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hydro One

BY RESS, EMAIL AND COURIER

September 25, 2019

Ms. Kirsten Walli
Board Secretary
Ontario Energy Board
Suite 2700, 2300 Yonge Street
P.O. Box 2319
Toronto, ON M4P 1E4

Dear Ms. Walli,

EB-2019-0082 - Hydro One Networks Inc. Additional Interrogatories on Expert Evidence by Pacific Economics Group LLC

Further to Hydro One Networks Inc. ("Hydro One")'s letter of September 19, 2019 enclosing IRs on the expert evidence of Pacific Economics Group LLC ("PEG"), we enclose additional IRs following the review of PEG's working papers (PSE received access to the working papers on September 19, 2019).

This filing has been submitted electronically using the Board's Regulatory Electronic Submission System and two (2) hard copies will be sent via courier.

Hydro One's points of contact for service of documents associated with the Application remain as listed in Exhibit A, Tab 2 Schedule 1.

Sincerely,

ORIGINAL SIGNED BY HENRY ANDRE ON BEHALF OF FRANK D' ANDREA

Frank D'Andrea

Enclosure: Hydro One Additional Interrogatories on Expert Evidence by Pacific Economics Group

HYDRO ONE ADDITIONAL INTERROGATORIES ON PACIFIC ECONOMICS GROUP WORKING PAPERS

21. Reference: Exhibit M1, Working Papers

In examining the PEG working papers and on p. 28 of the PEG Report, we understand that PEG subtracted certain cost categories from Hydro One's OM&A expenses to make a more consistent cost definition with the sample. These categories include miscellaneous transmission expenses, load dispatching, maintenance of miscellaneous regional transmission plant, and transmission by others. However, in examining the working papers it only appears that PEG subtracted these costs from Hydro One's OM&A expenses for the years 2008 to 2017 and that when PEG subtracted the expenses for Hydro One the costs were in different units than the rest of the costs. When Hydro One provided these cost breakouts to PEG in updated response to I-01-OEB-12 the company stated that the broken out cost data was only available for the years 2008 to 2017 but that the accounts averaged around 13% of OM&A expenses. The response also mentioned the provided data is in millions of dollars.

a) Please confirm that PEG did not subtract these cost categories for the forecasted years of 2018 to 2022 and for years prior to 2007. If confirmed, please explain why PEG did not subtract an estimated portion in these years to make the cost definition consistent with the US sample in years other than 2008 through 2017.

b) Please confirm that in the years of 2008 to 2017, when PEG did subtract these costs, the effect was to only subtract $1/1,000^{th}$ of the costs that should have been subtracted from Hydro One. For example, in 2017 Hydro One reported $42.7 million in miscellaneous transmission expenses but PEG only subtracted $42.7 thousand for these miscellaneous transmission expenses. Please confirm that our understanding of PEG's methodology in this regard is correct.

22. Reference: Exhibit M1, Working Papers

It is the standard approach in benchmarking work to report the econometric model that includes the entire sample. PEG has done this both in the PEG Report and in the working papers. It is also the standard approach to estimate the model excluding the studied utility and calculate the benchmarks from that model.

a) Please confirm that the econometric total cost model used to calculate Hydro One's total cost benchmarks excluded Hydro One from the model run.

b) Please provide the estimated econometric total cost model parameter values that excluded Hydro One's observations and was used to calculate the Hydro One benchmarks.

23. Reference: Exhibit M1, Working Papers

In the output file titled "pegTCOutput.txt" in PEG's working papers, it is PSE's understanding that PEG calculated the average total cost score for each utility in the sample for the most recently available three-year period. This is labeled as the "diff" column. It is PSE's understanding that for most of the utilities in the sample, other than Hydro One, this would be the average total cost benchmarking score for 2014 to 2016.

a) Please provide the PEG benchmark scores for each utility in the sample in the individual years of 2014, 2015, and 2016. PEG may use the "pegid" identifier only and not include the company name to shield the identity of the observation's benchmark score.

b) Please provide the PEG benchmark scores for each utility in the sample in the individual years of 2014, 2015, and 2016 for the PEG model that adds a quadratic trend variable with all other PEG variables and methodologies the same. This should be the same model as requested in Hydro One's interrogatory #6 part (h) to PEG. PEG may to use the "pegid" identifier only and not include the company name to shield the identity of the observation's benchmark score.

c) Please provide the PEG benchmark scores for each utility in the sample in the individual years of 2014, 2015, 2016, 2017, and 2018 for the PEG model that adds 2017 and 2018 US sample data to PEG's benchmarking sample with all other PEG variables and methodologies the same. This should be the same model as requested in Hydro One's interrogatory #6 part (c) to PEG. PEG may to use the "pegid" identifier only and not include the company name to shield the identity of the observation's benchmark score.

24. Reference: Exhibit M1, Working Papers

On p. 59 of the PEG Report, PEG mentions its econometric model estimation procedure now corrects for autocorrelation, whereas in the HOSSM proceeding it did not. Normally, a small change in results would be expected due to making such a methodological change. Yet, PSE notices a large difference in results from PEG's HOSSM proceeding and a large difference in PEG's results relative to a model estimated using Pooled Ordinary Least Squares (OLS) that PSE was able to estimate from PEG's working papers.

a) Would PEG normally expect a large change in results based on the autocorrelation methodological change made by PEG relative to either an OLS model or PEG's Generalized Least Squares model reported in the HOSSM case?

b) Given the PEG approach in HOSSM was a valid approach and an OLS modelling approach still produces unbiased parameter estimates even in the presence of autocorrelation and heteroskedacity, is PEG concerned about the large change in results stemming from its modeling procedure now used in this application?

c) Please list the applications in PEG's prior cost benchmarking research in Ontario where PEG's econometric modeling procedures included this same autocorrelation correction. The list of possible applications should include 3rd Generation IR model, 4th Generation IR model, two Toronto Hydro Custom IR applications, Hydro One Distribution Custom IR, and the Hydro One SSM application.

d) Please list the applications in PEG's prior cost benchmarking research in Ontario where PEG's econometric modeling procedures did not include this same autocorrelation correction. The list of possible applications should include 3rd Generation IR model, 4th Generation IR model, two Toronto Hydro Custom IR applications, Hydro One Distribution Custom IR, and the Hydro One SSM application.