

Elson Advocacy

October 21, 2020

Megan Lund

Independent Electricity System Operator
1600-120 Adelaide Street West
Toronto, Ontario M5H 1T1

Dear Ms. Lund,

Re: IESO Transmission Losses Engagement

I am writing to provide comments on the IESO transmission losses webinar on September 30, 2020.

Overall Process Comments

As a preliminary matter, it is important to emphasize that this process is required by previous Board orders and a settlement agreement to focus on tangible improvements and to include key elements of the IESO's scorecard consultation, such as a report by an independent expert and extensive intervenor participation. The Board did not direct the IESO merely to provide information on what it already does to address transmission losses. It directed the IESO to explore additional cost-effective opportunities. The Board's direction in the 2017/2018 Hydro One transmission rates case reads as follows:

The OEB finds that, given the magnitude of line losses, Hydro One should work jointly with the IESO to explore cost effective opportunities for line loss reduction. Hydro One should also explore, as part of its investment decision process, opportunities for economically reducing line losses. The OEB requires Hydro One to report on these initiatives as part of its next rate application.¹

In the 2017 IESO fees case, the Board specifically directed the IESO to work jointly with Hydro One on these issues and report back to the Board.²

In the 2018 fees case, the Board felt that the transmission losses issue was sufficiently important to include a separate issue in the list: "What is the status of the IESO's transmission losses study?" As you know, the issue was settled on the basis of the following commitment:

The IESO will engage with stakeholders regarding the IESO's transmission losses work/report (similar to the 2017 engagement the IESO undertook on the development of its regulatory scorecard) including a discussion of the

¹ Decision in EB-2016-0160, p. 32.

² Decision in EB-2017-0150, October 31, 2018, pp. 2-3.

transmission losses processes used by National Grid UK, the recommendations of the Council of European Energy Regulators, and methodologies to assess the cost effectiveness of transmission loss reduction measures.

This term of the settlement was accepted by the Board and incorporated into its decision and order. We note that slide 6 of the IESO's webinar presentation included an inaccurate excerpt from the settlement agreement that removed the key text bolded about (without an ellipsis).³

There are important aspects of the above wording in relation to the 2017 engagement, which the Board approved:

- (1) **Independent Expert:** This engagement must be similar to the IESO's scorecard engagement. An independent expert ran that engagement and produced a report with recommendations. To be consistent with the settlement wording, this process must involve an independent expert who prepares a report.
- (2) **More than Information Sharing:** Like the scorecard engagement process, the losses engagement process must be more than information sharing. The scorecard process involved stakeholder participation in the development of a proposed scorecard. This process must be similarly concrete, focusing on proposals for improvements with respect to transmission losses.
- (3) **Focus on Improvements:** The settlement wording referred back to the IESO's work to address the Board's transmission losses directive. That directive required the IESO to explore additional opportunities to cost-effectively reduce transmission losses. That must be the focus of the engagement process, not merely information sharing.
- (4) **Report:** The agreement makes reference to the IESO engaging with stakeholders in the development of a "report." This is consistent with the request that the engagement centre on a report outlining opportunities to cost-effectively reduce losses.

The session on September 30, 2020 was not at all "similar to the 2017 engagement the IESO undertook on the development of its regulatory scorecard." The scorecard engagement sessions were led by an independent expert. They involved an open-minded discussion of the issues and a collaborative approach to develop a final report. Stakeholders were directly involved in developing the report. In contrast, the September 30, 2020 session, particularly the second half, appeared to primarily consist of the IESO explaining its existing practices at a high-level, asserting that those are best practices, and suggesting that no changes are needed.

We hope that a future stage of this process will focus on specific improvements and involve an independent expert as envisioned by previous Board orders and the settlement agreement in this matter.

³ The slide said: "As part of settlement of the IESO's 2018 Revenue Requirement Submission, the IESO agreed with intervenors to undertake the following with respect to the issue of transmission losses: "engage with stakeholders regarding the IESO's transmission losses work/report including a discussion of the transmission losses processes used by National Grid UK, the recommendations of the Council of European Energy Regulators, and methodologies to assess the cost effectiveness of transmission loss reduction measures.""

Substantive Comments

During the September 30, 2020 session I provided comments on each of the discussion questions. Those comments will not be repeated here. Instead, we will focus on the following three high-level points.

Transmission Losses Guidelines and Processes

The IESO has asked for comments on the current approach to losses. We believe it is too early to expect stakeholders to provide anything but high-level comments. Hydro One has been directed to “prepare an internal Hydro One guideline delineating the transmission line loss process that Hydro One will follow and is accountable for” which will be “refined throughout the IESO stakeholder consultation as necessary.”⁴ Hydro One and the IESO have not yet prepared a draft of their respective guideline and process documents. We believe the appropriate next step is for those draft guidelines to be circulated for comment.

During the session on September 30 we provided some examples of items that should be addressed in these guidelines. Please also refer to the following submissions starting at the bottom of page 4: <http://www.rds.oeb.ca/HPECMWebDrawer/Record/559983/File/document>.

Valuation of Losses

It appears at this stage that the most important issue with respect to the IESO is the economic value assigned to loss reduction measures (i.e. the avoided cost methodology). Hydro One has said that it only includes the Hourly Ontario Energy Price (HOEP) in its valuation and completely excludes the Global Adjustment (GA). It says that it is bound to do this by IESO protocols. This excludes over 75% of the actual cost of electricity and thus greatly undervalues potential investments to reduce transmission losses. It is also inconsistent with the practices of distributors, which include the GA in their economic evaluations of loss reduction measures.⁵ Although it may be appropriate to exclude the GA for market settlement purposes, it is not appropriate to do so for economic evaluation of loss reduction measures.⁶

Including only the HOEP assumes that there are no other financial benefits to loss reductions, which we know is incorrect. This runs counter to best practices in economic evaluation of energy efficiency and other distributed energy resources. Synapse Energy describes the principle as follows:

“DER impacts should not be excluded or ignored on the grounds that they are difficult to quantify or monetize. Approximating hard-to-quantify impacts is preferable to assuming that those costs and benefits do not exist or have no value.”⁷

⁴ EB-2019-0082, Decision and Order, April 23, 2020, p. 58.

⁵ See e.g. page 17 of this PDF See page 17 of this pdf: <http://www.rds.oeb.ca/HPECMWebDrawer/Record/679185/File/document>.

⁶ EB-2016-0160, Transcript, Vol. 12, p. 100, ln. 16 to p. 101, ln. 5.

⁷ Synapse Energy, Benefit-Cost Analysis for Distributed Energy Resources, September 22, 2014, p. 36 ([link](#)).

Including only the HOEP also runs counter to the marginal cost and avoided cost calculations published by the IESO as part of its most recent Annual Planning Outlook.⁸

However, we believe an external expert is needed to review these issues and comment on an appropriate avoided cost methodology for transmission loss reduction measures. We ask that this be added to the work of an expert hired for this process. Alternatively, we request cost eligibility to retain an expert to undertake that task for the purposes of this process.

Example of Loss Planning and Documentation

We would like to bring the recent settlement agreement with Hydro Ottawa to the attention of both Hydro One and the IESO. Hydro Ottawa is a good example of efforts made to proactively manage losses and seek additional opportunities to reduce losses. In short, Hydro Ottawa has been open to specific targets and to seeking additional cost-effective opportunities. The agreement states as follows:

Between 2021 and 2025, Hydro Ottawa shall endeavour to maintain its five-year average total system losses⁹ below the target of 3.02% set by the OEB in EB-2005-0381 through cost-effective measures.

In addition, over the course of 2020-2021, Hydro Ottawa shall prepare a plan to reduce distribution losses as much as possible through cost-effective measures. The utility shall file the plan with the OEB when complete. In 2022-2025, Hydro Ottawa shall implement as many of the cost-effective measures set out in its plan as possible (e.g. any changes to planning and procurement processes to better mitigate losses, investments that can be made within current budgets, operational measures, etc.). All other cost-effective measures will be incorporated into the utility's next rebasing application and DSP.

Finally, as described in Hydro Ottawa's response to undertaking JT 3.10, a pilot of a Grid Edge Volt/VAr Control ("VVC") solution will be complete by the end of 2020. If this pilot is successful, Hydro Ottawa shall increase the deployment of these (or equivalent) units by conducting an analysis in 2021 to identify potential suitable locations and by deploying these units in a subset of locations which are deemed to be suitable and cost-effective, with an estimated investment of up to \$1.0M over the five-year test period. The cost of these investments will be accommodated within the overall approved capital budget.¹⁰

⁸ See <http://www.ieso.ca/-/media/Files/IESO/Document-Library/planning-forecasts/apo/APO-Marginal-Costs-Jan2020.xlsx?la=en> and <http://www.ieso.ca/-/media/Files/IESO/Document-Library/planning-forecasts/apo/APO-Avoided-Costs-Jan2020.xlsx?la=en>.

⁹ "Total System Losses" refers to the losses as a percentage of purchases, as shown in Table 1 of UPDATED Exhibit 8-9-1: Loss Adjustment Factors. To provide additional clarity, the "Electricity Purchases" shown in Table 1 refer to the "Wholesale" kWh delivered to the distributor (higher value) as shown in UPDATED Attachment 8-9-1(A): OEB Appendix 2-R - Loss Factors, and therefore include supply losses. For further clarity, this includes losses in the distributor's system and transmission losses upstream of the distributor.

¹⁰ EB-2019-0261, Settlement Proposal, September 18, 2020, pp. 22-23.

This recent commitment from Hydro Ottawa builds on previous work:

- Hydro Ottawa's 2006 loss reduction plan can be found starting at page 19 of this PDF: <http://www.rds.oeb.ca/HPECMWebDrawer/Record/683000/File/document>.
- Hydro Ottawa's 2011 update on that plan can be found starting at page 5 of this PDF: <http://www.rds.oeb.ca/HPECMWebDrawer/Record/679185/File/document>.
- There are also some further updates on pages 12 to 18 of this PDF: <http://www.rds.oeb.ca/HPECMWebDrawer/Record/683000/File/document>.

Of course, many of the specific measures to reduce losses differ as between distributors, transmitters, and system operators. However, we believe Hydro Ottawa provides a good example of the kind of attention and thoroughness this issue warrants.

We look forward to the next steps in this process.

Yours truly,

A handwritten signature in blue ink, appearing to read 'K. Elson', written in a cursive style.

Kent Elson