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BY EMAIL AND RESS

May 19, 2023

Ms. Nancy Marconi
Registrar
Ontario Energy Board
Suite 2700, 2300 Yonge Street
P.O. Box 2319
Toronto, ON M4P 1E4

Dear Ms. Marconi,

**EB-2022-0142 – Hydro One Networks Inc.'s Southwest Ontario Transmission Line Projects –
Bi-annual Reporting for the Period: November 1, 2022, to April 30, 2023**

Please find attached Hydro One Networks Inc.'s, ("Hydro One") bi-annual reporting pertaining to four Southwest Ontario Transmission Line Projects, for the reporting period November 1, 2022, to April 30, 2023, consistent with the direction provided to Hydro One by Ontario Energy Board in its letter dated May 24, 2022.

The two attached reports contain all four of the Southwest Ontario Transmission Line Projects, and are organised as follows;

- The first report contains both the St. Clair Transmission Line Project and Windsor Area to Lakeshore Transmission Line Project.
- The second report contains two separately identified transmission circuit projects that will span between Longwood Transformer Station ("TS") to Lakeshore TS. The two circuits have separately identified in-service date expectations.

An electronic copy of the Bi-annual reports has been submitted using the Board's Regulatory Electronic Submission System.

Sincerely,



Joanne Richardson

Southwest Ontario
Transmission Line Project

St. Clair Transmission Line

OEB Report



Southwest Ontario Transmission Line Projects

St. Clair Transmission Line Project and Windsor Area to Lakeshore Transmission Line Project

Ontario Energy Board Progress Report

November 1, 2022, to April 30, 2023

EXECUTIVE SUMMARY

On April 6, 2022, the Ontario Energy Board (“OEB”)¹ amended Hydro One Network Inc.’s (“Hydro One”) transmission licence (ET-2003-0035) to include a requirement for Hydro One to develop and seek all necessary approvals for four new transmission projects located in Southwestern Ontario as per the Directive approved by the Lieutenant Governor in Council on March 31, 2022, as Order in Council (“OIC”) No. 875/2022. The four transmission projects (the “Projects”), being;

- Project #1, a 230 kilovolt (kV) transmission line from Lambton Transformer Station (“TS”) to Chatham Switching Station, including associated station facility expansions or upgrades required at the terminal stations;
- Project #2, a 500 kV transmission line from Longwood TS to Lakeshore TS, including associated station facility expansions or upgrades required at the terminal stations;
- Project #3, a second 500 kV transmission line from Longwood TS to Lakeshore TS, including associated station facility expansions or upgrades required at the terminal station and;
- Project #4, a 230 kV transmission line that connects the Windsor area to the Lakeshore TS, including associated station facility expansions or upgrades required at the terminal station.

On May 24, 2022², the OEB requested Hydro One prepare semi-annual project reporting to the OEB that provides an update for each of the Projects regarding the following: Overall Project Progress, Development Cost, Development Work Schedule, Risks and Issues Log, and Project Scope and Timing Recommendations provided by the IESO. Reporting for the period May 1 to October 31, should be filed in November, and the reporting for the period November 1 to April 30, should be filed in May.

This document includes project reporting for two of the four individual projects and represents Hydro One’s second semi-annual report. Project #1 and Project #4 are included in this document, as to-date both projects are in their infancy period with minimal active project development work undertaken. As the projects mature, separate reports will be provided.

The report provides a forecast development cost for Project #1, a new 230 kV transmission line from Lambton TS to Chatham Switching Station, which has been renamed by Hydro One as the “St. Clair Transmission Line Project” and will be referred to as such herein. Hydro One estimates the known forecast development phase costs for the St. Clair Transmission Line Project to be \$38.4M. As of October 31, 2022, the costs spent to date are \$6.6M.

¹ EB-2022-0142

² EB-2022-0142 (The letter is attached at **Attachment 1** to this document)

The report also provides information regarding the development status of Project #4, a new 230 kV transmission line that connects the Windsor area to the Lakeshore TS, including associated station facility expansions or upgrades required at the terminal station.

Once projects are in the active development stage, such as Project #1, the St. Clair Transmission Line Project, they are monitored for risks. Risk mitigation is implemented as a matter of routine activity by the Project teams. Delays in regulatory approvals remain an active risk that Hydro One is working with regulators to manage. Should these risks have a greater impact on any of the Projects, they will be included in greater detail in subsequent progress reports.

Hydro One's guiding recommendations for the four transmission reinforcement projects in the Southwestern Ontario Area are driven by two specific reports by the IESO:

1. [West of London Bulk Study – Need for Bulk System Reinforcements West of London](#) (Sept 2021)
2. [Windsor-Essex IRRP Addendum Report](#) – (February 2022)

The West of London Bulk Study references these projects in Section 7.3 Near Term Recommendations (Project #1), Section 8.3 Long Term Recommendations (Projects #2 and #3) and Section 9.3 Interdependency with Regional Planning (Project #4). The *West of London Bulk Study* identified the need and timing of Project #2. Section 6.1.2 *Coordination with the West of London Bulk Plan of the Windsor-Essex IRRP Addendum Report* also references Project #4.

These four identified transmission line projects are expected to be owned by and included in the rate base of a new partnership, as a licenced transmitter, such that line costs will be included in the Affiliate Transmission Projects Account ("ATP Account") and will not form part of Hydro One's rate base. On October 7, 2021, the OEB approved Hydro One's application for an accounting order to establish the new regulatory ATP Account for a project where Hydro One has, or will, receive a letter from the IESO identifying transmission system needs, and/or an Order in Council or direction of the Ministry of Energy for the development or construction of a transmission line project, that is expected to form a new partnership. The associated station work for the Projects is expected to form part of Hydro One's transmission rate base.

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BACKGROUND

On April 4, 2022, the Minister of Energy, issued a Directive to the OEB under section 28.6.1 of the Ontario Energy Board Act (“Directive”) requiring the OEB to amend Hydro One’s electricity transmission licence to require Hydro One to develop and seek approvals for four transmission line projects located in Southwest Ontario (collectively referred to as the Projects), that were approved by the Lieutenant Governor in Council on March 31, 2022, as Order in Council No. 875/2022. The four projects are as follows:

1. Project #1 - A new 230 kilovolt (kV) transmission line from Lambton Transformer Station to Chatham Switching Station, including associated station facility expansions or upgrades required at the terminal stations;
2. Project #2 - A new 500 kV transmission line from Longwood Transformer Station to Lakeshore Transformer Station, including associated station facility expansions or upgrades required at the terminal stations;
3. Project #3 - A second new 500 kV transmission line from Longwood Transformer Station to Lakeshore Transformer Station, including associated station facility expansions or upgrades required at the terminal stations; and
4. Project #4 - A new 230 kV transmission line that connect the Windsor area to the Lakeshore Transformer Station, including associated station facility expansions or upgrades required at the terminal stations.

The Directive also required the OEB to amend Hydro One’s licence to include a condition that the scope and timing for the Projects accord with the recommendations of the Independent Electricity System Operator (“IESO”), and it also directed the OEB to require that Hydro One provide such reporting to the OEB as the OEB may consider appropriate with respect to budget, timing, and risks in relation to the development of the Projects.

The Order in Council accompanying the Directive states that expansion of Ontario’s transmission system is critical to provide a reliable and adequate supply of electricity to Southwestern Ontario to support economic growth in the region, including the rapidly growing agricultural sector and the potential for growth in the electric vehicle and broader automotive sectors.

Two of the projects listed in the Directive (Project #1 and #2 above) have been declared to be needed as priority projects pursuant to section 96.1 of the Act in Order in Council 876/2022 dated March 31, 2022. The third project, a new 230 kV electricity transmission line from the existing Chatham Switching Station to the new Lakeshore TS, was the subject of a previous Directive issued to the OEB on December 17, 2020. The OEB amended Hydro One’s transmission licence in respect of that project by Decision and

Order dated December 23, 2020. As at the reporting date, no meaningful, and / or separately identifiable planning or development activities have commenced pertaining to Project #4. This Project is pending further technical studies, to be led by the IESO.

In a letter dated May 24, 2022, the OEB requested that Hydro One prepare semi-annual reports updating on the following matters:

- Overall Project progress,
- Development cost
- Development work schedule
- Risks and Issues Log
- Project scope and timing recommendations provided by the IESO.

The reports should be filed as follows:

- May 1 to October 31 for reporting in November
- November 1 to April 30 for reporting in May.

All reports are to be filed by the 15th business day of the month following the end of each reporting period.

In this bi-annual reporting to the OEB, of the four OIC projects, as listed above, Hydro One is including individual updates for Projects #1 and #4, to the extent that there are updates on which to provide. For the purposes of maintaining regulatory efficiency, Hydro One has included two reports, by project, in this document. Project #1 is in active development and Project #4 requires further studies and hence at this stage does not have material updates to provide. Hydro One's intention is to continue to prepare and submit Project #4 in this report until a time where it enters the active development stage. At that stage, Hydro One will then provide a separate bi-annual report for Project #4, in line with the OEB's expectations.

Projects #2 and #3, identified above, both pertain to new 500 kV circuits between the same termination stations Longwood TS and Lakeshore TS, and for this reason, both those projects are included in a single report, separate from this report.

Hydro One's OEB-Approved Affiliate Transmission Projects Regulatory Account

On October 7, 2021, the OEB approved Hydro One's application for an accounting order to establish a new regulatory account, the Affiliate Transmission Projects Account. The ATP Account will be used for a transmission line project where:

1. Hydro One has, or will, receive a letter from the IESO identifying transmission system needs, and/or an Order in Council or direction of the Minister of Energy for the development or construction of a transmission line project and,

2. All or part of the transmission line project is expected to be owned by and included in the rate base of a new partnership, as a licensed transmitter, such that costs included in the ATP Account Project will not form part of Hydro One's rate base.

The four new transmission line projects, two of which are reported on in this document, are expected to be owned by and included in the rate base of a new partnership, as a licensed transmitter, such that costs included in the ATP Account Project will not form part of Hydro One's rate base. On October 7, 2021, the OEB approved Hydro One's application for an accounting order to establish the new ATP Account for use where Hydro One has, or will, receive a letter from the IESO identifying transmission system needs, and/or an Order in Council or direction of the Minister of Energy for the development or construction of a transmission line project.

Project Summary Table

For ease of reference, and comparison, Table 1 below provides a summary of the two individual projects included in this report. A Map of southwestern Ontario and the new transmission projects can be found at **Attachment 2** to this document.

Table 1 - Summary of St. Clair Transmission Line and Windsor to Lakeshore Transmission Line Projects

Status	Line Name	Voltage (kV)	Length (KM)	Circuit Type	Completion	Project Stage	Notes
Under Development and Planned for Construction	St. Clair Transmission Line (Lambton to Chatham)	230 kV	60	Double	2028	Under development Construction to begin in Spring 2027	Stakeholder Engagement is underway. A preferred route will be publicly announced in June 2023
To Be Developed	Windsor to Lakeshore Transmission Line	230 kV	42	Double	No current Timeline established	To be developed	Further Study by IESO Required

PROJECT REPORT

Project 1 - St. Clair Transmission Line Project Report

OVERALL PROGRESS BY PROJECT

In a letter dated March 26, 2020³, (the “IESO Letter”) the IESO directed Hydro One to initiate project work to develop and construct a new 230 kV double-circuit line from Lambton TS southwards to Chatham SS and associated station facility expansions or upgrades required at the terminal stations. In terms of timing, the IESO’s Letter identified the need for the facilities no later than 2028, however, the IESO also stated there is benefit in streamlining the implementation of this Project and completing it earlier if possible. Between April 1, 2022, and October 31, 2022, Hydro One continued to proceed with development work on the Project, advancing environmental approvals, consultation, engineering, and design activities. The following summarizes the work that was undertaken to-date and within the reporting period.

Environmental Approvals

On February 10, 2022, Hydro One distributed the Notice of Commencement of the Environmental Assessment (“Notice”) to Indigenous communities, government officials/agencies, interested persons and organizations, signifying the start of the Class Environmental Assessment (“EA”) activities. Since that time, Hydro One has continued to engage with Indigenous communities, stakeholders, and members of the public.

A comprehensive environmental field survey program is underway which will collect data along the alternative transmission line routes to help inform the evaluation and selection of the Project’s preferred route, as well as the assessment of the Project footprint. The Project team are working closely with Indigenous communities to ensure that their involvement in the field surveys is encouraged and that opportunities to share Indigenous knowledge during field surveys are possible.

Indigenous Engagement and Consultation

The Project team has worked and continues to engage with interested Indigenous communities to advance information sharing and engagement activities.

Key activities have included:

- The First Nation communities listed in the duty to consult delegation letter dated July 6, 2022, from the Ministry of Energy are being engaged and informed. Some of the engagement opportunities offered to Indigenous communities included: in-person and virtual Community Open Houses; notices and posters; community

³ Attachment 1

presentations to Chief & Council and Environmental Protection Committees to monitor field studies and the issuance of the Archaeological study report to review.

- Communities are being provided with opportunities to share information and provide data for the evaluation of the preferred route selection. This includes regular update meetings, workshops and review of baseline field data reports. The project team is in active conversations with communities to organize community meetings.
- Hydro One has continued to work with interested communities to support and develop frameworks for their Indigenous Knowledge (“IK”) studies. Communities have expressed varying degrees of interest in undertaking IK studies at this point. Hydro One has further developed its approach and tools with the input from an external advisor. The approach is designed to be flexible, and community led. Hydro One is offering its assistance to communities to advance IK studies and to ensure that communities have capacity to retain the resources they need to undertake studies that they deem important and significant.

Other Consultation

The Project team continued to engage the public, municipal officials, government agencies and elected officials across the period of this report. On November 8, 9, and 10, 2022, community open houses were held in Chatham, Wallaceburg and St. Clair supported by mail-out flyers and social media (such as Facebook etc.) to increase awareness in the areas around the route alternatives. These were well-attended events. On November 23, 2022, a virtual community open house was held, during which a survey was conducted to members of the public to collect additional feedback. More than 3,000 people participated, and their responses directly feed into the route evaluation process, which supports our continued collaborative approach to public engagement.

Engineering and Design

In support of the Project’s development phase activities Hydro One undertook an extensive competitive procurement process in Q1 2022, to engage the services of two Engineering Procurement and Construction (“EPC”) contractors for an Early Contractor Involvement (“ECI”) procurement model. The ECI model has continued to:

- Provide necessary design and engineering information into the environmental assessment and Hydro One’s overall development of the Project;
- Advance preliminary identification of Project specific Indigenous and non-Indigenous employment, procurement and training opportunities and requirements through continuing meetings with Indigenous communities and organizations; and
- Identify opportunities for innovation in design, materials, and procurement early in the Project to enable the development of the best project delivery solution.

COSTS

In the IESO Letter directing Hydro One to start development of the SCTL Project, the planning allowance for project's capital expenditure was indicated to be in the range of \$210-\$290M. Hydro One's estimate for known development costs⁴ for the Project are expected to be \$38.4M with an accuracy of Association for the Advancement of Cost Engineering ("AACE") Class 3 (with a range/tolerance of +20%/-15%). Table 2 below summarizes the Project development costs incurred against that overall budget for the current reporting period.

⁴ Development costs are those projects costs incurred up to the point of the submission by Hydro One of a s.92 leave to construction application to the OEB.

Table 2 - Project Development Costs – Project #1 – St. Clair Transmission Line Project

	Actuals Spent		C	Forecast Budget Variance					
	A	B		D	E	F	G	H	I
	Spent this Reporting Period (Millions)	Total Spent to Date (Millions)	Budget per Apr, 2022 Report (Millions)	Forecast Budget Change from Last Report (Millions)⁵	Forecast Budget Change from Last Report (%)	Revised Total Budget (Millions)	G = F - B Budget Remaining (Millions)	H = G/F * 100 Budget Remaining (%)	Reasons for Change
Real Estate	\$0.2	\$0.4	\$11.7	\$0.0	0%	\$11.7	\$11.3	96.6%	
Engineering and Design	\$0.5	\$1.9	\$3.0	\$0.0	0%	\$3.0	\$1.1	36.7%	
Environmental Approvals	\$0.7	\$1.5	\$4.2	\$0.0	0%	\$4.2	\$2.7	64.3%	
Indigenous Consultation	\$0.2	\$0.5	\$6.0	\$0.0	0%	\$6.0	\$5.5	91.7%	
Project Management	\$0.1	\$0.8	\$1.4	\$0.0	0%	\$1.4	\$0.6	42.9%	
Contingency	\$0.00	\$0.00	\$3.0	\$0.0	0%	\$3.0	\$3.0	100%	
Other Consultation	\$0.9	\$3.2	\$4.2	\$0.0	0%	\$4.2	\$1.0	23.8%	
Interest and Overhead	\$0.4	\$1.0	\$4.9	\$0.0	0%	\$4.9	\$3.9	79.6%	
Total	\$3.0	\$9.3	\$38.4	\$0.0	0%	\$38.4	\$29.1	75.8%	

⁵ Not Applicable in this first Report

PROJECT SCHEDULE

Table 3 - Project #1 – St. Clair Transmission Line

<i>Milestones</i>	<i>Schedule</i>	<i>Completed</i>	<i>Adjusted to</i>
<i>Class EA Notice of Commencement</i>	February, 2022	February 10, 2022	-
<i>Virtual Community Open House #1</i>	Feb/Mar, 2022	March 9 and 10, 2022	-
<i>Community Open House #2</i>	Fall 2022	November 8 – 10, 2022 and Virtual live discussion on November 23, 2022	-
<i>Community Open House #3 and Selection of Preferred Route</i>	June 2023	-	-
<i>Release of draft Environmental Study Report (ESR)</i>	Fall 2023	-	-
<i>Submit final ESR and complete Class EA process</i>	Late 2023	-	-
<i>Leave to Construct (Sec. 92) application approval</i>	Fall 2025	-	-
<i>Construction starts</i>	Spring 2027	-	-
<i>In-Service</i>	Late 2028	-	-

The Project team completed environmental field studies on the alternative routes. These studies are pertinent in supporting the selection of the preferred route of the Project. The preferred route is planned to be publicly announced in June 2023. Preliminary design and engineering will continue to provide support in development phase activities. Consultation and engagement on the Project continue, including Project-specific capacity building (training, funding, procurement, and employment) for Indigenous communities, information sharing, IK gathering and participation in development activities. The Project is on schedule to complete development work by the second quarter of 2024. Thereafter, Hydro One expects to file a s.92 leave to construct application to the OEB.

RISKS AND ISSUES LOG

The Project is being monitored continually for risks and risk mitigation implemented as a matter of routine activity by the Project team. Risks are formally re-evaluated on a quarterly basis. Table 4 below lists major development risks actively being managed. Project execution risks will be identified and included in Hydro One's S.92 Leave to Construct application when submitted to the OEB.

The Minister of Energy issued a Duty to Consult ("DTC") letter to Hydro One in July 2022. Hydro One and Ministry of Energy ("Energy") have a Memorandum of Understanding ("MOU") that outlines the DTC roles and responsibilities of the two parties regarding major projects. Hydro One meets monthly with Energy and other agencies to provide Indigenous consultation and engagement updates, to keep the Crown apprised of any potential challenges in the consultation process and to discuss how Energy and Hydro One can work together to find solutions to those challenges. At the height of the COVID-19 pandemic it provided unprecedented challenges across the industry, not just for Hydro One, in the development of infrastructure projects. The timely adaptation from the more traditional in-person to virtual engagement has proven to be effective. Hydro One has developed and successfully implemented a wide variety of versatile virtual tools including the use of telepresence meetings, webinars, virtual town-halls and the use of USB-storage sticks and tablets to distribute project materials safely. With increasing vaccination rates and the implementation of effective health and safety protocols a return to in-person engagement with a need to continue to provide virtual tools in addition to in person engagement activities has become the new practice. Health and safety are a priority to Hydro One and our Project activities will continue to be monitored and adapted.

As the Project matures government agencies such as Energy, Ministry of Environment, Conservation and Park ("MECP"), Ministry of Northern Development, Mines, Natural Resources and Forestry and other government agencies may influence the schedule and scope of the Project. Hydro One meets regularly with these agencies and provides information to keep them apprised of Project progress and to work with them to manage expectations.

Table 4 - Project #1 – St. Clair Transmission Line Project – Identified Risks

Risk Description	Likelihood of Occurrence	Impact of Risk on the Project	Mitigation
Consultation	Moderate	Scope, Schedule and cost	Risk remains that the scope of Indigenous and non-Indigenous consultation could change as the Project matures. Hydro One meets regularly with Energy and MECP.
Regulatory Approvals	Moderate	Scope, Schedule and cost	Decisions by various Regulators may result in changes to scope, schedule and cost of the Project. This includes delays to the approval of the Class environmental assessment by the MECP and the Minister of MECP imposing conditions on Hydro One/SCTL Project as a result of receipt of Section 16 Order requests. Mitigation involves meeting with Regulators to discuss and address issues and providing sufficient time and opportunity for Regulators to undertake their reviews, comments and approvals. Conducting extensive and thorough notification and outreach to those rights-holders and conducting a thorough and robust First Nations consultation program and working to involve First Nations in the Class EA process.
Real Estate	Moderate	Schedule and Cost	Expropriation and compensation for Business Disruption/Loss associated in the grant of permanent land rights. Mitigation involves engagement with potential landowners and commercial business operators at the outset of engagement (after route announcement) to determine scope of any potential business loss requirements.
Environment	Moderate	Schedule and Cost	Species at Risk - Project has the potential to come into conflict with Species at Risk (SAR) habitat. Mitigation involves conducting research and field studies during the Class EA to characterize SAR habitat within the study area and consulting with SAR Ontario Branch of the MECP during the Class EA Archaeology - Project has the potential to conflict with both known and unknown archaeological sites and risk of encountering heritage structures (i.e. buildings, bridges, monuments, etc.) requiring additional studies and/ or additional action to avoid or preserve. Mitigation involves consulting with MHSTCI and FNs, Conducting Stage 1 Arch and preliminary HIA assessment during the class EA.

PROJECT SCOPE AND TIMING RECOMMENDATIONS PROVIDED BY THE IESO

Should the IESO provide an update to the scope and/or timing recommendations to Hydro One for Project #1, the St. Clair Transmission Line Project, these will be provided to the OEB and summarised in this section of the Report going forward. Information in this section will reflect any updates provided to Hydro One within the semi-annual reporting period to which the report pertains, by Project.

Updates - Nothing to report during the period.

PROJECT REPORT

Project 4 - A new 230 kV Transmission line that connects the Windsor area to Lakeshore TS

OVERALL PROGRESS BY PROJECT

As at the reporting date, no meaningful, and / or separately identifiable planning or development activities have commenced pertaining to this Project's individual scope. This Project is pending further technical studies, to be led by the IESO.

COSTS

As at the reporting date, no planning or development cost activities have commenced pertaining to this Project's individual scope.

RISKS AND ISSUES LOG

The Project Risks and Issues Log for this Project has not yet been prepared due to the infancy of the Projects in its development phases. Hydro One's future semi-annual reports will include information for this Project when those specific activities have been undertaken and elements identified.

PROJECT SCHEDULE

Consistent with the description of the status of the Project above and due to the infancy of this Project's development phase, a Project Schedule has not yet been prepared. Hydro One's future semi-annual reports will include a Project Schedule when those specific activities have been identified and Project plan developed.

PROJECT SCOPE AND TIMING RECOMMENDATIONS PROVIDED BY THE IESO

Should the IESO provide an update to the scope, need, and/or timing recommendations to Hydro One for the Project, those details will be provided to the OEB and summarised in this section of the Report going forward. Information in this section will reflect any update/s provided to Hydro One within the semi-annual reporting period to which the report pertains.

Additional IESO studies for this Project are required add more definition to the Project and provide in-service timing, prior to Hydro One commencing any further meaningful project development work. Hydro One's future semi-annual reports will include more details once available.

Updates - Nothing to report during the period.

ATTACHMENT #1

OEB Letter to Hydro One Re: New Transmission Lines in Southwestern Ontario

Dated May 24, 2022

OEB File Number: EB-2022-0142



BY EMAIL

May 24, 2022

Ms. Joanne Richardson
Director, Major Projects and Partnerships
Hydro One Networks Inc.
483 Bay Street, 7th Floor South Tower
Toronto, ON M5G 2P5
Joanne.Richardson@HydroOne.com

Dear Ms. Richardson:

**Re: New Transmission Lines in Southwestern Ontario
Board File Number: EB-2022-0142**

This letter acknowledges receipt of your letter of April 12, 2022 in which Hydro One Networks Inc. (Hydro One) provided a copy of the Independent Electricity System Operator's (IESO's) recommendations regarding the scope and timing of four new transmission line projects, as required by the Ontario Energy Board (OEB) in its April 6, 2022 Decision and Order.

The four transmission line projects (collectively referred to as the Projects) are:

1. A new 230 kilovolt (kV) transmission line from Lambton Transformer Station to Chatham Switching Station, including associated station facility expansions or upgrades required at the terminal stations;
2. A new 500 kV transmission line from Longwood Transformer Station to Lakeshore Transformer Station, including associated station facility expansions or upgrades required at the terminal stations;
3. A second new 500 kV transmission line from Longwood Transformer Station to Lakeshore Transformer Station, including associated station facility expansions or upgrades required at the terminal stations; and
4. A new 230 kV transmission line that connect the Windsor area to the Lakeshore Transformer Station, including associated station facility expansions or upgrades required at the terminal stations.

Section 19.8.1 of Hydro One's licence, as amended on April 6, 2022, requires Hydro One to develop and seek approvals for the Projects.

In addition to requiring the amendment of Hydro One's licence, the Minister's Directive, dated March 31, 2022, also directed the OEB to require that Hydro One provide such reporting to the OEB as the OEB may consider appropriate with respect to budget, timing and risks in relation to the development of the Projects. This letter sets out the OEB's reporting requirements for the Projects.

Separate reports shall be provided by Hydro One for each of the four transmission line projects. Reports for a specific transmission line project shall be provided until a leave to construct application for that transmission line project is filed. The reports should be filed as follows:

- May 1 to October 31 for reporting in November
- November 1 to April 30 for reporting in May

All reports are to be filed by the 15th business day of the month following the end of each reporting period. The first set of reports should be filed on November 15, 2022.

In each report, Hydro One shall provide an update on the following matters:

- *Overall Project Progress:* An executive summary of work progress, cost and schedule status, and any emerging issues/risks and proposed mitigation.
- *Development Cost:* Development costs shall be reported in the form of the attached table. A forecast of the development cost is to be provided in the first set of reports (in column 'C' of the table) and will be used as the reference for future reports. A future hearing will examine the prudence of development costs incurred by Hydro One for the Projects.
- *Development Work Schedule:* The milestones completed and the status of milestones in-progress. The schedule and milestones for development work provided in the first report will be used as the reference for future reports. For milestones that are overdue or delayed, the reasons for delay, the magnitude and impact of the delay on broader project timelines and cost, and any mitigating steps that have or will be taken to complete the task.
- *Risks and Issues Log:* An assessment of the risks and issues with respect to project development, potential impact on schedule, cost or scope, as well as potential options for mitigating or eliminating the risk or issue.
- *Project scope and timing recommendations provided by the IESO:* If the IESO updates its scope and timing recommendations these should be included.

Any questions relating to this letter should be directed to Andrew Pietrewicz at Andrew.Pietrewicz@oeb.ca.

Yours truly,

Brian Hewson
Vice President, Consumer Protection & Industry Performance

Attachment: Project Development Cost Reporting Table

Project Development Cost Reporting Table for Use in Bi-annual Reports

All bi-annual reports should include the following table that summarizes budgeted vs. actual expenditures to date, as well as any forecast changes in budget and the revised total budget. Percentage values in the cost table should be used to two decimal places.

Project Development Cost Reporting Table

	Actuals Spent			Forecast Budget Variance					
	A Spent this Reporting Period (millions)	B Total Spent to Date (millions)	C Budget per November 15, 2022 Report (millions)	D Forecast Budget Change from Last Report (millions)	E Forecast Budget Change from Last Report (%)	F Revised Total Budget (millions)	G = F – B Budget Remaining (millions)	H = G/F *100 Budget Remaining (%)	Reasons for Change
Real Estate									
Engineering and Design									
Environmental Approvals									
Indigenous Consultation									
Project Management									
Contingency									
Other Consultation									
Interest and Overhead									
Total									

Notes on the Project Development Cost Reporting Table

- Column 'A' should reflect expenditures since the last reporting period.
- Column 'B' should reflect all expenditures to date for the specific transmission line project.
- Budgeted costs in Column 'C' should be those reported in Hydro One's first bi-annual report and are to be held fixed.

ATTACHMENT #2

**IESO Letter to Hydro One Re: Building a new 230 kV double-circuit line from Lambton TS
to Chatham SS**

Dated May 26, 2020

March 26, 2020

Robert Reinmuller
Director, Transmission System Planning
Hydro One Networks, Inc.
483 Bay Street
Toronto, ON M5G 2P5

Dear Robert:

Re: Building a new 230 kV double-circuit line from Lambton TS to Chatham SS to supply forecasted load growth in the Windsor-Essex region and surrounding Chatham area

The purpose of this letter is to identify the need for a new 230 kV double-circuit line from the Lambton transformer station ("TS") to the Chatham switching station ("SS") and the associated station facility expansions or upgrades required at the terminal stations. This reinforcement is needed to ensure that the system can meet the near- to mid-term needs for the Windsor-Essex region. These facilities are required no later than 2028, but there is benefit in streamlining the implementation of this project and completing it earlier if possible.

The purpose of these new facilities is to:

- Ensure sufficient bulk transfer capability east of Chatham to supply the forecast load in the Windsor-Essex region and surrounding Chatham area in the near- to mid-term; and
- Improve the deliverability of resources in the Lambton-Sarnia area for intra-zonal and provincial supply.

Background

The west of London area, as shown in Figure 1, encompasses a 230 kV and 115 kV high voltage network stretching from the western edge of the City of London, to Lambton-Sarnia in the northwest, and the City of Windsor in the west. This system interconnects large generators in the Lambton-Sarnia and Windsor areas with existing load centres, and encompasses the growing Kingsville-Leamington and Chatham-Kent areas. It provides four interconnection points with Michigan's power system via Windsor and Lambton-Sarnia. The area also encompasses a connection to the 500 kV system at Longwood within the Municipality of Strathroy Catadoc, providing a strong path for supply to and from the region and the rest of the province.

There are two main pockets of load growth and economic development in the area west of London – in the Town of Kingsville and Municipality of Leamington, and in the community of Dresden, located within the Municipality of Chatham-Kent. This growth is driven by strong indoor agricultural growth, mainly in vegetable greenhouses, as well as in part, cannabis, specifically through the intensification of existing greenhouses switching to lit indoor facilities, expansion of greenhouse facilities, and supplemental load to support the agricultural sector.

In 2019, the IESO published a bulk transmission study for the area, [*Need for Bulk Transmission Reinforcement in the Windsor-Essex Region*](#), which recommended transmission upgrades to supply this increased electricity demand in the region. More specifically, the upgrades addressed bulk transmission system limitations west of Chatham, between Chatham SS and the Kingsville-Leamington area. These included a new switching station at Leamington Junction (Lakeshore SS) and a new 230 kV double-circuit line from Chatham SS to the new Lakeshore SS. At that time, transmission system constraints east of Chatham were also identified but additional assessments were required before further recommendations could be made.

Recent studies conducted by the IESO with input from Hydro One, local distribution companies (LDCs), stakeholders and communities concluded that bulk electricity demand west of London region will be adequately supplied by the previous recommendations for transmission reinforcements and existing resources until the beginning of 2028.

To supply the forecasted electricity demand beyond 2028 and to maintain the capability of the transmission system to deliver the output of generation resources in the Lambton-Sarnia area, the IESO recommends a new 230 kV, double-circuit transmission line be built between Lambton TS and Chatham SS. Prior to this reinforcement coming into service as new loads connect, operational actions such as arming Remedial Action Schemes (RAS) for load or generation rejection, or temporarily allowing higher operating ratings, may be required to address the potential congestion of generation resources in the Lambton-Sarnia area. This would be outlined in potential exemptions to reliability standards, as required.

Due to the rapid and constantly evolving nature of the load growth in the area, and the need to occasionally rely on operating actions to reduce congestion of generating resources, there is benefit in streamlining the implementation of this project to complete it earlier if possible.

The analysis found that this transmission solution is the most cost effective next step to supplying the increasing demand in the region.

In arriving at this recommendation alternate transmission options and local supply options were considered. The analysis of the different options will be described in the IESO's west of London bulk study report, to be published in Q2 2021. This report will also make additional recommendations around further transmission or resource solutions, as required, to continue meeting bulk system needs into the long-term.

Lambton South (Lambton to Chatham) Transmission Line Project Scope

Based on the above considerations, the IESO recommends that Hydro One initiate the work, engagement and activities, including seeking Environmental Assessment and Leave-to-Construct approvals, that are required to develop and construct a new 230 kV double-circuit line from Lambton TS southwards to Chatham SS and associated station facility expansions or upgrades

required at the terminal stations. Single-line diagrams of the existing and proposed facilities are shown in Figure 2.

The project and its related costs and timelines have been discussed with Hydro One. The IESO understands that, if approvals are received, an in-service date of 2028 is achievable and recommends the transmitter investigate options for an accelerated implementation if possible, for the reasons mentioned previously. Hydro One has indicated costs for the project may range between \$210 million to \$290 million. If there is any delay or suspension of the targeted in-service date and/or project costs are forecasted to exceed the upper end of this range, Hydro One will notify the IESO as soon as possible so that the assessment of the bulk system reinforcement plan in the west of London can be updated appropriately.

The IESO is aware that there are Indigenous communities in Southern Ontario that may have an interest in this project. The IESO encourages Hydro One to meaningfully engage with these communities in a way that recognizes the unique interest of each community in this project, and to discuss their concerns about potential impacts to their Aboriginal or treaty rights.

Future Activities

This transmission line is the next stage of a number of improvements to the bulk transmission system required to support load growth and ensure reliability in the area. Planning for the west of London bulk system is still underway and additional recommendations along with a final report are planned for spring 2021. In parallel, long-term planning also continues at the regional level through the on-going Windsor-Essex addendum study and forthcoming Chatham-Kent/Lambton/Sarnia regional planning cycle in Q2 2021. Engagement with Indigenous and municipal communities and sector stakeholders will continue to inform these activities.

IESO will continue to work with Hydro One in the implementation of this project. We look forward to an ongoing exchange of information as Hydro One proceeds with the development of the project.

Yours truly,

Ahmed Maria

Ahmed Maria

Cc: Terry Young, IESO
Leonard Kula, IESO
Candice Trickey, IESO
Chuck Farmer, IESO
Bruno Jesus, Hydro One
Mark Brodie, Hydro One
IESO Records

Figures: System Maps

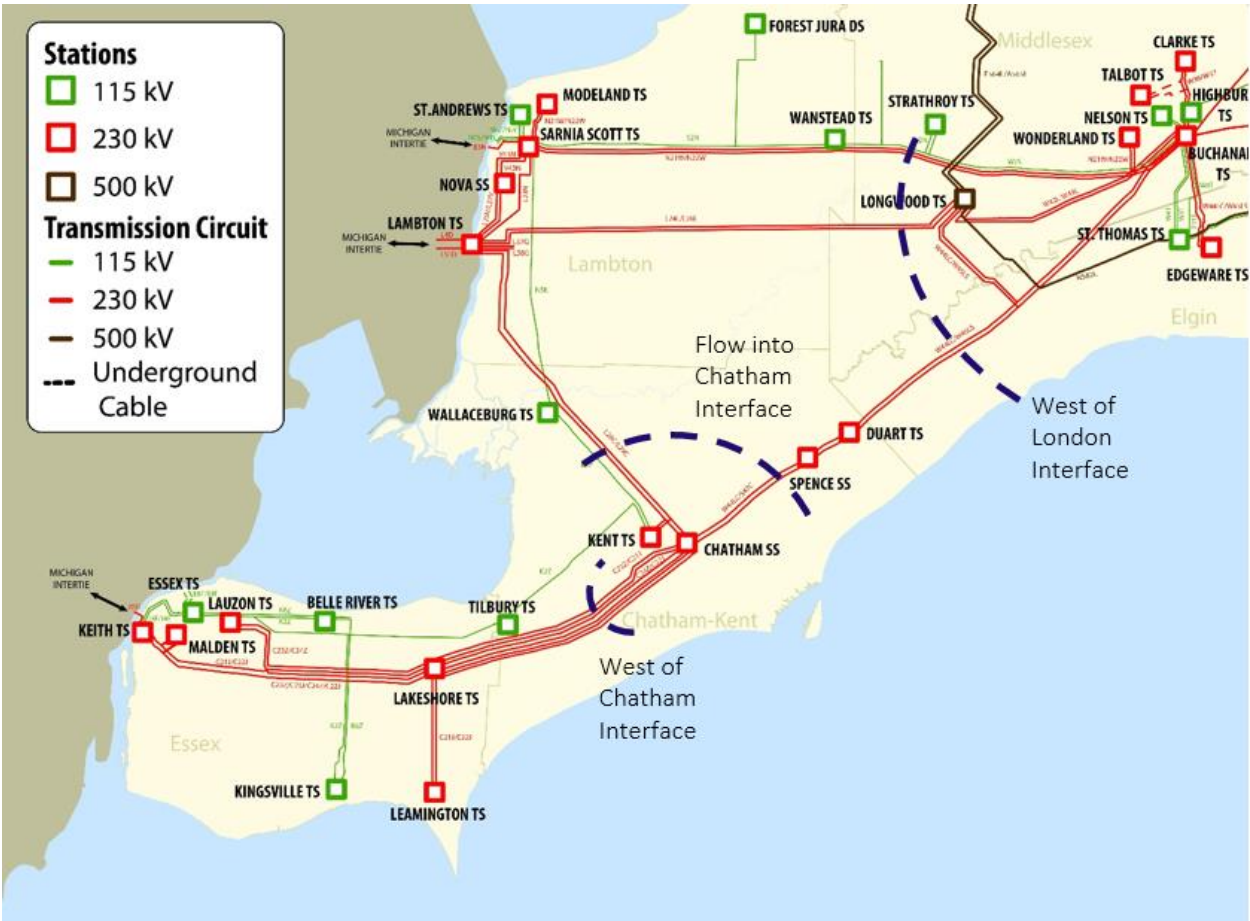


Figure 1: Geographical map of West of London

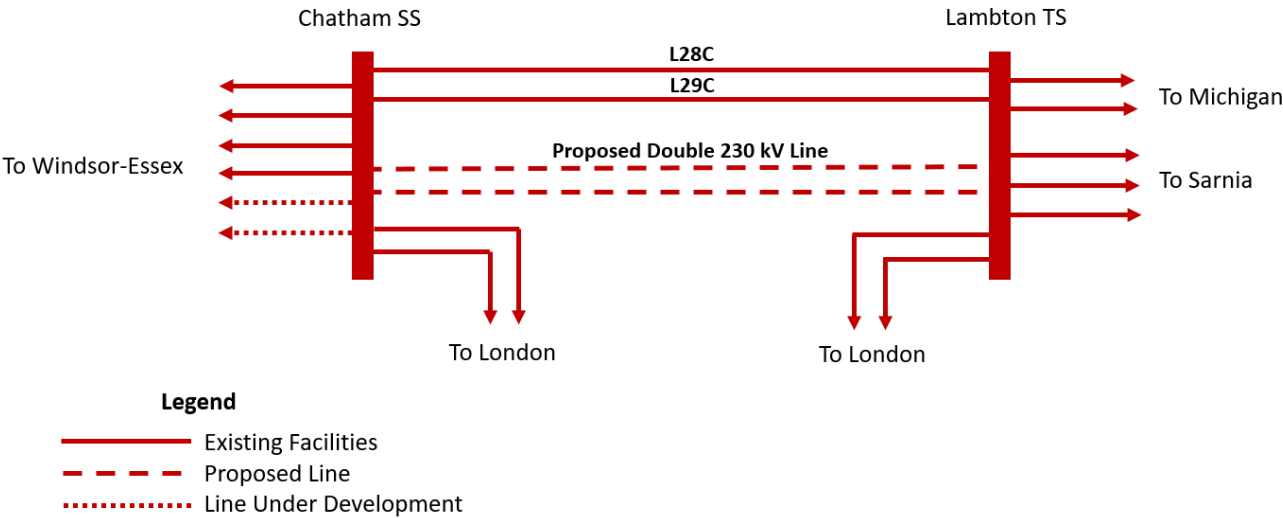


Figure 2: Single line diagram of existing and proposed facilities in West of London

ATTACHMENT #3
Map of the New Transmission Lines in Southwestern Ontario

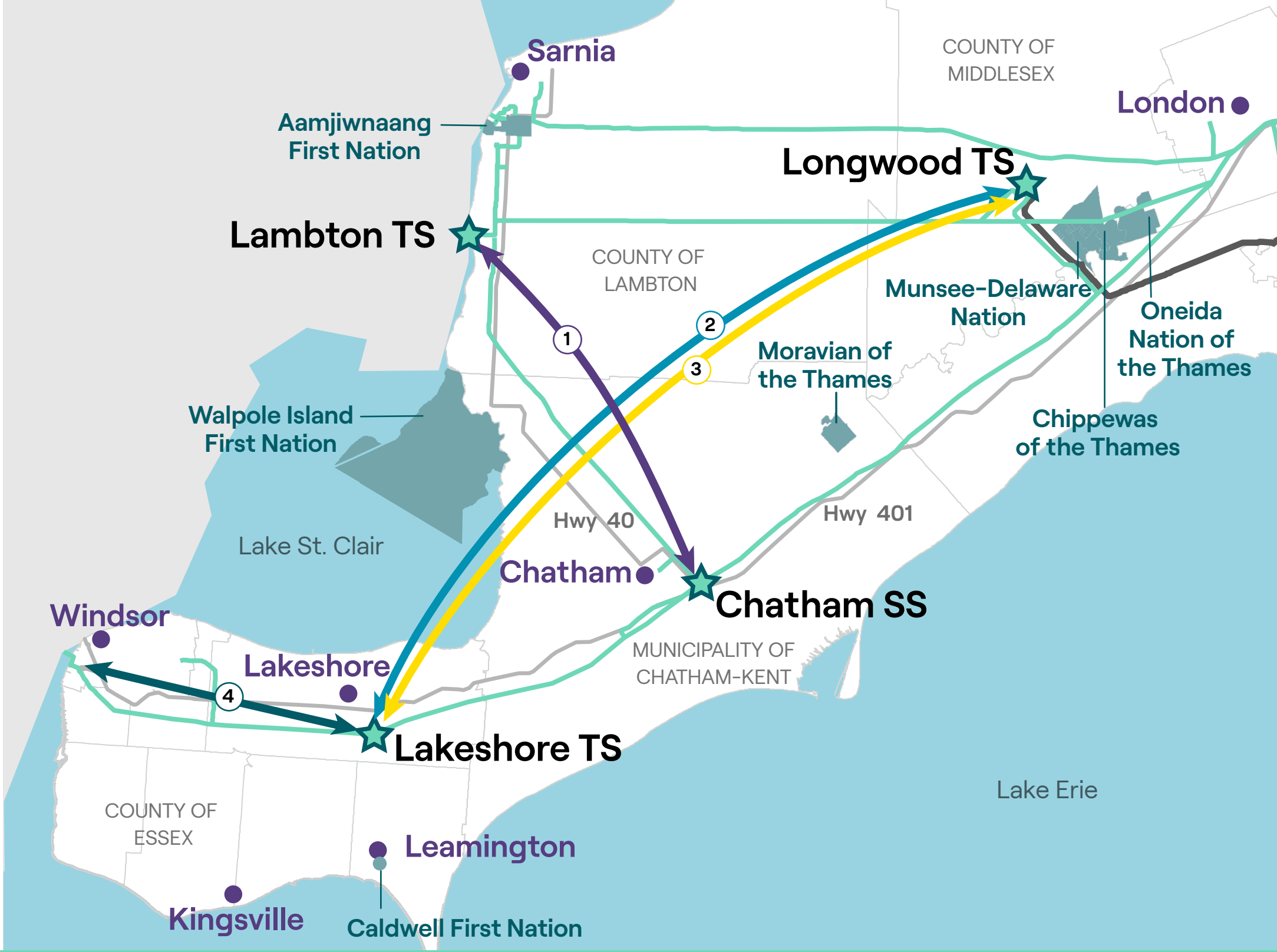


Southwest Ontario Transmission Projects

- 1 St. Clair 230 kV Transmission Line (2028)
- 2 Longwood to Lakeshore 500 kV Transmission Line (2030)
- 3 Longwood to Lakeshore 500 kV Transmission Line (TBD)
- 4 Windsor to Lakeshore 230 kV Transmission Line (TBD)

Map Legend

- 230 kV Existing Transmission Line
- 500 kV Existing Transmission Line
- Existing Transformer Station
- City/Town
- Highway
- First Nation



Southwest Ontario
Transmission Line Project

Longwood x Lakeshore

OEB Report



Southwest Ontario Transmission Line Projects

Longwood TS to Lakeshore TS Transmission Line Projects

Ontario Energy Board Progress Report

November 1, 2022, to April 30, 2023

EXECUTIVE SUMMARY

On April 6, 2022, the Ontario Energy Board (“OEB”)¹ amended Hydro One Network Inc.’s (“Hydro One”) transmission licence (ET-2003-0035) to include a requirement for Hydro One to develop and seek all necessary approvals for four new transmission projects located in Southwestern Ontario as per the Directive approved by the Lieutenant Governor in Council on March 31, 2022, as Order in Council (“OIC”) No. 875/2022. The four transmission projects (the “Projects”), being; 1) a 230 kilovolt (kV) transmission line from Lambton Transformer Station (“TS”) to Chatham Switching Station, including associated station facility expansions or upgrades required at the terminal stations; 2) a 500 kV transmission line from Longwood TS to Lakeshore TS, including associated station facility expansions or upgrades required at the terminal stations; 3) a second 500 kV transmission line from Longwood TS to Lakeshore TS, including associated station facility expansions or upgrades required at the terminal station and; 4) a 230 kV transmission line that connects the Windsor area to the Lakeshore TS, including associated station facility expansions or upgrades required at the terminal station.

On May 24, 2022², the OEB requested that Hydro One prepare semi-annual reporting to the OEB that provides an update for each of the Projects on: Overall Project Progress, Development Cost, Development Work Schedule, Risks and Issues Log, and Project Scope and Timing Recommendations provided by the IESO. Reporting for the period May 1 to October 31, should be filed in November, and the reporting for the period November 1 to April 30, should be filed in May.

This document includes the project reporting for two of the four individual projects and represents Hydro One’s first semi-annual report for those Projects, referred to as Project’s #2 and #3 respectively, above. This report provides information on activities related to the development of two new 500 kV transmission lines from Longwood Transformer Station to Lakeshore Transformer Station.

At this time, the second project included in this Report (referred to as Project #3) requires further IESO study and direction in terms of timing of the in-service date. Expenditures incurred relate only to the Environmental Assessment, which is being conducted in parallel with Project #2.

For projects in the active development stage, such as the Longwood to Lakeshore transmission line Projects (Project #2 and Project #3), they will be monitored continually for risks, and risk mitigation is implemented as a matter of routine activity by the Project teams. Delays in regulatory approvals remain an active risk that Hydro One is working with regulators to manage. Should these risks have a greater impact on any of the Projects, they will be included in greater detail in subsequent progress reports.

¹ EB-2022-0142

² EB-2022-0142 (The letter is attached at **Attachment 1** to this document)

Hydro One's guiding recommendations for the four transmission reinforcement projects in the Southwestern Ontario Area are driven by two specific reports by the IESO:

1. [West of London Bulk Study – Need for Bulk System Reinforcements West of London](#) (Sept 2021)
2. [Windsor-Essex IRRP Addendum Report](#) – (February 2022)

The West of London Bulk Study references these projects in Section 7.3 Near Term Recommendations (Project #1), Section 8.3 Long Term Recommendations (Projects #2 and #3) and Section 9.3 Interdependency with Regional Planning (Project #4). *The West of London Bulk Study* identified the need and timing of Project #2. Section 6.1.2 *Coordination with the West of London Bulk Plan of the Windsor-Essex IRRP Addendum Report* also references Project #4.

These four identified transmission line projects are expected to be owned by and included in the rate base of new partnership/s, as licenced transmitter/s, such that the project line costs will be included in the Affiliate Transmission Projects Account ("ATP Account") and will not form part of Hydro One's rate base. On October 7, 2021, the OEB approved Hydro One's application for an accounting order to establish the ATP Account for a project where Hydro One has, or will, receive a letter from the IESO identifying transmission system needs, and/or an Order in Council or direction of the Ministry of Energy for the development or construction of a transmission line project, that is expected to form a new partnership. The associated station work for the projects is expected to form part of Hydro One's transmission rate base.

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BACKGROUND

On April 4, 2022, the Minister of Energy issued a Directive to the OEB under section 28.6.1 of the Ontario Energy Board Act (“Directive”) requiring the OEB to amend Hydro One’s electricity transmission licence to require Hydro One to develop and seek approvals for four transmission line projects located in Southwest Ontario (collectively referred to as the Projects), that were approved by the Lieutenant Governor in Council on March 31, 2022, as Order in Council No. 875/2022. The four projects are as follows:

1. A new 230 kilovolt (kV) transmission line from Lambton Transformer Station to Chatham Switching Station, including associated station facility expansions or upgrades required at the terminal stations;
2. A new 500 kV transmission line from Longwood Transformer Station to Lakeshore Transformer Station, including associated station facility expansions or upgrades required at the terminal stations;
3. A second new 500 kV transmission line from Longwood Transformer Station to Lakeshore Transformer Station, including associated station facility expansions or upgrades required at the terminal stations; and
4. A new 230 kV transmission line that connect the Windsor area to the Lakeshore Transformer Station, including associated station facility expansions or upgrades required at the terminal stations.

The Directive also required the OEB to amend Hydro One’s licence to include a condition that the scope and timing for the Projects accord with the recommendations of the Independent Electricity System Operator (“IESO”), and it also directed the OEB to require that Hydro One provide such reporting to the OEB as the OEB may consider appropriate with respect to budget, timing, and risks in relation to the development of the Projects.

The Order in Council accompanying the Directive states that expansion of Ontario’s transmission system is critical to provide a reliable and adequate supply of electricity to Southwestern Ontario to support economic growth in the region, including the rapidly growing agricultural sector and the potential for growth in the electric vehicle and broader automotive sectors.

Two of the projects listed in the Directive (Project #1 and #2 above) have been declared to be needed as priority projects pursuant to section 96.1 of the Act in Order in Council 876/2022 dated March 31, 2022. The third project, a new 230 kV electricity transmission line from the existing Chatham Switching Station to the new Lakeshore TS, was the subject of a previous Directive issued to the OEB on December 17, 2020. The OEB amended Hydro One’s transmission licence in respect of that project by Decision and Order dated December 23, 2020. As at the reporting date, no meaningful, and / or separately identifiable planning or development activities have

commenced pertaining to Project #4. This Project is pending further technical studies, to be led by the IESO.

In a letter dated May 24, 2022, the OEB requested that Hydro One prepare semi-annual reports to the OEB that provided updates on the following matters:

- Overall Project progress
- Development cost
- Development work schedule
- Risks and Issues Log
- Project scope and timing recommendations provided by the IESO.

The reports should be filed as follows:

- May 1 to October 31 for reporting in November
- November 1 to April 30 for reporting in May.

All reports are to be filed by the 15th business day of the month following the end of each reporting period.

This report covers Projects #2 and #3, the two single-circuit 500 kV transmission lines from Longwood to Lakeshore. Since both Projects are distinct but have the same terminal facilities, they have been included together in this report.

Hydro One's OEB-Approved Affiliate Transmission Projects Regulatory Account

On October 7, 2021, the OEB approved Hydro One's application for an accounting order to establish a new regulatory account, the Affiliate Transmission Projects Account. The ATP Account will be used for a transmission line project where:

1. Hydro One has, or will, receive a letter from the IESO identifying transmission system needs, and/or an Order in Council or direction from the Minister of Energy for the development or construction of a transmission line project and,
2. All or part of the transmission line project is expected to be owned by and included in the rate base of a new partnership, as a licensed transmitter, such that costs included in the ATP Account Project will not form part of Hydro One's rate base.

The four new transmission line projects, two of which are reported on in this document, are expected to be owned by and included in the rate base of a new partnership, as a licenced transmitter, such that costs included in the ATP Account Project will not form part of Hydro One's rate base. On October 7, 2021, the OEB approved Hydro One's application for an accounting order to establish the new ATP Account for use where Hydro One has, or will, receive a letter

from the IESO identifying transmission system needs, and/or an Order in Council or direction from the Minister of Energy for the development or construction of a transmission line project.

In this bi-annual report to the OEB Hydro One is including individual updates for Projects #2 and #3, to the extent that there are updates on which to provide. For the purposes of maintaining regulatory efficiency, Hydro One has included two reports, by project, in this document. Projects #2 and #3 are in active development while Project #3 requires further studies by IESO to determine the in-service date. Hydro One's intention is to continue to prepare and submit Project #3 in this report, with Project #2, until the Environmental Assessment ("EA") is complete, as the EA covers both projects.

Project Summary Table

For ease of reference, and comparison, Table 1 below provides a summary of the two individual projects included in this report. A map of southwestern Ontario and the new transmission projects, including Projects #2 and #3, can be found at **Attachment 2** to this document.

**Table 1 - Summary of Project #2 and Project #3 –
Longwood to Lakeshore Transmission Line Projects**

Status	Line Name	Voltage (kV)	Length (KM)	Circuit Type	Completion	Project Stage	Notes
To Be Developed and Prioritized for Construction	Longwood to Lakeshore Transmission Line	500 kV	Approx. 135	Single	2030	Under development	Preliminary Development underway
To Be Developed	2 nd Longwood to Lakeshore Transmission Line	500 kV	Approx. 135	Single	No current Timeline established	Under development	Further Study by IESO Required

PROJECT REPORT

Project 2 - 500 kV Transmission Line from Longwood TS to Lakeshore TS

This project, identified as Project #2 in the listing above, is also known as “Phase 1” of the total circuits contemplated between Longwood TS to Lakeshore TS. The Directive to Hydro One called for two new 500 kV transmission lines between these two stations. The two projects are expected to have different construction and in-service timelines.

OVERALL PROGRESS BY PROJECT

In the IESO’s “Need for Bulk System Reinforcements West of London” report issued in September 2021, among other things, the IESO identified a need for a single-circuit 135 km, 500 kV transmission line from Longwood TS to Lakeshore TS (also known and referred to as “Phase 1”, due to another 500 kV circuit project of the same nature also being defined between those two stations) in 2030. In the same report, the IESO also indicated a second 500 kV single-circuit transmission line (also known and referred to as “Phase 2”), approximately 135 km in length in the area should be considered as an option to address higher growth. By OIC, dated March 31, 2022, the Government declared the first single-circuit 500 kV line a priority project, and designated Hydro One as the transmitter.

To better coordinate rights-holder and stakeholder consultations for the second 500 kV circuit (Phase 2), the development work for this Project, consisting of the environmental assessment activities and consultations, has commenced and include those elements for both 500 kV projects (Phase 1 and Phase 2). However, at this time Hydro One expects it will seek separate OEB Leave to Construct approvals for each phase, starting with Project #2 (Phase 1), a single 500 kV line. As part of ongoing regional and bulk planning assessments, as led by the IESO, the IESO is expected to determine the timing of Project #3 (Phase 2) in the future. When further details are known, Hydro One will include those details in future Project reporting.

Hydro One began development work in October 2022 and continues to proceed with development work for Phase 1 and Phase 2. The following summarises the work that was undertaken within the reporting period.

Environmental Approvals

Hydro One continues to proceed with development work for this Project. In consultation with IESO, which supported Hydro One to proceed with the EA for both Project Phase 1 and Phase 2 as soon as possible to shorten the overall Project lead time required to have the assets ready to be in service to meet the electricity capacity needs, for Phase 1, and, when the need materializes for Phase 2.

In February 2023, Hydro One commenced a Comprehensive EA for Phase 1 and Phase 2 through release of a Notice of Commencement of Terms of Reference (“ToR”) to Indigenous communities, municipalities, government agencies, residents and other potentially impacted stakeholders. Hydro One hosted five in-person Community Open Houses across the Route Selection Study Area between March 21st and March 30th as well as one virtual Community Open House on April 13th to introduce the Project and the EA process. In addition, the first Technical Advisory Committee (“TAC”) Workshop was held, and focused on seeking input on routing criteria that will be used in the development of route corridors. The TAC Workshop was a three-day event held March 21st–23rd in Chatham (with a virtual attendance option provided). A TAC Workshop focusing on garnering input from Indigenous communities on routing criteria is planned for May 4th in London, Ontario.

The ToR sets out the workplan and decision-making process to be followed during the EA. The ToR process will continue for the rest of 2023 including extensive consultation, data collection and development of route alternatives with the intent to submit the Proposed ToR to the Ministry of the Environment, Conservation and Parks in early 2024.

Other Consultation

Hydro One continues to proceed with development work on the Project. Ongoing consultation and engagement are being performed with ten Indigenous communities, government agencies, the public and other interested parties. Capacity, in the form of funding and training, is being provided to Indigenous communities to assure opportunity for extensive participation and consultation in the Project.

Engineering and Design

Engineering and design work has begun for the expansion of two of Hydro One transmission stations, i) Longwood TS and ii) Lakeshore TS, to support the need for Phase 1. Engineering and design work will be conducted for both Phase 1 and Phase 2 as required to support the development work.

COSTS

The IESO indicated that the planning level allowance used in the economic assessment of solution for the *“Need for Bulk System Reinforcements West of London report September 2021”* utilized a range of between \$800M and \$1,150M for Phase 1, with a contingency allowance of 50% for the transmission line portion of the Project.

Hydro One has only recently commenced work on this Project and is in the process of determining a project development cost estimate.

Table 2 - Project Development Costs – Project 2 – 500 kV transmission line from Longwood TS to Lakeshore TS (Phase 1)

	<i>Actuals Spent</i>		<i>C</i>	<i>Forecast Budget Variance</i>					
	<i>A</i>	<i>B</i>		<i>D</i>	<i>E</i>	<i>F</i>	<i>G</i>	<i>H</i>	<i>I</i>
	<i>Spent this Reporting Period (Millions)</i>	<i>Total Spent to Date (Millions)</i>	<i>Budget per TBD Report (Millions)</i>	<i>Forecast Budget Change from Last Report (Millions)</i>	<i>Forecast Budget Change from Last Report (%)</i>	<i>Revised Total Budget (Millions)</i>	<i>G = F - B Budget Remaining (Millions)</i>	<i>H = G/F * 100 Budget Remaining (%)</i>	<i>Reasons for Change</i>
Real Estate	\$0.02	\$0.02	TBD	\$0.00	0%	\$0.00	TBD	TBD	
Engineering and Design	\$0.50	\$0.54	TBD	\$0.00	0%	\$0.00	TBD	TBD	
Environmental Approvals	\$0.21	\$0.27	TBD	\$0.00	0%	\$0.00	TBD	TBD	
Indigenous Consultation	\$0.00	\$0.00	TBD	\$0.00	0%	\$0.00	TBD	TBD	
Project Management	\$0.03	\$0.05	TBD	\$0.00	0%	\$0.00	TBD	TBD	
Contingency	\$0.00	\$0.00	TBD	\$0.00	0%	\$0.00	TBD	TBD	
Other Consultation	\$0.07	\$0.08	TBD	\$0.00	0%	\$0.00	TBD	TBD	
Interest and Overhead	\$0.08	\$0.09	TBD	\$0.00	0%	\$0.00	TBD	TBD	
Total	\$0.91	\$1.05	TBD	\$0.00	0%	\$0.00	TBD	TBD	

PROJECT SCHEDULE

In the IESO “Need for Bulk System Reinforcements West of London report September 2021” the IESO indicated that the Longwood to Lakeshore Transmission Line (Phase 1) would be required to be in service by 2030. Hydro One has built out a development schedule with the goal of completing all development work by the end of 2026. Table 3 presents the key milestones involved in completing development.

Table 3 - Project Schedule
Project 2 – 500 kV transmission line from Longwood TS to Lakeshore TS (Phase 1)

Milestones	Schedule	Status
<i>Notice of Commencement of Terms of Reference (TOR)</i>	February 2023	February 27 2023 to March 3, 2023 (with pre-release to Indigenous Communities and key stakeholders occurring February 13, 2023 – February 24, 2023)
<i>Community open house #1</i>	March 2023	March 21, 22, 23, 29, 30, 2023
<i>Virtual open house #1</i>	April 2023	April 13, 2023
<i>Data collection, and development of route alternatives</i>	Early 2023 – Mid 2023	In-Progress
<i>Publish the draft TOR for public review</i>	Late 2023	Not started
<i>Proposed TOR submitted to Ministry of the Environment, Conservation and Parks</i>	Early 2024	Not started
<i>TOR approved by the Ministry of the Environment, Conservation and Parks</i>	Mid 2024	Not started
<i>Notice of Commencement of Comprehensive Environmental Assessment (EA)</i>	Late 2024	Not started
<i>Consultation and data collection in support of the EA</i>	2024 - 2025	Not started

<i>Selection of preferred routes</i>	Early 2025	Not started
<i>Publish the draft EA for public review</i>	Mid 2025	Not started
<i>Final EA submitted to Ministry of the Environment, Conservation and Parks</i>	Late 2025	Not started
<i>Decision on EA by Ministry of the Environment, Conservation and Parks</i>	2026	Not started
<i>Leave to Construction (Section 92) application</i>	2026	Not started
<i>Construction</i>	2027-2030	Not started

RISKS AND ISSUES LOG

The below risks have been identified for the ToR stage of this Project. Risks for further stages of the Project development work will be identified as the Project progresses.

- The risk of an extended regulatory review period for the proposed ToR approval, could adversely impact the development schedule. Hydro One has allowed additional time in the schedule for the review period to mitigate this risk.
- The risk the regulator may determine that Indigenous consultation completed during the course of the ToR is not adequate could adversely impact the development work and schedule. Hydro One continues to engage regularly with regulator, aimed at (among other things) to ensure Hydro One meets their expectations regarding the adequacy of consultation and study. Additionally, Hydro One continues to offer engagement opportunities with Indigenous communities proximate to the Project's EA study area, which has included offering to provide capacity funding.

PROJECT SCOPE AND TIMING RECOMMENDATIONS PROVIDED BY THE IESO

Should the IESO provide updates to the scope and/or timing recommendations to Hydro One for Phase 1, these will be provided to the OEB and summarised in this section of the Report going forward. Information in this section will reflect any update/s provided to Hydro One within the semi-annual reporting period to which the report pertains, by Project.

Updates - Nothing to report during the period.

PROJECT REPORT

Project 3 - A second new 500 kV transmission line from Longwood TS to Lakeshore TS

This Project, identified as Project #3 in the listing above, is also known as “Phase 2”, the second circuit contemplated between Longwood TS to Lakeshore TS.

OVERALL PROGRESS BY PROJECT

To better coordinate rights-holder and stakeholder consultations for Project#3, the second 500 kV circuit (also known as Phase 2), the development work consisting of EA activities has commenced and includes scope for both 500 kV projects (i.e., Phase 1 and Phase 2)

The IESO is supportive of Hydro One proceeding with development for both Phase 1 and Phase 2 projects as soon as possible to shorten the overall lead time required to have the assets ready to be in-serviced to meet the electricity capacity needs for the region. In February 2023, Hydro One commenced a Comprehensive EA for Phase 1 and Phase 2. A Notice of Commencement of ToR was released publicly in February 2023.

COSTS

Hydro One has only recently commenced work on this Project and is in the process of determining a project development cost estimate forecast. As at the reporting date, minor costs have been incurred and relate predominately to the undertaking of the Project EA. Phase 1 and Phase 2 Project EA work is being undertaking in parallel.

Table 4 - Project Development Costs – Project 3 – 500 kV transmission line from Longwood TS to Lakeshore TS (Phase 2)

	Actuals Spent		C	Forecast Budget Variance					
	A	B		D	E	F	G	H	I
	Spent this Reporting Period (Millions)	Total Spent to Date (Millions)	Budget per TBD Report (Millions)	Forecast Budget Change from Last Report (Millions)	Forecast Budget Change from Last Report (%)	Revised Total Budget (Millions)	G = F - B Budget Remaining (Millions)	H = G/F * 100 Budget Remaining (%)	Reasons for Change
Real Estate	\$0.00	\$0.02	TBD	\$0.00	0%	\$0.00	TBD	TBD	
Engineering and Design	\$0.00	\$0.00	TBD	\$0.00	0%	\$0.00	TBD	TBD	
Environmental Approvals	\$0.00	\$0.27	TBD	\$0.00	0%	\$0.00	TBD	TBD	
Indigenous Consultation	\$0.00	\$0.00	TBD	\$0.00	0%	\$0.00	TBD	TBD	
Project Management	\$0.00	\$0.05	TBD	\$0.00	0%	\$0.00	TBD	TBD	
Contingency	\$0.00	\$0.00	TBD	\$0.00	0%	\$0.00	TBD	TBD	
Other Consultation	\$0.00	\$0.08	TBD	\$0.00	0%	\$0.00	TBD	TBD	
Interest and Overhead	\$0.00	\$0.04	TBD	\$0.00	0%	\$0.00	TBD	TBD	
Total	\$0.00	\$0.46	TBD	\$0.00	0%	\$0.00	TBD	TBD	

RISKS AND ISSUES LOG

The below risks have been identified for the ToR stage of this Project. Risks for further stages of the Project development work will be identified as the Project progresses.

- The risk of an extended regulatory review period for the proposed ToR approval, could adversely impact the development schedule. Hydro One has allowed additional time in the schedule for the review period to mitigate this risk.
- The risk the regulator may determine that Indigenous consultation completed during the course of the ToR is not adequate could adversely impact the development work and schedule. Hydro One continues to engage regularly with regulator, aimed at (among other things) to ensure Hydro One meets their expectations regarding the adequacy of consultation and study. Additionally, Hydro One continues to offer engagement opportunities with Indigenous communities proximate to the Project's EA study area, which has included offering to provide capacity funding.

PROJECT SCHEDULE

A high-level Project Schedule has been developed, however at this time Project 3 has no defined in-service date. The EA work for both Project phases is being undertaken concurrently, (i.e., study areas for Project #2 and Project #3), however, no other significant work has occurred as at the reporting date.

PROJECT SCOPE AND TIMING RECOMMENDATIONS PROVIDED BY THE IESO

Should the IESO provide updates to the scope and/or timing recommendations to Hydro One for Project #3), these will be provided to the OEB and summarised in this section of the Report going forward. Information in this section will reflect any updates provided to Hydro One within the semi-annual reporting period to which the report pertains, by Project.

Additional IESO studies for Project #3 will provide more project definition, scope, and in-service timing, prior to Hydro One commencing further meaningful project development work beyond the EA work. Hydro One's future semi-annual reports will include more details when they become available.

Updates - Nothing to report during the period.

ATTACHMENT #1

OEB Letter to Hydro One Re: New Transmission Lines in Southwestern Ontario

Dated May 24, 2022

OEB File Number: EB-2022-0142



BY EMAIL

May 24, 2022

Ms. Joanne Richardson
Director, Major Projects and Partnerships
Hydro One Networks Inc.
483 Bay Street, 7th Floor South Tower
Toronto, ON M5G 2P5
Joanne.Richardson@HydroOne.com

Dear Ms. Richardson:

**Re: New Transmission Lines in Southwestern Ontario
Board File Number: EB-2022-0142**

This letter acknowledges receipt of your letter of April 12, 2022 in which Hydro One Networks Inc. (Hydro One) provided a copy of the Independent Electricity System Operator's (IESO's) recommendations regarding the scope and timing of four new transmission line projects, as required by the Ontario Energy Board (OEB) in its April 6, 2022 Decision and Order.

The four transmission line projects (collectively referred to as the Projects) are:

1. A new 230 kilovolt (kV) transmission line from Lambton Transformer Station to Chatham Switching Station, including associated station facility expansions or upgrades required at the terminal stations;
2. A new 500 kV transmission line from Longwood Transformer Station to Lakeshore Transformer Station, including associated station facility expansions or upgrades required at the terminal stations;
3. A second new 500 kV transmission line from Longwood Transformer Station to Lakeshore Transformer Station, including associated station facility expansions or upgrades required at the terminal stations; and
4. A new 230 kV transmission line that connect the Windsor area to the Lakeshore Transformer Station, including associated station facility expansions or upgrades required at the terminal stations.

Section 19.8.1 of Hydro One's licence, as amended on April 6, 2022, requires Hydro One to develop and seek approvals for the Projects.

In addition to requiring the amendment of Hydro One's licence, the Minister's Directive, dated March 31, 2022, also directed the OEB to require that Hydro One provide such reporting to the OEB as the OEB may consider appropriate with respect to budget, timing and risks in relation to the development of the Projects. This letter sets out the OEB's reporting requirements for the Projects.

Separate reports shall be provided by Hydro One for each of the four transmission line projects. Reports for a specific transmission line project shall be provided until a leave to construct application for that transmission line project is filed. The reports should be filed as follows:

- May 1 to October 31 for reporting in November
- November 1 to April 30 for reporting in May

All reports are to be filed by the 15th business day of the month following the end of each reporting period. The first set of reports should be filed on November 15, 2022.

In each report, Hydro One shall provide an update on the following matters:

- *Overall Project Progress:* An executive summary of work progress, cost and schedule status, and any emerging issues/risks and proposed mitigation.
- *Development Cost:* Development costs shall be reported in the form of the attached table. A forecast of the development cost is to be provided in the first set of reports (in column 'C' of the table) and will be used as the reference for future reports. A future hearing will examine the prudence of development costs incurred by Hydro One for the Projects.
- *Development Work Schedule:* The milestones completed and the status of milestones in-progress. The schedule and milestones for development work provided in the first report will be used as the reference for future reports. For milestones that are overdue or delayed, the reasons for delay, the magnitude and impact of the delay on broader project timelines and cost, and any mitigating steps that have or will be taken to complete the task.
- *Risks and Issues Log:* An assessment of the risks and issues with respect to project development, potential impact on schedule, cost or scope, as well as potential options for mitigating or eliminating the risk or issue.
- *Project scope and timing recommendations provided by the IESO:* If the IESO updates its scope and timing recommendations these should be included.

Any questions relating to this letter should be directed to Andrew Pietrewicz at Andrew.Pietrewicz@oeb.ca.

Yours truly,

Brian Hewson
Vice President, Consumer Protection & Industry Performance

Attachment: Project Development Cost Reporting Table

Project Development Cost Reporting Table for Use in Bi-annual Reports

All bi-annual reports should include the following table that summarizes budgeted vs. actual expenditures to date, as well as any forecast changes in budget and the revised total budget. Percentage values in the cost table should be used to two decimal places.

Project Development Cost Reporting Table

	Actuals Spent			Forecast Budget Variance					
	A Spent this Reporting Period (millions)	B Total Spent to Date (millions)	C Budget per November 15, 2022 Report (millions)	D Forecast Budget Change from Last Report (millions)	E Forecast Budget Change from Last Report (%)	F Revised Total Budget (millions)	G = F – B Budget Remaining (millions)	H = G/F *100 Budget Remaining (%)	Reasons for Change
Real Estate									
Engineering and Design									
Environmental Approvals									
Indigenous Consultation									
Project Management									
Contingency									
Other Consultation									
Interest and Overhead									
Total									

Notes on the Project Development Cost Reporting Table

- Column 'A' should reflect expenditures since the last reporting period.
- Column 'B' should reflect all expenditures to date for the specific transmission line project.
- Budgeted costs in Column 'C' should be those reported in Hydro One's first bi-annual report and are to be held fixed.

ATTACHMENT #2

Map of the New Transmission Lines in Southwestern Ontario

Of the four transmission lines included in the **Attachment #2** Map of the **Southwest Ontario Transmission Projects**, Project's #2 and #3 (also referred to in this Project report as Phase 1 and 2 of the circuits planned to span between Longwood TS to Lakeshore TS, as referenced in the MAP, are the Projects whose information is included in this Bi-annual Report for the period November 1, 2022 through April 30, 2023.



Southwest Ontario Transmission Projects

- 1 St. Clair 230 kV Transmission Line (2028)
- 2 Longwood to Lakeshore 500 kV Transmission Line (2030)
- 3 Longwood to Lakeshore 500 kV Transmission Line (TBD)
- 4 Windsor to Lakeshore 230 kV Transmission Line (TBD)

Map Legend

- 230 kV Existing Transmission Line
- 500 kV Existing Transmission Line
- Existing Transformer Station
- City/Town
- Highway
- First Nation

