

IN THE MATTER OF the *Ontario Energy Board Act 1998*,
Schedule B to the *Energy Competition Act, 1998*, S.O. 1998, c. 15

AND IN THE MATTER OF an Application by Elexicon Energy
Incorporated for an Order or Orders approving just and
reasonable distribution rates and other service charges
for the distribution of electricity, effective January 1, 2027.

**INTERROGATORIES OF ELEXICON ENERGY INCORPORATED (“EE”)
TO OEB STAFF ON THE PEG EXPERT EVIDENCE**

References:

- **Statistical Cost Research for the Elexicon Energy CIR Plan “PEG Empirical Report”**
- **Issues in the Design of the New Elexicon Energy CIR Framework “PEG Plan Report”**
- **PEG Working Papers**

EE-1

Please provide the engagement letter and all related materials including any RFP and proposal response, and all written instructions provided to PEG, related to the preparation of PEG’s reports.

EE-2

Reference: PEG Empirical Report, p. 7

PEG lists two larger concerns on page 7 that it has regarding Clearspring’s cost benchmarking study. The first mentions that the sample selection and sample period are suboptimal. The second is not a specific concern regarding Clearspring’s total cost benchmarking but rather that Clearspring only provided total cost benchmarking and not OM&A and capital cost benchmarking as well.

In PEG’s first concern, it mentions that there are 8 of the 82 sampled U.S. distributors that are smaller than Elexicon. The first concern also mentions Clearspring starting the sample in 2000 and having 24 years worth of observations and includes a single time trend variable. PEG has previously raised a concern that Mr. Fenrick’s benchmarking work did not go back far enough and stated this would reduce the precision of the econometric benchmarking model parameter estimates. In EB-2018-0218, Mr. Fenrick put forth a cost benchmarking model that used data from 2004 to 2016 (a 13-year period). PEG listed their concerns on page 14 of its report in that proceeding. The one listed first stated, “The relatively short sample period unnecessarily reduces the precision of the econometric benchmarking model parameter estimates.” In that same report, PEG put forth a total cost model that spanned 22 years (1995-2016) and included a single time trend variable. Clearspring’s model in this case spans 24 years and includes a single time trend variable.

- a) Please provide the number of utilities in PEG's alternative sample that are smaller than Elexicon in terms of number of customers served in 2023. What percentage of the PEG sample is this?
- b) PEG previously had a concern in EB-2018-0218 that a 13-year benchmarking sample period used by Clearspring was too short when PEG used a 22-year sample period in that proceeding. Now a concern is stated that 24 years is too long and suboptimal despite PEG used similarly long sample periods in some of its past studies. Please provide the rationale for this apparent contradiction.

EE-3

Reference: PEG Empirical Report, p. 9

PEG states that the eleven years of productivity trends from 2014 to 2024 have fewer data problems than the preceding years and suggests that new industry productivity factors should be considered in this proceeding.

- a) Is PEG aware of any data problems during this 2014 to 2024 period? If so, please list and describe them.
- b) Please confirm that the 2014 productivity trend is constructed as the growth rate in productivity from 2013 to 2014.
- c) How many months and weeks has PEG been working on this new productivity research?
- d) How many person-hours of effort has PEG put into gathering the Ontario dataset, gathering and examining input prices, and conducting the productivity calculations?
- e) In doing this above new research did PEG make use of, consider or take into account generic research it was also previously doing in connection with other work for the OEB relating to this topic? If so, in what way was this related research used, considered or taken into account, and when did PEG begin working on this other related generic research?
- f) PEG only provided an Ontario industry productivity trend study as the basis for its productivity factor recommendation. Does PEG believe U.S. productivity trends are relevant to the productivity factor in the context of Elexicon Energy?

EE-4

Reference: PEG Empirical Report, p. 11

Equation [2] states that the growth in cost equals the growth in input prices plus the growth in inputs.

- a) Should the "I" in the I-X escalation formula track the growth in input prices or, alternatively, have an adjustment made to it?
- b) In PEG's view has the Board's annual distribution IPI correctly tracked the growth in input prices? Please respond in the context of total costs, OM&A expenses, and capital costs.
- c) In PEG's view, what price indexes, weighting, or other alternatives would improve the inflationary tracking within the escalation formula?

- d) Equation [3] on p. 10 states that the growth in inputs can be stated as the growth in costs minus the growth in input prices and then Equation [4] provides the equation for productivity being outputs divided by inputs. In PEG's view, should the input price inflation assumptions in the productivity research match the inflation used in the I-X escalation formula? If not, please explain.
- e) Did PEG use the Board's historical IPI results as the input price inflation index in its productivity research?
- f) If no to part (e), what would the TFP, OM&A PFP, and Capital PFP results be using the Board's historical IPI inflation rates.

EE-5

Reference: PEG Empirical Report, p. 19

Equation [15b] describes a maximization formula between essentially a capital revenue indexing approach and a capital revenue forecasting approach.

- a) Is PEG of the view that the "Inflation" term in Equation [16a] for capital has been adequately tracked by the Board's IPI? For possible context please refer to Clearspring's report, Section 4.5.1 which contains evidence and a discussion regarding capital inflation relative to the Board's IPI.
- b) In PEG's view, has the poor inflationary tracking performance of capital assets by the Board's IPI contributed to the need for utilities to seek incremental funding in excess of I-X?
- c) In PEG's view, would using the historical Handy-Whitman index inflation rates be a far closer approximation of the likely capital inflation encountered by distributors than the Board's IPI? Please give consideration to the historical costs of the rate base and the capital-related revenue requirement and how asset prices today and tomorrow for replacing assets that are 30 years old are impacted by the inflation rates in every historical year during that entire 30 year time span.

EE-6

Reference: PEG Empirical Report, p. 32

PEG states, "Many Ontario electricity distributors have transitioned to Modified International Financial Reporting Standards ("MIFRS") that, among other things, reduce capitalization of their OM&A expenses. This materially slowed OM&A and total factor productivity trends of many distributors during the transition. However, this transition was largely complete by 2013, and the problem can be mitigated by focusing on the years since this occurred."

- a) Please confirm that the prior accounting standard that was mostly used in the industry before 2012, GAAP, tended to capitalize more expenses than the current MIFRS?
- b) Would the higher capitalization in years before 2012 increase PEG's monetary measure of the capital stock in PEG's productivity research for all years of the sample, including years after 2012, above what they would have been if MIFRS had been the standard for all years?
- c) Given the now lower capitalization under MIFRS but the elevated capital stock because of GAAP, would that be expected to increase both the TFP trends after 2012 and the capital PFP trends?

EE-7

Reference: PEG Empirical Report, p. 33

PEG states, “However, due to the approach to the restructuring of retail power markets pursued in Alberta, many billing and collection services are provided by other entities that also sell power to end users.”

- a) Please confirm this would tend to lower the total costs and OM&A expenses of the Alberta utilities included in PEG’s sample relative to other utilities, like Elexicon, that do provide these services, all else being equal.

EE-8

Reference: PEG Empirical Report, p. 34

PEG lists several major disadvantages of including Alberta utilities in the benchmarking sample.

- a) Is one of the considerations for PEG starting its benchmarking dataset in 2009 due to the fact Alberta utilities do not have capital data available prior to 2004?
- b) Is PEG concerned that this recent capital benchmark year of 2004 for the Alberta utilities may insert a higher level of inaccuracy into its dataset relative to utilities with capital benchmark years beginning in 1964?
- c) ATCO does not appear in PEG’s benchmarking data sample list. Is the reason why they were excluded because of this outlier result status?
- d) Please provide evidence that ATCO Electric is an outlier.
- e) Does ATCO tend to have very strong cost performance (i.e., a good benchmark score) or a very poor cost performance score?
- f) Please insert ATCO Electric into PEG’s benchmarking models and provide the model, ATCO’s benchmark score for the most recent three years of data, and Elexicon’s benchmark scores after ATCO is inserted in the model. We note that the working papers do not appear to include ATCO data for Clearspring to allow Clearspring to test this statement.
- g) Does the inclusion of the Alberta utilities improve Elexicon’s benchmark score or make it worse?
- h) Please provide the benchmark scores of each of the three included Alberta utilities.

EE-9

Reference: PEG Empirical Report, p. 44

In past proceedings, Clearspring preferred using the Handy-Whitman indexes (“HWI”) but was criticized by PEG for using only the HWIs. PEG preferred using a Canadian specific index. However, PEG has now shifted to using only Clearspring’s preferred index, which is the Handy-Whitman indexes.

PEG states on p. 44, “Recent research by PEG suggests that it is more accurate to just use the HWI.”

- a) Was PEG mistaken in its past criticisms of Clearspring's preferred methodology of using the HWIs?
- b) What caused PEG to now shift to only using the HWI despite its prior arguments against using the index?
- c) Did PEG also use the HWI in its Ontario productivity trend research?
- d) If yes, did that substantially increase the total factor productivity trends and the capital PFP trends relative to PEG's previously preferred asset price index?
- e) Please provide a table with PEG's previously preferred index and the HWIs used.
- f) Which index grew faster from 2004 to 2024?
- g) All else equal, will using a faster growing asset price index tend to increase measured productivity trends?
- h) Please provide the Ontario TFP trend and capital PFP trend results using PEG's previously preferred asset price index for Ontario.
- i) Please provide the recent research by PEG that suggests the HWI is more accurate.

EE-10

Reference: PEG Empirical Report, p. 45

In one of PEG's smaller concerns of Clearspring's research it says that Clearspring's capital cost does not include capital gains.

- a) Did PEG's 4GIR benchmarking and productivity research on behalf of OEB Staff include capital gains?
- b) Please describe how the capital gains term is calculated.
- c) Has PEG put forth previous CIR research or studies that did not include capital gains? If so, please advise which ones.
- d) Please detail the argument to include capital gains in capital costs in light of how capital costs are calculated for utility revenue requirements.
- e) Is there typically a capital gains component in the revenue requirement of electric utilities?
- f) If yes, is it a typically large component of the capital cost portion of an electric distribution utility's revenue requirement?
- g) Is one of the impacts from the capital gains term to lower the proportion of capital costs relative to total costs?
- h) In examining the PEG working papers, it appears that in PEG's productivity research the share of capital in total costs is well below the share of OM&A expenses. Is this mostly due to the inclusion of this capital gains term?
- i) Would taking out the capital gains term, lower PEG's TFP trend estimates?

EE-11

Reference: PEG Empirical Report, p. 48 Table 1

PEG lists the 53 Ontario distributors included in its productivity trend study.

- a) Are the 53 distributors based on how many distributors reported data in 2024?
- b) How many distributors were there in Ontario in 2013?
- c) Elexicon is listed on Table 1. Is Elexicon data included in the productivity trend research?
- d) In PEG's 4GIR productivity trend research, the utilities of Hydro One Networks and Toronto Hydro were excluded from the samples. Did PEG continue that approach? If not, why not?

EE-12

Reference: PEG Empirical Report, p. 52

PEG states that both the ratcheted peak demand and a moving average of recent annual peak demands were considered for inclusion in PEG's research.

- a) Please confirm that the ratcheted peak demand variable used by PEG can never decline for a given utility, even for utilities that have experienced long-term and sustained peak demand reductions.
- b) Please provide the productivity trend results for the TFP, OM&A PFP, and Capital PFP when using a 10-year rolling average.
- c) PEG calculated the ratcheted peak demand variable based on the highest annual peak demand since 2002. For utilities with declining peak demands, does the use of the ratcheted peak demand increase their productivity trends upwards relative to using a moving average or annual peak demands?

EE-13

Reference: PEG Empirical Report, p. 63

PEG states, "However, recent research by PEG suggests that the GDPPI tends to materially understate the M&S price inflation of U.S. utilities."

- a) Please provide the recent research by PEG that suggests GDPPI tends to understate the M&S price inflation.
- b) Did PEG make an adjustment to the GDPPI for U.S. utilities in calculating M&S input price inflation? If yes, please describe.
- c) If yes to part (b), did PEG make the same adjustment to the Alberta and Ontario M&S input price. If not, why not?
- d) Did PEG use the Ontario or Canadian GDP-IPI FDD for Elexicon?
- e) Did PEG use the Alberta or Canadian GDP-IPI FDD for the Alberta utilities?

EE-14

Reference: PEG Empirical Report, p. 65

PEG uses a different rate of return for the U.S. utilities compared to Elexicon and the Alberta utilities. PEG took a 50/50 average of the rates of return for debt and equity for the U.S. utilities.

- a) Does this create different rates of return on capital for the sample and the studied utility?

- b) These differences will impact the proportion of capital costs and OM&A costs, correct?
- c) Please explain why a benchmarking study that is attempting to estimate the cost performance of the studied utility (Elexicon in this case) should not use the same rate of return as the utility being studied?

EE-15

Reference: PEG Empirical Report, p. 66

PEG states, “We instead use this variable to create a customer density variable (customers/area) for the year 2023.”

- a) Please confirm this is the only business condition variable that also includes a quadratic term.
- b) Is this variable time invariant and set at the 2023 value?

EE-16

Reference: PEG Empirical Report, p. 68

PEG states, “We calculated a DER penetration variable which is the ratio of DER generation capacity to a 3-year rolling average of maximum peak load. The source of these data for the United States is the Form EIA 861 survey’s sections on Net Metering and Non-Net Metering Distributed Generation. We obtained analogous data from the Alberta transmission system operator for the Alberta distributors. The expected sign of this variable is indeterminate in all three cost models”

- a) Please provide the source link and citation of the data used for Elexicon’s DER generation capacity value.
- b) Please provide the source link and citation of the data used for the Alberta utilities DER generation capacity value.
- c) Did PEG escalate Elexicon’s DER generation capacity in the years of 2026 to 2031? If yes, please explain the basis for the escalation.
- d) If no to part (c), is it a realistic assumption that Elexicon will have zero growth in DER generation capacity for upcoming years?

EE-17

Reference: PEG Empirical Report, p. 73 Table 3

- a) Please provide the custom elasticities on customers and ratcheted peak demand for Elexicon in 2024.
- b) For each observation in PEG’s sample, are there any negative custom elasticities for customers and/or ratcheted peak demand? If yes, please provide how many for each.

EE-18

Reference: PEG Empirical Report, p. 87

PEG states, “Our new research includes these costs, albeit in years in which they cleared smart meter deferral accounts rather than in the years when they were incurred. The first sample year that was free of these clearances was 2014.”

- a) Please provide a year-by-year detail with costs of when the smart meter deferral accounts were cleared. If this is not possible, please provide the years in which these accounts were cleared.
- b) What accounts were these deferral accounts generally cleared into?

EE-19

Reference: PEG Empirical Report, p. 90 Table 8b

PEG provides a table showing the outputs and input quantities in its Ontario productivity study.

- a) The data in the columns of this table appear to be off, based on Clearspring’s review. Please verify that the first column titled “Output Quantity Index” actually shows customer growth, the second column titled “Customers” actually shows ratcheted peak demand, the third column titled “Ratcheted Peak Demand” actually shows the output quantity index, the fourth column titled “Total Factor” actually shows OM&A input quantities, the fifth column titled “OM&A” actually shows capital input quantities, and the last column titled “Capital” actually shows total factor input quantities.
- b) What is the average annual growth rate of annual peak demand of the industry without it being ratcheted from 2014 to 2024?
- c) Please confirm that the 2024 ratcheted peak demand variable was a maximum of 23 prior years’ worth of annual peak demands (from 2002 to 2024) for each utility.
- d) Please confirm that the 2013 value of ratcheted peak demand was a maximum of 12 prior years’ worth of annual peak demands (from 2002 to 2013) for each utility.

EE-20

Reference: PEG Plan Report, p. 7

PEG states, “PEG agrees with Clearspring that the OEB’s I factors tend to understate OM&A input price inflation.”

- a) In PEG’s view, what would be the appropriate IPD (or other adjustment) to better align the inflationary relief in the escalation formula with input price inflation?
- b) Would PEG further agree that the OEB’s I factors have tended to understate capital input price inflation?
- c) If yes to part (b), can PEG provide an estimate of the magnitude of the differential between the Board’s IPI and asset price inflation?

- d) If yes to part (b), in PEG's view is the large understatement in capital inflation, at least in part, one likely reason distributors need to use custom IR and propose using the capital forecasting approach?

EE-21

Reference: PEG Working Papers

PEG produced a new service territory area variable and a new percent forested variable.

- a) Please provide the new GIS service territory maps for each utility in PEG's benchmarking sample.
- b) Please provide the overlaid forestation maps for each utility in PEG's benchmarking sample.
- c) What was the input source used for the new service territory maps? Please provide a proper citation or website link.
- d) Was the GIS and variable construction conducted by PEG or another consulting firm?
- e) Please provide either the map or a link used to the land cover map used for the forestation variable.
- f) What are the six land cover categories that were designated as forest?

EE-22

Reference: PEG Empirical Report, p. 42

PEG states a concern about Clearspring's Distribution Work Variable

- a) Please confirm that PEG included a similar variable in its recent Alectra benchmarking research in EB-2025-0252.
- b) If confirmed, why did PEG choose to not include this same variable in this proceeding?
- c) Which model is the preferred one by PEG?

EE-23

Reference: PEG Empirical Report, p. 63

PEG discusses the input prices used in its study.

- a) What city or cities were used for Elexicon's labour input price?
- b) What city or cities were used for Elexicon's capital asset price?

EE-24

Reference: PEG Empirical Report, p. 70

PEG states, "PEG's input price index for materials and services is quarter-levelized while Clearspring's is not. Our approach permits M&S prices to be higher where labour prices are higher."

- a) This states "quarter-levelized" whereas on p. 64 it appears the assumption is 1/3. What is the actual ratio used by PEG?

- b) Did PEG test different proportions?
- c) How did PEG decide on whatever proportion was used?
- d) In PEG's view, is PEG's recognition that labour price levels influence M&S input prices a reason to add further weight to the labour portion in the OM&A IPD calculation?

EE-25

Reference: PEG Empirical Report, p. 77 Table 5

PEG displays its OM&A benchmarking model.

- a) PEG included a skyscraper variable in its OM&A benchmarking model for Alectra but did not include the variable in its OM&A benchmarking model for this proceeding. What caused PEG to change this model that it presented only six weeks prior?
- b) What model is PEG's preferred model?
- c) PEG's model in this proceeding has 15 added observations relative to the one reported in its Alectra research in EB-2025-0252. What utility or utilities were added to PEG's sample and for what years?
- d) What caused the addition of these observations?