

August 12, 2016

**BY COURIER (2 COPIES) AND RESS**

**Ms. Kirsten Walli**

Board Secretary

Ontario Energy Board

2300 Yonge Street, Suite 2700, P.O. Box 2319

Toronto, Ontario M4P 1E4

Dear Ms. Walli:

**Re: EB-2016-0160 – Hydro One – Cost of Service**

Enclosed please find the interrogatories of Environmental Defence in the above matter.

Please do not hesitate to contact me if anything further is required.

Yours truly,



Kent Elson

Encl.

cc: Participants in EB-2016-0160

Environmental Defence Interrogatories for Hydro One

1. Reference: Ex. B1, Tab 1, Sch. 2, Page 8
  - a) Please provide the theoretical maximum import and export capacity (MW) of each of Hydro One's 26 interconnections with adjoining jurisdictions (Manitoba, Quebec, Minnesota, Michigan and New York);
  - b) Please provide Hydro One's best estimate of the actual maximum amount of electricity (MWhs) that can be imported per year via each of these interconnections;
  - c) Please provide Hydro One's best estimate of the actual maximum amount of electricity (MWhs) that can be exported per year via each of these interconnections;
  - d) Please describe all the actions that Hydro One is taking to increase the amount of electricity (MWhs) that can be imported and/or exported via each of these interconnections. In each case where actions are being taken, please state the expected increase in annual imports and/or exports (MWhs) that these actions will allow.
  - e) Has Hydro One estimated the benefits and costs of upgrading its transmission system to permit increased imports and/or exports of electricity? If yes, please provide copies of these analyses.
2. Reference: Ex. B2, Tab 1, Sch. 1
  - a) Please provide, for each of the last 10 years, Hydro One's annual transmission energy losses as a percent of its total annual transmission throughput volumes; and
  - b) Please provide, for each of the last 10 years, Hydro One's transmission energy losses during the annual peak demand hour as a percent of the total demand of its customers during the peak hour.
3. Reference: Ex. B2, Tab 1, Sch. 1
  - a) Has Hydro One undertaken benchmarking studies which compare its annual transmission energy losses as a percent of its total annual transmission throughput volumes to those of other electricity transmission companies? If yes, please provide these studies; and
  - b) Has Hydro One undertaken benchmarking studies which compare its transmission energy losses during the annual peak demand hour as a percent of the total demand of its customers during the peak hour to those of other electricity transmission companies? If yes, please provide these studies; and

- c) What are the average transmission energy losses for transmission companies in (i) the United States and (ii) Canada? To the extent that they are available, please provide the figures for both the annual transmission energy losses as a percent of total annual transmission throughput volumes and the transmission energy losses during the annual peak demand hour as a percent of the total demand of its customers during the peak hour.

4. Reference: Ex. B2, Tab 1, Sch. 1

- a) Please provide a detailed description of the various sources of Hydro One's transmission energy losses. Please include a percentage breakdown by geographic region and type (e.g. line losses versus losses from equipment such as transformers). Please also attach any internal documents, reports, presentations, etc. on this issue.
- b) Please provide a detailed description of Hydro One's plans to reduce its transmission energy losses from the various sources of those losses. Please also attach any internal documents, reports, presentation, etc. on this issue.
- c) Please describe and list all of the actions that Hydro One could take but will not be taking to reduce its transmission energy losses (e.g. due to cost, viability, priorities, etc.).

5. Reference: Ex. B2, Tab 1, Sch. 1

- a) Please make best efforts to estimate the gross cost of the energy lost in each of the last 10 years via transmission energy losses. Please make and state assumptions as necessary.
- b) To the extent that the figure would be different than the one provided in response to (a) above, please estimate the cost of the transmission energy losses to Hydro One's customers.
- c) Please estimate the cost of transmission energy losses to Hydro One itself.

6. Reference: Ex A, Tab 3, Schedule 1, Pages 16 & 17: Proposed Transmission Scorecard

- a) Would Hydro One support modifying its Proposed Transmission Scorecard to include "Actual annual import capacity(MWhs)/maximum theoretical annual import capacity (MWhs)" and "Actual annual export capacity (MWhs)/maximum theoretical annual export capacity (MWhs)"? If no, please explain why not.
- b) Would Hydro One support modifying its Proposed Transmission Scorecard to include "annual transmission energy losses as a percent of its total annual transmission throughput volumes" and "peak hour transmission energy losses as a percent of its peak hour demand". If no, please explain why not.