

# Elson Advocacy

October 6, 2022

## BY EMAIL AND RESS

**Nancy Marconi**

Board Secretary

Ontario Energy Board

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

Toronto, Ontario M4P 1E4

Dear Ms. Marconi:

**Re: EB-2022-0140 – Hydro One Networks Inc. – Application for Leave to Construct the Chatham to Lakeshore Transmission Project**

I am writing to provide submissions on behalf of Environmental Defence regarding Hydro One Network Inc.'s ("Hydro One") application for leave to construct the Chatham to Lakeshore Transmission Project.

Hydro One has applied to the Ontario Energy Board ("OEB") for leave to construct approximately 49 kilometres of 230 kV electricity transmission line facilities between the Chatham Switching Station and the Lakeshore Transformer Station ("Project"). The Project is anticipated to cost over \$235 million and be in service by 2025. The Project is needed to respond to increases in load growth in the region, primarily due to the significant increase in greenhouse operations.<sup>1</sup> Relying on an assessment conducted by the IESO, Hydro One forecasts a shortfall between transmission capability and forecast load beginning in 2025.<sup>2</sup>

Environmental Defence strongly supports new transmission infrastructure in this quickly growing area. There is no doubt that the Project is needed. Moreover, by increasing transmission capacity, the Project will support the increased electrification of transportation, space heating and some industrial processes in the region, all of which are likely to occur as Canada works to meet its binding greenhouse gas emissions reductions targets under the *Canadian Net-Zero Emissions Accountability Act*.<sup>3</sup>

However, Hydro One has conducted a fundamentally flawed analysis to support its decision to use a 1443 kcmil ASCR conductor instead of a larger 1780 kcmil ACSR conductor. In particular, a larger conductor would reduce line losses, and Hydro One has not properly estimated the value of those potential line loss reductions to determine if upsizing the conductor would be cost-

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<sup>1</sup> Exhibit B, Tab 3, Schedule 1, Attachment 2, Page 15

<sup>2</sup> Exhibit B, Tab 3, Schedule 1, pp 1-2.

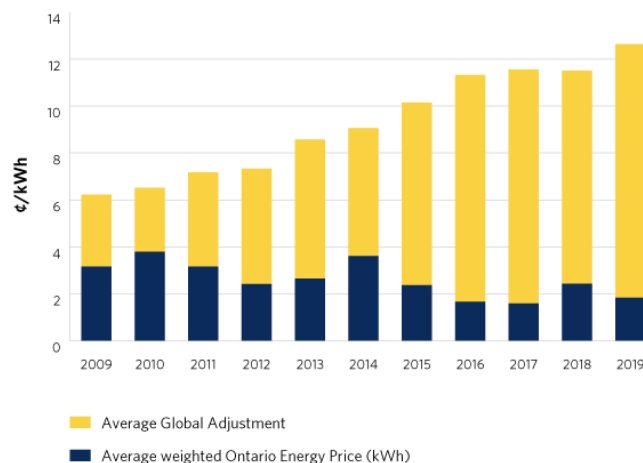
<sup>3</sup> [Canadian Net-Zero Emissions Accountability Act](#), S.C. 2021, c. 22.

effective. That is because Hydro One’s valuation of loss reductions was based on the energy savings alone and excluded the capacity savings.<sup>4</sup> This is contrary to the IESO’s latest draft of its *Transmission Planning Guideline: Consideration of Losses in the Transmission Planning Process*, July 22, 2021, which calls for an analysis that accounts for both energy and capacity savings.<sup>5</sup>

Hydro One’s approach is also contrary to common sense. As described in the IESO Guideline, “[i]n addition to the economic energy benefit/saving, there is a potential for additional savings as a result of peak demand reduction. The peak saving is a direct result of power loss savings during peak hours.”<sup>6</sup> Lower line losses mean that the same load can be served with less electricity, thereby reducing the amount of generation capacity needed to serve that load. This is particularly important because transmission losses (and the savings from reduced losses) are greatest at the peak. Also, Ontario is currently procuring new generation capacity, so measures to reduce the need for that capacity have particular value at present.

Hydro One valued line loss reductions based only on the Hourly Ontario Energy Price (“HOEP”). However, that excludes a huge share of the cost of electricity in Ontario. For instance, all of Ontario Power Generation’s payment amounts are funded through the Global Adjustment. In EB-2020-0265 (Hawthorne to Merivale), Power Advisory prepared evidence outlining why line loss reductions cannot accurately be valued using the HOEP alone.<sup>7</sup> Power Advisory illustrated the problem with the following figure showing how the HOEP makes up only a very small component of overall electricity costs:

Average HOEP plus Average GA



8

<sup>4</sup> Response to ED Interrogatory #7(d) [Exhibit I, Tab 2, Schedule 7 (d)].

<sup>5</sup> *Transmission Planning Guideline: Consideration of Losses in the Transmission Planning Process*, July 22, 2021, p. 13 ([link](#)); Environmental Defence and Hydro One are participating in the IESO’s consultation on this guideline. The IESO has confirmed that the next and final draft also requires an analysis of energy and capacity savings and will be published very soon.

<sup>6</sup> *Ibid.*

<sup>7</sup> EB-2020-0265, *Evidence of Travis Lusney of Power Advisory*, Updated March 18, 2021 ([link](#)).

<sup>8</sup> *Ibid.*, p. 8.

Hydro One's flawed analysis is particularly problematic in this case because there is an indication that upsizing the conductor could be cost-effective. When Hydro One valued the losses at \$23.2/MWh, equivalent to the HOEP, a larger conductor was uneconomic. However, when valued at \$120/MWh, roughly equivalent to the HOEP plus the GA, the larger conductor would save ratepayers \$2.8 million.<sup>9</sup> A true estimate of the value of capacity is more complex, but the result of the assessment based the HOEP plus GA in the very least shows the strong need to conduct a full, proper analysis.

We assumed in this case that we would not need to hire our own consultant as we did in the Hawthorn to Merivale case. Instead, we asked Hydro One to value the losses based on the IESO's latest guideline.<sup>10</sup> We were very surprised when Hydro One declined to do so.<sup>11</sup> We then followed up and asked Hydro One more generally to value the losses accounting for both energy and capacity savings.<sup>12</sup> Again, Hydro One declined to do so.<sup>13</sup>

Unfortunately, it is now too late and Hydro One has effectively given the OEB no choice with respect to conductor size. Hydro One states as follows:

*A decision to change to a 1780 kcmil ACSR conductor, at this time, would require the abandonment of the completed design and commencement of a new design using this conductor. This would result in increased project cost and delay to the in-service date of the project.<sup>14</sup>*

At this stage, we cannot say whether and how much a larger conductor would save customers. And therefore we cannot ask the OEB to deny approval, particularly when we strongly agree with the need to build out transmission infrastructure to this growing area in a timely way. We therefore can only ask that Hydro One be directed to conduct future analysis in a way that is consistent with IESO transmission planning guidelines and file for approval soon enough to give the OEB a real choice in how the project is carried out.

Yours truly,



Amanda Montgomery

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<sup>9</sup> Exhibit B, Tab 9, Schedule 1, p. 4

<sup>10</sup> Response to ED Interrogatory #7(a) [Exhibit I, Tab 2, Schedule 7 (a)].

<sup>11</sup> *Ibid.*

<sup>12</sup> Response to Supplementary ED Interrogatory #10 [Exhibit I, Tab 2, Schedule 10].

<sup>13</sup> *Ibid.*

<sup>14</sup> Response to ED Interrogatory #9(c) [Exhibit I, Tab 2, Schedule 9].