

August 17, 2017

**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-2017-0150 – Independent Electricity System Operator (IESO)  
Revenue Requirement**

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

Yours truly,



Kent Elson

Encl.

Cc: Parties in the above matter

Environmental Defense Interrogatories for the IESO

Issue 5.1 Is the IESO's proposed Regulatory Scorecard appropriate?

Reference for the following interrogatories: Ex. C-1-1, p. 4 and Ex.C-1-1, Attachment 1, p. 36

1. Please provide the annual transmission losses (TWh) of the IESO-controlled Ontario electricity transmission system for each of the last ten years.
2. Please state the annual transmission losses of the IESO-controlled Ontario electricity transmission system as a percentage of its annual throughput volumes for each of the last ten years.
3. Please state the financial cost to Ontario electricity consumers of Ontario's annual transmission losses for each of the last ten years. Please show your assumptions and calculations. If the IESO calculates the financial cost to consumers based only on the HOEP, please also provide a calculation of the financial cost that includes all costs included in the Global Adjustment Charge.
4. Please provide the annual peak hour transmission losses of the IESO-controlled Ontario electricity transmission system for each of the last ten years.
5. Please state the annual peak hour transmission losses of the IESO-controlled Ontario electricity transmission system as a percentage of its annual peak hour demands for each of the last ten years.
6. Please state the financial cost to Ontario's electricity consumers of Ontario's annual peak hour transmission losses for each of the last ten years. Please show your assumptions and calculations. If the IESO calculates the financial cost to consumers based only on the HOEP, please also provide a calculation of the financial cost that includes all costs included in the Global Adjustment Charge.
7. Please describe in detail how transmission losses are measured, how the cost of transmission losses are recovered, which entities/customers bear those costs, and in what approximate proportion the various entities/customers bear those costs.
8. Please describe in detail:
  - a. How the Net Energy Market Settlement Uplift is calculated;
  - b. The purpose of the Net Energy Market Settlement Uplift; and
  - c. The ways in which that purpose differs from the purpose of calculating the total cost of losses to electricity consumers.

9. Please list and describe all of the actions and processes by which the IESO optimizes or could optimize the level of transmission losses (e.g. generation siting, generation dispatch, voltage control, identification of incremental line or equipment investments, expansion of demand response, etc.). Please provide a full and comprehensive response.
10. Please list and describe all of the actions and processes for optimizing transmission losses that are the responsibility of entities other than the IESO. For each action and process, please describe any role that the IESO plays with respect to those actions and processes or, where appropriate, please indicate that the IESO plays no role at all whatsoever.
11. Please provide all IESO reports, policies, procedures, standards, or other similar such documents that describe what the IESO does to optimize transmission losses.
12. The European Regulators' Group for Electricity and Gas states that "it is important to ensure that network operators face adequate incentives so that they make an appropriate effort on evaluating the costs and benefits of reducing losses and, hence, optimise the level of losses in the most efficient way."<sup>1</sup> Does the IESO agree with this statement? Please explain why or why not.
13. If the Board were to direct the IESO to measure and monitor the effectiveness of its efforts to optimize the level of transmission losses, please compare, rank, and discuss the appropriateness of the following metrics:
  - a. Annual transmission losses (TWh);
  - b. Annual transmission losses (TWh) as a percent of total annual transmission throughput volumes (TWh);
  - c. Total annual cost of transmission losses to consumers; and
  - d. Total annual cost of transmission losses to consumers per TWh of total annual transmission throughput volumes.
14. If the IESO wished to measure and monitor the effectiveness of its efforts to optimize the level of transmission losses or the Board were to direct it to do so, what metric(s) would it use? Please explain.

Reference for the following interrogatories: Exhibit C, Tab 1, Schedule 1, p. 4

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<sup>1</sup> European Regulators' Group for Electricity and Gas, *Treatment of Losses by Network Operators ERGEG Position Paper for public consultation*, Ref: E08-ENM-04-03, July 15, 2008 ([http://www.energy-regulators.eu/portal/page/portal/EER\\_HOME/EER\\_CONSULT/CLOSED%20PUBLIC%20CONSULTATIONS/ELECTRICITY/Treatment%20of%20Losses/CD/E08-ENM-04-03\\_Treatment-of-Losses\\_PC\\_2008-07-15.pdf](http://www.energy-regulators.eu/portal/page/portal/EER_HOME/EER_CONSULT/CLOSED%20PUBLIC%20CONSULTATIONS/ELECTRICITY/Treatment%20of%20Losses/CD/E08-ENM-04-03_Treatment-of-Losses_PC_2008-07-15.pdf))

15. Please provide the TRC Test net benefits of the IESO's CDM programs for each of the past ten years.
16. Would the IESO object to the inclusion of the TRC Test net benefits of its CDM programs as one of its Regulatory Scorecard's metrics? If yes, please fully explain and justify the IESO's objections.
17. Please provide the IESO's rationale for proposing the conservation metric of "annual reporting of portfolio cost (\$/kWh)."
18. Please:
  - a. Explain in detail the basis for the proposed target of within 0.04\$/kWh for the cost of conservation per kWh;
  - b. Indicate whether the government has approved that target, and if yes, include documentation indicating as such; and
  - c. Provide any studies, reports, or presentation prepared by the IESO in relation to that proposed target.
19. The IESO's consultant, John Todd, concluded with respect to the TWh conservation targets that "Appropriate annual milestones consistent with these long-term targets should be identified for reporting in the Scorecard." What annual milestones does the IESO believe would be appropriate? Please explain and justify any response.
20. In its May 2017 report, *Ontario-Quebec Interconnection Capability: A Technical Review*, the IESO described a number of options which could increase Ontario's capacity to import electricity from Quebec using the existing interties and by building a new 2,000 MW intertie (see pages 18 to 27). Please state the IESO's dates for the completion of cost-benefit analyses with respect to each of these options.
21. In its *Ontario-Quebec Interconnection Capability* report, the IESO described a number of options which could increase Ontario's capacity to import electricity from Quebec. Would the IESO object to the inclusion of the completion of cost-benefits analyses with respect to these options as one of its Regulatory Scorecard's metrics? If yes, please fully outline and explain the IESO's objections.