors under control of THESL and those that are not.

c) What remedial actions is THESL going to undertake (summary and timing)?

d) Has THESL considered asking for an exception to Sections 7.5.1 and 7.5.2?

e) If so, provide parameters of this.

2A-Energy Probe-11

Ref: Exhibit 2A, Tab 10, Schedule 3, Page 1, OEB Appendix 2-G, Service Reliability Indicators 2009 – 2013

a) Please provide a forecast for the SQRS for the period 2014-2019.

b) Please provide explanation/commentary on any SQRS that exhibit significant differences from the Minimum Standard.

c) Please provide explanation of significant changes/trends over the CIR period.

2B-Energy Probe-12

Ref: Exhibit 2B, Section C2, Page 3, Table 1 &
Section C3, Figure 7 and Figure 8

Preamble: Table 1 shows Proposed Performance Measures Framework encompassing SAIDI, SAIFI, CAIDI, FESI and MAIFI

a) Please provide a chart that show Historic 2009-2013 and forecast 2014-2019 FESI.

b) Please indicate clearly how the forecasts were derived.

c) Please comment on whether THESL would commit to the FESI forecast as a Metric for assessing the outcomes of its investments targeted towards service improvements on the utility's worst performing feeders. (E6.21) over the CIR Plan period.

d) If not, please provide a full explanation.

e) Please provide a chart that show Historic 2009-2013 and forecast 2014-2019 MAIFI.

f) Please comment on whether THESL would commit to the MAIFI forecast as a Metric for assessing the outcomes of its investments targeted towards service improvements r similar to SAIFI projections for outages over 1 minute.

g) If not, please provide a clear explanation.

2B-Energy Probe-13

Ref: Exhibit 2B, Section C3.1, Page 15, Distribution System Plan Implementation Progress

Preamble: Toronto Hydro plans to measure the overall progress of its Distribution System Plan implementation as a rolling ratio of total capital expenditures made over the plan years completed to date, divided by the five-year total amount of OEB-approved capital expenditures approved as a part of the utility's 2015-2019 Distribution System Plan.

a) Please explain why a CAPEX Implementation Progress Index is appropriate compared to an In-Service Assets (ISA) Index.

b) Please provide a description and formula for a rolling ISA Implementation Index based on Rate Base asset additions over the CIR Plan Period.

2B-Energy Probe-14

Ref: No Reference -Distribution System Plan and CIR Plan Metrics and Scorecard

a) **Please provide a consolidated Scorecard for the Distribution System Plan showing without LoS and MED, historic 2009-2013 and forecast 2014-2019 Metrics for SAIDI, SAIFI, CAIDI, MAIFI, CAPEX Implementation Index and ISA Implementation Index per Energy Probe IRs above (#12-13). If full historic Data are not available please so indicate and explain.**

b) **Please indicate whether THESL would commit to the above Metrics (part a) for assessing the Outcomes of its investments targeted towards service improvements and the Scorecard, based on these Metrics, as a measure of its Performance.**

c) **If not please provide an alternative set of Metrics and Scorecard.**

d) **Please provide a copy of THESLs OEB Scorecard for Electricity Distributors for 2013.**

e) **Please comment whether the OEB Scorecard should be used instead of or in parallel with the THESL Scorecard.**

2B-Energy Probe-15

Ref: Exhibit 2B, Section C, Distribution System Plan

Preamble: Page 13 Lines 1-7 describe THESL's intention to automate the data collection and processing for its MAIFI index.

a) **Please describe the work that will be necessary to automate the calculation of this index along with the estimated cost of doing so.**

b) **Please explain why an automated system may yield materially different MAIFI performance compared to the present manual system.**

2B-Energy Probe-16

Ref: Exhibit 2B, Section C, Distribution System Plan

Preamble: Pages 17-18 describe THESL's proposed metric to track Planning, Engineering and Support Staff efficiency.

a) **Does THESL employ consultant or contract labour to perform any of the Planning, Engineering and Support Staff functions?**

b) If yes, how does THESL plan to account for those costs in the proposed metric?

2B-Energy Probe-17

Ref: Exhibit 2B, Section C, Distribution System Plan

Preamble: Page 20 describes THESL's proposed metric for Supply Chain Efficiency. Lines 12-14 note that the On Cost service charge is applied to a capital project as a percentage of the project's total costs.

Please explain why a charge against the total costs of the project is a more appropriate method of allocating warehousing costs than a charge against just the value of the materials used on the project.

2B-Energy Probe-18

Ref 1: Exhibit 2B, Section 00, Distribution System Plan
Ref 2: Exhibit 2B, Section C, Distribution System Plan

Preamble: Page 26 of the first reference shows a chart of historical actual spending on Capital over the period 2010-2013. Expenditures are relatively the same, around $450 M in all years except 2012 which had only $288 M. Page 21 of the second reference shows the On Cost rate for warehouse cost recovery which is also relatively consistent around 12%.

Given the significantly lower amount of capital undertaken in 2012 though, one would expect that the On Cost rate for that year would have been considerably higher than years in which capital expenditures were much higher in order to recover the relatively fixed costs of warehousing operations. However, the rate in 2012 was only 13%. Please explain.

2B-EP-19

Ref: Exhibit 2B, Section C, Distribution System Plan

Preamble: Pages 30-31 describe THESL's Stations Capacity Availability. The chart on page 31 shows the number of stations at or exceeding 90% capacity.

a) Please provide the specific stations that are at or above 90% capacity along with the normal capacity rating of the stations. According to the evidence the metric is based on switchgear and/or bus capacity. For stations with more than one bus, how is the metric defined. (e.g. If a station has two busses both of which are at or above 90% capacity, would that result in a count of 2 in the stations metric or just 1?)

b) If the busses are owned by HONI are they included in the count for this metric?

c) How many transformer stations in the THESL system are covered by this metric?

d) Line 8-10 states that the "metric drops from 2012 to 2013 primarily as a result of load transfer projects…." According to the chart the metric appears to be the same (5) for both years. Please explain where the drop is indicated.

2B-Energy Probe-20

Ref: Exhibit 2B, Section D3, Distribution System Plan

Preamble: Lines 10-13 on page 2 of this exhibit read as follows:
"Interaction points include the fact that capital investment programs are informed through their associated cross-referencing maintenance programs, to ensure that capital investment program spending is above and beyond the life extension benefits produced from the maintenance programs."

This statement is difficult to interpret. Please explain what it means.

2B-Energy Probe-21

Ref: Exhibit 2B, Section D3, Distribution System Plan

a) The footnote on page 14 states that "The OEB also acknowledged that refining the FIM inputs may only come at significant cost." The actual statement by the Board in its April 2, 2013 Partial Decision in EB-2012-0064 on page 21 regarding the FIM reads:

"While the Board expects that it will continue to be refined, the Board notes that the level of detail sought by some of the intervenors may only be available at significant effort or cost."

Has THESL taken this statement to mean that it does not need to refine the customer outage cost assumptions used in the FIM?

b) Has THESL done any work to refine and validate the assumed customer costs of $30 per KVA and $15 per KVA – hour as well as the use of peak load on the feeder rather than the actual load at the time of the outage? If yes, please provide details of the work done. If not, does THESL have plans to do any such work in the future?

2B-Energy Probe-22

Ref: Exhibit 2B, Section D3, Distribution System Plan

Preamble: Pages 29-30 discuss the Asset Risk cost in the Business Case Evaluation analysis. Figure 9 on page 30 shows graphically the various components of costs used in the analysis. Line 20-21 on page 29 states that "For an existing Asset, the AR does not include capital cost since this is a sunk cost that has been already incurred."

a) **Does the Asset Risk for a new asset include its estimated capital cost?**

b) **Is the Annualized Risk Cost of a new asset (orange line in left hand panel) equivalent to the Risk Cost of an existing asset (red line in right hand panel)? I.e. do they both include the same sorts of risks or are there differences in what is included.**

c) **If the two are equivalent, please provide an example that would help explain why the AR line in the right hand panel is illustrated with a much steeper slope than the ARC line in the left hand panel.**

2B-Energy Probe-23

Ref: Exhibit 2B, Section D3, Distribution System Plan

Preamble: Pages 30-31 describe the Non Asset Risks that are a factor in the cost of ownership in the BCE analysis. Lines 3-5 on page 31 state "The overhead System and the Underground System experience differing outage causes because the non-asset factors that affect an overhead system are different from those that affect an underground system."

a) **Does THESL have situations on its system where the Overhead System supplies an Underground System?**

b) **If yes, how does THESL account in its BCE for an underground project for the Non Asset Risk arising from the Overhead System that supplies the underground system?**

2B-Energy Probe-24

Ref: Exhibit 2B, Section D3, Distribution System Plan

Preamble: Page 31 discusses the Maintenance Cost component of the Cost of Ownership in the BCE analysis. Lines 11-12 state "when a program results in a net reduction in the amount of maintenance required for a system…. This change contributes to the difference in the COO, which in turn is shown as a benefit of the program."

a) Please provide a chart showing those capital programs that result in a net reduction in the amount of maintenance required for the system along with the estimated annual savings in maintenance costs associated with the program.

b) Are there programs that result in an increase in annual maintenance costs? Please describe them and provide an estimate of the annual maintenance costs required to support them.

2B-Energy Probe-25

Ref: Exhibit 2B, Section D3, Distribution System Plan

Preamble: Section D3.3.2.3 on page 31 discusses Additional Quantifiable Benefits as a factor in the Business Case Evaluation.

a) Please provide an example of where operational efficiency savings are realized.

b) Are there also Additional Quantifiable Costs that might be associated with a program? If so, please provide examples and indicate how these are accounted for in the BCE process.

2B-Energy Probe-26

Ref: Exhibit 2B, Section D3, Distribution System Plan

Preamble: Lines 7-11 on page 9 discuss the possibility of new developments in IT affecting THESL's five year investment plan for IT. Lines 9-11 state "The five-year Investment Plan could be affected if Toronto Hydro determines that any of these technologies would be beneficial to its operations or would maximize the value of its IT assets."

a) Does THESL seek a flexible approach for how it spends its Board approved IT budget e.g. Substituting a different technology for one funded in the budget with no change in overall spending level? Or, does it seek the flexibility to amend its overall spending level on IT during the five year CIR period?

b) If the latter, how would THESL propose to obtain Board approval for a material change in its IT spending level?

2B-Energy Probe-27

Ref: Exhibit 2B, Section D, Appendix A

Preamble: Page 5 of the Kinectrics 2014 Asset Condition Assessment Audit states that "underground cable testing has not yet started" but "Progress is being made with regard to the preferred type of testing".

a) **Please explain the types of cable testing being considered along with the pros and cons of each.**

b) **If cable testing has not yet started, please explain how THESL has determined what cables to replace and what ones to conduct maintenance on.**

c) **When does THESL expect to conduct the pilot project referenced on the page?**

2B-Energy Probe-28

Ref: Exhibit 2B, Section D, Appendix A

Preamble: Page 5 also references enhancements to the BI calculator and notes that THESL has completed "Modification of calculation method to ensure that the correct age of an asset is used in the assessment".

Please explain how the calculation method impacts the correct age of an asset. I.e. isn't the age of the asset in the database already and therefore an input to the BI calculator?

2B-Energy Probe-29

Ref: Exhibit 2B, Section D, Appendix A

Preamble: Page 6 notes that recommendation 6 of the Kinetrics 2011 audit has not been implemented by THESL. Specifically, "The Health Index formulas presented in the 2011 audit have not been incorporated into the BI or Interim Calculators…"

a) **Why did Kinectrics recommend using the new formulas? How do they differ from the old ones?**

b) **Please explain why THESL has not incorporated the formulas as recommended by Kinetrics.**

c) **What errors or inaccuracies are introduced to the BI or Interim Calculators by using the old formulas?**

2B-Energy Probe-30

Ref: Exhibit 2B, Section D, Appendix A

Preamble: Page 11 shows a chart of population changes for various assets including 3 phase overhead remotely operated switches at –94%. This is explained on page 8 as the result of a misclassification of many manually operated switches as remotely operated switches.

a) **Has the dramatic decrease in the number of remote switches been reflected in a decreased switch maintenance budget i.e. No motor operator, no radio or Scada interface to maintain?**

b) **If yes, please provide details. If no, please explain why not.**

2B-Energy Probe-31

Ref: Exhibit 2B, Section D, Appendix A

Preamble: Page 13 notes that Station Power Transformers and Station Switchgear experienced significant declines in health indices from 2012.

Please explain the reasons for the declines over the past two years.

2B-Energy Probe-32

Ref: Exhibit 2B, Section D, Appendix A

Preamble: Page 14 notes that pad-mounted transformers have experienced a decline of 43% in those considered very good compared to 2012.

a) **Please explain the reasons for this significant decline.**

b) **Does THESL expect the condition of padmounted transformers to continue to decline as rapidly?**

c) **What measures are being taken to counteract the decline in condition?**

2B-Energy Probe-33

Ref: Exhibit 2B, Section D, Appendix A

Preamble: Section 6 of the audit report contains recommendations by Kinetrics.

Please indicate which recommendations THESL intends to adopt and which ones it does not intend to adopt along with reasons for the decisions.

2B-Energy Probe-34

Ref: Exhibit 2B, Section E1

Preamble: Table 4 on page 14 shows forecasted distributed generation connections by type and year to 2019. In the combined heat and power section the forecast ranges between 24 MW and 39 MW up to 2018 but in 2019 the forecast is for 104 MW.

Please explain the large increase in forecast connections for CHP in 2019.

2B-Energy Probe-35

Ref: Exhibit 2B, Section E1
Preamble: Table 5 on page 16 shows DG peak operation forecasts by type and year to 2019. The forecast for combined heat and power in 2019 is 6.9 MW which is roughly 50% of the forecast for the prior years.

a) **Please explain why the forecast for 2019 is so much lower than other years particularly in light of the connection forecast of 104 MW.**
b) **Please explain how peak operation forecasts for DG are arrived at.**

2B-EP-36

Ref: 2B, Section E5.4

Preamble: Page 22 of the schedule notes at lines 25-27 that work at George and Duke MS must be completed in 2015 to avoid a "scheduled road moratorium that will prevent work from occurring in the area for a five year period".

Please explain what circumstances have caused the City to impose a five year moratorium on road work in the area.

2B-Energy Probe-37

Ref: 2B, Section E8.1

Preamble: Charts on page 22 show graphs of Maintenance cost for vehicles vs. age and vs. odometer readings.

These charts appear to be totalized for the entire fleet. Because light vehicles might differ significantly from heavy vehicles in repair and maintenance costs it would be helpful to have the two shown in separate graphs. Please provide charts similar to those on page 22 but separated into light and heavy vehicle categories.

2B-Energy Probe-38

Ref: 2B, Section E8.2

Preamble: Lines 26-28 on page 16 of the schedule describe the need to perform a structural review at 60 Eglinton Ave. to ensure building integrity and identify any issues.

a) **The fact that the building is 60 years old appears to be the triggering factor for this review. Is this age a common criterion for building structural review? If so, please provide references. If not, please explain why that particular age has prompted the need for such a review.**

b) **Has THESL experienced any problems with the building that would lead it to suspect structural issues? If yes, please provide details.**

c) **What is the budgeted cost for this review?**

4A-Energy Probe-39

Ref1: Exhibit 4A, Tab 2, Schedule 1
Ref2: Exhibit 2B, Section D, Appendix A

Preamble: On page 17 of the first reference 3 phase gang operated switches are noted in lines 2-3 are noted as "not capable of remote operation". On page 8 of the second reference 3 Overhead Remote switches are mentioned.

a) **Are these Overhead switches part of the gang operated category of switches?**

b) **Is the term "Remote" meant to indicate that the switch can be operated from the control room?**

c) If yes, please explain the statement in Reference 1 that such gang operated switches are not remotely operable.

d) If no, please explain what the term Remote is intended to convey

4A-Energy Probe-40

Ref: Exhibit 4A, Tab 2, Schedule 1

Preamble: Page 28 of the exhibit states that trees surrounding feeders are pruned "once every two to five years, with the system average being approximately three years".

a) Is the term "surrounding" meant to be taken literally? I.e. Are only the lines that actually run directly through the tree canopy trimmed on average every three years or is 3 years the average trimming cycle that THESL experiences for its lines?

b) If the latter, has THESL compared its vegetation management practices with other distributors to determine if its trimming cycle can be lengthened? If yes, what differences did it identify that contribute to the more frequent trimming cycle in THESL.

c) On page 32, reference is made to the expected loss of approximately 860,000 Ash trees to the emerald ash borer. Has THESL investigated the merits of asking the City to replant with species more compatible to overhead lines i.e. those that do not grow quickly and do not reach a height that can interfere with power lines?

4A-Energy Probe-41

Ref: Exhibit 4A, Tab 2, Schedule 1

Preamble: At various pages of the Exhibit reference is made to oil testing of equipment to comply with PCB Regulations.

a) What are THESL's obligations under the regulations to identify and eliminate PCB contaminated equipment from its system?

b) What are the estimated costs and timelines to accomplish that objective?

4A-Energy Probe-42

Ref: Exhibit 4A, Tab 2, Schedule 3

Preamble: On page 15 of the schedule footnote 10 states that "Toronto Hydro proposes to allocate a portion of the revenue received by TH Energy from the City of Toronto for street lighting maintenance and operation to exactly offset the revenue requirement impacts arising from the transfer".

a) **Please describe the process by which TH Energy revenue from the City of Toronto is reallocated to THESL to offset revenue requirement arising from the transfer of street lighting assets.**

b) **Does the revenue requirement include maintenance, operations, depreciation and return on capital components or just the maintenance and operations components?**

c) **How much does THESL estimate the revenue requirement offset from this source will be in 2015?**

d) **The footnote states that there will be no overall change in the 2015 Revenue Requirement resulting from these assets being included in rate base. Does the same hold true for 2016-2019?**

4A-Energy Probe-43

Ref: Exhibit 4A, Tab 2, Schedule 3

Preamble: Table 6 on page 18, shows actual and forecast costs for major event and storm damage restoration. Given the very large cost in 2013 and the theme of increasingly violent weather events that appears throughout the evidence, it would seem optimistic to forecast costs based solely on the average of three years and excluding the 2013 major event costs.

Is it THESL's intention to deal with extreme weather event damage that exceeds the average by way of Z factor relief or is it prepared to accept the risk and absorb unexpected damage costs?

4A-Energy Probe-44

Ref: Exhibit 4A, Tab 2, Schedule 4

Preamble: This schedule describes THESL's need for a Disaster Preparedness Management Program. Table 1 on page 1 shows expenditures in 2009 of $0.9 M.

a) Was this expenditure related to the G20 conference referenced later in the exhibit? If not, please explain what the expenditure was for.

b) Was any of the planning undertaken in 2009 useful for the proposed Disaster Program discussed in the exhibit? If yes, please provide details of what can be used.

4A-Energy Probe-45

Ref: Exhibit 4A, Tab 2, Schedule 4

Preamble: Table 3 on page 25 shows $1.55 M for full time staff.

a) Please provide details of the number of employees included in this budget along with their position titles and job descriptions.

b) Given that Board approval may not be forthcoming on this application until the spring of 2015, is it reasonable to expect that staff can be recruited to the full extent of the budget in 2015? If not, what would be a reasonable expectation for staffing in 2015?

c) Is it reasonable that training, exercise and audit activity costs should be deferred until 2016 or later in light of the expected timeline for Board approvals and the lag inherent in establishing the program before downstream activities like these would be undertaken?

d) THESL notes at the outset of the discussion that some disaster planning has always been part of its activities. How much should be acknowledged as already embedded in rates for disaster planning activities?

e) Does THESL have an estimate of how much quicker or less costly the 2013 storm response would have been if it had its proposed disaster preparedness program in place at that time?

f) If yes, please provide details of how restoration could have proceeded more quickly or more cost effectively. If no, what evidence or analysis does THESL have that the proposed program would provide value to customers for the cost incurred?

4A-Energy Probe-46

Ref: Exhibit 4A, Tab 2, Schedule 6

Preamble: Page 5 discusses temporary service requests and notes that "Toronto Hydro provides firm quotations for these transactions, with any variance between actual costs of completing the project and the terms of a firm connection offer recovered through operating expenditures."

a) Please provide a variance summary for the past five years between firm price connection offers and actual costs.

b) Has THESL considered providing estimated connection costs with the proviso that the customer will be charged actual costs? If yes, what factors led it to choose firm price connection offers. If no, please explain why this would not be a good strategy to protect ratepayers from any impact on operating costs.

4A-Energy Probe-47

Ref: Exhibit 4A, Tab 2, Schedule 7

Preamble: Table 3 on Page 7 of the schedule shows Planning and Records Management costs increasing from $5.5 M and $5.7 M in 2011 and 2012 respectively to $8.8 M in 2013, $8.7 M in 2014 and $9.0 M in 2015.

Please provide a more detailed explanation of why costs in this segment have increased about 60% over 2011 levels.

4A-Energy Probe-48

Ref: Exhibit 4A, Tab 2, Schedule 11

Preamble: Table 3 on page 7 of the schedule shows Facilities Maintenance Services will increase from about $10 M in 2012 and 2013 to $13.7 M in 2015 (an increase of about 35%. This increase is attributed partly to inflation and to the introduction of the Facilities Management Office "which has significantly increased the scope of facilities service available at Toronto Hydro…"

a) The FMO is presented as an efficiency improvement feature but costs appear to have increased significantly as a result of its implementation. Please explain in more detail how this new structure provides customer value for the cost incurred.

b) Please provide more detail on the "increased scope of facilities services" available through the FMO.

c) How were these services provided in the past before the advent of the FMO?