EB-2021-0110

Ontario Energy Board

IN THE MATTER OF the *Ontario Energy Board Act, 1998*, S.O. 1998, c. 15 (Sched. B) (the Act);

AND IN THE MATTER OF an application by Hydro One Networks Inc., for an order or orders made pursuant to section 78 of the Act, approving or fixing just and reasonable rates for the transmission and distribution of electricity.

Hydro One Networks Inc.
Joint Rates Application 2022-2027

Energy Probe Research Foundation
Interrogatories to Board Staff/Pacific Economics Group

January 20, 2022

Hydro One Networks Inc.
Joint Rates Application 2022-2027
Energy Probe Research Foundation Interrogatories

Board Staff/Pacific Economics Group

M-Energy Probe-1
Reference: Exhibit M, Pages 8-9 Transmission Productivity Study
Preamble; PEG indicates it based its US sample on the Sample it used for the Hydro Quebec Transmission MRI.

a) Confirm PEG's study sample was substantially based on an update for 2017-19 data to the recent sample for Hydro One Sault St Marie, which was in turn, based on the Power Systems Engineering (PSE) sample of 48 utilities in that case.
b) Please provide a tabular side by side comparison of the Clearspring and PEG samples in this case. Highlight utilities included/excluded and indicate the bases for these changes.
c) Please indicate, apart from PEG using a longer sample period (1996-2019) than Clearspring EA, what were the "other problems" with the Clearspring Transmission Productivity Study. Please be specific.
d) Please provide a chart that shows the US TX Industry Total Factor Productivity Growth over the two sample periods and indicate the impact of the Sample periods on the Clearspring and PEG TX Productivity study results.(-0.68% and -1.66%).
e) Apart from the sample period impacts, what are the other differences affecting the two TFP results. Please be specific, such as to which FERC accounts are at issue.

M-Energy Probe-2
Reference: Exhibit M, Page 10 and Page 35 Table 5 & Figure 1 Transmission Benchmarking Study
Preamble; PEG states: On average during the three most recent years for which the requisite historical data were available (2017-2019). Hydro One's forecasted/proposed total costs were about 14% above our model's predictions on average during the five years of the proposed new IR plan (2023-2027). The decline in the Company's total cost efficiency would average 1.12% annually between 2023 and 2027.

a) The PEG and Clearspring EA Benchmark Studies of Hydro One Transmission Total Costs vary materially. Please provide a Chart similar to Figure 1, that shows the two results for the historic and MRI Periods.
b) What are the main differences in the data sets and input assumptions such as the Substation counts. How do these affect the Clearspring EA results.
c) Please connect the PEG and Clearspring EA Benchmark scores to the respective recommended Stretch factors for Hydro One Transmission.
d) Provide an opinion if the X-factor and S-factors are to be determined and considered independently, or if there is an implicit relationship between the two.
e) What is the basis of the PEG recommended 0.75% S-factor? is it purely score/performance based or are there other factors/considerations? Please discuss.
f) Please confirm PEGs position on inclusion of a Growth Factor for Transmission

M-Energy Probe-3
Reference: Exhibit M, Page10 Distribution Productivity Study
Preamble; PEG States "Clearspring developed an econometric model of total power distributor cost using operating data from 81 U.S. electric distribution utilities over the 2000-2019 period. This model was used to benchmark the total cost of base rate inputs which Hydro One Distribution incurred over the historical 2003-2019 period, as well as the Company's forecasted/proposed cost over the 2020-2027 period".

a) Provide the genesis of the PEG US Distributor Sample for Hydro One Distribution, for example did PEG adopt the Clearspring EA US Distribution sample?
b) Please provide the list of Companies that form the basis of the sample for the PEG Total and Partial Productivity Analyses and indicate any differences to the Clearspring EA Sample.
c) Confirm the proposed X factor is fixed during the plan as the sum of a base productivity growth factor and a stretch factor. 0% base productivity growth factors are proposed, which is consistent with the OEB 4th Generation IRM decision.

M-Energy Probe-4
Reference: Exhibit M, Page10 and Page 55 Table 13 & Figure 4 Distribution Benchmarking Study
Preamble; PEG states: "On average, projected/proposed Hydro One Distribution Total Cost during the new plan will exceed the benchmarks by about 37% during the 2023-2027 term of the CIR plan. From 2023 to 2027, cost efficiency will average a 1.38% annual decline".

a) The PEG and Clearspring EA Benchmark Studies of Hydro One Distribution Total Costs vary materially. Please provide a Chart similar to Figure 4, that shows the two results for the historic and MRI Periods.
b) Apart from the sample period, what are the differences in other input assumptions affecting the two Benchmarking Studies. Please be specific.
c) What is PEG's view of the effect of amending the Density parameter and 50kV threshold on the Results?
d) Please confirm the basis of the recommended Stretch Factor. Is it purely score based or are other factors included. Please discusss.
e) Confirm PEGs view regarding inclusion of an explicit growth factor for Hydro One Distribution.

M-Energy Probe-5
Reference: Exhibit M, Page 68 Capital Stretch Factor- Scap
Preamble; "After considering the pros and cons of these options, we recommend that the OEB at a minimum add a supplemental stretch factor to Hydro One's C factor calculation. This factor should be no less than the comparable markdown on plant additions that is produced by the ICM".

a) Confirm the recommended Capital Stretch Factor(s) for Transmission and Distribution.
b) What is the basis for these? Is there a mathematical derivation related to historic and planned CAPEX? Please discuss and illustrate.
c) Does the recommendation for Hydro One to keep 5% (rather than 2%) of CIVSA negative balances apply to both Tx and DX and apply annually or over the entire IRM period?