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Witness: Julia Frayer
Request from: Public Utilities Regulatory Authority

Question:

(OM&A PFP AND X-FACTOR) Exhibit CLP-PBR-2; Exhibit CLP-PBR-3; Interrog. Resps. OCC-534 and OCC-538. LEI uses a 20-year period (i.e., 2005-2024) for the Total Factor Productivity (TFP)/PFP analysis and a 10-year period (i.e., 2015-2024) for the econometric benchmarking analysis. LEI states that the longer TFP/PFP period reduces the influence of year-to-year variability, unusual observations, and one-time events and better reflects long-run productivity trends.

a. Explain why these considerations support a 20-year period for the TFP/PFP analysis but not for the econometric benchmarking analysis.
b. Conversely, explain why the considerations supporting the 2015-2024 period for the econometric benchmarking analysis do not support using a similar period for the TFP/PFP analysis.
c. Explain the basis for selecting 2015 as the starting year for the econometric benchmarking analysis.

Response:

a. The appropriate study period depends on the purpose and methodology of the analysis. The TFP/PFP analysis is intended to estimate a long-run industry productivity trend, based on changes in industry inputs and outputs over a sufficiently long period of time. For that purpose, a longer period provides more annual growth observations and reduces the influence of individual years affected by changes in consumption, lumpy capital expenditures, labor-cost fluctuations, or other one-time events. LEI therefore selected the 2005–2024 period as a sufficiently long period to measure the underlying industry productivity trend, while remaining relevant to current industry conditions.

   The econometric benchmarking analysis serves a different purpose. It estimates the relationship between utility costs and contemporaneous cost drivers in order to assess CL&P's current cost performance relative to the industry. For that analysis, LEI selected a more recent ten-year period to estimate the relationship between costs and drivers and provided annual results for the own-cost benchmarking – this timeframe, in the context of the panel regression with 88 EDCs, provides sufficient observations for statistically robust estimation while maintaining the relevance of the estimated cost relationships to current operating conditions and future PBR rate setting.

b. Conversely, the considerations supporting the 2015–2024 period for econometric benchmarking do not support limiting the TFP/PFP analysis to the same ten-year period. The benchmarking analysis is intended to capture relatively recent operating and cost relationships at a **specific point in time**. In contrast, the objective of the TFP/PFP analysis is to measure productivity **trends over time**. Shortening that analysis to ten years would reduce the number of annual growth observations and increase the influence of the particular economic and operating conditions occurring within that shorter period, including unusual or transitory events. This would be less consistent with the objective of estimating a representative long-run industry productivity trend. The TFP study therefore balances the need to reduce the influence of individual-year volatility against the need to retain relevance to current industry conditions.

c. LEI selected 2015 as the starting year because 2015–2024 represents the most recent ten-year period ending with the latest complete year of data used in the study. That period provides a balanced panel in which each of the 88 EDCs is observed in each year, while providing sufficient observations to estimate and test the relevant business drivers and capturing a range of recent operating conditions relevant to the benchmarking analysis.