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

BY EMAIL

August 12, 2026

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

Dear Ritchie Murray:

Re: Hydro One Networks Inc.
Leave to Construct Application – Orleans Area Reinforcement Project
Ontario Energy Board Staff Interrogatories
OEB File Number: EB-2026-0018

In accordance with Procedural Order No. 1, please find attached the Ontario Energy Board (OEB) staff interrogatories for the above proceeding. This document has been sent to Hydro One Networks Inc. (Hydro One Networks) and to all other registered parties to this proceeding.

Hydro One Networks is reminded that its responses to interrogatories are due by **August 27, 2026**. Responses to interrogatories, including supporting documentation, must not include personal information (as that phrase is defined in the *Freedom of Information and Protection of Privacy Act*), unless filed in accordance with rule 9A of the OEB's Rules of Practice and Procedure.

Yours truly,

Harout Manougian
Digitally signed by Harout Manougian
Date: 2026.08.12 15:04:25 -04'00'

Harout Manougian
Sr. Advisor, Transmission
Encl.

OEB Staff Interrogatories
Hydro One Networks Inc.
Leave to Construct Application – Orleans Area Reinforcement Project
EB-2026-0018

Staff – 1

Ref. 1: Exhibit B, Tab 1, Schedule 1, p. 3

Preamble:

According to Reference 1, Hydro One Networks filed the final Environmental Study Report (ESR) on April 2, 2026. A hyperlink to the ESR is provided in the application; however, the link is broken and does not open the ESR for the Orleans Area Reinforcement Project (Project).

Question:

a) Please provide the final ESR for the Project.

Staff – 2

Ref. 1: Exhibit B, Tab 7, Schedule 1, p. 1

Ref. 2: Exhibit H, Tab 1, Schedule 1, Attachment 1, p. 79

Ref. 3: https://www.hydroone.com/about/indigenous-partnerships

Preamble:

According to Reference 1, the estimated capital cost of the Project is $99.9 million.

According to Reference 2, regular outreach was made to three First Nations during the development of the Integrated Regional Resource Plan (IRRP).

According to Reference 3, Hydro One Networks collaborates on all large-scale transmission line projects valued at more than $100 million through its 50-50 First Nation Equity Partnership Model.

Questions:

a) Please confirm whether or not Hydro One Networks is seeking to apply its 50-50 First Nation Equity Partnership Model to the Project.

b) Does the $100 million threshold for Hydro One Networks' 50-50 First Nation Equity Partnership Model apply to the total capital cost of projects that are predominantly transmission line projects or does it apply specifically to the transmission line component of any given project?

c) If the final capital costs of the Project were to exceed $100 million, would the Project qualify for Hydro One Networks' 50-50 First Nation Equity Partnership Model?

Staff – 3

Ref. 1: Exhibit B, Tab 2, Schedule 1, p. 2

Ref. 2: 2015 Ottawa Area IRRP

Preamble:

According to Reference 1, the existing H9A circuit is designed and rated for 230 kV but is currently operated at 115 kV.

According to Reference 2, Orleans Transformer Station (TS) was placed in-service in 2015 with an initial dual supply (230 kV and 115 kV) configuration.

Questions:

a) Why was the Hawthorne to Orleans section of the H9A circuit built to 230 kV standards but operated at 115 kV? When was the line placed in-service at its current rating?

b) Why was Orleans TS designed with an initial configuration of one 115 kV supply and one 230 kV supply? Were there already plans to upgrade it to a 230 kV Dual Element Spot Network (DESN) design when the station was first conceived?

c) What is the age of the 115 kV equipment at Orleans TS that will be removed? Please provide any plans for some of this equipment to be redeployed at other sites in the province in the future.

Staff – 4

Ref. 1: Exhibit B, Tab 3, Schedule 1, Attachment 1, pp. 3-5

Ref. 2: Exhibit H, Tab 1, Schedule 1, Attachment 1, p. 26

Ref. 3: Exhibit H, Tab 1, Schedule 1, Attachment 2, pp. 61-63

Ref. 4: 2015 Ottawa Area IRRP

Ref. 5: 2015 Ottawa Area IRRP – Appendix, p. 16

Ref. 6: 2020 Ottawa Sub-Region IRRP, pp. 66-71

Ref. 7: 2020 Ottawa Sub-Region IRRP Appendices, Appendix B, pp. 19-20

Ref. 8: Exhibit H, Tab 1, Schedule 1, Attachment 2, pp. 68-75

Preamble:

According to Reference 1, the need and rationale for the Project are outlined in the 2023 Orleans Area Planning Study, which re-evaluated the conclusions of the 2020 Ottawa Area IRRP under updated demand growth forecasts for the City of Ottawa. The 2023 Orleans Area Planning Study was not included in the application and is not available on the Independent Electricity System Operator (IESO) public website.

Questions:

a) Please provide the 2015 Ottawa Area IRRP, including appendices.

b) Please provide the 2020 Ottawa Area IRRP, including appendices, mentioned in Reference 1.

c) Please provide the 2023 Orleans Area Planning Study mentioned in Reference 1.

d) What is the need that the Project addresses?

e) Please provide the evaluation of the wires and non-wires alternatives to the Project.

f) What were the underlying factors that led to the increase in forecast demand for the Orleans Area between the 2020 IRRP and the 2023 Orleans Area Planning Study?

g) Table 1 below represents an attempt to summarize the different electricity demand forecasts for the Orleans Area for the year 2032 that informed recent regional planning exercises. Please confirm whether or not the figures in Table 1 are an accurate representation of the forecasts used for their respective regional planning reports. If there are any inaccuracies, please provide the correct figures.

Table 1. 2032 Forecast Demand for the Orleans Area

	2032 Forecast Demand for the Orleans Area [MW]			
Source	Bilberry Creek TS	Orleans TS	Mer Bleue MTS	Total
2015 IRRP (Reference 5)	55	109	-	164
2020 IRRP (Reference 7)	50.8	131.3	-	182.1
2023 Orleans Area Planning Study	(Not publicly available.)			
2025 IRRP (Reference 2)	(Not publicly available.)			
2026 RIP Summer – Ref (Reference 8)	0.0	149.8	68.2	218.0
2026 RIP Winter – Ref (Reference 8)	0.0	96.1	95.8	191.9
2026 RIP Summer – High (Reference 8)	0.0	151.2	74.5	225.7
2026 RIP Winter – High (Reference 8)	0.0	97.6	117.5	215.1

h) Please provide the 2032 forecast demand, in MW, for the Orleans area that informed the 2023 Orleans Area Planning Study and the 2025 IRRP, broken down by supply station.

i) Please provide the actual annual peak demand, in MW, for the Orleans area for the years 2020 to 2025, broken down by supply station.

j) According to Reference 8, Mer Bleue MTS is forecasted to be winter-peaking while Orleans TS is forecasted to remain summer-peaking. Why is there a discrepancy between the two stations when they are supplying load in the same area?

k) According to Reference 8, Orleans TS has a summer limited time rating (LTR) of 118.2 MW. According to Reference 6, converting Orleans TS to a dual 230 kV supply would expand its capacity to 153 MW. According to Reference 8, the 2044 forecast summer demand for Orleans TS is 173.2 MW in the reference load scenario and 174.2 MW in the high load scenario. Please explain how Orleans TS is expected to supply load that exceeds its capacity.

l) According to Reference 8, the 2044 forecast winter demand for Mer Bleue MTS is 147.8 MW in the reference load scenario and 175.9 MW in the high load scenario. Its winter LTR, however, is only 123.5 MW. Please explain how Mer Bleue MTS is expected to supply load that exceeds its capacity.

Staff – 5

Ref. 1: Exhibit B, Tab 5, Schedule 1, pp. 1-2

Preamble:

According to Reference 1, Alternative 1, which consists of modifying the existing double-circuit transmission line towers to support a third circuit, would have presented challenges due to transmission line galloping, structural foundation reinforcement, and outage management.

Questions:

a) Under Alternative 2, Hydro One Networks' preferred alternative, the new single-circuit 115 kV transmission line will be built within an existing right-of-way shared with two existing 230 kV double-circuit transmission lines. What is the overall width of the shared right-of-way? Please provide Hydro One Networks' assessment of any galloping concerns between the adjacent circuits under the preferred alternative.

b) Please provide the higher compression and uplift forces resulting from adding a third circuit to the existing structures in Alternative 1, as well as the design loads of the existing structure foundations.

c) Does Alternative 2 require the use of temporary bypass line arrangements? Please explain how it is preferable over Alternative 1 in this regard.

Staff – 6

Ref. 1: Exhibit B, Tab 5, Schedule 1, pp. 2-4

Preamble:

According to Table 1 and Table 2 of Reference 1, the net capital cost for 1443.7 kcmil ACSR/TW conductor is $52.945 million, compared to $51.880 million for 1033.5 kcmil ACSS/TW conductor, a difference of $1.065 million. However, the net present value of 1443.7 kcmil ACSR/TW conductor is more favourable over a 50-year time horizon due to reduced line losses.

Questions:

a) Other than the difference in material procurement costs of the two conductor alternatives in Table 1 and Table 2 of Reference 1, what other factors contribute to the difference in their net capital cost ($1.065 million)?

b) Please provide the calculation showing how the $164,052/MW capacity price used in Table 2 of Reference 1 was derived. Which year's IESO capacity auction results is this calculation based on?

c) Would the following conductor size alternatives meet the supply capacity needs in the Orleans area and continue to maintain the interconnection power exchange capability?

i. 1192.5 kcmil ACSR

ii. 1780 kcmil ACSR/TW

d) Please supplement the conductor size alternative analysis in Reference 1 by including 1192.5 kcmil ACSR and 1780 kcmil ACSR/TW as additional alternatives. Please provide the complete calculations for the NPV sensitivity analysis in Microsoft Excel format, including all formulas used, for these two additional alternatives as well as the original two alternatives included in Table 2 of Reference 1.

Staff – 7

Ref. 1: Exhibit B, Tab 7, Schedule 1, pp. 1-3

Ref. 2: 2020 Ottawa Sub-Region IRRP, pp. 66-71

Ref. 3: OEB Filing Requirements for Electricity Transmission Applications, pp. 19-20

Preamble:

According to Reference 2, the alternative to retire Bilberry Creek TS and convert Orleans TS to a dual 230 kV supply was estimated to cost $21 million in 2020. According to Reference 1, the cost estimate has increased to $99.9 million.

Questions:

a) Please explain the cost difference between the 2020 IRRP and the 2026 Class 3 estimate, identifying the different factors that contributed to the cost escalation.

b) Table 1 of Reference 1 includes $4.535 million in cost contingencies for the lines work of the Project and Table 2 of Reference 1 includes $5.597 million in cost contingencies for the stations work of the Project. Does the -20%/+30% confidence range of the Class 3 estimate apply to the project costs before or after the inclusion of the cost contingencies included in Table 1 and Table 2 of Reference 1?

c) Does the Allowance for Funds Used During Construction in Table 1 and Table 2 of Reference 1 correspond to the Capitalized Interest in Table 2 of Reference 3?

Staff – 8

Ref. 1: Exhibit B, Tab 7, Schedule 1, pp. 8-11

Preamble:

Reference 1 compares the estimated cost of the stations components of the Project against comparable stations projects.

Question:

a) According to Table 4 of Reference 1, the work at Hawthorne TS involves the installation of only one 230 kV circuit breaker, while the comparable projects include two to three 230 kV circuit breakers within their scope. Please update Table 4 of Reference 1 by including an adjustment factor for the number of circuit breakers within the scope of the projects.

Staff – 9

Ref. 1: Exhibit B, Tab 9, Schedule 1, pp. 1-18

Ref. 2: EB-2021-0110 Application, Exhibit H, Tab 2, Schedule 1, pp. 27-28

Ref. 3: Transmission System Code (TSC), section 6.7.2

Ref. 4: TSC, section 6.7.2A

Preamble:

According to Reference 1, the Project will have a positive present value to the network rate pool.

Questions:

a) Does the load forecast in Table 1 of Reference 1 represent new load that would not be able to connect if the Project did not receive leave to construct? If it does not, please update Table 1 of Reference 1 to accurately reflect incremental revenue to the network rate pool.

b) Which company generated the load forecast in Table 1 of Reference 1? What would be the consequences to the network rate pool if actual load turned out to be lower than this forecast?

c) According to Reference 1, the existing 115 kV H9A circuit is classified as a "multi-purpose (dual function line)" asset. According to Reference 2, the Hawthorne TS to Orleans TS line section of the existing H9A circuit is classified as a line connection. Please clarify the discrepancy.

d) According to Reference 1, neither the lines nor the stations component of the Project is attributable to any specific request by a customer. Please clarify whether Hydro Ottawa requested an increase in supply capacity between the 2020 IRRP and the 2023 Orleans Area Planning Study due to an increased load forecast. Please clarify whether the connection of the Mer Bleue MTS is possible without the Project. Please explain why the Project is not attributable to Hydro Ottawa.

e) Please identify the customers that are supplied or are to be supplied by each of Bilberry Creek TS, Mer Bleue MTS, and Orleans TS.

f) According to Reference 3, where a transmitter-owned connection facility has reached its end-of-life and is planned to be retired, and its replacement with a new connection facility is determined to be the optimal solution, the transmitter shall recover a capital contribution from a customer to replace the connection facility, where the customer requires additional capacity. Does this section of the

TSC apply to the replacement of Bilberry Creek TS with Mer Bleue MTS and an upgraded Orleans TS? Please explain.

g) According to Reference 4, where a transmitter-owned connection facility has not reached its end-of-life and is replaced at the request of a customer, the transmitter shall recover a capital contribution from the customer. Does this section of the TSC apply to the replacement of the 115 kV equipment at Orleans TS with new 230 kV equipment? Please explain.

Staff – 10

Ref. 1: Ontario Energy Board Act, 1998, S.O. 1998, c. 15, Sched. B, s. 1(1)

Preamble:

One of the objectives of the OEB is to regulate the electricity sector in a manner that supports economic growth, consistent with the policies of the Government of Ontario.

Question:

a) Please explain if and how the Project would support economic growth in the province of Ontario.

Staff – 11

Ref. 1: Exhibit F, Tab 1, Schedule 1, p. 1

Ref. 2: Exhibit G, Tab 1, Schedule 1, p. 1

Ref. 3: Exhibit G, Tab 1, Schedule 1, Attachment 1, p. 6

Ref. 4: Exhibit H, Tab 1, Schedule 1, Attachment 2, p. 62

Preamble:

According to Reference 1, Hydro One Networks expects to receive the IESO's final System Impact Assessment (SIA) shortly.

According to Reference 2, Hydro One Networks expects to finalize the Customer Impact Assessment (CIA) following the receipt of the IESO's final SIA and once all customer comments on the draft CIA have been addressed.

According to Reference 3 and Reference 4, "Orleans TS will no longer be subject to momentary interruptions due to its configuration" as a result of the Project.

Questions:

a) Please provide the final SIA prepared by the IESO.

b) Please provide the final CIA.

c) Please elaborate on the momentary interruptions that result from the current configuration at Orleans TS and how the Project would improve reliability and quality of electricity service.

Staff – 12

Ref. 1: Exhibit E, Tab 1, Schedule 1

Ref. 2: July 13, 2026 Letter of Comment from National Capital Commission

Preamble:

According to Reference 2, the National Capital Commission (NCC) is seeking to negotiate 49-year fixed term easements with Hydro One Networks.

Question:

a) Reference 1 does not reference 49-year fixed term easements. Please provide the latest version of the land use agreements proposed to be offered by Hydro One Networks.