Ontario Energy Board | Commission de l'énergie de l'Ontario

BY EMAIL

September 14, 2026

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

Dear Ritchie Murray:

Re: Ontario Energy Board (OEB) Staff Submission
Hydro One Networks Inc.
Leave to Construct Application – D6 Relocation Project
OEB File Number: EB-2026-0112

Please find attached OEB staff's submission in the above referenced proceeding, pursuant to Procedural Order No. 1.

Yours truly,

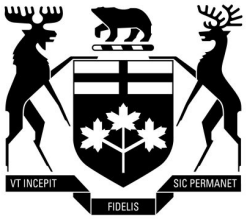
Muhammad Yunus

Digitally signed by Muhammad Yunus
Date: 2026.09.14 11:22:40 -04'00'

Muhammad Yunus
Advisor, Transmission

Encl.

cc: All parties in EB-2026-0112



ONTARIO ENERGY BOARD

OEB Staff Submission

Hydro One Networks Inc.

Leave to Construct Application – D6 Relocation Project

EB-2026-0112

September 14, 2026

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1. Background and Overview

1.1 Overview of the Application

On May 13, 2026, Hydro One Networks Inc. (Hydro One) applied for an Order under section 92 of the *Ontario Energy Board Act, 1998* (OEB Act) for leave to construct electricity transmission facilities in Renfrew County.

In its application Hydro One proposed the construction of approximately 21 km of new 115 kV single-circuit transmission line in a greenfield corridor to relocate a segment of the D6 transmission line that has been confirmed through condition assessment to have reached end of life (the Project). Hydro One explains that the complete D6 transmission line is a 98.2 km, 115 kV single-circuit transmission line that connects the Des Joachims Transformer Station (TS) with Pembroke TS.

Refurbishment work for 77 km of the transmission line was described to the OEB in Hydro One's 2020-2022 Revenue Requirement application.[1] Hydro One confirmed the completion of the refurbishment of 48 km of the transmission line in 2022, with the outstanding portion being the subject of this application.[2]

The portion of the transmission line which Hydro One proposes to relocate crosses the Canadian Forces Base Petawawa which is an active military base and includes a live firing range. Hydro One has been unable to secure the required access and approvals from the Department of National Defence (DND) to complete the necessary refurbishment of the line in its current location.[3] The proposed relocated line segment will be constructed between existing D6 line structures #236 and #437.[4]

Hydro One also applied under section 97 of the OEB Act for approval of the forms of land use agreements it has offered, or will offer, to affected landowners.

1.2 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 2.7 of this submission.

OEB staff supports Hydro One's section 97 request for approval of the forms of agreements it will offer to affected landowners. OEB staff's submission is provided in detail in the following sections.

[1] EB-2019-0082
[2] Clarification Question Responses, August 7, 2026, Response No. 1, pp. 1-2
[3] Exhibit B, Tab 2, Schedule 1, pp. 1-2
[4] Exhibit B, Tab 2, Schedule 1, Attachment 2, p. 1

2. OEB Staff Submission

2.1 Project Need, Alternatives and Route

2.1.1 Project Need

OEB staff submits that the evidence demonstrates the need for the Project to complete the D6 transmission line and ensure continued service to existing loads.

Although Hydro One holds the land rights to the existing corridor, Hydro One states that the *Defence Controlled Access Area Regulations* supersedes those land rights and allows DND to restrict Hydro One's access to the corridor. There is also a safety risk as DND has confirmed that the grounds contain the hazard of live unexploded ordnances.[5]

The Independent Electricity System Operator (IESO) provided supplemental evidence stating that the D6 transmission line serves several stations in the area and so continued service on the corridor is essential to maintaining supply to existing loads. The evidence mentions that Hydro One's 2021 Needs Assessment and Hydro One's 2023 Regional Infrastructure Plan (RIP) for the Renfrew Region identified a need to undertake end-of-life refurbishment of the D6 transmission line.[6]

Hydro One noted in its argument-in-chief that the portions of the D6 transmission line outside of the Project have been refurbished and when the Project is completed, the reliability need identified in the 2021 Needs Assessment will be complete.[7]

In OEB staff's view, the Project is consistent with the recommendations contained in the 2021 Needs Assessment and the 2023 RIP.

2.1.2 Project Alternatives and Project Route

OEB staff submits that Hydro One has demonstrated that the Project is the preferred option to address the need. In OEB staff's view, the selection of conductor and consideration of alternatives were appropriate.

Hydro One states that there are no practical alternatives to the Project. The route of the Project was determined through the Class Environmental Assessment (EA) process in accordance with Ontario's *Environmental Assessment Act*.[8] Hydro One filed an

[5] Exhibit B, Tab 3, Schedule 1, p. 1
[6] Exhibit B, Tab 3, Schedule 1, pp. 4-5
[7] Argument-in-Chief, p. 4, para. 15
[8] *Environmental Assessment Act, R.S.O. 1990, c. E.18*. See Exhibit B, Tab 5, Schedule 1, p. 1.

overview map of the Project which represents the final preferred route and station locations that were selected through the Class EA process.[9]

OEB staff submits that the map that Hydro One filed with the application satisfies the requirements of the OEB Act[10] and issue 7.2 of the standard issues list[11] for leave to construct applications.

The route selected in the EA process for the relocation was determined in concert with the DND who recommended placing the transmission line adjacent to Highway 17, which would reduce the length of the relocated section from 26 km to approximately 21 km.[12] The new route also crosses DND lands but is removed from where dangerous activities are expected to occur.[13]

Hydro One conducted an analysis of conductor size alternatives that would meet the supply capability requirements for the D6 transmission line. Four conductors were considered and a 50-year net present value analysis was conducted using a 5.65% discount rate. The analysis compared different energy prices and considered line losses and found the most economically efficient alternative to be the 411.4 kcmil ACSR/TW conductor.[14]

2.2 Project Cost

OEB staff submits that Hydro One has provided sufficient information to demonstrate that the estimates of the Project cost are reasonable.

In the application, Hydro One estimated the cost of the new 21 km section of 115 kV transmission line to be $37.1 million. An additional $3.1 million of OM&A removal costs are associated with the construction of the Project, bringing the total cost of the Project to $40.2 million.[15]

Hydro One indicated that this cost estimate was developed using internal cost estimate tools and techniques, and a risk management model for the contingency allowance. Hydro One assigned a confidence level consistent with a Class 3 (-20% / +30%) estimate classification under the Association for the Advancement of Cost Engineering International estimate classification system, reflecting a moderate level of definition for

[9] Exhibit B, Tab 2, Schedule 1, Attachment 1
[10] Section 94 of the OEB Act requires the applicant to file “a map showing 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.”
[11] OEB Standard Issues List for Leave to Construct Applications
[12] Exhibit B, Tab 3, Schedule 1, Attachment 2, p. 1
[13] Exhibit B, Tab 3, Schedule 1, p. 2
[14] Exhibit B, Tab 5, Schedule 1, pp. 1-4
[15] Exhibit B, Tab 7, Schedule 1, p. 1

project scope, risk, and cost estimation.[16]

Hydro One stated that it has delivered a relatively small number of 115 kV greenfield transmission line projects recently which limits the availability of directly comparable projects. Hydro One provided the K4 Transmission Line Refurbishment Project, the X2Y Transmission Line Refurbishment Project and the D6 Transmission Line Refurbishment Project as comparable projects.[17] Hydro One stated that adjustments were made to the total project costs to exclude specific cost elements that are project specific, non-comparable, or driven by scope differences.[18]

As shown in Table 1, the Project's line work costs are estimated at approximately $879,000 per kilometre, which is slightly higher than the per kilometre costs for the X2Y Transmission Line Refurbishment Project and the D6 Transmission Line Refurbishment Project. However, this cost is lower than the per kilometre cost for the K4 Transmission Line Refurbishment Project.

Table 1: Costs of Comparable Line Projects[19]

	K4 Transmission Line Refurbishment Project	X2Y Transmission Line Refurbishment Project	D6 Transmission Line Refurbishment Project	D6 Relocation Project (The Project)
Total Adjusted Comparable Cost ($000s)	$11,596	$6,567	$42,071	$18,455
Approximate Length (km)	10.0	7.6	48.0	21.0
Unit Cost ($000s/Km)	**$1,160**	**$864**	**$876**	**$879**

OEB staff submits that it has no concerns regarding the comparable projects used by Hydro One as benchmarks for the Project. OEB staff notes that the cost for the Project is largely in line with the cost of the comparable projects, adjusting for current market conditions.

A breakdown of the Project line costs is shown in Table 2:

[16] Exhibit B, Tab 7, Schedule 1, p. 1
[17] Exhibit B, Tab 7, Schedule 1
[18] Exhibit B, Tab 7, Schedule 1, p. 5
[19] Exhibit B, Tab 7, Schedule 1, Table 2, pp. 8-9

Table 2: Line Costs[20]

	Estimated Cost ($000's)	Percentage (%)
Materials	$8,483	23%
Labour	$10,976	30%
Equipment Rental & Contractor Costs	$8,468	23%
Sundry	$1,033	3%
Contingencies	$2,927	8%
Overhead	$2,522	7%
Allowance for Funds Used During Construction	$1,416	4%
Real Estate	$1,309	4%
Total Project Work	**$37,135**	**100%**

Contingency Costs

OEB staff submits that Hydro One has adequately identified and described the risks associated with the Project and has included an appropriate contingency budget.

Hydro One's Project cost estimate includes an allowance for contingencies that may impact the final Project costs upon completion. The contingency allowance is intended to cover the following key Project risks:

- Permits, Approvals and Authorizations
- Procurement
- Subsurface Conditions
- Outage Constraints

Hydro One explained that the contingency amounts for the Project were developed using an industry established best practices methodology that utilized a risk management model that includes both a qualitative and quantitative risk analysis.[21]

Project Cost Evolution

In Hydro One's 2020-2022 revenue requirement application,[22] submitted March 21, 2019, the total cost for the refurbishment of the entire 77 km D6 transmission line was estimated to be $21.7 million based on an in-service date of 2021.[23] In its response to clarification questions from the OEB, Hydro One stated that it completed the refurbishment of approximately 48 km of the D6 transmission line in 2022 at a cost of

[20] Exhibit B, Tab 7, Schedule 1, Table 1, p. 1
[21] Exhibit B, Tab 7, Schedule 1, p. 2
[22] EB-2019-0082
[23] Exhibit B, Tab 10, Schedule 1, Attachment 1, p. 13 (Hydro One has included information from its 2020-2022 revenue requirement application [EB-2019-0082] at this reference)

$34.7 million, and that the total cost of the Project is fully incremental to the previous forecast.[24]

OEB staff notes that the total cost for the complete refurbishment of the D6 transmission line has grown substantially since the initial forecast was provided in Hydro One's 2020-2022 revenue requirement application.[25] The total combined cost of the D6 Refurbishment Project and the Project provided in this application is calculated as $74.9 million[26]. This represents an approximate increase of 345% to the initial $21.7 million provided in 2019. However, OEB staff notes that the total cost of the D6 refurbishment is beyond the scope of this proceeding and may be addressed by OEB staff in Hydro One's next rebasing proceeding.

2.3 Consumer Impact

Hydro One indicated that the Project's costs will be included in the line connection pool for cost classification and recovery purposes. As the Project is classified as a sustainment project, no customer contribution is required.[27]

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

A 25-year discounted cash flow analysis on the total $40.2 million Project cost, inclusive of the $3.1 million removal costs, indicated that the Project will have a negative net present value of $34.9 million.[28]

Hydro One estimated that the Project will increase the typical residential customer bill by $0.02 per month or 0.01%.[29] OEB staff submits that the consumer impacts of the Project are appropriate given the need for the Project as justified by Hydro One's evidence.

2.4 Reliability and Quality of Service

The IESO's final System Impact Assessment (SIA), dated April 24, 2026, concluded that the Project is expected to have no material adverse impact on the reliability of the integrated power system, provided that all requirements in the SIA report are

[24] Clarification Question Responses, August 7, 2026, Response No. 1, pp. 1-2
[25] EB-2019-0082
[26] $34.7 million + $40.2 million = $74.9 million
[27] Exhibit B, Tab 9, Schedule 1, p. 1
[28] *Ibid.*
[29] Exhibit B, Tab 9, Schedule 1, pp. 2-3

implemented.[30]

Hydro One's Final Customer Impact Assessment (CIA) concluded that the Project "will not have any adverse impact on the IESO-controlled grid when all the recommendations in the SIA, if any, are implemented."[31]

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

2.5 Economic Growth

The OEB's filing requirements for electricity transmission leave to construct applications provide that where an applicant asserts that a project will support economic growth, the applicant should provide evidence supporting this assertion and an indication of the economic growth policies of the Government of Ontario that are relevant to the project.[32]

In the application, Hydro One did not assert that the Project will support economic growth. In its argument-in-chief, Hydro One asserts that

> the Project supports economic growth by ensuring that the electricity transmission system has adequate capacity and reliability to accommodate ongoing and future development in the Renfrew Region, consistent with the objectives of the OEB Act and the policies of the Government of Ontario.[33]

OEB staff does not make specific submissions regarding economic growth but notes that, related to the issue of need mentioned in section 2.1, the D6 transmission line serves several stations in the area and it is essential to maintaining supply to existing customers.

2.6 Landowner Agreements

The 21 km transmission line will be sited within a corridor approximately 30 m wide. Approximately 18 km of the line traverses federally owned lands abutting Highway 17.[34] The remaining three kilometres cross private properties.

Hydro One stated that it has achieved voluntary settlement agreements with all affected

[30] Exhibit F, Tab 1, Schedule 1, Attachment 1, p. 3
[31] Exhibit G, Tab 1, Schedule 1, Attachment 1, p. 5
[32] Filing Requirements for Electricity Transmission Applications – Chapter 4: Leave to Construct and Related Matters under Part VI of the Ontario Energy Board Act, December 16, 2025, p. 17
[33] Argument-in-Chief, pp. 15-16, para. 63
[34] Exhibit E, Tab 1, Schedule 1, p. 1

landowners.[35]

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

- Easement rights on properties where the acquisition of new permanent lands rights are required.
- Temporary access and/or construction rights on federally, provincially, and municipally owned and private properties for access roads, temporary work headquarters, laydown areas, and material storage facilities (new land rights required).[36]

Table 3 below lists the different land rights agreements that Hydro One stated may be required, including details on the extent to which the forms of agreement have previously been approved by the OEB in a prior proceeding.

Table 3: Forms of Land Rights Agreements and Prior OEB Approvals[37]

Form of Agreement	Previous OEB Docket
Early Access Agreement	EB-2023-0198, Exhibit E, Tab 1, Schedule 1, Attachment 1
Option to Purchase a Limited Interest – Easement[38]	EB-2023-0198, Exhibit E, Tab 1, Schedule 1, Attachment 4
Compensation and Incentive Agreement – Easement	EB-2023-0198, Exhibit E, Tab 1, Schedule 1, Attachment 5
Agreement for Temporary Rights	EB-2023-0198, Exhibit E, Tab 1, Schedule 1, Attachment 2
Damage Claim Agreement/Waiver	EB-2023-0198, Exhibit E, Tab 1, Schedule 1, Attachment 3

OEB staff has reviewed the proposed forms of agreement and has no issues or concerns. The proposed forms of agreement are consistent with ones approved by the OEB through previous proceedings.[39]

[35] Exhibit E, Tab 1, Schedule 1, p. 5
[36] Exhibit E, Tab 1, Schedule 1, p. 2
[37] Exhibit E, Tab 1, Schedule 1, Table 3, p. 5
[38] OEB staff notes that in the form of agreement for the Option to Purchase a Limited Interest – Easement, in Schedule C to the agreement, found at Exhibit E, Tab 1, Schedule 1, Attachment 5, pp. 11-12, there is an additional clause as compared to the comparable form of agreement approved in EB-2023-0198. The clause is regarding a release of claims by Hydro One in relation to damage from the transferor's use of lands for agricultural purposes.
[39] See footnote above.

2.7 Conditions of Approval

The OEB 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 transmission Leave to Construct applications. Hydro One consented to the standard conditions of approval for the Project.[40] OEB staff proposes that the standard conditions of approval be placed on Hydro One.

~All of which is respectfully submitted~

[40] Exhibit B, Tab 1, Schedule 1, p. 6