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**BY EMAIL**

March 12, 2026

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

Dear Mr. Murray:

**Re: Hydro One Networks Inc. (Hydro One)  
Leave to Construct Application – Welland Thorold Project  
Ontario Energy Board (OEB) Staff Interrogatories  
OEB File Number: EB-2025-0290**

In accordance with Procedural Order No. 2, please find attached the OEB staff interrogatories for the above proceeding. This document has been sent to Hydro One and to all other registered parties to this proceeding.

Responses to interrogatories, including supporting documentation, must not include personal information unless filed in accordance with rule 9A of the OEB's Rules of Practice and Procedure.

Yours truly,

Katherine Wang  
Senior Advisor, Generation & Transmission  
Encl.

**OEB Staff Interrogatories**  
**Hydro One Networks Inc. – Welland Thorold Project Leave to**  
**Construct Application**  
**EB-2025-0290**

**Staff-1**

**Ref:** Exhibit B-2-1, pages 1-2

Preamble:

In the reference, Hydro One stated that the Project will construct approximately 18.5 km of new transmission line inclusive of 11.5 km of new 230 kV double circuit transmission line and 8 km of a new triple circuit transmission line initiating from Abitibi Consolidated Junction to Crowland TS. Hydro One also noted the length of the two double circuit line sections:

- Abitibi Consolidated Junction to Allanburg TS: 3.5 km
- Michigan Junction to Crowland TS: 7 km

Question(s):

- a) Please review and correct the total number of km of the double circuit transmission line referenced in the Preamble (11.5 km).

**Staff-2**

**Ref 1:** Exhibit B-2-1, pages 1-2

**Ref 2:** Exhibit C-1-1, pages 1-2

Preamble:

References 1 and 2 describe the three segments (A, B, and C) of the line component of the Project.

Question(s):

- a) Does Reference 2 contain a typo on Page 2, Line 3, where it should say “Segment B”, instead of “Segment C”?
- b) For Segment B, between Allanburg TS and Michigan JCT, please confirm whether there are two 115 kV transmission circuits (D3A and A3C) being dismantled, and being replaced with one new 115 kV transmission circuit, in addition to two new 230 kV transmission circuits?
- c) Please explain how two existing 115 kV circuits in Segment B are being consolidated into one.

### **Staff-3**

**Ref 1:** Exhibit B-2-1, page 2

**Ref 2:** Exhibit C-1-1, page 1

Preamble:

References 1 and 2 refer to Segment C (Michigan JCT to Crowland TS) of the line component of the Project. Reference 1 suggests that 7 km of an idle 115 kV transmission line corridor will be repurposed. Reference 2 suggests that 5.5 km of idle corridor will be repurposed and 1.5 km will be net-new corridor.

Question(s):

- a) Please clarify the inconsistency between the descriptions.

### **Staff-4**

**Ref:** Exhibit B-2-1, Attachments 3-4

Preamble:

The Reference provides a simplified schematic diagram for the two new 230 kV circuits.

Question(s):

- a) Please clarify whether there will be any taps off the two new 230 kV circuits.
- b) Please confirm whether the new Crowland TS will have a connection to the 115 kV network.
- c) Please provide single line diagrams, showing all line segments and connected customers/stations, before and after the completion of this Project, for circuits D3A, A3C, A6C, A7C, A1C, and A1T.

### **Staff-5**

**Ref:** Exhibit B-3-1

Preamble:

In the reference, Hydro One stated that the Project is needed to increase the supply capacity between Abitibi Consolidated Junction and Crowland TS to support the continued load growth in the Niagara area and improve reliability in the area.

Attachment 1 of Exhibit B-3-1 also stated that since the 2022 Niagara Integrated Regional Resource Plan (IRRP), a number of System Impact Assessments (SIA) have been received for new load connection requests that are impactful to the need for the Project.

Question(s):

- a) Please provide five years of historical demand information (MW) for the Niagara area.
- b) Please provide demand forecast information (MW) consistent with the forecast used in the relevant planning assessment that recommended the Project.
- c) How many new load customers have indicated to Hydro One that they plan to connect, and what is the amount of capacity (MW) they will require to meet their planned energy needs?
- d) How many new generators have indicated to Hydro One that they plan to connect to the proposed system and what is the related supply capacity (MW)?

**Staff-6**

**Ref:** Exhibit B-3-1, pages 1-2

Preamble:

The Reference states that “Specifically, the current protection scheme is insufficient to provide adequate protection for the newly added 230 kV circuit” before recommending installing inline breakers and adding a new sectionalizing station.

Questions:

- a) Please explain how the Project will provide adequate protection for the two new 230 kV circuits before the planned future Crowland SS is constructed.

**Staff-7**

**Ref 1:** Exhibit B-5-1

**Ref 2:** Chapter 4 Filing Requirements, section 4.3.2.5

Preamble:

As required in Reference 2, applicants for LTC projects that derive from a regional plan must demonstrate that alternatives to address regional needs, including conservation and demand management (CDM) measures and non-wire alternatives have been appropriately considered in developing the proposed project.

Question(s):

- a) Have the above noted alternatives been considered in developing the proposed Project? If yes, please briefly discuss those alternatives. If no, please explain why.

- b) Reference 1 states that the transmission line loss analysis is available upon request. Please provide the transmission line loss analysis.

**Staff-8**

**Ref:** Exhibit B-5-1, pages 1-2

Preamble:

The Reference refers to the conductor size alternative analysis.

Questions:

- a) Please provide the NPV analysis that was conducted for the three alternatives.

**Staff-9**

**Ref 1:** Exhibit B-6-1, page 1

**Ref 2:** Hydro One's letter dated February 12, 2026 (Submission on Scope of Proceeding and Issues List)

Preamble:

Reference 1 states that the Project is subject to the applicable Class Environmental Assessment (EA) process in accordance with the *Ontario Environmental Assessment Act*. In Reference 2, Hydro One noted that it filed the Final Environmental Study Report (ESR) and Statement of Completion with the Environment, Conservation and Parks (MECP) on November 25, 2025.

Question(s):

- a) Please provide a copy of the Final ESR.
- b) Please discuss how the different route alternatives were developed in the Class EA process. What factors were considered in developing the route alternatives?
- c) What are the criteria applied in the evaluation of route alternatives?

**Staff-10**

**Ref:** Exhibit B-7-1, Table 1 and Table 2

Preamble:

Hydro One estimated that the total cost of the Project is \$311.4 million. Table 1 and Table 2 of Exhibit B-7-1 provided breakdown of the line costs and station costs respectively.

Question(s):

- a) For both Table 1 and Table 2, please provide a detailed list of the costs included in the contingencies category and the reason for its inclusion.
- b) Please describe how the contingency cost estimate for the Project compares to contingency cost estimates developed for projects of similar size and complexity undertaken by Hydro One.
- c) Please provide additional details on how the overhead costs were calculated, with additional information on how they relate to the ECI-EPC methodology. Please also provide the calculations of the stated overhead values in Excel format.
- d) Please describe how the overhead cost estimate shown in Table 1 and Table 2 for the Project compares to overhead cost estimates developed for similar Hydro One projects.
- e) Please also provide breakdown of the overhead cost between direct overheads and indirect overheads. If this cannot be done by Hydro One, please explain why.
- f) Please discuss the methodology used to determine the AFUDC as well as the calculations used to arrive at the stated values. Please provide the calculations in Excel format.
- g) Please describe how the AFUDC cost estimate shown in Table 1 and Table 2 for the Project compares to AFUDC cost estimates developed for similar Hydro One projects.

**Staff-11**

**Ref:** Exhibit B-7-1, pages 2-3

Preamble:

In the Reference, Hydro One stated that the Project cost estimate is based on a fixed price EPC contract, and the selection of the EPC contractor used a two-stage process that is variant but ultimately akin to the OEB-approved ECI-EPC project delivery model.

Question(s):

- a) Please clearly describe the two stages of the process noted in the Preamble. (Please clearly list the steps taken in each stage.)
- b) Please indicate which part(s) of and how the process is variant to the OEB-approved ECI-EPC project delivery model.

- c) Please discuss how the EPC contractor was selected among different EPC contractors. Please include a list of the specific functions the contractors were assessed on.
- d) Please discuss how Hydro One determined that utilizing the successful contractor's bid is more cost-effective than Hydro One performing the work itself.
- e) In the EPC selection process, how many contractors were qualified under Stage 1? Please list all contractors that were considered qualified.
- f) How many contractors submitted bids in Stage 2 of the process? Please provide the cost quotes in the proposals received by each bidder in Stages 2 and explain how the final proposal was selected.
- g) Please clarify how the Project cost was estimated based on the fixed price EPC contract, and why the cost estimate reflects market price.
- h) Please provide a list of early activities the contractor will be conducting that require a long lead procurement process.
- i) Please provide details on how cost overruns will be handled between Hydro One and the selected contractor.
- j) Please provide a breakdown of the fixed price EPC contract by line costs and station costs.
- k) What is the magnitude of the EPC contract as a percentage of the total Project cost?

## **Staff-12**

**Ref:** Exhibit B-7-1, pages 4-9

Preamble:

In the Reference, Hydro One compared the line cost of the Project with the following three projects:

- Guelph Area Transmission Refurbishment Project
- Power South Nepean Project
- Woodstock Area Transmission Reinforcement

However, two of Hydro One's most recent and geographically relevant projects — the Chatham–Lakeshore Transmission Line (EB-2022-0140) and the St. Clair Transmission Line Project (EB-2024-0155) — are not included in the comparable project analysis.

Question(s):

- a) Please explain why the Chatham–Lakeshore Line and the St. Clair Project were not included as comparators for the Welland–Thorold Project.
- b) Please provide a sensitivity analysis showing how the Welland–Thorold unit costs (\$/km) compare to the actual costs of the Chatham–Lakeshore Line and St. Clair Project.

**Staff-13**

**Ref:** Exhibit B-7-1, pages 4-12, Table 5 and Table 6

Preamble:

In the Reference, Hydro One provided analysis of costs on comparable projects for both line work and station work of this Project.

Question(s):

- a) In Table 6 of Exhibit B-7-1, there is an adjustment item of “Feeder Reconfiguration”.
  - i. Please discuss what this cost is and how the value (\$4,500k) was decided for Crowland TS.
  - ii. Please also confirm that the Feeder Reconfiguration cost is not applicable to the three comparable projects.
- b) In Table 6, there is an adjustment item of “Brownfield Site Clearing”.
  - i. Please discuss what this cost is and how the value (\$3,300k) was decided for Crowland TS.
  - ii. Please also confirm that the Brownfield Site Clearing cost is not applicable to the three comparable projects.
- c) In Table 6, there is an adjustment item of “Ground Conditions”.
  - i. Please discuss what this cost is and how the stated values for three stations (Minden TS, Arnprior TS and Crowland TS) were decided.
- d) For both Table 5 and Table 6, Hydro One noted that the inflation adjustment factors used for comparator projects are consistent with the OEB’s annual inflation parameters for electricity transmitters’ rate applications.
  - i. Please confirm if Hydro One has applied the OEB’s 2026 inflation parameters in the escalation adjustment.
  - ii. If not, please update the escalation adjustment calculations for both Table 5 and Table 6 using the OEB’s 2026 inflation parameters.

- iii. For both Table 5 and Table 6, Please indicate what inflation parameter has been used for the years 2027, 2028 and 2029.
- e) For both Table 5 and Table 6, please provide detailed calculations (in Excel format) for the Escalation Adjustment values (or the Total Adjusted Comparable Cost) for the three comparable projects. The calculations should show the annual inflation parameters applied for each year.
- f) Based on the total adjusted comparable costs shown in the last row of Table 6, the average cost of the three comparable stations is about \$47,551k (in 2029 dollars). The estimated adjusted cost of Crowland TS of \$51,930k is about 9.2% higher than the average cost of the three comparable projects. Please discuss why Crowland TS has a relatively higher estimated adjusted cost compared to the average cost of the three comparable projects.

#### **Staff-14**

**Ref 1:** Exhibit B-1-1, page 2

**Ref 2:** Exhibit B-9-1, pages 1-2

Preamble:

As stated in the application, the construction of a new sectionalizing station, Crowland SS, will be a separate project to allow proper protection and load capacity in accordance with recent requirements defined in the IESO's Final SIA. Reference 1 states that Crowland SS is considered as a functionally distinct project and is needed only after completion of the Welland Thorold Project.

As per the application, the estimated cost of \$55.6 million for Crowland SS is not included in the total cost of the Welland Thorold Project.

Reference 2 states that the costs that underpin the economic feasibility and rate impact assessment include the new switching station (Crowland SS) that is required to achieve the full incremental load per the Final SIA. Reference 2 also states that the Project will enable 180 MW of supply capacity.

Question(s):

- a) What is the amount of the full incremental load per the Final SIA? Is it the 180 MW of supply capacity that the proposed (Welland Thorold) Project will enable as stated in Reference 2?
- b) If the construction of Crowland SS is required to achieve the full incremental load of the area, please provide the rationale for the exclusion of Crowland SS in the proposed Project.

- c) If Crowland SS should be considered as a separate project and its cost is not included in the proposed Project's total cost, please provide the rationale for the inclusion of the cost of Crowland SS in the network pool rate impact assessment.

**Staff-15**

**Ref:** Exhibit B-9-1, pages 2-3

Preamble:

The Reference states that the transmission line functionally serves as a line connection facility.

Question(s):

- a) Please clarify the functional categories of the following circuits: Q24HM, Q29HM, D3A, A3C, A6C, A7C, A1C, and A1T. Will any of these functional categories change as a result of this Project?
- b) If any of these circuits are dual function lines, please provide their allocation factors between the network and connection pools.
- c) Please identify all the customers supplied by Crowland TS and the proportion of the station capacity and of the A6C/A7C circuits that is allocated to each of them.
- d) Please provide the assigned capacity of each customer for the two new 230 kV circuits.

**Staff-16**

**Ref:** Exhibit B-9-1, page 2

Preamble:

The Reference states that:

As identified by the IESO, the purpose of the Project is to:

- resolve the Crowland TS capacity and replacement needs,
- resolve the A6C/A7C security issue, and
- enable other load growth on the 115 kV sub-system.

The alternatives to assess how to address these system needs were studied in the Niagara Integrated Regional Resource Plan and subsequent Regional Infrastructure Plan and the Project addressed all needs for almost one-third of the cumulative cost of all other solutions. [Footnote omitted]

Question(s):

- a) Please describe the other solutions and provide the cost for each of those solutions.
- b) Please provide the cumulative cost for each of all other solutions and demonstrate that the cost of the Project is almost one-third of the cumulative cost of all other solutions.

**Staff-17**

**Ref:** Exhibit B-9-1, page 2

Preamble:

The Reference mention enabling load growth and resolving the A6C/A7C security issue, as well as a long-term transition towards eliminating the 115 kV supply in the area.

Question(s):

- a) Please explain whether the project resolves the A6C/A7C security issue or merely reduces its severity.
- b) Please comment on how load growth and new connections in the area are envisioned to be divided between the 115 kV and 230 kV networks in the future.
- c) Please explain where the 180 MW of additional load could be connected. That is, could it all be connected at Crowland TS, on the two new 230 kV circuits, or a broader range of connection points? Please explain any constraints on load connections to access this capacity or any circumstances in which the project will enable less than 180 MW of capacity, i.e. due to inefficient connection points.

**Staff-18**

**Ref:** Exhibit B-9-1, pages 2-3

Preamble:

The application proposes to allocate costs of the new 230 kV line to Crowland TS to the network pool as stated in the reference that “the transmission line that functionally serves as a line connection facility will be recovered through the network pool”. The incremental costs associated with increased station load capacity at Crowland TS are proposed to be allocated to the connected customer.

Question(s):

- a) Please explain whether Hydro One is proposing to classify the new 230 kV line as a network facility. Is there a change in classification from the existing 115 kV lines that supply Crowland TS?
- b) Please explain the basis for allocating the cost of increased station capacity work at Crowland TS to the connected customer, while allocating the cost of the new 230 kV supply line to that Crowland TS to the network pool.
- c) Please explain whether any portion of the 230 kV line investment is directly attributable to the Crowland TS expansion and should therefore be treated as line or transformation connection.
- d) Please provide precedents from other projects where a connection facility was cost allocated in its entirety to the network pool.

**Staff-19**

**Ref:** Exhibit B-9-1, pages 2-3

Preamble:

The application states that the Project is not associated with a specific load increase or customer load application. Additionally, the application states that the two new 230 kV circuits to Crowland TS functionally serves as a line connection facility but costs are proposed to be allocated to the network pool.

Question(s):

- a) Please confirm whether Hydro One considers this investment in the two new 230 kV circuits to Crowland TS to be customer-triggered for the purposes of Transmission System Code (TSC) section 6.3.18. If not, please explain why not.
- b) Please confirm whether, in Hydro One's view, Crowland TS customers will benefit from the two new 230 kV circuits and explain why.
- c) Please comment on any plans for how customers would reimburse the network pool in the future as load growth occurs and/or new customers connect to the two new 230 kV circuits.

**Staff-20**

**Ref 1:** Exhibit B-9-1, page 3

**Ref 2:** Exhibit C-1-1, page 5

**Ref 3:** Exhibit H-1-1, Attachment 1, page 43

Preamble:

Reference 3 recommends installing two new 75/125 MVA transformers at Crowland TS. Reference 1 and Reference 2 provide conflicting sizes for these transformers (100 MVA vs. 125 MVA).

Question(s):

- a) Please clarify the size of the transformers to be installed at Crowland TS.

## Staff-21

**Ref:** Exhibit B-9-1, pages 5-14, Tables 1-9

Preamble:

In the Reference, Hydro One provided rate impact assessment for both network pool and transformation connection pool.

Question(s):

- a) The OEB issued the most recent 2026 Uniform Transmission Rates (UTRs) Decision and Rate Order (EB-2025-0232) on January 15, 2026. Please provide the calculations and results of the discounted cash flow analysis and rate impact assessment based on the updated Network Service Rate. (Please include all the updated tables for Tables 1-9)
- b) In Table 9 "DCF Assumption", Hydro One included the following note:

Based on OEB-approved ROE of 9.36% on common equity and 4.79% on short-term debt, 4.3% forecast cost of long-term debt and 40/60 equity/debt split, and current enacted income tax rate of 26.5%
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Please indicate which year of the OEB approved cost of capital parameters have applied in the calculations. The OEB issued the most recent 2026 cost of capital parameters on October 31, 2025. Please update the calculation with the 2026 cost of capital parameters. If the most recent cost of capital parameters should not be used, please explain why.

## Staff-22

**Ref 1:** Exhibit B-9-1, page 3

**Ref 2:** Exhibit B-9-1, pages 8-9

**Ref 3:** Exhibit B-9-1, pages 12-13

Preamble:

Reference 1 states “Welland Hydro will be responsible for the incremental costs associated with the increased station load capacity, representing the difference between rebuilding the existing 115 kV 83 MVA station and constructing a new 230kV 125 MVA station. However, based on the transformation connection pool discounted cash flow provided at Table 7 of this Schedule, Welland Hydro will not be required to make a capital contribution because forecast future revenue will offset the cost.”

Table 7 (Reference 3) does not provide a discounted cash flow analysis as described in Reference 1. Reference 2 does provide a discounted cash flow analysis but does not break out incremental costs from total project station costs.

Question(s):

- a) What is the amount of the incremental costs associated with the increased station load capacity (representing the difference between rebuilding the existing 115 kV 83 MVA station and constructing a new 230 kV 125 MVA station)?
- b) Please provide the discounted cash flow analysis which forms the basis of the conclusion that forecast future revenue will offset incremental capital costs.

### **Staff-23**

**Ref:** Exhibit B-10-1, page 2

Preamble:

The Reference states that the transmission line costs of the Project are anticipated to be captured and tracked in the Affiliate Transmission Partnership Regulatory Deferral and Variance Account (ATP Account), which will be disposed of during a future rate hearing for the new partnership.

Question(s):

- a) Has the new partnership been formed? Please provide a current update on the establishment of the new limited partnership.
- b) When does Hydro One anticipate the transmission line costs to be included in the rate base, and when is the revenue requirement application of the new partnership expected to be filed?

### **Staff-24**

**Ref:** Exhibit C-1-1, pages 2-3

Preamble:

The two new 230 kV circuits will have a continuous ampacity of 1132.2 A, and the new 115 kV circuit will have a continuous ampacity of 499.6 A.

Question(s):

- a) How does the continuous ampacity of the two new 230 kV circuits compare to that of the main trunk of the Q24HM/Q29HM circuits it is tapping off?
- b) How does the continuous ampacity of the new 115 kV circuit compare to that of the D3A/A3C circuits it is replacing?

**Staff-25**

**Ref:** Exhibit E-1-1, pages 4-5, Table 2

Preamble:

The Reference states that Hydro One has been meeting with affected property owners since April 2025, and Hydro One will continue working with each property owner with the objective of reaching voluntary settlements. Hydro One also provide a summary of all land negotiation status in Table 2 of Exhibit E-1-1:

Property Type	Number of Properties	Early Access Agreement Offered	Early Access Agreement Achieved	Voluntary Settlement Agreements Offered	Voluntary Settlement Agreements Achieved
Private Lands	46	100%	78%	0	0
Federal Lands	3	N/A	N/A	0	0
Provincial Lands	6	N/A	N/A	0	0
Municipal Lands	7	N/A	N/A	0	0
Railway Lands	3	N/A	N/A	0	0

Question(s):

- a) Please update Table 2 with up-to-date information. For how many impacted private properties has Hydro One reached early access agreements and voluntary settlement agreements respectively?
- b) Please provide an up-to-date summary of all land and rights acquisitions processes, including their current status, any contentious issues and the proposed approach to resolution.
- c) Please confirm that all impacted landowners will have the option to receive independent legal advice regarding the proposed agreements.

- d) Please clarify whether Hydro One has committed to or will commit to reimbursing landowners for reasonably incurred legal fees associated with the review and completion of the necessary land rights agreements.
- e) How does Hydro One advise affected property owners of the availability of independent legal advice (ILA) and that Hydro One will reimburse landowners for the expense of obtaining ILA? Is this information communicated to property owners orally or in writing? If the latter, please provide a copy of the document.

### **Staff-26**

**Ref:** EB-2025-0290, Scope of Proceeding, Decision on Issues List and Procedural Order No. 2, issued March 5, 2026

Preamble:

The Reference includes the OEB's Standard Conditions of Approval for Electricity Transmission Leave to Construct Applications.

Question(s):

- a) Please comment on the above standard conditions in relation to this application. If Hydro One does not agree with any of the standard conditions of approval, please identify the specific conditions that Hydro One disagrees with, explain why, and provide proposed changes.

### **Staff-27**

**Ref 1:** [OEB CEO Policy 2026-01](#)

**Ref 2:** [Energy for Generations, Ontario's Integrated Plan to Power the Strongest Economy in the G7 \(June 2025\)](#) (IEP)

Preamble:

As stated in Reference 1, OEB shall identify the portions of the IEP that are relevant to the matters in issue in the proceeding.

Question(s):

- a) Please discuss if there are portions of the IEP that Hydro One considers relevant to this application.