Environmental Defence INTERROGATORY #001

Reference:

Reference: Ex. B1, Tab 1, Sch. 2, Page 8

Interrogatory:

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.

Response:

a) The import and export capability for individual interconnections is not computed. The concept of import and export capability applies to a collection of interconnections rather than individual interconnections. Import and export capability for a collection of interconnections is a function of not just the thermal capability of the individual interconnections, but also many other factors, not all of which are within the scope of Hydro One as a transmitter of electricity, including: the dispatch, loading patterns and constraints inside and outside of Ontario.

b) & c) Hydro One owns and operates the transmission assets. The use of these transmission assets for imports and exports depends on the transactions by market participants and the IESO who administers the electricity market. As stated in part (a) the import and export

capability can vary significantly depending on many factors that are not all within Hydro One's control; therefore Hydro One is not able to provide the information as requested.

d) There is only one investment included in Hydro One's capital plan related to existing interconnections. The "Merivale TS to Hawthorne TS: 230 kV Conductor Upgrade" project is needed to address an internal constraint that will enable a 500 MW firm capacity agreement between the Provinces of Ontario and Quebec on the existing interconnections with Quebec. Details on this specific project are available in Exhibit B1, Tab 3, Schedule 11, Investment Summary Documents Ref# D03.

e) No, Hydro One has not estimated the benefits of and costs of upgrading its transmission system to permit increased levels of imports or exports.

Environmental Defence INTERROGATORY #002

Reference:

Ex. B2, Tab 1, Sch. 1

Interrogatory:

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.

Response:

a) and b)

Information on transmission system losses resides with the IESO. Hydro One does not have information on the electricity (i.e. generation) supplied into the transmission system, nor does it have information for all the delivery points where electricity exits from the transmission system. Accordingly, Hydro One cannot calculate transmission system losses.

Environmental Defence INTERROGATORY #003

Reference:

Ex. B2, Tab 1, Sch. 1

Interrogatory:

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.

Response:

a) No, Hydro One has not undertaken such studies.

b) No, Hydro One has not undertaken such studies.

c) Hydro One does not have this information.

Environmental Defence INTERROGATORY #004

Reference:

Ex. B2, Tab 1, Sch. 1

Interrogatory:

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.).

Response:

a) Energy losses on the transmission system are largely due to line losses and transformer losses. For the reasons identified in ED # 2 (I-05-002) Hydro One does not have information on historical transmission system losses.

b) Hydro One does not have the information to forecasts annual transmission system energy losses. Hydro One does not have specific plans to reduce transmission energy losses.

c) See response to b).

Environmental Defence INTERROGATORY #005

Reference:

Ex. B2, Tab 1, Sch. 1

Interrogatory:

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.

Response:

a), b) and c)

Hydro One does not have the information required to determine the cost of energy associated with transmission losses. The cost of transmission losses is included as one component of the uplift charges that the IESO charges all transmission-connected customers. The cost of transmission losses have no impact on the revenue requirement requested in Hydro One's application.

Environmental Defence INTERROGATORY #006

Reference:

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

Interrogatory:

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.

Response:

a) Hydro One would not support this measure at this time. The calculation involves a small number of transmission assets whose operation is directed by the IESO. Measuring the performance of these assets would not provide meaningful insight of Hydro One's system or business performance.

b) Refer to response to Exhibit I, Tab 5, Schedule 2. Additionally, transmission losses are to a large extent a function of generation dispatch, which is the purview of the IESO. For these reasons, this would not be an appropriate metric for Hydro One.