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BY EMAIL

October 6, 2022

Ms. Nancy Marconi
Registrar
Ontario Energy Board
2300 Yonge Street, 27th Floor
Toronto, ON M4P 1E4
Registrar@oeb.ca

Dear Ms. Marconi:

**Re: Ontario Energy Board (OEB) Staff Submission
Hydro One Networks Inc. (Hydro One)
Leave to Construct Application – Chatham to Lakeshore Project
OEB File Number: EB-2022-0140**

Please find attached OEB staff's submission in the above referenced proceeding, pursuant to Procedural Order No. 4.

Yours truly,

Original Signed By

Andrew Bishop
Senior Advisor, Generation and Transmission

Encl.

cc: All parties in EB-2022-0140



ONTARIO ENERGY BOARD

OEB Staff Submission

Hydro One Networks Inc.

Leave to Construct Application – Chatham to Lakeshore Project

EB-2022-0140

October 6, 2022

1. Background and Overview

1.1 Overview of Application

Hydro One filed an application with the OEB under section 92 of the *Ontario Energy Board Act, 1998*, S.O. 1998, c. 15, (Schedule B) (the Act), seeking approval to construct approximately 49 kilometres (km) of 230 kilovolt (kV) double-circuit transmission line between Chatham Switching Station (SS) and Lakeshore Transformer Station (TS) and associated station facilities to connect the new transmission line at the terminal stations (Project).

The Project will include terminal station modifications at Chatham SS and Lakeshore TS to accommodate the new transmission line. Chatham SS will require new and modified structures within the station property to accommodate the termination of the two new 230 kV circuits. Lakeshore TS is currently under construction and accommodations will be made for the termination of the two new 230 kV circuits.

The proposed transmission line and station facilities will be located in the municipalities of Chatham-Kent and Lakeshore and the County of Essex.

Hydro One has also applied under section 97 of the Act for approval of the form of land use agreements it offers affected landowners.

1.2 OEB's Jurisdiction in Section 92 Applications

The criteria for the OEB's considering of an application under section 92 is found in section 96 of the Act (note in particular subsection 96(2)):

96 (1) If, after considering an application under section 90, 91 or 92 the Board is of the opinion that the construction, expansion or reinforcement of the proposed work is in the public interest, it shall make an order granting leave to carry out the work.

(2) In an application under section 92, the Board shall only consider the following when, under subsection (1), it considers whether the construction, expansion or reinforcement of the electricity transmission line or electricity distribution line, or the making of the interconnection, is in the public interest:

1. The interests of consumers with respect to prices and the reliability and quality of electricity service.

Section 97 of the Act states that leave shall not be granted under section 92 until the applicant satisfies the OEB that it has offered or will offer to each owner of land affected by the approved route or location an agreement in a form approved by the OEB.

1.3 Priority Project Designation and Hydro One Licence Condition

By Order in Council dated March 31, 2022¹, the Lieutenant Governor in Council identified the Project as a priority transmission project under section 96.1 of the Act. In accordance with s.96.1(2) of the Act, having been declared to be a priority project, the OEB must accept that the Project is needed when it considers whether the Project is in the public interest.

Further, Hydro One's licence includes a condition that it develop and seek approvals for the Project, including associated station facilities. This licence condition was introduced in response to a Ministerial Directive² received by the OEB on December 17, 2020, and the OEB's related Decision and Order³ dated December 23, 2020.

1.4 Overview of OEB Staff Submission

OEB staff supports Hydro One's section 92 request for leave to construct, subject to the standard conditions of approval set out in Section 2.6. OEB staff also supports Hydro One's section 97 request for approval of the forms of agreements it will offer affected landowners. OEB staff's full submission is provided in further detail below.

¹ [Order in Council, March 31, 2022](#)

² [Ministerial Directive, December 17, 2020](#)

³ [EB-2020-0309 Decision and Order, December 23, 2020](#)

2. OEB Staff Submission

2.1 Project Need and Alternatives

The need for the new transmission line has been determined by the Independent Electricity System Operator (IESO) in multiple reports, including the “Need for Bulk Transmission Reinforcement in the Windsor-Essex Region”⁴ report published in June 2019 and the “Need for Bulk System Reinforcements West of London”⁵ report published in September 2021. The IESO has indicated that the new transmission line is needed to provide a reliable and adequate supply of electricity to the Kingsville-Leamington area and the Windsor-Essex region, identifying a required in-service date prior to the winter of 2025-2026.⁶

Submission

OEB staff agrees that the Project is needed on the basis that, by Order in Council, the Project has been identified as a priority project in accordance with section 96.1(2) of the Act. Section 96.1(2) states that, when considering a leave to construct application for a priority project, “the Board shall accept that the construction, expansion or reinforcement is needed when forming its opinion under section 96.”

Further, an assessment of project alternatives is not required as Hydro One is mandated by virtue of its amended licence to develop and seek approvals for a new 230 kV double-circuit transmission line from the existing Chatham SS to the new Lakeshore TS, in accordance with the project scope and timing recommended in the aforementioned IESO report entitled “Need for Bulk Transmission Reinforcement in the Windsor-Essex Region.”

Notwithstanding that assessment of alternatives to fulfill need is not required in this proceeding, the IESO report described the alternatives it considered when developing its recommendation. The main alternative considered was the construction of a new natural gas-fired simple cycle gas turbine, located west of the switching station at the Leamington Junction. However, this option was found to be less cost-effective relative to the construction of a new transmission line. The IESO report indicated that the transmission option results in net present cost savings of approximately \$500 million compared to the generation option for supplying load under reference load growth assumptions.

⁴ [“Need for Bulk Transmission Reinforcement in the Windsor-Essex Region”, IESO, June 13, 2019](#)

⁵ [“Need for Bulk System Reinforcements West of London”, IESO, September 23, 2021](#)

⁶ “Need for Bulk Transmission Reinforcement in the Windsor-Essex Region”, IESO, June 13, 2019, p. 29.

The IESO report also found that significant demand response was infeasible due to the risk of disruption of greenhouse crop growth cycles. Other generation types were considered (e.g., wind, solar, storage, combined cycle gas turbine), however the profile of energy required to meet the need made these options less cost-effective.

2.2 Proposed Route

Hydro One is required as a condition of its licence to develop and seek approvals for a new 230 kilovolt double-circuit transmission line from the Chatham SS to the new Lakeshore TS. The licence condition does not establish a detailed route that the transmission line is required to follow.

Hydro One's draft Environmental Assessment (EA) evaluated three route alternatives and their corresponding variations based on natural environment, socio-economic environment, technical and cost related matters, and Indigenous consultation criteria.^{7,8} The EA established the preferred route – referred to as route alternative 2A in the EA – based on its performance against the aforementioned criteria. This is the route that Hydro One has proposed for the Project in the application. Specifically, and as stated in Hydro One's Interrogatory Response, route alternative 2A:

“...minimizes the overall impact to the natural and socio-economic environments compared to the other Route Alternatives and minimizes impacts to agricultural lands by utilizing an existing idle transmission corridor for nearly 1/3 of its total length. Selection of Route Alternative 2A thus minimizes new land requirements as 1/3 of its length makes use of an existing transmission corridor. From a technical perspective, Route Alternative 2A is more complex to construct (soil conditions, line angles, etc.) but crosses the fewest number of property parcels and makes use of the existing idle line corridor. From an Anishnawbek and Haudenosaunee Culture, Values and Land Use perspective, Route Alternative 2A minimizes impacts to the natural environment while balancing opportunities to co-locate with existing infrastructure and proximity from identified areas of historical significance to Anishnawbek communities.”⁹

Submission

Section 94 of the Act requires the applicant to file “a map showing the general location of the proposed work and the municipalities, highways, railways, utility lines and

⁷ The Chatham to Lakeshore 230 kV Transmission Line Class Environmental Assessment: Draft Environmental Study Report, page 5-6

⁸ Hydro One's EA assigns equal weightage to the four criteria outlined

⁹ Interrogatory Response to OEB Staff-18

navigable waters through, under, over, upon or across which the proposed work is to pass.” The Act does not identify a requirement for a formal approval related to this map. The issue related to section 94 in the standard issues list for electricity leave to construct applications asks: “Does the route map provided pursuant to section 94 of the OEB Act show the general location of the proposed work and the municipalities, highways, railways, utility lines and navigable waters through, under, over, upon or across which the proposed work is to pass?”

In its argument in chief, Hydro One states that the maps that it has provided with the application and through the interrogatory process satisfy the requirements of the Act and the standard issue. OEB staff agrees.

OEB staff has not yet seen the submissions of the intervenors. However, based on various correspondence and interrogatory questions, some intervenors may argue that the OEB should carefully review the detailed proposed route of the Project on the grounds that the selection of the route can have a material impact on the costs of the Project (and therefore ultimately the prices paid by consumers).

OEB staff agrees that price is one of the matters that the OEB considers in a section 92 application, and that the route of a transmission line can have a material impact on price where the costs of the transmission line will ultimately be passed on the consumers through rates. However, OEB staff notes that detailed routing selection is considered through the EA process. The EA’s review of the detailed route for the Project is broad, and its conclusions are based on a weighing of the advantages and disadvantages of each route alternative from a number of criteria: natural environment, socio-economic environment, technical and cost related matters, and Indigenous consultation.

The Project cannot be built without a completed EA, which falls under the purview of the Ministry of the Environment, Conservation and Parks. The purpose of the OEB’s leave to construct review process is to consider whether the Project as filed is in the public interest based on the criteria established in section 96(2) of the Act. With respect to the proposed route of the Project, OEB staff has no concerns related to the interests of consumers with respect to prices and the reliability and quality of electricity service.

2.3 Project Cost

The total estimated capital cost of the Project is \$267.7 million¹⁰, comprised of \$235.3 million for line work and \$32.4 million for station work. Hydro One stated the project cost estimate carries a level of confidence equivalent to a Class 3 (-20% / +30%) under the

¹⁰ This estimate includes overheads and capitalized interest but does not include removal costs of \$0.1 million.

AACE International (formerly the Association for the Advancement of Cost Engineering) estimate classification system.

Hydro One's estimated project cost includes a contingency amount in recognition of risks associated with land acquisition, subsurface conditions and approvals.

In relation to the line work, Hydro One cited the Supply to Essex County Transmission project and the Woodstock Area Reinforcement project as comparator projects; both involved the construction of double-circuit 230 kV transmission lines in southwestern Ontario that are less than 50 km in length.

However, Hydro One stated that it is appropriate to exclude real estate costs when comparing costs with the comparator projects. Hydro One stated that the real estate costs for the Chatham to Lakeshore project are significantly higher relative to the comparator projects due to:

- A significant escalation in the real estate market since the time the comparator projects were placed in-service; and
- The scope of the real estate acquisition program is far greater for the Chatham to Lakeshore project.¹¹

Through interrogatories, Hydro One provided details on steps it has taken to mitigate the real estate component of costs which include establishing a land acquisition program to reduce the reliance on expropriation and selecting a project corridor that has fewer full property buyouts than other route alternatives.

The total project cost per circuit km of the comparator transmission line projects was \$2 million (Supply to Essex County Transmission project) and \$2.8 million (Woodstock Area Reinforcement project), respectively. Hydro One estimates the Chatham to Lakeshore Project will cost \$2.8 million per circuit km. Hydro One attributes the higher costs of the Project, in relation to the Supply to Essex County Transmission project, to global supply chain issues, rising commodity prices (e.g., copper, steel, aluminum) and overall inflation.

The total cost of the Project's station work is \$32.4 million, including \$28.8 million for Chatham SS and \$3.6 million for Lakeshore TS. Hydro One cited the Wawa TS in northwestern Ontario, which cost \$31.4 million¹², as the comparator project for the

¹¹ Exhibit B, Tab 7, Schedule 1, p. 4

¹² Exhibit B, Tab 7, Schedule 1, p. 7

proposed changes to Chatham SS.¹³ Hydro One stated that the Wawa TS is a reasonable comparator because its scope of work was similar to the Chatham to Lakeshore Project and focused on connecting the East West Tie lines.

Submission

OEB staff submits that Hydro One followed a reasonable process for developing its project cost estimate¹⁴ and that it followed a reasonable process for assessing project risks and developing a contingency estimate.¹⁵ OEB staff also submits that Hydro One has provided a reasonable explanation of the differences in costs between the Chatham to Lakeshore Project and the Supply to Essex County Transmission project.¹⁶ Given the above, OEB staff does not take issue with Hydro One's cost estimate for the project.

It should be noted that real estate costs represent 40% of the total Project costs. OEB staff submits that Hydro One has followed a reasonable process to develop the real estate costs estimate and taken appropriate steps to mitigate costs.¹⁷

2.3 Consumer Impacts

Hydro One stated that the new transmission line should be included in the Network Pool as the line connects two network stations (i.e., Chatham SS and Lakeshore TS), and meets IESO-identified system needs. Hydro One further stated that the Project is not associated with any specific customer load application, and hence no customer capital contribution is required.

Due to the enabled load growth from the Project in Southwestern Ontario, the net incremental revenue is expected to have an overall rate mitigating impact over a 25-year time horizon. Hydro One estimated that the Project will have a positive net present value of \$5.8 million. This estimate assumes approximately \$24.6 million in annual incremental revenue over a 25-year period utilizing the 2022 Uniform Transmission Rates. The estimate also considers the initial Project cost of \$267.8 million, plus the assumed impact on the future capital cost allowance and Hydro One's corporate income taxes payable.

Over a 25-year time horizon, Hydro One anticipates that the Project will decrease the current network rate of \$5.13/kW/month to an average rate of 5.11/kW/month. Hydro

¹³ Hydro One stated that it is appropriate to adjust the comparator project cost to reflect inflation, land acquisition and line entrance costs that are not comparable to the station work for Chatham SS.

¹⁴ Interrogatory Response to OEB Staff-7

¹⁵ Interrogatory Response to OEB Staff-8

¹⁶ Interrogatory Response to OEB Staff-9

¹⁷ Interrogatory Response to OEB Staff-7

One estimated that the Project will decrease the typical residential customer bill by \$0.03 per month or 0.02%. This amounts to a decrease of approximately \$0.38 per year.

Submission

OEB staff submits that Hydro One's proposed allocation of project costs to the network rate pool is appropriate. OEB staff takes no issue with Hydro One's position that no customer contribution is required.

OEB staff also submits the consumer impacts of the Project are appropriate given the project costs and expected increase in revenue.

2.4 Reliability and Quality of Service

The IESO's Final System Impact Assessment (SIA) concluded that the Project is expected to have no material adverse impact on the reliability of the integrated power system.

Hydro One's Final Customer Impact Assessment (CIA) concluded that the project will not have any adverse effects on the transmission-connected customers in the area. Hydro One also noted that the Project will materially improve the power supply reliability of customers in the Windsor-Essex region.

Submission

OEB staff does not have any concerns about the reliability and quality of service associated with the Project, considering the IESO's SIA and Hydro One's CIA.

2.5 Land Matters

The total route length of the proposed new transmission corridor is approximately 49 km. Hydro One proposed to make use of approximately 19 km of Bill 58 (the Reliable Energy and Consumer Protection Act) corridor lands, which is land owned by the Province of Ontario and with Hydro One holding a statutory easement on these lands. Approximately 16 km of the Bill 58 corridor lands are occupied by an existing idle 115 kV line between Tilbury TS and Kent TS.

The new transmission corridor passes through primarily agricultural lands, a small portion of commercial lands and a small portion of rural industrial zoned lands. Hydro One has indicated that the new corridor is sited alongside an existing Hydro One transmission corridor or will be using Bill 58 corridor lands for 50% of the route.

Hydro One stated that the Project will require Hydro One to acquire land rights from 126 directly impacted property owners, consisting of 120 privately or municipally held properties and 6 railway crossings.

The new Project corridor will include a combination of the following land rights requirements:

- Hydro One statutory easements on provincially owned (Bill 58) lands (no new land rights required)
- Easement or fee simple rights on private and municipal properties (new land rights required)
- Rail crossing agreements (new land rights required)
- Temporary access and/or construction rights on provincially owned and private properties for access roads, temporary work headquarters, laydown areas and material storage facilities (new land rights required).

Table 1, below, lists the different land rights agreements that Hydro One has stated may be required, including details on the extent to which the forms of agreement have previously been approved by the OEB in prior proceedings.

Table 1: Forms of Land Rights Agreements and Prior OEB Approvals

Form of Agreement	Past OEB Approval
Early Access Agreement	Prior approval in EB-2019-0077, no substantive changes proposed
Agreement for Temporary Rights	Prior approval in EB-2019-0077, no substantive changes proposed
Damage Claim Agreement/Waiver	Prior approval in EB-2019-0077, no substantive changes proposed
Option to Purchase a Limited Interest – Easement	Prior approval in EB-2019-0077, small changes proposed
Compensation and Incentive Agreement – Easement	Prior approval in EB-2019-0077, small changes proposed
Option to Purchase – Fee Simple	Prior approval in EB-2019-0077, small changes proposed
Compensation and Incentive Agreement – Fee Simple	Prior approval in EB-2019-0077, small changes proposed
Off Corridor Access	New Agreements
Crop Land Out of Production Agreement	New Agreements
Option to Purchase a Limited Interest- Easement with a Voluntary Buyout Offer	New Agreements

Submission

OEB staff has reviewed the proposed forms of agreements and has no issues or concerns. Many of the agreements are generally consistent with the agreements approved by the OEB through previous proceedings.¹⁸ Hydro One has also indicated through interrogatory responses why the new agreements are required to facilitate the Project. OEB staff observes that as a general matter the new agreements appear to be in response to landowner requests or concerns. OEB staff further notes that the forms of agreement serve only as the initial offer to landowners, and may not reflect the final agreement that is agreed to between the parties.

Hydro One confirmed that all impacted landowners have the option to receive independent legal advice regarding the land agreements, and that it would commit to reimbursing those landowners for reasonably incurred legal fees associated with the review and completion of the necessary land rights.¹⁹

2.6 Conditions of Approval

The Act permits the OEB, when making an order, to impose such conditions as it considers proper. The OEB has established a set of standard conditions of approval for electricity leave to construct applications. Those conditions were attached to Procedural Order No. 1 in this proceeding.²⁰

Submission

OEB staff proposes that the standard conditions of approval attached to Procedural Order No. 1 be placed on Hydro One. The proposed conditions have been approved by the OEB in prior leave to construct applications. They have been reviewed by Hydro One during this proceeding; Hydro One has agreed to them.²¹

3. Conclusion

OEB staff submits that Hydro One's leave to construct application for the Project is in the public interest as defined by section 96(2) and should be granted subject to the conditions of approval proposed in this submission and that Hydro One's proposed forms of landowner agreements should be approved.

¹⁸ EB-2019-0077 Decision and Order, October 17, 2019 (Power South Nepean Project)

¹⁹ Interrogatory Response to OEB Staff-14

²⁰ Procedural Order No. 1, Schedule A, Attachment 1

²¹ Interrogatory Response to OEB Staff-10

The project has been identified as a priority project and is being constructed in accordance with Hydro One's licence. Further, its impacts on price, and reliability and quality of service are appropriate.

OEB staff further submits that the forms of agreement proposed under section 97 are appropriate and should be approved by the OEB.

~All of which is respectfully submitted~