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October 15, 2014

Reply To: Thomas Brett
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Our File No. 141748

VIA RESS, EMAIL AND COURIER

Ontario Energy Board
2300 Yonge Street
27th Floor
Toronto, Ontario
M4P 1E4

Attention: Kirsten Walli
Board Secretary

Dear Ms. Walli:

Re: EB-2014-0116

Please find attached BOMA's Interrogatories.

Yours truly,

FOGLER, RUBINOFF LLP

A handwritten signature in black ink that reads "Tom Brett per: [initials]".

Thomas Brett

TB/dd

Encls.

cc: All Parties

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
BUILDING OWNERS AND MANAGERS ASSOCIATION, GREATER TORONTO
("BOMA")

October 15, 2014

Interrogatories

1. *Updated Evidence, Appendix A, Table of Revisions, page 1, to letter dated September 23, 2014 from Daliana Coban to OEB*

Please explain why the forecast 2015 Capital Investments have increased from \$523.6 million to \$539.6 million, an increase of \$16.0 million, when the components of the total, mandated obligations, and safety have increased by only \$2.8 million and \$0.7 million (decrease), respectively.

2. *Exhibit 1A, Tab 2, Schedule 1, page 4. "Toronto Hydro has been an efficient organization"*

- (a) Please provide data which validates Toronto Hydro's claim that it is efficient, and shows the organizations relative to which Toronto Hydro has been efficient.
- (b) Please indicate what period of time Toronto Hydro has measured its efficiency relative to what it considers to be an appropriate peer group.
- (c) Please provide a copy of Toronto Hydro's distribution licence.

3. *Ibid, page 7 of 30, line 14*

Please discuss, in detail, the pressures from economics (system load) growth and capacity contracts from "the increased proliferation of distributed generation". Please provide both qualitative, and quantitative analyses to explain those pressures, and their magnitude.

4. *Ibid, page 7, lines 4-12*

Does the percentage of assets described to be at the end of the useful lives by 2015 take into account of the replacement assets that have been installed in 2013, 2014 to date, and will be installed in 2015? Does the phrase by 2015, mean over by January 1, 2016 or December 31, 2014?

5. *Ibid, page 8, 2.3 Toronto Hydro Corporate Strategy - "The utility's strategic vision is to continuously maximize customers' and stakeholders' satisfaction by operating in a safe, reliable and environmentally responsible manner at optimal costs. To realize this vision, Toronto Hydro employs a framework consisting of four strategic pillars:*

1. *Customer Service: deliver value-for-money to Toronto Hydro's customers, including making it easier for them to work with the utility, helping them conserve energy and providing them with tools and technology;*

2. *Operations: improve reliability through optimal and sustainable system management, including keeping the system safe, building a grid that supports a modern city and maintaining productivity;*
3. *People: fully-engages, safe and healthy workforce, that meets the changing business environment; and*
4. *Financial Strength: meet financial objectives including obtaining a fair return.*

These strategic pillars guide the establishment of the utility's goals and business plans, and focus the organization."

Why does your Corporate Strategy not include Public Policy Responsiveness, which is one of the four Performance Outcomes described in the RRFE?

6. *Ibid, page 11: "Toronto Hydro assesses that since amalgamation in 1998, its productivity efforts have resulted in significant savings for ratepayers"*

Please describe in detail each element of its productivity efforts since 1998 and the savings that result from each effort. To what extent have the savings persisted?

7. *Ibid, page 13*

Please provide copies of any climate change adaptation studies that Toronto Hydro has done.

8. *Ibid, page 15, line 13 (updated)*

- (a) In what manner is Toronto Hydro's forecast 2015 capital expenditures or its 2015-2019 average capital expenditures of \$500 million per year "comparable" to its average capital expenditure in the last rebasing in 2011 (\$440 million per year)? The planned five year average is \$60 million, or 13% higher than the average of the 2011-2012 numbers.
- (b) Please provide the comparable numbers for 2012, 2013, and the 9 and 3 estimate for 2014.
- (c) What has the 2014 capex been to date?
- (d) Please compare the 2012, 2013, and 2014 actual capex either Board approved, or settled amounts or amounts incurred for those years, and explain any differences.
- (e) Please provide the compound growth rate of actual capital expenditures over the 2006-2015 period, and the increase year over year for the same period.

9. *Ibid, page 15*

Please provide a copy of Toronto Hydro's Conditions of Service.

10. *Ibid, page 17, Table 2*

- (a) Please break out the customer services requests from third party requests in line 3 of the table.
- (b) Please indicate the contributions from third parties to investments made for that reason, by category, eg. City of Toronto, Go Transit, Province of Ontario, etc.
- (c) Please explain in detail what is meant by "functional obsolescence". Provide examples.

11. *Ibid, page 17, Table 2 - The categories of capital expenditures resulting from different drivers peak in different years. For example, Failure Risk, System Maintenance and Capital Support, Capacity Contracts and Mandated Service Obligations related investments peak in 2015. Functional Obsolescence and System Efficiency related investments, Customer Service Requests/Third Party Requests peak in 2017. Failure and reliability driven investments peak in 2019*

Please explain the reasons for the differences in the time peak spending related to the various drivers that are the result of plan over the 2015-2019 period. Please explain fully.

12. *Ibid, page 19, Tables 5 and 6*

Please confirm that the smart grid investments and regional planning investments are included in the capital investments set out in Table 2 (page 17). If not, please explain.

13. *Rate Base – Addition of street lights into rate base, Ibid, page 17, Table 2*

- (a) Does System Maintenance in line three refer to only maintenance capital or does it include any OM&A costs?
- (b) What is the trade-off between capital and OM&A requests displayed in the application.

14. *Ibid, page 23, Table 7, entitled "OM&A – 2015-19 Cost Drivers", but the expenditures/drivers in the table are for the test year, bridge year, and historical years*

- (a) What are the comparable drivers for the period 2016-2019?
- (b) Are they deemed to be identical to the 2011-2015 period?

15. *Exhibit 3, Tab 1, Schedule 1, Appendix C-1, page 1; Exhibit 3, Tab 1, Schedule 1 (corrected)*

- (a) Please describe how Toronto Hydro counts customers in condominiums and in both small (4-plex, 6-plex) and large multi-family residential (apartment buildings). Is it on the basis of meters or meters and sub-meters (suite-meters in condominiums and apartment buildings)? What has been the impact of the creation of the Competitive Sector Multi-Unit Residential Class effective January 1, 2013.
- (b) Assuming that suite-metered customers in apartment units or condominium units constitute a customer, how many suite-meter customers does Toronto Hydro now have? How are they divided between condominiums and multi-unit residential buildings? Does the balance of the 736,974 customers include structures or are some of them additional meters within a structure, for example, tenant meters in a shopping centre? Please explain fully.
- (c) Table 1 for 2014 (bridge year) shows 736,974 customers (total for all classes) but only 175,545 connections, devices. Please account for the discrepancy. Explain fully. Please describe the distinction between a connection and a "device".

16. *Ibid, page 17, Table 2*

Please explain the difference between "safety" and "reliability" as a primary and a secondary driver, respectively. What percentage of programs do the 32 and 23 programs represent?

17. *Ibid, page 27 (original evidence; Accrual)*

In the blue page Ex-Summary, you have removed section 4.5, Budgeting and Accounting Assumptions of the Original Filing. Why was this done, and is the data submitted still applicable? Please explain fully.

18. *Ibid, page 30*

Why has DVA increased from \$55.2 million to \$60.4 million?

19. *Ibid, page 7*

Please describe the manner in which the data set used by PSE is expanded relative to the data set used by PEG. Please explain fully.

20. *Ibid, page 9*

- (a) Why are Revenue Offsets assumed to increase by I-X? What are the prospects for the revenue offsets being higher than forecast?

- (b) Please confirm that the values for interest and ROE will be changed to correspond to the Board's approved cost of capital parameters for each year.

21. *Ibid, page 10, Table 2*

How much of (i) the interest, and (ii) ROE in each year from 2015 to 2019 is due to:

- (a) changes in forecast interest rates/ROE prices changes;
- (b) growth in rate base.

22. *Earnings Sharing*

Why has Toronto Hydro not included earnings sharing in the proposal in light of the Board's decision in EGD, EB-2012-0459? Please discuss fully.

23. *Ibid, page 18*

Does Toronto Hydro accept that the criteria the Board:

- (a) should apply to determine whether a particular event should qualify for Z-factor treatment are the criteria the Board adopted in EB-2012-0459.
- (b) given the criteria the Board adopted, why has Toronto Hydro proposed a list of "events with a one-time impact", and "events with an ongoing impact"?
- (c) on what basis does Toronto Hydro request that the OEB identify its "concerns with respect to the availability of Z-factor treatment in relation to any of the items set out below", given that the criteria to be applied to any event for which Z-factor treatment is requested is set out in EB-2012-0459. In what form and forum, does Toronto Hydro wish the Board to express its concerns?
- (d) Is Toronto Hydro saying that it would amend its application in the event that the Board "expressed concerns" about one or more of the events listed age pages 17-18?

24. *General*

Please explain why it is necessary to have both a I-X increase and a customer capital index applied to the capital component and then back out the part of the I-X attributable to capital. Would it not be simpler to apply the I-X only to OM&A? If the two approaches do not produce equivalent results, please explain.

Please provide a calculation showing the impacts on revenue requirement, capital index, and rate impacts if this were done.

25. *Ibid, page 13*

Please provide a full quantitative explanation for reduction in 2016 Custom PCI from 5.62 (original) to 4.56 (blue). Please provide a similar explanation for the changes to the PCI for each of 2017, 2018, and 2019.

26. *Exhibit 1B, Tab 2, Schedule 4, Capital, page 5*

What capital expenditure does Toronto Hydro intend to make to facilitate distributed generation over the plan period? Please discuss fully.

27. *Ibid, page 6*

Please provide the capital expenditure for 2012, 2013, and the latest (9 and 3) forecast for 2014.

28. *Ibid, page 9*

- (a) In predicting the likely time to failure of an asset, how does the Feeder Investment Model take into account the assets that are judged to be in fair to very good condition in the current year's Asset Condition Survey, notwithstanding the fact that they are beyond the normal life?
- (b) To what does Toronto Hydro attribute the majority or large minority of customers (depending on rate class) that are not accepting of further rate increases (as evidenced by the Innovation Research Group Report)?

29. *Ibid, page 13*

- (a) Which of the proposed measurement framework measures are in a mature state and can be tracked over the plan period, and which are in a "nascent" state and yet to be fully developed? For the latter, please indicate when each one will be deployed. Please discuss fully. Please discuss each of the twelve performance measurement tests.
- (b) Please discuss the strengths and weaknesses of the Downtown Toronto infrastructure, feeder back-up is provided by intra station ties rather than inter station feeder lines. Please discuss fully.

30. *Ibid, page 4, #7, "There are potential undesirable consequences to system reliability, safety, and performance if Toronto Hydro does not proceed with the proposed project"*

- (a) Please indicate the qualitative and quantitative impact of the planned five year capital program on operating costs (a) over the plan term, and (b) in the five years beyond the plan term. Please discuss fully.
- (b) In the fifth bullet, Navigant states that customers would likely see higher costs. How likely? Please discuss fully.

31. *Ibid, page 16*

- (a) Does "steady state" in Toronto Hydro's vocabulary mean a state where no assets (other than as required for efficient execution) operate beyond the useful life, or is there another number, for example, 5% or 10% of assets in service beyond their useful life that represents an acceptable solution?
- (b) To what extent does Toronto Hydro take into account the different probabilities of failure and the consequences of failure of an asset beyond end of useful life, including the assets that have been found to be in fair, good, very good shape, in the Asset Condition Review? Please discuss fully and provide examples.
- (c) Please indicate for each year between now and 2037 the impact of the proposed annual investment to achieve the "steady state" condition.

32. *Exhibit 1B, Tab 2, Schedule 4, Appendix A*

Has Toronto Hydro investigated means of challenging the City's use of road moratoria in some fashion? Has it made representation to the City on this matter? If so, please provide copies of the material.

33. *Ibid, Appendix B – Navigant*

Please explain what is meant by the phrase "Each of the projects proposed offer justification for...and show they can be executed with financial validity". What does the underlined part mean?

34. *Exhibit 1B, Tab 2, Schedule 5, page 14*

What were Toronto Hydro's negative productivity factor(s) as determined by PEG in its study over the period studied by PEG (compare with the TP figures from the other Ontario utilities, and Hydro One). What was the TP trend over the relevant period?

35. *DSP Capital Efficiency Metric*

- (a) For each "measure" referred to in line 10, "the efficiency and cost effectiveness of the DSP Planning and implementation", please set out the reduced expenditure or the increased in service quality or both, in:

- (i) capitalized supply chain costs;
 - (ii) capitalized warehousing operations;
 - (iii) capitalized engineering costs;
 - (iv) capitalized design costs;
 - (v) capitalized administrative functions related to (c) and (d) above, as a percentage of total program costs in years 2012, 2013, and 2014 (to provide a base for measurement of subsequent achieved efficiencies). Show both in absolute terms as a percentage of total program capital.
- (b) Please estimate the savings achievable for each of (i) through (v) over the term of the program, with a full explanation.

36. *Ibid, page 20*

Toronto Hydro states:

"The standard asset assemblies framework in the early stages and will undergo further testing and development during the 2015-2019 CIR timeframe."

Why will it take five years to produce a mature productivity practice, such as this? Why can it not be finalized in two years? Please discuss fully (lines 14-15).

37. *Ibid, page 21*

How does the Toronto Hydro absenteeism rate as determined by the 2013 Conference Board of Canada study relate to those of large investor-owned Canadian utilities, eg. TCPL, Enbridge, etc.? Please provide a copy of the study.

38. *Ibid, page 26*

How many efficiency and/or safety producing improvements arising from Toronto Hydro management meeting with employees described at 2.2.3.4 has Toronto Hydro implemented in each of the last five years? Please provide a brief description of each improvement.

39. *Ibid, page 22*

Are the different Toronto Hydro buildings and work centers also interconnected digitally? Please discuss.

40. *Ibid, page 23*

How were Baltimore and Chicago utilities chosen as the US utilities to visit to determine best practices?

41. *Ibid, page 17, line 26*

Describe what senior management does to encourage "effective performance feedback" throughout the organization.

42. *Exhibit 1B, Tab 2, Schedule 5, Appendix A, page 3*

Please provide the evidence to support the assertion that Toronto Hydro has been a leader in Smart Meter development, web-based customer service, and enabling renewable generation connection across its service area.

43. *Ibid, page 4 – "The integration efforts were further complicated by the implementation of sector transformative initiatives, such as smart meters and distributed generation" (our emphasis)*

Please provide data on distributed generation installed on Toronto Hydro's system for each of the years between 1998 and 2014, including number of installations, kw of each one, and total annual kw installed, type of fuel, eg. solar, wind, biomass, waste, natural gas. Please provide connection costs for each year and required network costs, if any, for each year with detail.

44. *Ibid, page 7 (evidence)*

Provide an analysis of the annual savings achieved by partial outsourcing of the call center since 1999. Please describe the current status of the call center. Does it remain outsourced, mixed internal and outsource? Provide details.

45. *Ibid, page 7*

Please provide the calculation supporting the NPV staff reduction/VEP program savings of \$1.9 billion. Please illustrate how the calculation was done. Please quantify the pv of the expenditures for the additional staff hired since 1999; including full time, contract, and part time.

46. *Ibid, page 8*

To what extent did the VEP contribute to the current shortage of semi-skilled trades? Please explain fully.

Why was the VEP made totally open, without regard to the strategic resources needed to deal with future needs? Please explain fully.

Facilities Consolidation

47. *Ibid, page 9*

Please explain what is meant by the following sentence, especially the underlined portion: "The creation of the reporting and control system and its benefits were key to the execution of increased capital work, and the transition from effective to efficient practices".

Please provide Toronto Hydro's understanding of the difference between "effectiveness" and "efficiency" in relation to capital project implementation.

48. *Ibid, page 19*

To what extent can the GEAR system be used to facilitate the integration of distributed generation?

49. *Ibid, page 20*

- (a) Please describe what the automated Outage Management System does. Illustrate by examples.
- (b) Please provide an assessment of the reduction of SAIDI over the 1998 to 2014 period, including an estimate of dollar and other benefits which resulted from the introduction of the Outage Management System. What has been the accumulated savings to customers (increase in customer value, over the period)?

50. *Ibid, page 21*

Please provide the data and calculations to justify the \$214 million of cost reduction in Table 6, in particular the \$165 million of salary savings attributed to measures taken with respect to the Energy Response staff.

51. *Ibid, page 22*

Please explain how the absenteeism rate is calculated at Toronto Hydro. Please provide a copy of the Nichole Stuart study.

52. *Ibid, page 27*

Please explain fully the partial outsourcing of metering/billings/payments process and provide evidence to support the \$4 million in salary savings (NPV).

53. *Ibid, page 32*

- (a) What company provides the outsourced warehousing function?

- (b) Please provide details of the arrangement, ownership, service contract, staffing, etc.
- (c) Were the previous three warehouses sold, repurposed? Please discuss.
- (d) Were proceeds credited to the revenue requirement; in which rate case?

54. *Ibid, page 32*

What is the material investment referred to?

55. *D16 – Safety Gains*

Ibid, page 32

Please document the reduction of occupational injury costs since 2007.

56. *Ibid, page 33*

Why has Toronto Hydro not already removed asbestos from its work sites? What is its plan to do so? By what date? Have funds been budgeted for this task? Please discuss fully. How many cases of asbestos related illness have Toronto Hydro employees suffered since 1998?

57. *Ibid, page 34*

Who is the current third party provider of residential customer calls?

58. *Exhibit 1B, Tab 2, Schedule 5, Appendix B (PSE Studies)*

Please provide the engagement letter or its equivalent between Toronto Hydro and PSE for both studies it provided, including any amendments, addenda, comments on drafts, or any other written (including e-mail) communications between the parties prior to, during, or after the study period.

59. *Ibid, page 4, Figure 2*

Why is the "thirty utility observations" described as "being in the same customer range as Ontario Hydro (400,000 to 800,000)" when Toronto Hydro has 709,000 customers? Should not the applicable range be 500,000 to 900,000? What are the implications of such a change for study results?

60. *Ibid, pages 60-61*

Why is the peak demand shown as 4,000 units in Figure 25 (Ontario only) but 6,000 for US only and combined data?

61. *Appendix (8) to Appendix B*

Please provide the full curriculum vitae of each of the five authors of the two PSE studies, including a list of all of the studies each has prepared as sole author, and as joint author, in the last ten years. Please provide copies of any other studies done, similar to the Capital Requirements for Serving Developed Environments (Appendix 8 to Appendix B of Exhibit 1B, Tab 2, Schedule 5 [PSE Study]) by any or all of Erik S. Sonju, Steve Hall, or Amanda Jutrzonka, or other PSE employees in the last ten years.

62. *Ibid, page 1-2*

Please provide evidence to the infrastructure cost per type of area shown in Figure 1-1.

63. *Ibid, page 2-1*

Which skyscrapers were built in Toronto in the "early 1900's"? Please explain fully.

64. *Ibid, page 2-5 – "A unique and dated downtown system, which features a network of secondary voltage cables"*

Please provide a full discussion of the "unique and dated" characteristics of the downtown system of Toronto Hydro.

65. *General*

Please provide the evidence in support of each coincident factor used to calculate the coincident peaks for each building type in this analysis and for each of the six areas. Provide rationale for each coincident factor together with studies and surveys or forecasts that provide authoritative bases for these choices (for example, commercial office space at 0.52 and education at 1.00).

66. *Ibid, page 4-4*

Please justify the use of a 90% power factor in the comparison between the coincident peak for the Urban Residential Area (Area 4) as calculated by PSE and Toronto Hydro.

67. *Ibid, page 4-5*

Please justify the use of the 90% power factor generally.

68. *General*

Please explain the relationship between service and unit for each building type used in the analysis. For example, in a 100 suite condominium, or an apartment building, with a master meter, and residential suite meters for each suite plus one suite, is there one service (to the master meter) or 101 services? What is the difference if individual suite energy consumption is not metered but allocated by the Condominium Board, or apartment owner?

69. *Ibid, page 5-1*

What were the developed "electrical design plans by PSE" based on, aside from the actual installations by Toronto Hydro? What else were they based on? Please discuss fully.

70. *Ibid, Page 5-1*

For the replacement cost exercise:

- (a) please explain how the assumption made as to how the infrastructure for the six areas were developed. Were they designed ab initio, in other words, creating an "optimal" infrastructure, assuming there is no existing plant, are they based on replacing like with like, or are they based on replacing retiring assets with what the authors consider to be the best infrastructure to meet the needs of the area, taking into account the basic structure of the existing infrastructure, for example, the fact that almost all the transformer stations are owned and operated by Hydro One Transmission? Please discuss fully.
- (b) Please provide the answers for all six areas, identifying any differences in methodology among areas.
- (c) Please provide the geographic boundaries of each of the six areas, and the municipality in which they are located, and the justification for selecting those boundaries. Please describe any alternative areas that were considered and rejected. Did Toronto Hydro provide the six areas to PSE, or did PSE select the areas from lists provided by Toronto Hydro, or through their own analysis?

71. *Ibid, page 6-4*

Please confirm that the same conclusion can be drawn for a utility(ies) serving predominantly in rural areas.

72. *Ibid, page 6-4 (general)*

Please indicate how many sq km of Toronto are classified in each of the six area types defined in the study. Please provide a detailed rationale for the classification. Provide the same information for each of Ottawa Hydro, Horizon Utilities, London Utilities, and Enersource.

73. *Appendix B (continued), page 6, "The same reasons that necessitate a combined US and Ontario sample when performing total cost benchmarking for Toronto Hydro also apply to benchmarking its reliability"*

- (a) Please explain fully why that should be the case.
- (b) Please provide evidence for that conclusion.
- (c) Please explain the factors that support this proposition. Please consider, in descending order of importance, each variable, eg. number of customers, demand, etc. that influences distribution costs, and for each variable, describe why it should also impact SAIFI and SAIDI and SAIFI/customer in the same manner. Provide the same for each.
- (d) Please provide the SAIFI and SAIDI per customer results and the SAIFI and SAIDI per kw demand results for Toronto Hydro relative to the Ontario utilities, and the combined sample.
- (e) Please provide the historical and projected costs on a per customer basis between historical and projected costs for the company and the Ontario and combined samples.

74. *Ibid, page 16*

Please provide a copy of the most recent FERC Form 1 filings for each of the US companies in the combined data set, and a 2013 copy of the Platt's UDI Directory of Electric Power Suppliers and Distributors.

75. *Ibid, page 16*

- (a) Please explain why, in determining Canadian distributor wage costs, you did not use the filings of the Ontario utilities.
- (b) Please explain why you used BLS estimate of job occupation weight in the US Power Industry to assess such weights in Ontario, which could be more directly determined by looking at Ontario data.

76. *Ibid, page 17*

Please list the US utilities that qualified as having above one million customers. Did these utilities typically serve more than one municipality? Please provide details for each utility.

77. *Ibid, page 18*

Please show the percentage of forestation available from Toronto Hydro and each of the Ontario utilities that had such data available.

78. *Ibid, page 19*

- (a) Why did PSE not use km of underground line as a proxy for plant in service overhead, and underground? Please explain fully.
- (b) Why did PSE not extract data on plant in service overhead and plant in service underground from Ontario utility filings, including responses to IRs of recent cases?
- (c) How many of the US utilities listed are located in more than one regulatory jurisdiction? Please indicate which ones, and which regulators when the information available in the FERC filings.

79. *Ibid, page 23*

Does PSE use the allowed return on capital as the opportunity cost of capital? Please explain fully what PSE means by the "opportunity cost of capital".

80. *Ibid, page 24*

Why is the US sample not confined to utilities that are distribution utilities only? How many of the utilities listed at page 20 are distribution only? How many are distribution and transmission only? Please provide the cost analysis done in PSE on a "cost per customer basis". What conclusion can be drawn from that analysis, in PSE's view?

81. *Ibid, page 24, Figure 8*

What independent variables did PSE consider adding but ultimately reject in its regression analysis, and why? Please discuss fully.

Please indicate why the following independent variables were:

- (a) considered but ultimately not used to construct the model;
- (b) not considered:

- (i) nature of the subsurface condition, eg. rock, sand, clay, etc.
- (ii) temperature
- (iii) composite age of the utility infrastructure, in particular, age of the central core, date the utility was founded, dates of major expansions
- (iv) legislative requirements for third parties to share capital costs due to work done in response to government/agency directives
- (v) presence and percentage of distributed generation on the distribution system, relative to total utility purchased or produced power
- (vi) capital structure and allowed returns, in each year of the period studied
- (vii) regularity of rate cases
- (viii) stringency of environmental legislation
- (ix) zoning legislation.

82. *Ibid, page 26, "A cost benchmark reflects the performance of an average utility facing the business conditions of the utility whose values are used to generate the benchmark"*

How is the average utility determined in this case? How many of the sample companies were relied upon to create the average utility? Which utilities were they? Please provide Annual Reports, SEDAR filings, for each of the utilities (or leaves to obtain such). How were the costs assembled and developed? Please discuss fully. Which business conditions were considered?

83. *Ibid, page 26*

Please explain in readable form, the composition of the equations in 2.3.2.2, explaining fully what each symbol denotes, and how it is used to describe the determinants of cost (c), and how the equation relates to the simplified cost function equation at the middle of page 26.

84. *Ibid, page 26*

Could the same variables, or some of the same variables, eg. number of customers, demand, be used to benchmark Toronto Hydro on a cost per customer basis. Please discuss fully. Would such analysis have different implications for benchmarking exercise?

85. *Ibid, page 24*

Please rank the eight independent variables in Figure 8, on a descending percentage basis, on their relative influence in determining utility costs in the PSE Model. Please show the relative percentage contribution for each variable.

86. *Ibid, page 28*

In the simplified equation on that page, please explain fully why the incremental number of customers is multiplied by ten.

87. *Ibid, page 28, "Absent robust forecast costs from a large sample of US utilities, PSE is of the opinion that..."*

- (a) Please confirm that the validity of benchmarking future costs, against other utilities' future costs, or against the same utility's historical costs is dependent on the integrity and accuracy of the forecasts. Please discuss fully. Has PSE included in its analysis the accuracy of Toronto Hydro's forecasts of the relevant variables, capital costs, capital price, depreciation, OM&A costs over the period 2002-2012? Please explain fully, and provide the results of the forecasts relative to actuals for each variable for each historical year including 2013 and 2014 to date.
- (b) Has PSE done studies for other utilities which utilize the approach utilized in the study, including comparison of a hypothetical composite average utility facing the same business conditions as the utility to be benchmarked (in this case, Toronto Hydro), and/or the use of historical benchmarking results to determine the reasonableness of forecast future results. Please provide copies of all such studies.

88. *Ibid, page 37*

- (a) (i) Does the US sample utilities contain all major US utilities, including the major nuclear utilities, such as Exelon, Southern Company? (ii) Why are the numbers not provided for the corporations that own several US utilities, such as Exelon, Southern, AEP, First Energy, Natural Grid, etc.? How many of the large multi-utility corporations are not in the US sample and what would be the results of including them?
- (b) Some of the relative importance of the variables as between the US sample and the Combined Sample appear to be very different (see comparison of Table 4, page 31 with Table 7, page 37). The correlation with costs to customer numbers is lower in US sample, the correlation with demand is twice as large, .220 vs .114, the urban core deeming variable is much larger in the US. In effect, the relative contribution of different variables is very different in the US sample compared to the combined sample. Please discuss in detail the extent to which this affects the integrity of the

comparison. Please provide the same explanation for the reliability indexing, pages 46-47 (Tables 11, 12, 13, 14).

89. *Ibid, page 43*

Why were only some of the samples of US utilities used in the total cost benchmarking used for the reliability benchmarking? For each of the utilities not used, please provide the explanation.

90. *Ibid, pages 55-61*

Please provide the data in Figures 23, 24, and 25 as a total cost per customer basis, and peak demand per customer basis.

91. Please provide a detailed explanation of the "dummy" variable for the urban core in the PSE analysis. What does its coefficient signify?