Attachment AUC-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

Alectra Utilities ("Alectra" or "the Company") is Canada's largest municipally-owned power distributor, serving 1.1 million customers in Ontario's Golden Horseshoe region. The Company resulted from the amalgamation of several municipal distributors that included Horizon Utilities, PowerStream, and Enersource Hydro Mississauga. The currently effective rate plan was determined in the decision approving the amalgamation of these utilities into Alectra. This plan took the form of Price Cap IR and featured a 10-year term. The Company was able to request supplemental funding through an incremental capital module during the plan and did so on several occasions. Rates were not rebased to Alectra's cost in the amalgamation proceeding. Harmonization of rates between the predecessor companies did not occur, so that Alectra has several rate zones and during the early years of the deferred rebasing period had different rate plans. The Company reports in the instant application that it has underearned in every year of the 2020-2024 period.

The Company is now proposing a Custom IR ("CIR") plan with a mix of conventional features and "targeted refinements to address the unique pressures facing Alectra Utilities over the 2027-2031 term". Supportive empirical research has been provided by Steven Fenrick, a Principal Consultant of Clearspring Energy Advisors. 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.
- Rates in the last four years of the plan would be escalated by a Custom Price Cap Index (CPCI) with an *In – X + RGF + Y + Z* formula.
    - *In* would be the standard OEB Inflation Factor.
    - The X factor would be the sum of a fixed 0% Productivity Factor and a fixed Alectra-specific Stretch Factor of 0.15%.
    - A Revenue Growth Factor (RGF) would effectively be the difference between the Company's proposed growth in its revenue requirement less *I* and the average growth in the Company's billing determinants.

The proposed revenue requirements for the last four years of the plan would have the following components.

- The capital-related revenue requirement (CRRR) would use traditional capital cost accounting and would be consistent with Alectra's distribution system plan (DSP).
- The OM&A revenue requirement would be escalated using an index with an *I + G + IPD* formula where
    - The Growth Factor (*G*) would be fixed at 1.81% and represent the estimated annual cost impact of forecasted annual growth in Alectra's operating scale. This proposal is based on econometric research by Clearspring on the total cost impact of peak demand and the number of customers served.
    - *IPD* is an Input Price Differential that would be fixed at 0.36% and is based on inflation research by Clearspring.
- Other operating revenue would be forecasted.

- An Earnings Sharing Mechanism (ESM) would asymmetrically share earnings exceeding the established ROE target by 150 basis points 50/50 between the Company and its customers.
- A Capital-Related Revenue Requirement Variance Account (CRRRVA) would asymmetrically return to customers any cumulative positive difference between the proposed revenue requirement for capital and actual capital cost during the plan term.
- Costs eligible for variance account treatment would include those for cumulative actual gains and losses arising from updated actuarial assumptions related to some post employment benefit costs; non-wires solutions; OEB cost assessments; incremental cloud computing implementation costs; changes in taxes and payments in lieu of taxes due to changes in tax rates or tax rules not incorporated in rates.
- The lost revenue adjustment mechanism would continue.
- Off-ramps and Z factor mechanisms were not discussed in the application. Alectra has not proposed an efficiency carryover mechanism or performance incentive mechanisms.

PEG notes the following initial concerns about Alectra Utilities' proposal and supporting evidence.

- Clearspring recommends and Alectra has proposed a productivity factor of 0%, based on TFP research that PEG undertook for the OEB Staff more than a decade ago in the 4th GIRM proceeding. Clearspring states on p. 2 of its report that "productivity trends in Ontario are believed to be negative" and that "there is no evidence establishing that the Ontario industry TFP is above zero." However, PEG has recently undertaken new Ontario power distributor productivity research for OEB Staff. Our latest productivity research results will likely be released by the OEB during this proceeding. The reported Ontario industry TFP growth trend is likely to be positive.
- Clearspring wants an IPD specific to OM&A expenses but a 0% productivity factor that derives from our 4th GIRM productivity research, which was designed to be used to escalate the *total* base revenue requirement of power distributors, not their *OM&A* revenue requirement. Total factor and OM&A productivity trends can differ materially. PEG has often found that the OM&A productivity trends of power distributors are more rapid than their total factor productivity trends. We are finding materially positive OM&A productivity trends in our X project research.
- It is unusual for an Ontario utility to propose an input price differential. Clearspring's evidence in support of the IPD proposal therefore merits careful inspection as regards both the underlying rationale for including an IPD in the

CPCI formula and the empirical research on this matter that Clearspring undertook.

- Clearspring's approach to calculating a G factor should also be examined. One concern is that the cost elasticities Clearspring used were based on econometric *total* cost rather than *OM&A* cost research.
- Clearspring was right to base its stretch factor recommendation on a custom transnational benchmarking study because a) Alectra differs in important ways from the typical Ontario power distributor and b) the OEB's current total cost benchmarking model is woefully outdated. In CIR proceedings, custom transnational benchmarking studies are usually countered by an alternative benchmarking model prepared by Staff's expert witness. The desirability of a counter study in this proceeding is increased by the fact that PEG has recently made extensive progress towards the development of updated and upgraded econometric cost benchmarking models for the OEB. We notably now have the ability to use consistent Ontario and Alberta data as well as US data in transnational econometric benchmarking.

  In an application to Alectra, it could prove sensible to use only US and Alectra (and possibly also Alberta) data if this makes it possible to use better variables and cost specifications since we would not then be limited to variables that are available for all Ontario distributors. For example, we would be able to exclude pension and benefit expenses from the study since these were included in the global stretch factor study because many Ontario distributors don't itemize them.

  Our current total cost benchmarking score for Alectra using data from the current full global stretch factor (Ontario-Alberta-US) sample is much different (and less favorable) than the score that Clearspring reports. The numerous reasons for different results include the following.
  - Data from Alberta and other Ontario distributors were used in the sample as well as US distributors.
  - A quadratic rather than full translog output specification saves degrees of freedom to use in adding other model variables.
  - different asset price index for deflating gross plant additions
  - alternative urban congestion treatment
  - new forestation and service territory area variables
  - Electric vehicle and distributed generation variables address the cost impact of the energy transition.
  - A few variables are excluded from our model that Clearspring included.
  - a shorter and more recent sample period (2013-2023)

- Clearspring does not provide itemized benchmarking results for OM&A expenses, capital cost, or capex. Itemized results can be quite informative yet the incremental cost of itemization is modest.
- The report is dated July 2025. 2024 US data were available but excluded from the study. The addition of 2024 data would be helpful for estimating the cost impact of energy transition variables and these data could later be used to update the X project models.

This proposal raises a number of other IR plan design issues that PEG can address. Most notable is the proposal to effectively base the entirety of the Company's capital revenue on a capital cost forecast (less a small stretch factor knockoff) and the clawback of cumulative capital cost underspends to customers. This proposal raises many concerns --- including weak cost containment incentives, exploitation of information asymmetries, and overcompensation --- that PEG has discussed in past CIR proceedings. Alternative ratemaking treatments of capital can 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 the Toronto Hydro CIR proceeding. To our knowledge, K-bar is not being considered in the OEB's utility remuneration initiative so this proceeding is a good place to continue discussions on its merits.

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 team 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. Assist OEB staff with the preparation of interrogatories to fully assess Alectra's evidence and review the Company's responses.
2. Participate in any technical conference(s) and/or assist OEB staff in preparing for any such conference(s), and review oral and any written responses.

3. If requested by OEB Staff, draft a report critiquing Alectra's evidence, and prepare an alternative study to rebut or augment the evidence filed. This report, if required, will be filed on the record of the proceeding.
4. If requested, assist OEB Staff in preparing cross-examination for the oral hearing.
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. 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 core tasks should be part of the project.

- Review and comment on Clearspring's cost benchmarking evidence and prepare an alternative study that leverages PEG's work in the X project.
- Present updated Ontario productivity trend research that leverages PEG's work in the X project.
- Review and comment on Clearspring's proposed OM&A revenue cap index and propose an alternative index if warranted.
- Review and comment on other aspects of Alectra's proposed Custom IR plan, particularly the capital revenue provisions. Succinctly discuss alternative rate-setting frameworks that would be appropriate for Alectra.

The following optional tasks also merit serious consideration.

- Upgrade the global stretch factor transnational benchmarking model and make it more appropriate in an application to Alectra. This would be done using PEG's data and may consider the alternative hyperbolic decay capital cost specification, different parameter estimators, and alternative peak load and substation treatments.
- Update the US database used in the alternative benchmarking study to include 2024 data. US distributor operating data for 2024 became available in May of 2025. By the time the X project resumes, they will have been available for long enough that some participants may ask why they have not been included. The combined value to both projects warrants consideration of a US data update.
- Do the additional work needed to ask Alectra to provide a K-bar alternative to Alectra's capital revenue proposal.
- Add a detailed explanation of the K-bar alternative and salient precedents.
- Add Rebecca Kavan and/or Dave Hovde as a joint witness to give them experience that may prove useful to the OEB in future proceedings.

- Critique and possibly respond to any unscheduled supplemental evidence by Alectra Utilities. This would be done on a time-and-materials basis outside the scope of the proposed budget.