

**Attachment EE-1_PEG Research Proposal:
The introduction and proposal section of PEG's response**

Company Experience and Expertise

Overview

Pacific Economics Group Research LLC ("PEG") is a consulting firm in the field of energy utility economics. We are a North American leader in the areas of incentive ratemaking [(“IR”) aka performance-based ratemaking (“PBR”)] and statistical research on energy utility performance. Our personnel have accumulated over 80 person years of experience in these areas, which share a foundation in economic statistics. PEG's headquarters are located on Capitol Square in Madison, WI. The University of Wisconsin-Madison (“UW”) has trained most of our staff and is renowned for its economic statistics program.

We periodically write articles on our work in respected professional journals. Our practice is multinational and has to date involved projects in twelve countries, including dozens of projects in Canada. Work for a mix of regulators, utilities, trade associations, government agencies, and consumer and environmental groups has given us a reputation for objective empirical research and dedication to good regulation.

Dr. Mark Newton Lowry is President of PEG. He has been the principal investigator for many of our projects and provides most of our expert witness testimony. Vice President David Hovde manages our empirical team. Rebecca Kavan is our econometrician and helps with other empirical tasks. Matt Makos plays a prominent role in our research on the design of IR plan provisions. Gretchen Waschbusch is our office manager. The Company also has several Senior Advisors who are not employees. The UW campus begins about a mile from our offices and this helps us to hire capable interns who are usually talented undergraduate economics students.

PEG's Proposal

Project Background

Elexicon Energy Inc (“Elexicon” or “the Company”) is a municipally-owned distributor of electricity to scattered Ontario communities located east of Toronto. The Company resulted from the amalgamation of Veridian Connections and Whitby Hydro in 2019. In 2024 Elexicon served about 178,000 customers. The currently effective rate plan was

determined in the decision approving the amalgamation that resulted in Elexicon. The Company expects brisk growth in operating scale in the next five years.

Elexicon proposes in EB-2025-0312 a Custom Incentive Rate Framework that has several similarities to the framework that Alectra Utilities recently proposed. Supportive empirical research has been provided by Steve Fenrick, a Principal Consultant of Clearspring Energy Advisors who is also testifying for Alectra. Here are some key provisions of the proposal.

- The term of the plan is the five years from 2027 to 2031.
- Rates for 2027 would be subject to a cost of service rebasing.
- The base revenue requirement in the last four years of the plan would be escalated by a Custom Revenue Cap Index (“CRCI”) with an $ln - X + G + IPDOMA + RGF$ formula.

ln would be OEB’s annually recalculated Inflation Factor applicable to electricity distributors.

An Input Price Differential ($IPDOMA$) fixed at 0.25% is calculated as the difference between the OEB’s forecasted Inflation Factor and forecasted inflation in prices of OM&A inputs.

X , the X factor, would be the sum of a fixed 0% Productivity Factor and a fixed Elexicon-specific Stretch Factor of 0.15% that is linked to a Clearspring econometric total cost benchmarking study. □ A Growth Factor (G) fixed at 2.48% would capture the annual long-term cost impact of growth in the Company’s operating scale. This proposal is based on econometric research by Clearspring on the elasticity of total cost with respect to growth in peak demand and the number of customers served.

A Revenue Growth Factor (“RGF”) would *effectively* swap out growth in the revenue cap index with growth in the Company’s Service Revenue Requirement (SRR) which would be based on forecasted growth in its OM&A and capital cost (net of other operating revenue) less the X factor. The Capital-Related Revenue Requirement (“CRRR”) would be based on traditional capital cost accounting.

- An Earnings Sharing Mechanism (“ESM”) would asymmetrically share earnings that exceed the established ROE target by 100 basis points 50/50 between the Company and its customers.
- A Capital In-Service Addition Variance Account (“CISAVA”) would asymmetrically return to customers the benefit of any difference between forecasted and actual capital cost for most kinds of capital, subject to a 2% deadband.
- A Demand-Related Work Variance Account would symmetrically share variances in the capital-related revenue requirement associated with the Customer and Generation

Connections, externally initiated plant relocations, and system expansions capital programs.

- A New Stations Deferral Account (“DRVA”) would capture the incremental capital-related revenue requirement of additional stations projects beyond those included in Elexicon’s Substation Growth program.
- Other costs eligible for deferral or variance account treatment would include those for non-wires solutions and connection and cost recovery payments to Hydro One.
- Conventional off-ramp and Z factor provisions are also proposed.

Preliminary Critique of Elexicon’s Evidence

PEG notes the following initial concerns about Elexicon’s proposal and supporting evidence.

Productivity Factor

Elexicon has proposed (without support from Clearspring) a productivity factor of **0.00%** based on total factor productivity (“TFP”) research that PEG undertook for OEB Staff more than a decade ago in the RRF proceeding.³ Elexicon claims that the 0.00% target contains an implicit

Pacific Economics Group, “Productivity and Benchmarking Research in Support of Incentive Rate Setting in Ontario: Final Report to the Ontario Energy Board,” November 2013.

28 stretch factor of 0.33% because PEG reported TFP growth averaging -0.33% annually in the RRF proceeding.

The sample period for PEG’s study in that proceeding was the 10 (growth rate) years from 2003 to 2012. The power distributor business has changed a lot since 2012, rate regulation has changed in Ontario with the adoption of the RRF, productivity research methods have improved, and the OEB has recently funded new PEG research on Ontario power distributor productivity trends. In its decision approving the 0% productivity factor, the OEB stated that “total factor productivity will be updated every five years (e.g. the update after 2014 would be in 2019).”⁴ Clearspring is quite capable of reviewing our new Ontario productivity research if detailed in our report.

4 EB-2010-0379 Rate Setting Parameters and Benchmarking Under the Renewed Regulatory Framework for Ontario’s Electricity Distributors, November 2013, p. 13.

Recent empirical evidence from various sources suggests that a 0% productivity factor is no longer reasonable.

- PEG's new Ontario power distributor productivity research for OEB staff has found a TFP growth trend in the years since 2013 of around **0.36%** per annum. OM&A productivity averaged **1.40%** growth while capital productivity averaged a **0.26%** annual decline.
- In recent research and testimony for OEB Staff in a Toronto Hydro proceeding (EB-2023-0195) PEG reported that, over the last 15 years ending in 2022, the TFP growth of U.S. power distributors averaged **0.39%** annually. OM&A productivity averaged **1.01%** annual growth while capital productivity averaged a **0.08%** annual growth.
- Clearspring's econometric total cost model includes a -0.0033 value for the trend variable parameter. This is not out of line with a positive TFP trend.

A 0% productivity factor proposal is all the more controversial because it might end up applying to OM&A revenue (e.g., as in the recent CIR settlement for Toronto Hydro) even though the recent industry OM&A productivity growth trend of Ontario power distributors is materially positive. This can be unfair to customers because Elexicon is requesting compensation for a professed inability to achieve 0% capital productivity growth. Why correct a problem that indexation poses for the Company but ignore one benefit of indexation? Christensen Associates proposed an OM&A-specific productivity trend for an OM&A revenue cap index in testimony for OEB staff in the recent Hydro Ottawa CIR proceeding.⁵

5 Crowley, Nick, Dan McLeod, and Xueting (Sherry) Wang, "Evaluation of Hydro Ottawa's Proposed Custom Incentive Regulation Framework," for the OEB, EB-2024-0115, October 14, 2025

Input Price Differential

- Clearspring's complaint about the standard OEB Inflation Factor is that the 30% weight on the faster-growing labor price that is used in its calculation is smaller than it should be in an application to COM. While that is true, Clearspring does not propose an OM&A-specific productivity factor or G-factor.
- Clearspring's IPD calculation focusses on the OM&A cost share weights for the wage rate index and gross domestic product implicit price index for final domestic demand ("GDP-IPI-FDD") but Clearspring's calculation of the appropriate weights is incorrect in a way that benefits Elexicon.
- GDP-IPI-FDD should be a reasonably good proxy for the trend in prices of materials and services. Services do tend to have labor-intensive technologies but so do many goods and services whose prices are tracked by the GDP-IPI-FDD.
- IPD calculations are common in the design of rate and revenue cap indexes for U.S. IR plans but not for Canadian plans. There are two salient reasons for this. One is that

the multifactor productivity (“MFP”) trend of the U.S. economy is fairly brisk whereas the MFP trend of Canada’s economy is close to zero. This matters because brisk MFP growth materially slows growth in the economy’s output prices, making an index that measures output price trends in the macro economy less suitable as a measure of *input* price inflation. The second reason is that IR plans in the U.S. that have indexed ARMs typically use *only* a macroeconomic inflation measure such as the gross domestic product price index (“GDP-PI”). Meanwhile, the OEB and other provincial regulators in Canada typically use inflation factors based on inflation in multiple price indexes that include a wage rate index. The OEB has actually called its inflation measure an input price index.

G Factor

PEG has long acknowledged the reasonableness of including a growth factor in revenue cap index formulas. Our chief concern with Clearspring’s G factor calculation is that it is based on econometric *total* cost rather than *OM&A* cost research.⁶ This matters quite a bit for two reasons. One is that the elasticity of *total* power distributor cost tends to be much higher with respect to peak demand than is the elasticity of *OM&A* expenses with respect to peak demand. The other reason is that Elexicon forecasts its peak demand to grow *much* more rapidly than the number of customers it serves. A more *OM&A* specific growth factor can be developed using elasticity estimates from an econometric *OM&A* cost model. However, Mr. Fenrick has neglected to provide such a model in his evidence.

Previous CIR plans have only applied the G factor to *OM&A* expenses.

Summing Up

The $I - X + G + \text{IPDOMA}$ formula may end up escalating Elexicon’s *OM&A* revenue but is inconsistently designed in a way that is notably self-serving. *IPDOMA* is expressly designed to make the index more relevant to *OM&A* but is combined with a *total factor* productivity trend and a growth factor that is based on *total cost* research. All three pieces of the formula, favor to Elexicon. The traditional application of the OEB’s inflation factor with a growth factor based on total cost research would be more reasonable because some overstatement of scale growth is combined with some understatement of inflation.

Total Cost Benchmarking

The need for a total cost benchmarking study based on US data is less pressing in the case of Elexicon because its business conditions are not markedly different from those of a typical Ontario power distributor. However, the OEB’s current total cost benchmarking model was finalized in 2013 and is now substandard and outdated.

In work for the OEB in the ongoing X project, PEG has recently developed new cost benchmarking models that were estimated using data from the U.S., Ontario, and Alberta. However, in an application to Elexicon it is sensible to use only U.S. and Elexicon (and possibly also Alberta) data since this makes it possible to use better business condition variables and cost specifications that are not limited to variables for which data are readily available for all Ontario distributors. Most notably, we are then able to exclude pension and other benefit expenses from the study.

The econometric cost models that PEG is developing for Alectra evidence are also applicable to Elexicon and have many advantages over Clearspring's work. Here are some notable advantages.

- The model is estimated with data from Alberta as well as U.S. distributors.
- There are many more U.S. companies in our sample (95 vs. 82 companies).
- Our 2013-2023 sample period is more recent.
- After new research, we use a different asset price index (now just the Handy Whitman Power Distribution Construction Cost Index for the North Atlantic states instead of an average of this HWI and a Canadian capital stock deflator) to deflate Elexicon's gross plant additions.
- The input price *levels* of utilities tend to differ at each point in time. Our input price levelizations are more recent than Clearspring's, and this makes the benchmarking of costs in recent years more accurate. We use 2019 whereas Clearspring used 2015 for its capital price index and 2010 for its OM&A price index.
- We use an alternative urban congestion variable (number of skyscrapers).
- We have new forestation and service territory area variables.
- Our new models include a distributed generation variable that addresses an important cost of the energy transition.
- PEG includes a capital gains term in the capital service price index whereas Clearspring does not (which was PEG's practice in the 2014 study).
- Clearspring uses the Board's target ROE for all sampled utilities whereas PEG uses different ROE values for the U.S. and Canada.
- Clearspring does not provide itemized benchmarking results for OM&A expenses, capital cost, or capex and in past proceedings has refused our requests to develop such models. Itemized benchmarking results can be quite informative, and the incremental cost of itemization is modest.

Other IR Plan Design Issues

Elexicon's proposal also raises other IR plan design issues. One concern is the proposal to effectively base all of the Company's capital revenue requirement escalation on a capital cost forecast (less a small stretch factor knockoff) and to claw back most of any capital cost underspends to customers. This approach is common in CIR but nonetheless raises many concerns --- including weak capital cost containment incentives, exploitation of information asymmetries, and high regulatory cost --- that PEG has discussed in past CIR proceedings. Alternative ratemaking treatments of capital may do a better job of balancing the goals of affordability and energy transition progress. The proposed capital cost treatment has long been a major concern of Ontario intervenors with CIR. Possible remedies include the supplemental capital stretch factors approved in prior CIR plans and a K-bar treatment of some kinds of capex such as that used in Alberta, California, and Massachusetts. We broached the topic of a K-bar approach in our report in the Toronto Hydro CIR proceeding. In the Alectra proceeding we have been permitted to ask a question that may lay the foundation for a K-bar run. K bar may or may not be considered in the OEB's utility remuneration initiative so this proceeding is a good place to continue discussions on its merits.

The extraordinary scope of variance accounts and the use of forecasting to determine OM&A revenue requirement escalation are also controversial. These provisions differ from Alectra's proposal and are rationalized in part by the challenge posed by the energy transition. Similar issues were raised in the recent Toronto Hydro CIR proceeding.

Study Objectives

Either prior to or at the start of the project, PEG recommends that a kickoff meeting be held. This meeting would likely include an introduction of PEG's team to the OEB staff assigned to this project and would consider priorities and timelines for the project. This will help to ensure that everyone is working in concert.

The project entails the following tasks as set forth in Staff's RFS.

1. Analyze the evidence in Elexicon's application related to total cost benchmarking and the proposed rate framework. This analysis will include identification of strengths and weakness in the filed evidence while considering OEB expectations and guidelines for CIR filings expressed in prior decisions, the *Rate Handbook*, and the RRF decisions.
2. Assist OEB staff with the preparation of interrogatories to fully assess Elexicon's evidence and review the Company's responses.

3. Participate in any technical conference(s) and/or assist OEB staff in preparing for such conference(s), and review pertinent oral and any written responses.
4. If requested by OEB Staff, draft a report critiquing Elexicon's evidence, and/or prepare alternative studies of some matters to rebut or augment the evidence filed. This report, if required, will be filed on the record of the proceeding.
5. If an independent expert report is filed, respond to interrogatories filed with respect to the expert's report and testify at the oral hearing to explain the analysis and findings.
6. If requested, assist OEB Staff in preparing cross-examination for the oral hearing.
7. Assist OEB staff in preparing a final submission.

PEG will complete all tasks in a timely manner consistent with the OEB's schedule for this proceeding once it is established in a procedural order.

We believe that the following matters should be addressed in the critique for OEB staff and in any report that PEG provides in this proceeding.

- a) Updated Ontario productivity trend research that leverages PEG's work in the X and Alectra projects.
- b) Review and comment on Clearspring's proposed *G* and *IPDOMA* terms and propose alternative terms if warranted.
- c) Alternative cost benchmarking results using OM&A, capital, and total cost models similar to those that PEG is developing for the Alectra Utilities proceeding.
- d) Review and comment on other aspects of Elexicon's proposed Custom IR plan, particularly the capital revenue provisions, use of OM&A cost forecasting, and the expansive use of deferral and variance accounts. Succinctly discuss alternative rate-setting frameworks that merit consideration for Elexicon.

These matters will also be addressed in PEG's critique of the Elexicon evidence and Staff will have the option of not using PEG as a witness.

The following optional tasks also merit serious consideration.

- Do the additional work needed to ask Elexicon to provide a K-bar alternative to Elexicon's capital revenue proposal.
- Critique and possibly respond to any unscheduled supplemental evidence by Elexicon. This would be done on a time-and-materials basis outside the scope of the proposed budget.