Hydro One Networks Inc.
483 Bay Street
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Toronto, Ontario M5G 2P5
HydroOne.com

Joanne Richardson
Director, Major Projects and Partnerships
T 416.345.5393
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Joanne.Richardson@HydroOne.com

BY EMAIL AND RESS

June 8, 2022

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

Dear Ms. Marconi,

EB-2022-0140 – Hydro One Networks Inc. Leave to Construct Application – Chatham by Lakeshore – Update to Exhibit B-3-1

Hydro One is providing an update to Exhibit B, Tab 3, Schedule 1 and the corresponding first attachment of the same Schedule of its prefiled evidence to include a Letter from the Minister of Energy and an Order in Council declaring the Chatham to Lakeshore Project to be needed as a priority project.

In addition to these specific updates, Hydro One has also filed a text-searchable electronic version of the complete application that encompasses these changes using the OEB's Regulatory Electronic Submission System.

Lastly, in accordance with the Letter of Direction, issued June 3, 2022, Hydro One confirms that it has also updated the Hydro One website to reflect this update to the Application.

Sincerely,

Joanne Richardson

cc: Gord Nettleton (McCarthy Tétrault)
Monica Caceres (Hydro One Networks Inc.)

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Toronto, Ontario M5G 2P5
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BY EMAIL AND RESS

May 9, 2022

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

Dear Ms. Marconi,

EB-2022-0140 – Hydro One Networks Inc. Leave to Construct Application – Chatham by Lakeshore – Application and Evidence

Pursuant to s.92 of the *Ontario Energy Board Act, 1998* (the "Act") Hydro One Networks Inc. ("Hydro One") seeks the Ontario Enery Board's ("OEB") approval for an Order or Orders granting leave to construct approximately 49 kilometres of 230 kV transmission line facilities between Chatham Switching Station and Lakeshore Transformer Station in the West of Chatham area.

Additionally, pursuant to s.97 of the Ontario Energy Board Act, 1998, Hydro One seeks OEB approval for an Order granting approval of the forms of the agreement offered or to be offered to affected landowners.

An electronic copy of this Application and Evidence has been filed through the OEB's Regulatory Electronic Submission System.

Sincerely,

Joanne Richardson

EXHIBIT LIST

Exh	Tab	Schedule	Attachment	Contents
A				
	1	1		Exhibit List
B				
	1	1		Application
	2	1		Project Overview
	2	1	1	General Area Map
	2	1	2	Schematic Diagram of Proposed Line Facilities
	2	1	3	Schematic Diagram of Proposed Chatham SS Configuration
	2	1	4	Schematic Diagram of Proposed Lakeshore TS Configuration
	3	1		Evidence In Support of Need
	3	1	1	Order-in-Council
	3	1	2	Need for Bulk Transmission Reinforcement in the Windsor-Essex Region
	3	1	3	IESO Letter
	4	1		Classification and Categorization
	5	1		Cost Benefit Analysis and Options
	6	1		Benefits
	7	1		Apportioning Project Costs and Risks

Exh	Tab	Schedule	Attachment	Contents
	8	1		Network Reinforcement
	9	1		Transmission Rate Impact
	10	1		Deferral Account
	11	1		Project Schedule
C				
	1	1		Physical Design
D				
	1	1		Operational Details
E				
	1	1		Land Matters
	1	1	1	Early Access Agreement
	1	1	2	Agreement for Temporary Rights
	1	1	3	Damage Claim Agreement/Waiver
	1	1	4	Option to Purchase a Limited Interest – Easement
	1	1	5	Compensation and Incentive Agreement – Easement
	1	1	6	Option to Purchase – Fee Simple
	1	1	7	Compensation and Incentive Agreement – Fee Simple
	1	1	8	Off Corridor Access
	1	1	9	Crop Land Out of Production Agreement

Exh	Tab	Schedule	Attachment	Contents
	1	1	10	Option to Purchase a Limited Interest – Easement with a Voluntary Buyout Offer
F				
	1	1		System Impact Assessment
	1	1	1	IESO System Impact Assessment
G				
	1	1		Customer Impact Assessment
	1	1	1	Final Customer Impact Assessment

ONTARIO ENERGY BOARD

IN THE MATTER OF the *Ontario Energy Board Act, 1998*;

AND IN THE MATTER OF an Application by Hydro One Networks Inc. pursuant to s. 92 of the *Ontario Energy Board Act, 1998* (the "Act") for an Order or Orders granting leave to construct transmission line facilities ("**CxL Project**" or "**Project**") in the West of Chatham area.

AND IN THE MATTER OF an Application by Hydro One Networks Inc. pursuant to s. 97 of the Act for an Order granting approval of the forms of land use agreements offered or to be offered to affected landowners.

APPLICATION

1. The Applicant is Hydro One Networks Inc. ("**Hydro One**"), a subsidiary of Hydro One Inc. The Applicant is an Ontario corporation with its head office in the City of Toronto. Hydro One carries on the business, among other things, of owning and operating transmission facilities within Ontario.

2. Hydro One hereby applies to the Ontario Energy Board (the "**Board**") pursuant to s. 92 of the Act for an Order or Orders granting leave to construct approximately 49 kilometers of transmission line facilities in the West of Chatham area. The CxL Project has been declared a priority project for Hydro One to develop and seek approvals for by the Minister of Energy. The Order in Council from the Minister of Energy is provided as **Exhibit B, Tab 3, Schedule 1, Attachment 1.** These facilities are required to increase long-term transmission capacity to the Leamington area as recommended by the IESO in their report entitled the *Need for Bulk Transmission Reinforcement in the Windsor-Essex Region.* That report is provided as **Exhibit B, Tab 3, Schedule 1, Attachment 2.** The Project has been identified as a non-discretionary development project in **Exhibit B, Tab 4, Schedule 1**.

3. Hydro One is committed to working with Indigenous Peoples in a spirit of cooperation and shared responsibility. We acknowledge that Indigenous Peoples have unique historic and cultural relationships with their land and a unique knowledge of the natural environment. Forging meaningful relationships with Indigenous Peoples based upon trust, confidence, and accountability is vital to achieving our corporate objectives. Hydro One has been engaging with communities since early in the development process and will continue that engagement throughout the life cycle of the Project. Additionally, Hydro One has, and will continue to throughout the life cycle of the Project, engaged in extensive economic participation negotiations with impacted Indigenous communities including employment, training, contracting and equity participation in the Project. Though Hydro One has been directed to undertake the development component of this Project, the transmission line facilities proposed within this Application will ultimately be owned by a future Hydro One partnership expected to have First Nation ownership. As of the time of this Application, that partnership has not yet been finalized. As negotiations are ongoing, Hydro One is not currently able to provide commercial details. However, those details will be provided to the OEB once the partnership is formed through any and all a transmission licence applications and asset transfer applications. Given this information, the cost associated with the transmission line facilities will reside in the OEB approved Affiliate Transmission Partnership regulatory account[1] and not form part of Hydro One's rate base. For reference purposes, further information on this OEB-approved regulatory account is provided at **Exhibit B, Tab 10, Schedule 1**.

4. The proposed CxL Project will construct approximately 49 km of 230 kilovolt (**"kV"**) circuits between Chatham Switching Station (**"SS"**) and Lakeshore Transformer Station (**"TS"**). An overview map of this area is provided in **Exhibit B, Tab 2, Schedule 1, Attachment 1** and a schematic diagram of the proposed Project can be found at **Exhibit B, Tab 2, Schedule 1, Attachment 2**.

The proposed in-service date for the CxL Project is December 2025, assuming a construction commencement date of January 2023 and an OEB approval of this

[1] EB-2021-0169

Application by December 2022. A project schedule is provided at **Exhibit B, Tab 11, Schedule 1**.

5. New permanent land rights on properties from Lakeshore TS and Chatham SS will be required to accommodate the proposed transmission facilities. Temporary rights for construction purposes will also be required at specific locations along the corridor. Further information regarding the real estate needs to complete this project are provided in **Exhibit E, Tab 1, Schedule 1**.

6. The IESO has completed a System Impact Assessment ("**SIA**"). The SIA concludes that the Project is expected to have no material adverse impact on the reliability of the integrated power system and recommends that a *Notification of Conditional Approval for Connection* be issued. The IESO's SIA is provided as **Exhibit F, Tab 1, Schedule 1, Attachment 1** of Hydro One's prefiled evidence.

7. Hydro One has completed a Customer Impact Assessment ("**CIA**") in accordance with Hydro One's connection procedures. The results confirm that there will be no impacts on area customers as a result of the CxL Project. A copy of the CIA is provided as **Exhibit G, Tab 1, Schedule 1, Attachment 1**. Hydro One will fulfill all requirements of the SIA and the CIA, and will obtain all necessary approvals, permits, licences, certificates, agreements and rights required to construct, the Project.

8. The forecast total capital cost of the Project transmission facilities is $267.7million[2]. Details pertaining to these costs are provided at **Exhibit B, Tab 7, Schedule 1**.

9. The expected rate impact associated with the CxL Project (using 2022 OEB-approved uniform transmission rates as filed in **Exhibit B, Tab 9, Schedule 1)** is a $0.03/kw/month decrease in the network pool rate and a 0.02% decrease on the overall average Ontario residential consumer's electricity bill.

[2] There will be an additional $0.1M of OMA removal costs associated with constructing this project.

10. This Application is also seeking for approval of the forms of the agreement offered or to be offered to affected landowners, pursuant to s. 97 of the Act. The majority of these agreements are in the same form as previously approved in prior Hydro One Networks leave to construct proceedings. Any agreements that have not been previously approved by the OEB or have been altered from their last approval have all been explicitly identified in the Application. The forms of the applied-for agreements are found as attachments to **Exhibit E, Tab 1, Schedule 1**.

11. The Application is supported by written evidence which includes details of the Applicant's proposal for the transmission line. The written evidence is prefiled and may be amended from time to time prior to the Board's final decision on this Application.

12. Given the information provided in the prefiled evidence, Hydro One submits that the Project is in the public interest. The Project meets the need of the transmission system and improves quality of service and reliability with minimal impact on price.

13. Hydro One requests that a copy of all documents filed with the Board be served on the Applicant and the Applicant's counsel, as follows:

a) The Applicant:

Carla Molina
Sr. Regulatory Coordinator
Hydro One Networks Inc.

Mailing Address:

7th Floor, South Tower
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Telephone: (416) 345-5317
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Electronic access: regulatory@HydroOne.com

b) The Applicant's counsel:

Gordon M. Nettleton
Partner
McCarthy Tétrault

Mailing Address:

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TD Bank Tower Box 48
Toronto, Ontario
M5K 1E6

Telephone: (403) 260-3622
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c) Monica Caceres
Assistant General Counsel
Hydro One Networks Inc.

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M5G 2P5

Telephone: (647) 505-3341
Fax: (416) 345-6972
Electronic access: monica.caceres@hydroone.com

PROJECT OVERVIEW DOCUMENTS

Hydro One is seeking approval to construct and operate transmission facilities to meet the requirements set out by the IESO in its letter dated June 11, 2019 (see Exhibit B, Tab 3, Schedule 1, Attachment 2). This application also satisfies the direction of the Minister of Energy[1], as amended into Hydro One's transmission licence[2], *to develop and seek all necessary approvals for a new 230 kv double-circuit transmission line from the existing Chatham Switching Station to the new Lakeshore Transformer Station to be located at Leamington Junction ("Chatham to Lakeshore Line"), including associated station facilities at the terminal stations*. The following proposed facilities are subject to section 92 approval:

- Approximately 49 km 230 kV double-circuit transmission line from the Chatham SS to the Lakeshore TS on a combination of a new corridor and widened existing 115 kV transmission corridor.
- Terminal station modifications at Chatham SS and Lakeshore TS to accommodate the new transmission line.

A map exclusively indicating the geographic location of the existing facilities as well as schematic diagrams of the proposed facilities are provided in **Exhibit B, Tab 2, Schedule 1, Attachment 1** and **Exhibit B, Tab 2, Schedule 1, Attachment 2**, respectively.

The transmission system in the Windsor–Essex Region requires reinforcement due to increased load growth in the Leamington–Kingsville area arising from the greenhouse sector.

Further information on the overhead transmission line and the station facilities is provided below.

[1] Exhibit B, Tab 3, Schedule 1, Attachment 1
[2] Hydro One Transmission Licence s. 19.7

Overhead Transmission Line

There are four existing 230 kV transmission circuits connecting Chatham SS and Lakeshore TS, whose nomenclatures are C21J, C22J, C23Z and C24Z. With the completion of this Project, there will be six transmission circuits between Chatham SS and Lakeshore TS. The total route length of the proposed double circuit transmission line from Chatham SS to Lakeshore TS is approximately 49 km. The route passes through one county and two municipalities (Essex, Chatham-Kent, and Lakeshore, respectively).

For approximately 16 km, the proposed line will be located in an idle 115 kV transmission corridor between Chatham and Tilbury. The existing idle transmission line structures, conductor and associated components will be dismantled, removed, and replaced, and the corridor will be widened to accommodate the proposed double circuit transmission line.

Chatham SS Line Termination and Switching Facilities

Chatham SS will require new and modified structures within the station property to accommodate the termination of the two new 230 kV circuits. The Project will also require modifications to telecommunications facilities at Chatham SS to provide status information and control capability to Hydro One's Ontario Grid Control Centre (OGCC) and status information to the IESO. Modifications and additions to protection and control, SCADA, metering, and AC/DC station service at Chatham SS, are required to provide protection, control and status of the new and re-terminated facilities. With the addition of new load stations in the Windsor-Essex area, Chatham SS will be designated as an "NPCC-impactive" station, therefore modifications will have to satisfy the pertinent NPCC requirements for such designation. A schematic diagram showing the proposed configuration at Chatham SS is provided at **Exhibit B, Tab 2, Schedule 1, Attachment 3**.

Lakeshore TS Line Terminations and Switching Facilities

Lakeshore TS is currently under construction and accommodations will be made for the termination of the new 230 kV circuits. The Project will also require installation of telecommunications facilities at Lakeshore TS to provide status information and control capability to Hydro One's OGCC and status information to the IESO. Modifications and additions to protection and control, SCADA, metering, and AC/DC station service at Lakeshore TS, are required to provide protection, control and status of the new facilities. With the addition of new load stations in the Windsor-Essex area, Lakeshore TS will be designated as "NPCC-impactive" stations, therefore modifications will have to satisfy the pertinent NPCC requirements for such designation. A schematic diagram showing the proposed configuration is provided at **Exhibit B, Tab 2, Schedule 1, Attachment 4**.

GENERAL AREA MAP

Hydro One Networks Inc. - Chatham to Lakeshore Line
Route Alternative 2A

Legend

Existing Electrical Transmission Line

Preferred Route (2A)

SCALE 1:110,000

0 1.25 2.5 5 km

N

Lake St. Clair

PAIN COURT

ST. CLAIR STREET

CHATHAM

COMMUNICATION ROAD

CHATHAM SWITCHING STATION

ORIOLE PARKWAY

401

CHARING CROSS ROAD

CHARING CROSS

BLOOMFIELD ROAD

NORTH BUXTON

Preferred Route 2A

QUEENS LINE

Portion of Idle 115 kV line to be Repurposed

LIGHTHOUSE COVE

STONEY POINT/POINTE-AUX-ROCHES

TOWN OF LAKESHORE

COUNTY ROAD 35

COUNTY ROAD 42

TILBURY

MUNICIPALITY OF CHATHAM-KENT

MERLIN ROAD

MIDDLE LINE

COUNTY ROAD 46

COMBER

PINEHURST LINE

LAKESHORE TRANSFORMER STATION

77

GRACEY SIDEROAD

COUNTY OF ESSEX

WHEATLEY ROAD

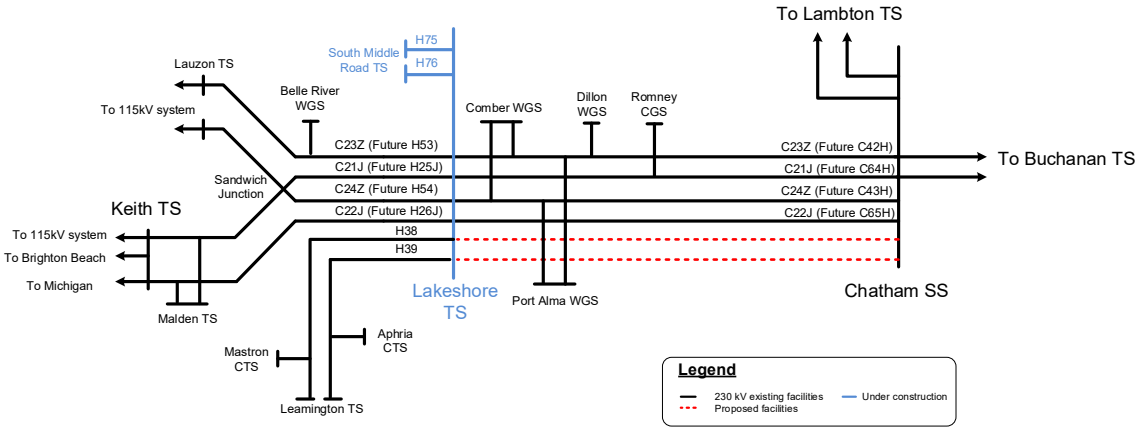
STAPLES

CHATHAM SWITCHING STATION

Proposed Expansion Area

PROPOSED FACILITIES:

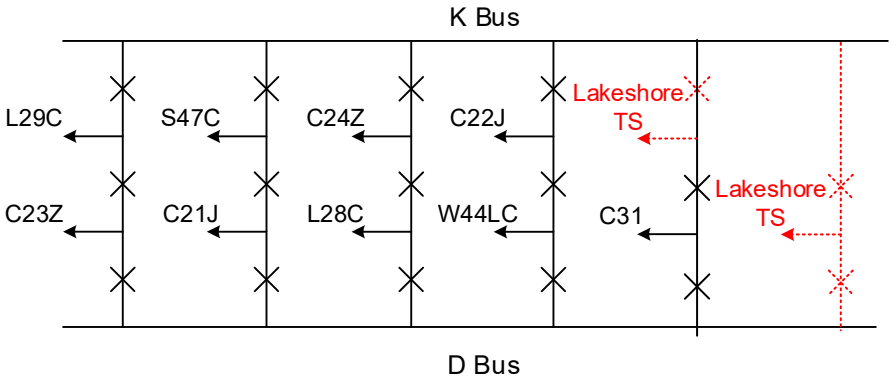
CHATHAM TO LAKESHORE 230 KV SCHEMATIC DIAGRAM



PROPOSED FACILITIES

230 kV CHATHAM SS SIMPLIFIED SCHEMATIC DIAGRAM

(dotted lines represent the proposed facilities)



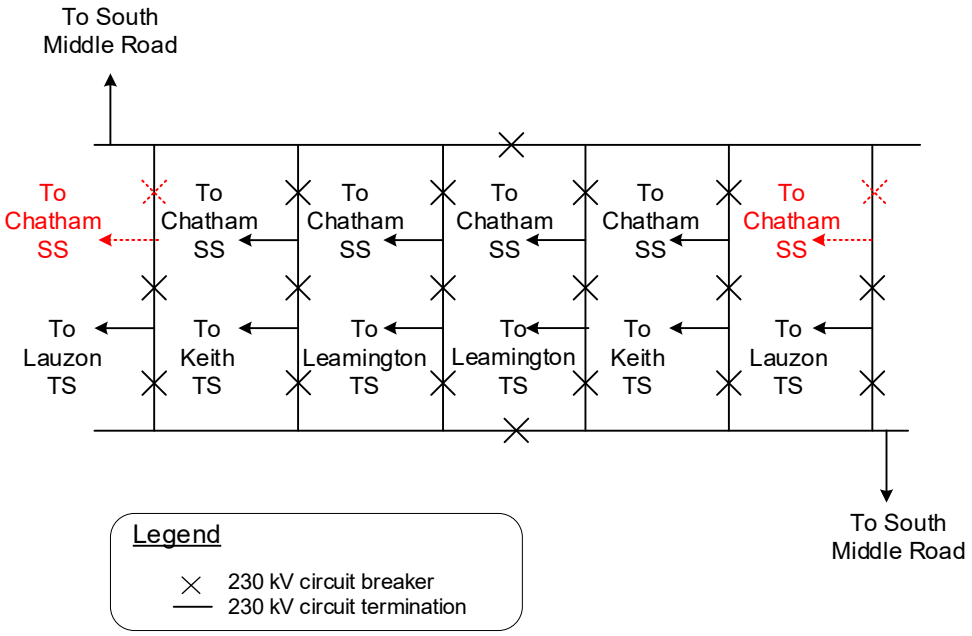
Legend

230 kV circuit breaker
230 kV circuit termination

PROPOSED FACILITIES

230 kV LAKESHORE SS SIMPLIFIED SCHEMATIC DIAGRAM

(dotted lines represent the proposed facilities)



EVIDENCE IN SUPPORT OF NEED

Effective December 17, 2020, the Minister of Energy, Northern Development and Mines (now the Minister of Energy) with the approval of the Lieutenant Governor in Council made an Order in Council ("**OIC**"), declaring that construction of the Chatham x Lakeshore Project is needed in accordance with s.28.6.1 of the OEB Act ("**the Act**"). The Independent Electricity System Operator described the need for the Project in its report entitled "Need for Bulk Transmission Reinforcement in the Windsor-Essex Region" dated June 13, 2019 ("IESO Report"). In-service timing of the Project is stated to be prior to winter of 2025-2026.

A copy of the OIC and correspondence from the Ontario Minister of Energy advising the Ontario Energy Board of the OIC is included as Attachment 1 of this Schedule. Also included in Attachment 1 is a subsequent OIC declaring the Project is needed as a priority project dated March 31, 2022. In accordance with s.96.1(2) of the Act, having been declared to be a priority project, the Project shall be accepted by the Board as needed when the Board considers an application for leave to construct.

This IESO Report is provided as Attachment 2 to this Schedule. The IESO Report provides further detail on the need to increase the long-term transmission capacity to the Leamington area including the need to:

- Improve the ability to connect new loads in the Leamington area
- Enable greater bulk system transfers to meet local and bulk system needs
- Maintain existing transmission capability on the Ontario-Michigan intertie.

In addition to the IESO's analysis of need and supporting information, Hydro One has also included a letter dated June 11, 2019 where the IESO advised Hydro One to seek the necessary approvals for a new 230kV line to increase the transmission capability to the Windsor-Essex area. The letter is provided as Attachment 3 of his Schedule.

Hydro One concurs with the IESO's determination that there is a need to increase the long-term transmission capacity to the Windsor-Essex area by winter of 2025/2026. As indicated in the IESO's materials, the IESO identified a shortfall between transmission

capability and forecast load of about 50 MW in 2025 and reaching about 190 MW the following winter. The shortfall will persist into the long-term and exacerbates as load growth accelerates. Given the expected shortfall, the IESO concluded through planning studies covering a range of scenarios, that there is a need to reinforce the transmission system out to the Windsor-Essex area.

Ministry of Energy, Northern Development and Mines

Office of the Minister

77 Grenville Street, 10th Floor
Toronto ON M7A 2C1
Tel.: 416-327-6758

Ministère de l'Énergie, du Développement du Nord et des Mines

Bureau du ministre

77, rue Grenville, 10e étage
Toronto ON M7A 2C1
Tél. : 416 327-6758

Ontario

MC-994-2020-1148

December 17, 2020

Mr. Richard Dicerni
Chair
Ontario Energy Board
2300 Yonge Street, 27th Floor
PO Box 2319
Toronto ON M4P 1E4

Dear Mr. Dicerni:

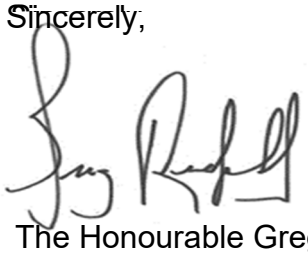
I am writing to you today to inform you that under the authority of section 28.6.1 of the *Ontario Energy Board Act, 1998*, I am, with the approval of the Lieutenant Governor in Council represented by Order in Council, issuing a directive to the OEB to amend Hydro One Networks Inc. (Hydro One)'s electricity transmission licence to include a requirement that it proceed to develop and seek all necessary approvals for a new 230 kilovolt (kV) double-circuit transmission line from the existing Chatham Switching Station to the new Lakeshore Transformer Station to be located at Leamington Junction ("Chatham to Lakeshore Line"), including associated station facilities to connect the Chatham to Lakeshore Line ("Project) at the terminal stations.

The Project was assessed by the Independent Electricity System Operator (IESO) through a planning report, entitled "Need for Bulk Transmission Reinforcement in the Windsor-Essex Region" (dated June 13, 2019). The report recommended a new transmission line west of Chatham as the appropriate solution required to meet expected demand growth and system needs of the region. The report identified an in-service date prior to the winter of 2025-2026 and the IESO had subsequently issued a letter to Hydro One (dated June 11, 2019), requesting Hydro One initiate work on the Project and the associated station facilities in order to achieve the required in service date.

…/cont'd

The licence amendments required by this directive will further support the timely development of this transmission line. I appreciate the OEB's actions in this regard.

Sincerely,



The Honourable Greg Rickford
Minister of Energy, Northern Development and Mines

Enclosure

c: Susanna Zagar, Chief Executive Officer, OEB

Ontario

Executive Council of Ontario
Order in Council

On the recommendation of the undersigned, the Lieutenant Governor of Ontario, by and with the advice and concurrence of the Executive Council of Ontario, orders that:

Conseil exécutif de l'Ontario
Décret

Sur la recommandation de la personne soussignée, le lieutenant-gouverneur de l'Ontario, sur l'avis et avec le consentement du Conseil exécutif de l'Ontario, décrète ce qui suit :

WHEREAS Ontario considers it necessary to expand Ontario's transmission system in order to provide a reliable and adequate supply of electricity to the Kingsville-Leamington area in the near to mid-term to meet forecast load growth, to permit the resources and bulk facilities in the region to operate efficiently and to maintain the existing interchange capability of the Ontario-Michigan interconnection;

AND WHEREAS the Independent Electricity System Operator, the organization responsible for ensuring the reliability of Ontario's electricity grid, issued a Bulk Planning Report, entitled the "Need for Bulk Transmission Reinforcement in the Windsor-Essex Region" (dated June 13, 2019) which recommended a new transmission line west of Chatham as the appropriate solution required to meet expected demand growth and system needs, identifying an in-service date prior to the winter of 2025-2026;

AND WHEREAS the Government has determined that the development of the transmission line project should be undertaken by a transmitter that is best positioned to ensure that the project can be developed efficiently and on a timeline that supports economic growth;

AND WHEREAS the Government has determined that the preferred manner of proceeding is to require Hydro One Networks Inc. to undertake the development of the transmission line project including any and all steps that are deemed to be necessary and desirable in order to seek required approvals;

AND WHEREAS the Minister of Energy, Northern Development and Mines has, with the approval of the Lieutenant Governor in Council, the authority to issue Directives pursuant to section 28.6.1 of the *Ontario Energy Board Act, 1998*, which relate to the construction, expansion or re-enforcement of transmission systems;

NOW THEREFORE the Directive attached hereto is approved and shall be and is effective as of the date hereof.

- - - - - - -

O.C. | Décret : 1499/2020

ATTENDU QUE l'Ontario estime qu'il est nécessaire d'étendre le réseau de transport d'électricité de l'Ontario dans le but d'assurer une alimentation en électricité fiable et convenable dans la région de Kingsville-Leamington, à court et moyen terme, pour répondre à la croissance prévue de la demande, favoriser le fonctionnement efficace des ressources et des installations en vrac dans la région et maintenir la capacité existante de transit d'énergie de l'interconnexion entre l'Ontario et le Michigan;

ATTENDU QUE la Société indépendante d'exploitation du réseau d'électricité (SIERE), l'organisme chargé d'assurer la fiabilité du réseau d'électricité de l'Ontario, a publié un rapport de planification de la distribution en vrac, intitulé « Need for Bulk Transmission Reinforcement in the Windsor-Essex Region » (daté du 13 juin 2019), qui recommandait une nouvelle ligne de transport à l'ouest de Chatham comme solution appropriée pour répondre à la croissance de la demande prévue et aux besoins du réseau, et précisait une date de mise en service antérieure à l'hiver 2025-2026;

ATTENDU QUE le gouvernement a décidé que le développement du projet de ligne de transport devrait être exécuté par un transporteur qui est le mieux placé pour assurer le développement efficace du projet dans un délai favorable à la croissance économique;

ATTENDU QUE le gouvernement a déterminé que la meilleure façon de procéder serait d'exiger que Hydro One Networks Inc. se charge du développement du projet de ligne de transport, y compris de toutes les étapes qui seraient jugées nécessaires et souhaitables en vue d'obtenir les approbations nécessaires;

ET ATTENDU QUE le ministre de l'Énergie, du Développement du Nord et des Mines peut donner des directives, approuvées par le lieutenant-gouverneur en conseil, en application de l'article 28.6.1 de la *Loi de 1998 sur la Commission de l'énergie de l'Ontario*, à l'égard de la construction, de l'extension ou du renforcement de réseaux de transport;

EN CONSÉQUENCE, la directive ci-jointe est approuvée et entrera en vigueur en date des présentes.

Recommended: Minister of Energy, Northern Development and Mines
Recommandé par : Ministre de l'Énergie, du Développement du Nord et des Mines

Concurred: Chair of Cabinet
Appuyé par : Le président | la présidente du Conseil des ministres

Approved and Ordered:
Approuvé et décrété le : NOV 05 2020

Lieutenant Governor
La lieutenante-gouverneure

2

MINISTER'S DIRECTIVE / DIRECTIVE DU MINISTRE

TO: THE ONTARIO ENERGY BOARD
DESTINATAIRE : LA COMMISSION DE L'ÉNERGIE DE L'ONTARIO

I, Greg Rickford, Minister of Energy, Northern Development and Mines, hereby direct the Ontario Energy Board ("Board") pursuant to section 28.6.1 of the *Ontario Energy Board Act, 1998* as follows:

1. The Board shall amend the conditions of the electricity transmission licence of Hydro One Networks Inc. ("Hydro One") to include a requirement that Hydro One proceed to develop and seek approvals for a new 230 kilovolt (kV) double-circuit transmission line from the existing Chatham Switching Station to the new Lakeshore Transformer Station to be located at Leamington Junction (Chatham to Lakeshore Line), including associated station facilities to connect the Chatham to Lakeshore Line at the terminal stations. The purpose of the Chatham to Lakeshore Line is to provide a reliable and adequate supply of electricity to the Kingsville-Leamington area in the near to mid-term to meet forecast load growth, to permit the resources and bulk facilities in the region to operate efficiently and to maintain the existing interchange capability of the Ontario-Michigan interconnection. Development of the Chatham to Lakeshore Line shall accord with the project scope and timing recommended by the Independent Electricity System Operator.

2. The Board shall require that Hydro One provide such reporting to the Board as the Board may consider appropriate, with respect to budget, timing and risks in relation to the development of the Chatham to Lakeshore Line.

3. The Board shall make the amendments to Hydro One's electricity transmission licence without holding a hearing.

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Je soussigné, Greg Rickford, ministre de l'Énergie, du Développement du Nord et des Mines (le « ministre »), ordonne ce qui suit à la Commission de l'énergie de l'Ontario (la « Commission »), en vertu du paragraphe 28.6.1 de la *Loi de 1998 sur la Commission de l'énergie de l'Ontario* :

1. La Commission modifiera les conditions du permis de transport d'électricité de Hydro One Networks Inc. (« Hydro One ») de manière à inclure l'exigence que Hydro One obtienne les approbations nécessaires à la construction d'une nouvelle ligne de transport à double circuit de 230 kilovolts (kV), du poste de sectionnement de Chatham existant au nouveau poste de transformation de Lakeshore, qui sera situé à la jonction de Leamington (ligne Chatham-Lakeshore), y compris les installations connexes pour relier la ligne Chatham-Lakeshore aux stations terminales. Le but de la ligne Chatham-Lakeshore Line est d'assurer une alimentation en électricité fiable et convenable dans la région de Kingsville-Leamington, à court et moyen terme, pour répondre à la croissance prévue de la demande, favoriser le fonctionnement efficace des ressources et des installations en vrac dans la région et maintenir la capacité existante de transit d'énergie de l'interconnexion entre l'Ontario et le Michigan. L'aménagement de la ligne Chatham-Lakeshore doit être en ligne avec l'étendue du projet et le délai recommandé par la Société indépendante d'exploitation du réseau d'électricité.

2. La Commission exigera que Hydro One lui remette les rapports qu'elle estime appropriés, en ce qui concerne le budget, les délais et les risques liés à l'aménagement de la ligne Chatham-Lakeshore.

3. La Commission apportera les modifications nécessaires au permis de transport d'électricité de Hydro One sans tenir d'audience.

Minister of Energy, Northern Development and Mines
Ministre de l'Énergie, du Développement du Nord et des Mines

Ministry of Energy

Office of the Minister

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Ontario

April 4, 2022

Mr. Richard Dicerni
Chair
Ontario Energy Board
2300 Yonge Street, 27th Floor
Toronto ON M4P 1E4

Dear Mr. Dicerni:

Southwestern Ontario is experiencing significant economic growth due to a rapidly expanding greenhouse sector and interest in major new developments in automotive battery manufacturing. This has underscored the need to accelerate critical electricity transmission projects so that power is available to support this growing region.

On September 23, 2021, the Independent Electricity System Operator issued a bulk planning report entitled Need for Bulk System Reinforcements West of London, which recommended new transmission infrastructure to meet forecast electricity demand growth and identified potential future projects that may be needed depending on how growth materializes and where generation resources are located.

I am writing to you today to inform you that under the authority of section 96.1(1) of the *Ontario Energy Board Act, 1998* (the Act), the Lieutenant Governor in Council made an order declaring that the construction, expansion or reinforcement of three transmission lines in Southwestern Ontario are needed as priority projects. The Order in Council took effect on March 31, 2022 and is attached to this letter.

Furthermore, under the authority of section 28.6.1 of the Act, I am, with the approval of the Lieutenant Governor in Council pursuant to Order in Council No. 875-2022, issuing a directive to the OEB to amend Hydro One Networks Inc.'s (Hydro One) electricity transmission licence to include a requirement that it proceed to develop and seek all necessary approvals for four new transmission projects in Southwestern Ontario, including two of the priority projects. The licence amendments required by this directive will further support the timely development of these transmission lines.

Please do not hesitate to contact my office with any questions.

Sincerely,

Todd Smith
Minister

Attachments

c: Susanna Zagar, Chief Executive Officer, OEB
Stephen Rhodes, Deputy Minister of Energy

Ontario

Executive Council of Ontario
Order in Council

On the recommendation of the undersigned, the Lieutenant Governor of Ontario, by and with the advice and concurrence of the Executive Council of Ontario, orders that:

Conseil exécutif de l'Ontario
Décret

Sur la recommandation de la personne soussignée, le lieutenant-gouverneur de l'Ontario, sur l'avis et avec le consentement du Conseil exécutif de l'Ontario, décrète ce qui suit :

WHEREAS Ontario considers it critical to expand Ontario's transmission system 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;

AND WHEREAS Ontario considers the expansion of the electricity network in Southwestern Ontario to support economic growth to be a priority;

AND WHEREAS the Independent Electricity System Operator, the organization responsible for ensuring the reliability of Ontario's electricity grid, has published:

1. A bulk planning report dated June 13, 2019, entitled the "Need for Bulk Transmission Reinforcement in the Windsor-Essex Region, which recommended a new 230 kilovolt (kV) transmission line west of Chatham as the appropriate solution required to meet expected demand growth and system needs; and

2. A bulk planning report dated September 23, 2021, entitled the "Need for Bulk System Reinforcements West of London," which recommended a new 230 kV transmission line from Lambton to Chatham and a new 500 kV transmission line between Longwood and Lakeshore as the appropriate solutions to meet forecast electricity demand growth

AND WHEREAS the Lieutenant Governor in Council may make an order under section 96.1 of the *Ontario Energy Board Act, 1998* (the "Act") declaring that the construction, expansion or reinforcement of an electricity transmission line specified in the order is needed as a priority project;

AND WHEREAS an order under section 96.1 of the Act requires the Ontario Energy Board, in considering an application under section 92 of the Act in respect of an electricity transmission line specified in the order, to accept that the construction, expansion or reinforcement is needed when forming its opinion under section 96 of the Act;

NOW THEREFORE it is hereby declared pursuant to section 96.1 of the Act that the construction, expansion or reinforcement of the following electricity transmission lines are needed as priority projects:

1. A new 230 kV electricity transmission line from the existing Chatham Switching Station to the new Lakeshore Transformer Station, as described in the Minister's Directive issued to the Ontario Energy Board on December 17, 2020, as approved by the Lieutenant Governor in Council pursuant to Order in Council No. 1499/2020 dated November 5, 2020;

2. A new 230 kV electricity transmission line from Lambton Transformer Station to Chatham Switching Station as described in clause 1 of sub-paragraph 1 i of the Minister's Directive to the Ontario Energy Board, as approved by the Lieutenant Governor in Council pursuant to Order-in-Council No. 875 /2022 dated March 31 ,2022; and

3. A new 500 kV electricity transmission line from Longwood Transformer Station to Lakeshore Transformer Station as described in clause 2 of sub-paragraph 1 i of the Minister's Directive to the Ontario Energy Board, as approved by the Lieutenant Governor in Council pursuant to Order-in-Council No. 875 /2022 dated March 31 , 2022.

ATTENDU QUE l'Ontario estime qu'il est crucial d'étendre le réseau de transport de l'Ontario pour assurer un acheminement fiable et adéquat d'électricité vers le Sud-Ouest de l'Ontario afin de favoriser la croissance économique dans la région, notamment la croissance rapide du secteur agricole et le potentiel de croissance des secteurs des véhicules électriques et, plus généralement, de l'automobile;

ATTENDU QUE l'Ontario estime que l'extension du réseau d'électricité dans le Sud-Ouest de l'Ontario pour favoriser la croissance économique est une priorité;

ATTENDU QUE la Société indépendante d'exploitation du réseau d'électricité, l'organisme responsable de la fiabilité du réseau électrique, a publié :

1. en date du 13 juin 2019, un rapport de planification global intitulé « Need for Bulk Transmission Reinforcement in the Windsor-Essex Region », qui recommande, comme solution nécessaire pour répondre à la croissance prévue de la demande et aux besoins du réseau, la construction d'une nouvelle ligne de transport de 230 kilovolts à l'ouest de Chatham; et

2. en date du 23 septembre 2021, un rapport de planification global intitulé « Need for Bulk System Reinforcements West of London », qui recommande, comme solutions adéquates pour répondre à la croissance prévue de la demande d'électricité, la construction d'une nouvelle ligne de transport de 230 kilovolts entre Lambton et Chatham et d'une nouvelle ligne de transport de 500 kilovolts entre Longwood et Lakeshore;

ATTENDU QUE, en vertu de l'article 96.1 de la *Loi de 1998 sur la Commission de l'énergie de l'Ontario* (la « Loi »), le lieutenant-gouverneur en conseil peut, par décret, déclarer que la construction, l'extension ou le renforcement de toute ligne de transport d'électricité précisée dans le décret est nécessaire à titre de projet prioritaire;

ET ATTENDU QU'un décret pris en vertu de l'article 96.1 de la Loi oblige la Commission de l'énergie de l'Ontario, lorsqu'elle examine une requête présentée en application de l'article 92 de la Loi relativement à toute ligne de transport d'électricité précisée dans le décret, à accepter le fait que la construction, l'extension ou le renforcement est nécessaire lorsqu'elle se fait une opinion dans le cadre de l'article 96 de la Loi;

EN CONSÉQUENCE, il est par les présentes déclaré, en vertu de l'article 96.1 de la Loi, que la construction, l'extension ou le renforcement des lignes de transport d'électricité ci-dessous sont nécessaires à titre de projets prioritaires :

1. une nouvelle ligne de transport d'électricité de 230 kilovolts, du poste de sectionnement de Chatham existant au nouveau poste de transformation de Lakeshore, conformément à la description faite dans la directive du ministre adressée le 17 décembre 2020 à la Commission de l'énergie de l'Ontario et approuvée par le lieutenant-gouverneur en conseil en vertu du décret 1499/2020 du 5 novembre 2020;

2. une nouvelle ligne de transport d'électricité de 230 kilovolts, du poste de transformation de Lambton au poste de sectionnement de Chatham, conformément à la description faite à la clause 1 de l'alinéa 1 i de la directive du ministre adressée à la Commission de l'énergie de l'Ontario et approuvée par le lieutenant-gouverneur en conseil en vertu du décret 875 /2022 du 31 mars 2022; et

3. une nouvelle ligne de transport d'électricité de 500 kilovolts du poste de transformation de Longwood au poste de transformation de Lakeshore, conformément à la description faite à la clause 2 de l'alinéa 1 i de la directive du ministre adressée à la Commission de l'énergie de l'Ontario et approuvée par le lieutenant-gouverneur en conseil en vertu du décret 875 /2022 du 31 mars 2022.

Recommended: Minister of Energy
Recommandé par : Le ministre de l'Énergie

Concurred: Chair of Cabinet
Appuyé par : Le président | la présidente du Conseil des ministres

Approved and Ordered: MAR 3 1 2022
Approuvé et décrété le :

Lieutenant Governor
La lieutenante-gouverneure

3

Need for Bulk Transmission Reinforcement in the Windsor-Essex Region

June 13, 2019

ieso
Connecting Today.
Powering Tomorrow.

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1 Executive Summary

This report documents the results of a planning study the IESO initiated to assess the adequacy of the bulk transmission system in the Windsor-Essex Region and recommends preferred near- and mid-term solutions to address identified needs. This analysis was triggered by recent unprecedented growth in forecast electricity usage for the greenhouse sector in the Kingsville-Leamington area. The anticipated level of growth is significant - the region's electrical demand is expected to double over the next five years. While this report focuses on near- and mid-term bulk electricity needs and solutions, it also touches on the potential mid- to long-term system needs if load continues to grow in the region and further work involved in order to trigger any additional long-term reinforcements, when required.

While the scope of this study is related to the bulk system supplying the Windsor-Essex Region, a separate regional planning study is underway. This companion study focuses on developing an integrated regional resource plan ("IRRP") to provide customers in the region with adequate line connection and step-down transformation capacity, and maintain a level of reliability consistent with accepted planning standards. Information from the IRRP, such as demand forecasts and plans for new connection facilities inform this bulk planning study. Recommended solutions in both studies have been integrated as they impact bulk and regional needs.

Based on the results of the two studies, the IESO recommends the following new bulk system facilities to address the near- and mid-term system needs:

- A new switching station at or near the existing Leamington Junction, as shown in Figure 1, to improve the capability to supply additional transformer stations ("TS") and large transmission customers that are planning to connect to that part of the Windsor-Essex power grid;[1] and,
- A new 230 kV double circuit transmission line from the existing Chatham Switching Station ("SS") to the new switching station at the Leamington Junction, as shown in Figure 1.

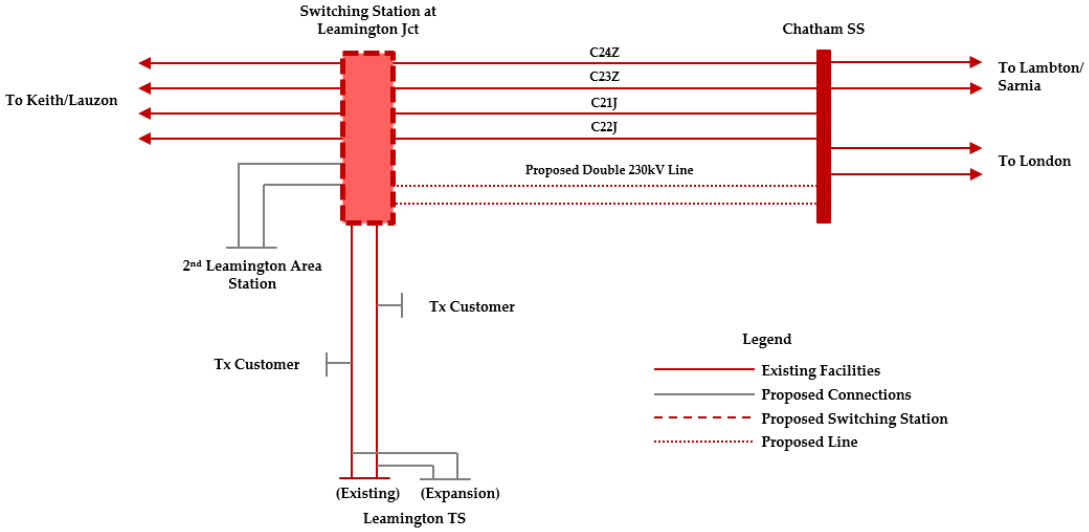
[1] Note, the need for this transmission reinforcement was triggered earlier within this bulk planning process, and work to develop the project is currently proceeding. For more information on the IESO hand-off letter, including frequently asked questions, read the backgrounder: http://www.ieso.ca/-/media/Files/IESO/Document-Library/regional-planning/Windsor-Essex/FAQs-Leamington-SS-Hand-Off-Letter-Final.pdf

This line will:

a) increase the overall transfer capability of the bulk transmission system west of Chatham in order to reliably supply the forecast load growth in the Kingsville-Leamington area and the broader Windsor-Essex Region in the near- to mid-term,
b) permit the resources and bulk facilities in this region to operate efficiently for local and system needs, and
c) maintain existing interchange capability on the Ontario-Michigan interconnection between Windsor and Detroit.

Based on current assessments, the IESO recommends an in-service date of 2022 for the switching station and prior to the winter of 2025/2026 for the transmission line.

Figure 1: Single Line Diagram of Existing and Proposed Facilities in the Leamington Area



This report outlines the assumptions and results of the bulk system assessments which evaluated both the needs and alternatives for the area. The transmission alternative was compared to least-cost resource alternative, using typical costs for a simple cycle natural gas turbine.[2] For the current planning assumptions and the evaluated load growth scenarios, new transmission was found to be the most cost effective and technically feasible option to meet identified system needs in a timely manner. For the needs considered, the transmission option

[2] Other resources and non-wires alternatives were considered but based on the profile of capacity and energy required, a simple cycle natural gas turbine was determined to be the least-cost resource alternative capable of supplying the need.

has a net present value ("NPV") approximately $500M lower than the least cost resource alternative for the most likely scenario.

The IESO will work with identified transmitters to implement the recommended solutions. In parallel, the IESO, working with local distribution companies ("LDCs") in the area, will continue to monitor project progress and connection of load in the region. Additional bulk transmission facilities may be required in the mid to long term. Additionally, the Windsor-Essex IRRP study may identify other connection needs in the region.

2 Introduction

In April 2015, the IESO published an IRRP for the Windsor-Essex Region, which recommended the Supply to Essex County Transmission Reinforcement ("SECTR") project. The scope of this project included an extension - approximately 13 km - of two existing 230 kV circuits from Chatham SS to Keith TS (located in Windsor), south to Leamington to supply a new transformer station for the area, Leamington TS #1.

Prior to this recommendation, load in both the Leamington and Kingsville areas, had been supplied from the existing Kingsville TS, which was fully utilized and unable to accommodate additional load growth.

In early 2018, the SECTR project came into service, providing an additional 200 MW of winter local load meeting capability to the Kingsville-Leamington area. Between the 2015 IRRP recommendation and the completion of the project in 2018, LDCs in the area, particularly Hydro One Distribution, received a large number of customer connection requests. These requests exceeded both the capability of the new station and the total load forecast for the area in the 2015 IRRP. This increase in forecast growth for the region triggered the second cycle of regional planning for Windsor-Essex, which is currently underway.[3]

To respond to customers' need for electrical connection in the area, Hydro One Distribution and Hydro One Transmission ("Hydro One") decided to proceed with an expansion of the recently constructed Leamington TS #1 (Leamington TS #2, with a targeted in-service date of early 2020), to double the amount of capacity that can be supplied from the station to 400 MW. Concurrently, the IESO and Hydro One also received a number of requests – totalling about 100 MW – from larger customers wanting to connect to the new Leamington transmission line. Together, these new connections cannot be accommodated on the existing transmission system while meeting required planning criteria. Interim measures have been identified to allow the connection of some new facilities to continue and will be included as part of the recommendations of the System Impact Assessments ("SIAs") for these projects.

System reinforcements are required to alleviate the need for these interim measures and to strengthen the bulk transmission supply to the region to enable further load connections. This report identifies the region's needs and presents a comparison of the alternatives considered to meet near- to mid-term supply requirements.

[3] The IRRP for the Windsor-Essex area is due to be published in September 2019. More information on regional planning for Windsor-Essex can be found on the IESO engagement page: http://www.ieso.ca/Get-Involved/Regional-Planning/Southwest-Ontario/Windsor-Essex

This report is organized into the following sections:

- Section 3 provides background on the Windsor-Essex Region, Kingsville-Leamington area, and the broader West of London area;
- Section 4 discusses planning considerations for the Windsor-Essex Region and context for the Leamington supply solutions;
- Section 5 describes the Windsor-Essex Region's electricity conservation and demand;
- Section 6 describes the Windsor-Essex Region's internal and external supply resources, as well as the need for additional supply;
- Section 7 analyzes the transmission and resource alternatives considered to meet the identified needs; and
- Section 8 provides the IESO's recommendation and outlines the major milestones in the implementation of Leamington supply solutions.

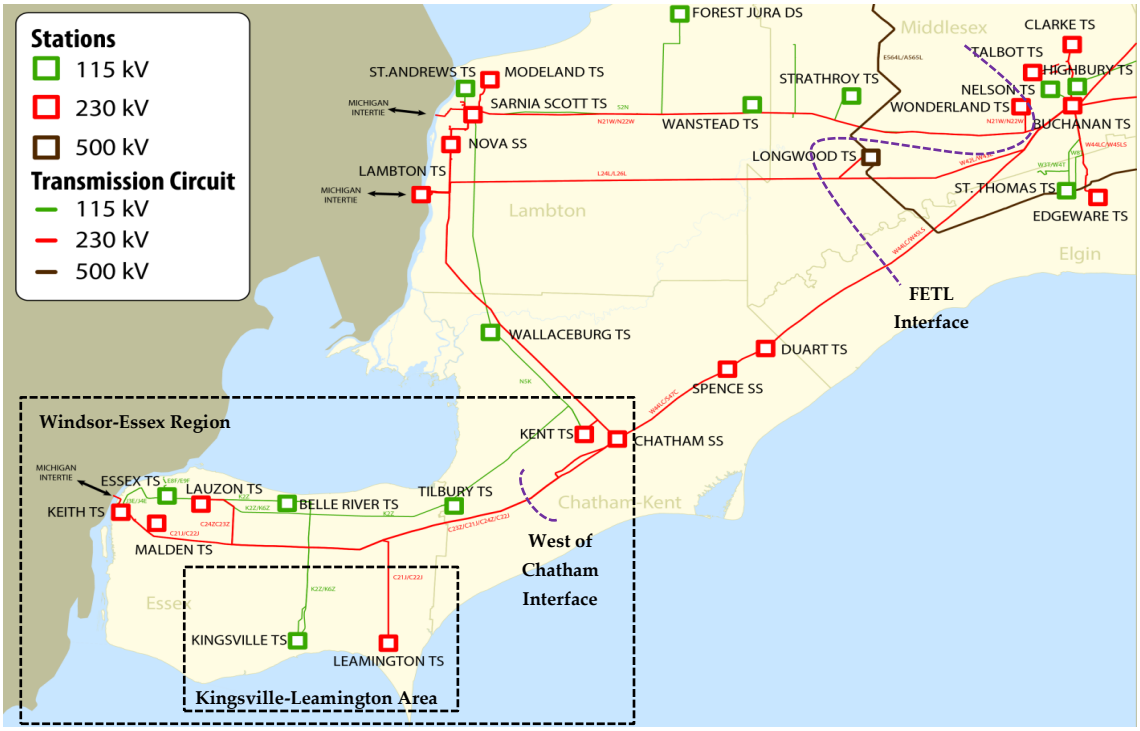
3 The Windsor-Essex Region

As the southernmost portion of Ontario, the Windsor-Essex Region extends southwest from Chatham to Windsor. Although the region is home to approximately 400,000 people, its electricity demand is defined by its economic activity. The region's history of automotive manufacturing, particularly near the city of Windsor, is accompanied by entertainment tourism in the city's core and large food processing operations throughout Essex County.

While the manufacturing sector in the Windsor-Essex Region continues on a downward trend in line with the recent automotive industry, economic diversification has triggered other changes to the region's electricity demand. The Kingsville-Leamington area within the Windsor-Essex Region includes North America's largest concentration of greenhouse vegetable production. With agricultural businesses in this local area expanding rapidly, interest in cannabis growth operations developing, and the adoption of artificial crop lighting becoming commonplace, electricity supply requirements to the Kingsville-Leamington area will continue increasing significantly. Due to the substantial growth in the area, any local supply needs have to be assessed along with the bulk system supply.

The Windsor-Essex region is part of the West of London bulk transmission system, which contains of a number of significant wind and gas generation resources. The generation resources in the West of London area are relied on for servicing load in western Ontario, including Windsor-Essex. Resources west of London also act as an important supply to the Greater Toronto Area, via the Flow East Towards London ("FETL") Interface. In addition, Ontario's existing transmission interconnection with Michigan is located within the West of London area, with connections in Sarnia, Lambton and Windsor. Figure 2 shows the broader West of London area in relation to the Windsor-Essex Region and the Kingsville-Leamington area.

Figure 2: Map of West of London Area, and Windsor-Essex Region



Supply to the Windsor-Essex Region from generation resources located in the eastern portion of the West of London bulk area is through the West of Chatham interface (the four 230 kV circuits from Chatham SS supplying the region). A number of generation resources are located within the Windsor-Essex region itself, contributing significantly to local supply.

Due to the significant amount of growth forecast for the Windsor-Essex region, and the concentrated nature of the load growth within the Kingsville-Leamington area, additional supply reinforcement is required at both the regional and bulk system level.

Before the system needs for the broader Windsor-Essex area can be assessed, the local need for system reinforcement, driven by initial customer connections in Kingsville-Leamington over the near term, has to be addressed. The transmission reinforcement required to meet this local need for load supply is discussed in section 4. The remainder of the report compares new transmission to strengthen the connection within the West of London area to the Windsor-Essex Region, and new local generation within Windsor-Essex to address the broader upstream system needs assuming this local reinforcement is in place.

4 Leamington Load Supply

To adequately supply the additional load that will begin connecting in the Kingsville-Leamington area in 2020 (with the expansion to Leamington TS #1), system reinforcements are

required for step-down transformation, connection capacity and local reliability. The need and scope of facilities for this local reliability issue were explored primarily through the IESO's regional planning process.

To accommodate the expansion of Leamington TS #1 and the connection of additional transmission customers starting in early 2020, interim measures are required resulting in a lower level of reliability to connecting customers than what is typically provided. Beyond these connections and interim measures, the existing system does not have the ability to accommodate the total amount of forecasted load for the Kingsville-Leamington area, discussed further in section 5.2.

The limitation on the existing supply to the Kingsville-Leamington area is caused by voltage decline at Leamington TS #1 and #2 under both single and double contingencies (loss of one or more 230 kV transmission circuits). To respect this limitation, the line to Leamington TS #1 and #2 can only accommodate 370 MW of load based on the Ontario Resource and Transmission Assessment Criteria ("ORTAC").[4] With interim measures, which allow for the rejection of load when a transmission circuit is lost, the amount of load that can be supplied in the Leamington area can be temporarily increased to approximately 500 MW. However, this results in lower reliability for new customers until reinforcements can be put in place.[5]

The IESO has requested that Hydro One establish a switching station at the Leamington Junction by 2022 to improve the local load meeting capability of the Kingsville-Leamington area. The proposed switching station will improve reliability, and provide some additional local supply capability to connect an additional transformer station and continue supplying load in the Kingsville-Leamington area. The switching station will increase the local load meeting capability to approximately 700 MW by 2022.[6] The on-going regional planning process will continue to explore options for future load connections, which could necessitate additional transmission connection assets or local upgrades.

Various alternatives to the switching station were considered in the regional planning process including non-wires options and other wires solutions. Due to the magnitude and the timing of

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[4] See *Ontario Resource and Transmission Assessment Criteria*, issue 5.0, available here: http://www.ieso.ca/-/media/files/ieso/Document%20Library/Market-Rules-and-Manuals-Library/market-manuals/market-administration/IMO-REQ-0041-TransmissionAssessmentCriteria.pdf

[5] The SIA for these connections will outline the requirements that must be met by the connection applicants, including actions required as a result of identified violations of the ORTAC.

[6] Determination of local load meeting capability makes assumptions around the dispatch of local generation (typical dispatch levels at system peak), bulk system flow limitations, and flows on the interchange between Ontario and Michigan (assumed to be zero for the determination of local/regional supply capability).

the need, non-wires alternatives alone are not sufficient. A generation option located at Leamington Junction was considered, but was deemed impractical due to its technical infeasibility and the anticipated cost. The build of a new radial 230 kV circuit from Chatham SS to Leamington TS was also ruled out on the basis that the load meeting capability would be insufficient to meet forecasted load growth or provide the flexibility to supply future growth beyond the Leamington TS #2 expansion.

In addition to improving load supply capability in the Kingsville-Leamington area, the proposed switching station will improve the performance of the bulk system by balancing the flow on the existing transmission circuits from Chatham, this improves the transfer capability of the West of Chatham interface which supplies the broader Windsor-Essex Region. The switching station will also reduce exposure to outages by allowing the existing 230 kV circuits to be sectionalized and switched independently.

5 Windsor-Essex Demand

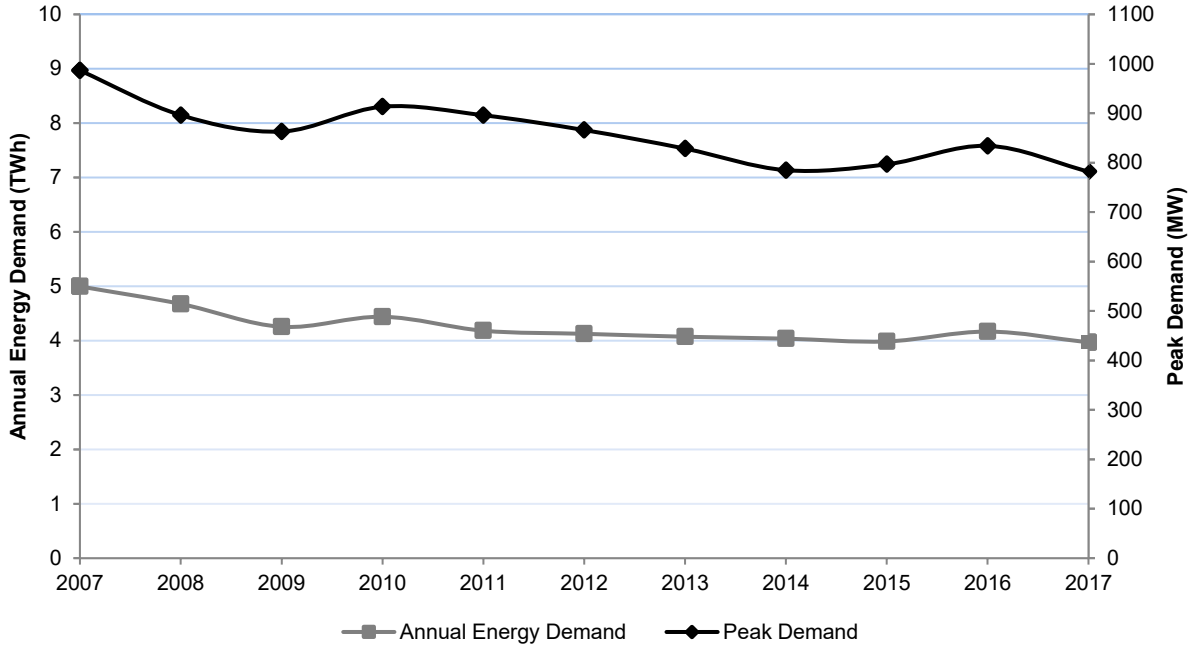
This section describes historical and forecast demand for the Windsor-Essex Region overall, and in detail for the local Kingsville-Leamington area, as it is the primary driver of demand growth for the region.

5.1 Historical Demand

Historically, the electric system in the Windsor-Essex Region has been summer-peaking, with the primary load centre being the city of Windsor.

Between 2013 and 2017, the annual energy requirements and coincident peak demand in the Windsor-Essex Region were around 4 TWh and 800 MW, respectively. Prior to 2008, summer peak demand was considerably higher, at approximately 1,000 MW. After 2008, summer peak demand decreased to around 900 MW, and continued to trend downward with the transition from heavy manufacturing to less energy intensive industry. Historical demand and energy consumption for the region are shown in Figure 3.

Figure 3: Historical Summer Demand and Energy Consumption for the Windsor-Essex Region



Arising from its historically higher load levels, the Windsor-Essex Region currently has a number of Remedial Action Schemes in place. While these protection schemes were implemented to improve reliability to the Windsor-Essex area when load levels, particularly automotive loads, within the city of Windsor were higher, they are still used today (e.g., under high import or export conditions). However, it should be noted that the Windsor-Essex Region was not able to sustain its past peaks without these protection schemes, which include generation and load rejection.

Load in the Kingsville-Leamington area has also historically exceeded the capability of existing transmission infrastructure (i.e., Kingsville TS - the main supply point to the area prior to the completion of the SECTR project). Historical load at Kingsville TS has ranged from 120-130 MW of summer peaking load. In the past (as well as today), the region's protection schemes have been used to accommodate this demand, by interrupting load in the Kingsville area following recognized contingencies in the region. While this facilitated higher load than the Kingsville TS capability, local customers experience reduced reliability compared to the rest of the Ontario system.

In recent years, forecast demand in the Kingsville-Leamington area has increased significantly, as seen in Figure 4. This is primarily driven by expansion of the greenhouse sector (vegetable and, in part, cannabis, production). Until the recent SECTR transmission expansion in the area, load growth had been constrained by the capability of Kingsville TS. Load growth in the area

will increase the frequency of use of the protection schemes mentioned above and require new protection measures for customers that are currently connecting. In the absence of a bulk system solution, this will significantly increase the amount of time the area is subjected to lower reliability and unable to meet the ORTAC reliability standards.

5.2 Windsor-Essex Demand Scenarios

As noted above, the primary driver of load growth for the overall region is expansion of the agricultural industry in the Kingsville-Leamington area. Demand forecast scenarios were developed based on different outlooks for growth in the Kingsville-Leamington area. While historically summer peaking, the load in the Kingsville-Leamington area is forecast to transition to a winter peaking load, due to the use of artificial crop lighting in winter months. As a result, the overall peak for the Windsor-Essex Region is also forecast to become a winter peak in the near-term.

Three scenarios were developed to represent the load growth forecast specific to the Kingsville-Leamington area.[7] Load growth was assumed to be all load that is supplied or will be supplied from the new Leamington tap line, constructed as part of the SECTR project, as well as any future growth forecast for the geographic area. Inputs to the forecast included:

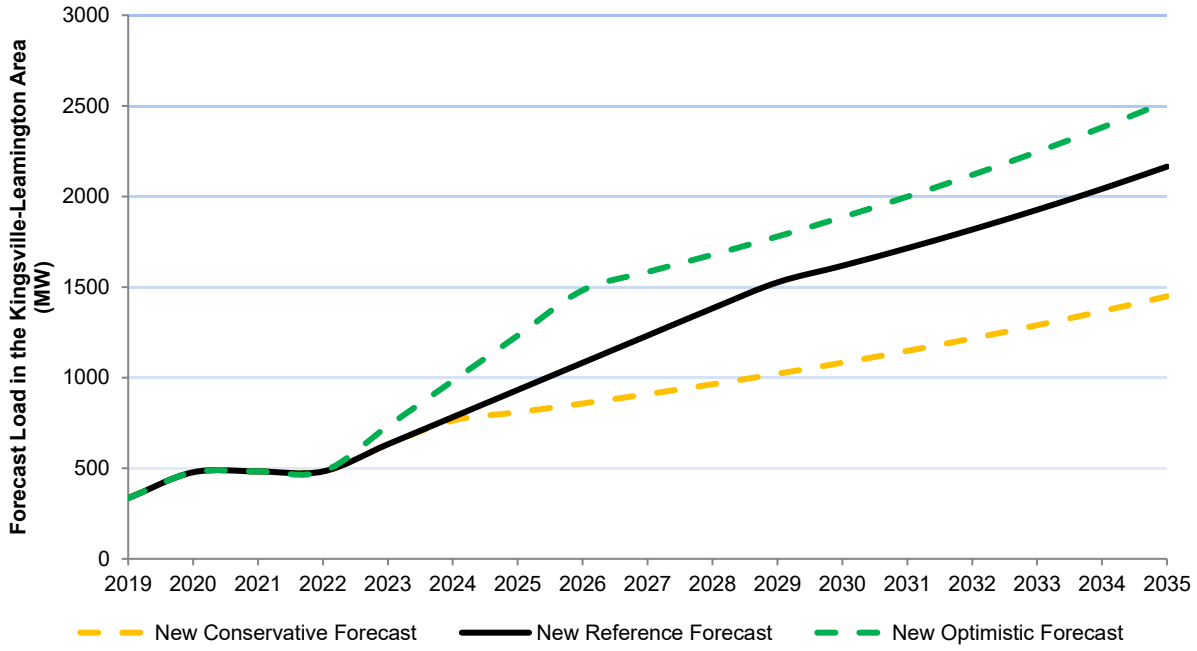
- Customer connection request information received from the LDCs in the area (primarily Hydro One Distribution, as most of the new load is in its service territory), including:
    - Customer location,
    - Requested capacity in each month of the year over a five-year horizon for load to materialize, where available, and
    - Crop type (vegetable or cannabis);
- Historical acreage expansion rates for vegetable greenhouse growers in the area obtained from the Ontario Greenhouse Vegetable Growers Association
- Information received from connection applicants who have submitted, or indicated a desire to submit, requests for SIAs in the Kingsville-Leamington area; and
- Development of other infrastructure in the area that supports local greenhouse growth, such as:
    - Natural gas supply reinforcement projects, specifically the Kingsville gas pipeline reinforcement project scheduled to be completed this year,[8] and

[7] The Kingsville-Leamington forecast in Figure 4 does not include the existing or forecast load supplied at Kingsville TS (up to the station's equipment rating). However, there is the potential that, after system reinforcements, some of the forecast load for the Kingsville-Leamington area could be supplied from the Kingsville TS site if enhancements were made to the existing station and/or its connection point.
[8] The IESO is also aware of Enbridge's planned expansion in the Dresden area. This will impact future studies for the electricity needs in the east of Chatham area.

- Municipal utility plans, specifically water and sewer system projects and road improvements undertaken by both the municipality of Leamington and town of Kingsville.

Based on the forecast inputs, three scenarios were developed specific to the Leamington-Kingsville area. All three scenarios are based on fufilling the LDCs' existing queue of customer connections, but assume different rates at which new loads may connect. The three forecast growth scenarios (conservative, reference, and optimisitic) are presented in Figure 4.

Figure 4: Winter Peak Forecast Scenarios for the Kingsville-Leamington Area



For the purpose of assessing incremental need for the area, the proposed switching station at the Leamington Junction is assumed to be in place. The switching station relieves the need for interim measures and allows additional load connections to be accomodated up to the capability of the bulk system to supply. Note that for all scenarios, the load forecast plateaus until 2022, after which the switching station is presumed to be in-service.

The *conservative scenario* assumes that after the Leamington switching station is built, the customers that have applied for an SIA, as well as those that have given a strong indication that an SIA application is imminent, are connected. Once the capacity at these facilities has been fully utilized, load is forecast to continue to grow at 6% per year,[9] reflecting historical acreage

[9] Based on the historical rate of under-glass greenhouse acreage expansion in the Leamington area, according to the Ontario Greenhouse Vegetable Growers Association.

expansion and assuming that the ratio of lit to unlit acreage will remain the same from that point forward until the end of the forecast period.

The *reference load scenario* assumes that after the Leamington switching station is built, the customer connections are addressed at a rate of 150 MW per year. This growth is informed by the rate at which LDCs are proposing to connect customers to the existing and expanded Leamington TS #1. Once the full queue of customers has been connected, load is assumed to grow at 6% per year until the end of the forecast period.

The *optimistic scenario* assumes that the construction of the Leamington switching station is followed by an aggressive build out of transformer stations and distribution lines with the transmitter and LDCs building facilities in parallel. This rapid construction will allow customers to be connected at an increased rate after 2022, addressing load connections at a rate of 250 MW per year. Once the full queue of customers has been connected, load is assumed to grow at 6% per year until the end of the forecast period.

The adoption of artificial crop lighting means that the energy profile for load in the Kingsville-Leamington area differs significantly from the rest of the Windsor-Essex Region and the province as a whole. Working with LDCs and members of the greenhouse community, the IESO developed a load shape for the greenhouse load to more accurately model the coincident Windsor-Essex area peak, as well as the region's hourly energy needs.

Using this load shape information, both summer and winter peak demand and energy forecasts for the broader Windsor-Essex Region were developed. This information is presented in Figure 5 and Figure 6, for the winter peak demand forecast and annual energy demand forecast, respectively.

Figure 5: Forecast Scenarios for Windsor-Essex Region Winter Peak Demand

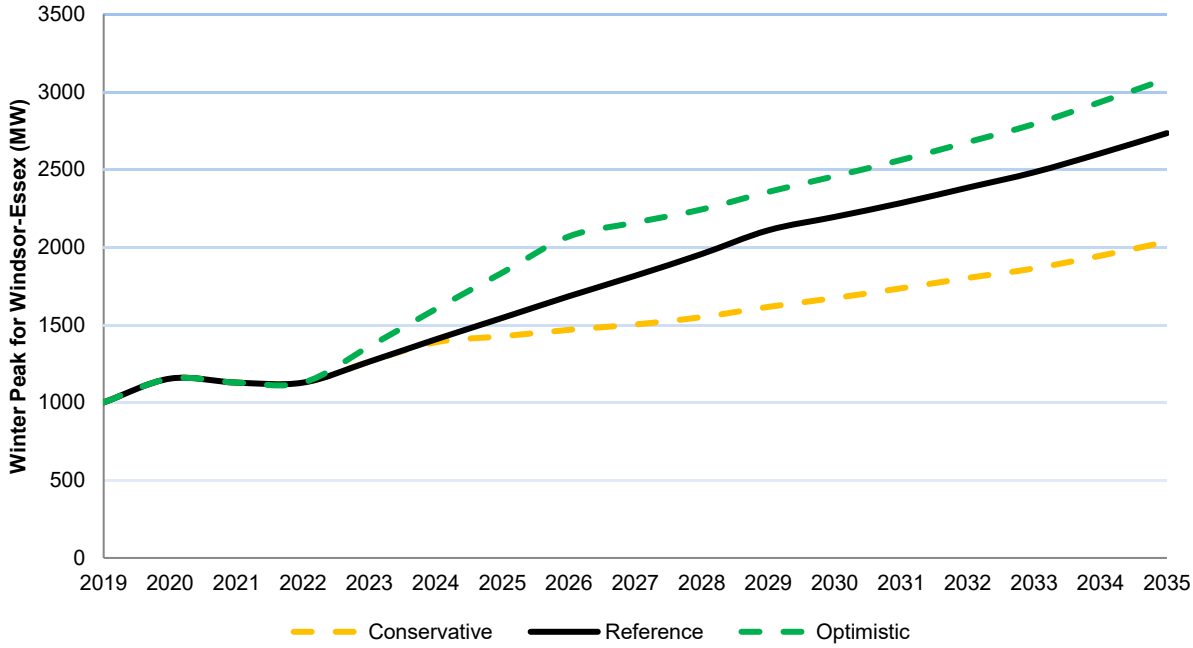
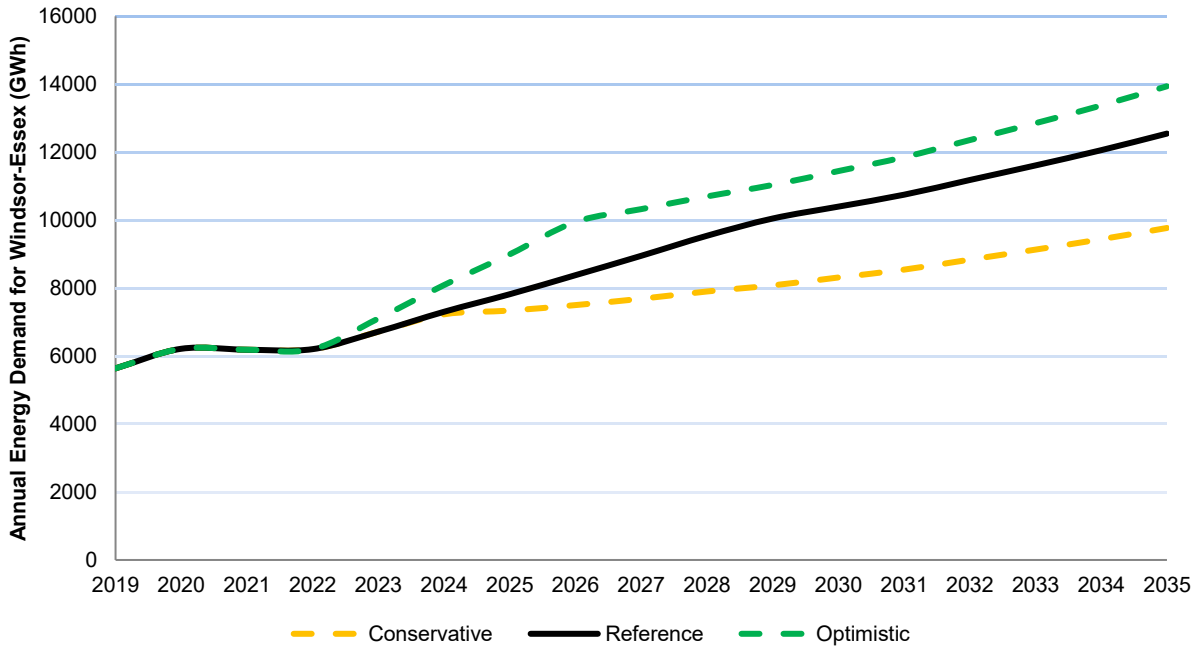


Figure 6: Forecast Scenarios for Windsor-Essex Region Annual Energy Demand



6 Supplying Windsor-Essex Demand

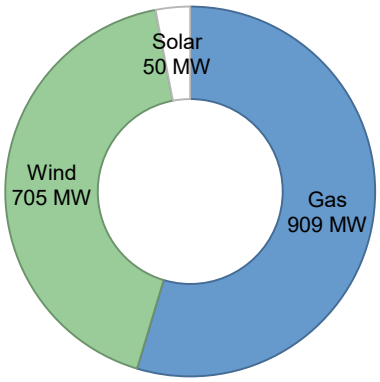
The Windsor-Essex Region is supplied by a mixture of internal resources (generation connected within Windsor-Essex) and external resources (generation located outside of Windsor-Essex accessed through transmission infrastructure).[10] The existing 230 kV network through the region provides Windsor-Essex with supply from the rest of Ontario, particularly the wind and gas generation resources located east of Chatham. It also offers a strong link with Michigan, allowing for imports and exports to flow through the region. Significant transmission connected generation resources located within the Windsor-Essex region, are also connected to both the 230 kV and 115 kV systems. The majority of the generation capacity in the region is located close to the city of Windsor.

The characteristics of these internal and external resources are discussed in further detail in sections 6.1 and 6.2.

6.1 Windsor-Essex Internal Resources

The Windsor-Essex Region's internal transmission connected resources currently comprise a significant amount of installed gas generation (including a large combined-cycle plant and a number of combined heat and power generators), a number of wind generators, and a large solar installation. These resources represent a combined total of 1,664 MW of installed generation capacity. Figure 7 shows the installed transmission connected resource mix in the Windsor-Essex Region in 2020.[11]

Figure 7: Installed Resources in the Windsor-Essex Area for 2020 by Resource Type



[10] The mixture of resources used to supply the region's and the province's energy needs at any time is determined by the real-time energy market.

[11] The region also has a significant number of distribution connected resources, mainly wind and solar. The Kingsville-Leamington area also benefits from a number of smaller distribution connected combined heat and power generators. The impact of these distributed resources was also modelled in the study.

6.2 External Resources to Supply Windsor-Essex

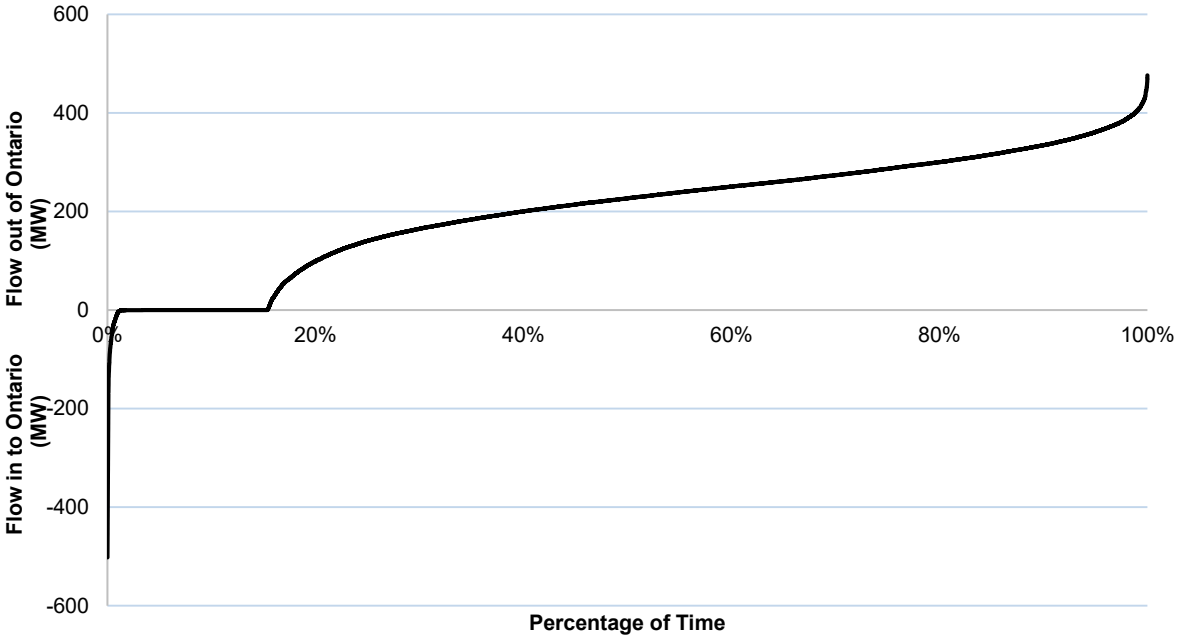
Supply to the Windsor-Essex Region is also provided by flow on the "West of Chatham" interface, defined as the four existing 230 kV transmission circuits that connect Keith TS and Lauzon TS in the region to Chatham SS in the east, providing supply from broader provincial resources.

Currently, the planning limit of this interface is 920 MW in the winter and 730 MW in the summer. The interface is limited by the loss of the 230 kV multi-circuit line C21J/C23Z, which connects Chatham SS to Keith TS and Lauzon TS, respectively. The recommended switching station at the Leamington Junction, while primarily required for increasing the capability to connect more load in the Leamington area, increases the transfer limit of the West of Chatham interface to 1,100 MW in the winter and 990 MW in the summer. With the switching station in place, the most limiting contingency is still the loss of 230 kV circuits C21J/C23Z and overloading the remaining circuits from Chatham SS to Keith TS and Lauzon TS.

The Windsor-Essex Region is also interconnected with Michigan at Keith TS by the J5D 230 kV interconnection line (Windsor to Detroit).[12] Currently, the interconnection between Ontario and Michigan supports import and export trade via the Ontario and Michigan real-time energy markets. In the future, with the implementation of the ICA, it may support capacity-backed imports or exports. Additionally, the J5D interconnection provides significant post-contingency support to the area through imports, which is used to increase transfer limits pre-contingency. While the entire Ontario-Michigan interface has a combined capability of 1,750 MW in the winter and 1,700 MW in the summer for both imports and exports, the tie located in the Windsor-Essex region is limited to approximately 400 MW. Figure 8 shows the recent historical flows on the intertie circuit. Phase-shifters on all the Ontario-Michigan interconnections, including J5D, control real-time flows across this major interconnection.

[12] The intertie circuit in the Windsor-Essex area that connects to the Michigan system is one of four circuits that interconnect Ontario and Michigan. The other three connection points are located in the Lambton and Sarnia areas.

Figure 8: Cumulative Distribution of Historical Flows on J5D Interconnection (2015-2018)



The Ontario-Michigan interface is subject to "loop-flows," which represent unscheduled flows that naturally occur, influenced by the dispatch of generation (within and external to Ontario), load levels and the configuration of the interconnected network. The IESO operates to control this to within +/-200 MW for the entire interface, but at times a portion of these loop-flows cannot be controlled. This means that the intertie circuit is likely subject to some amount of loop flow at any given time.

The current Ontario resource mix and loop flows, drives a substantial amount of export flow on this intertie - actual flow exceeds 200 MW from Ontario to Michigan 60% of the time, with export flows exceeding 350 MW typically 20% of time.

6.3 The Need for Additional Supply West of Chatham

The IESO has conducted an assessment of the system's capability to adequately supply the Windsor-Essex Region. Planning criteria were applied in accordance with North American Electric Reliability Corporation standards and the Northeast Power Coordinating Council reliability directories to determine system capacity needs. In the context of the bulk system, adequacy is defined as the ability to supply regional demand, while respecting transfer capability limits across the bulk system and interconnections.

This assessment considered both the contribution of existing internal generation and resources external to the area, and assumed the Leamington switching station was in place to facilitate

further load expansion. A number of key sensitivities were considered to determine the potential impact on the magnitude and timing of the need for additional supply capability.

The analysis of system need also looked at scenarios related to maintaining bulk system capability, including the interchange capability between Ontario and Michigan. As a base case the study assumed this interchange path would be maintained. Scenarios where only half the interchange capability was maintained were also investigated to better understand the ability of the system to accommodate more aggressive growth scenarios.

The internal and external resources, and associated sensitivities, were modelled for the three demand scenarios. The ability for available resources to meet system needs was evaluated based on a capacity assessment, as well as an unserved energy assessment using UPLAN.[13]

Sections 6.3.1 and 6.3.2 present the results of the capacity and energy analysis in further detail.

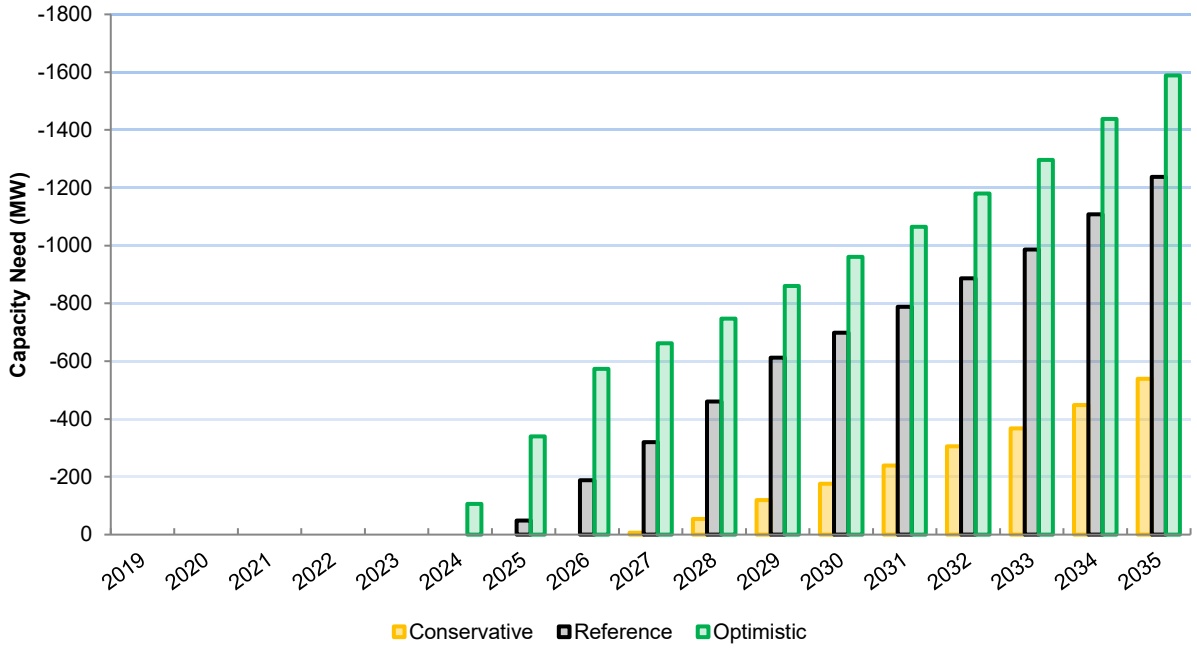
6.3.1 Capacity Adequacy Requirement

The IESO used a deterministic approach to evaluate the need for additional capacity in the Windsor-Essex Region. This approach considered internal resources based on their established capacity factors, and external resources based on the planning limit of the West of Chatham interface.

Based on this assessment, a capacity need of 49 MW begins to emerge in 2025 and increases to 188 MW by 2026 (under the reference load growth scenario). This capacity need continues to grow over the long-term and greater divergence is seen between the load growth scenarios, with over double the need seen under the reference load growth scenario compared to the conservative load growth scenario by 2035 (1,238 MW versus 539 MW). Figure 9 shows the winter capacity need for all three load growth scenarios, assuming interchange capability is maintained.

[13] UPLAN is a production cost modelling tool. UPLAN was also used to simulate and evaluate overall system production costs for the options compared in this analysis.

Figure 9: Winter Capacity Need for the Three Growth Scenarios



While the capacity need is predominantly a winter one, a summer capacity need also emerges under all forecast growth scenarios (as early as 2027 under the reference forecast and as late as 2032 under the conservative forecast).

6.3.2 Energy Requirement

The expected energy requirement was determined using the energy forecast for the three load scenarios, the supply capability of local generation and the capability of the existing West of Chatham interface (less the portion for maintaining interchange capability with Michigan).

These system conditions were modelled in UPLAN to evaluate both the yearly unserved energy profile without any system reinforcements and the incremental amount of generation already located in the region that was required to be dispatched due to local transmission congestion to meet local needs.[14] To establish the unserved energy profile, UPLAN dispatches available resources to serve the load while respecting the transfer limit of the West of Chatham interface, as discussed in section 6.2, and incorporating the probability of forced and planned generation outages. Figure 10 presents the yearly unserved energy in this region for the three demand growth scenarios. While the absolute amount of unserved energy for each year is presented, the

[14] Note, according to proposed changes under the IESO's Market Renewal Program, locational marginal pricing will more transparently reflect local area constraints, resulting in higher local pricing in areas where load supply is impacted by transmission congestion.

maximum hourly unserved energy and the number of consecutive hours of unserved energy were also used to inform the development of options to address the need.

Figure 10: Unserved Energy for the Three Growth Scenarios

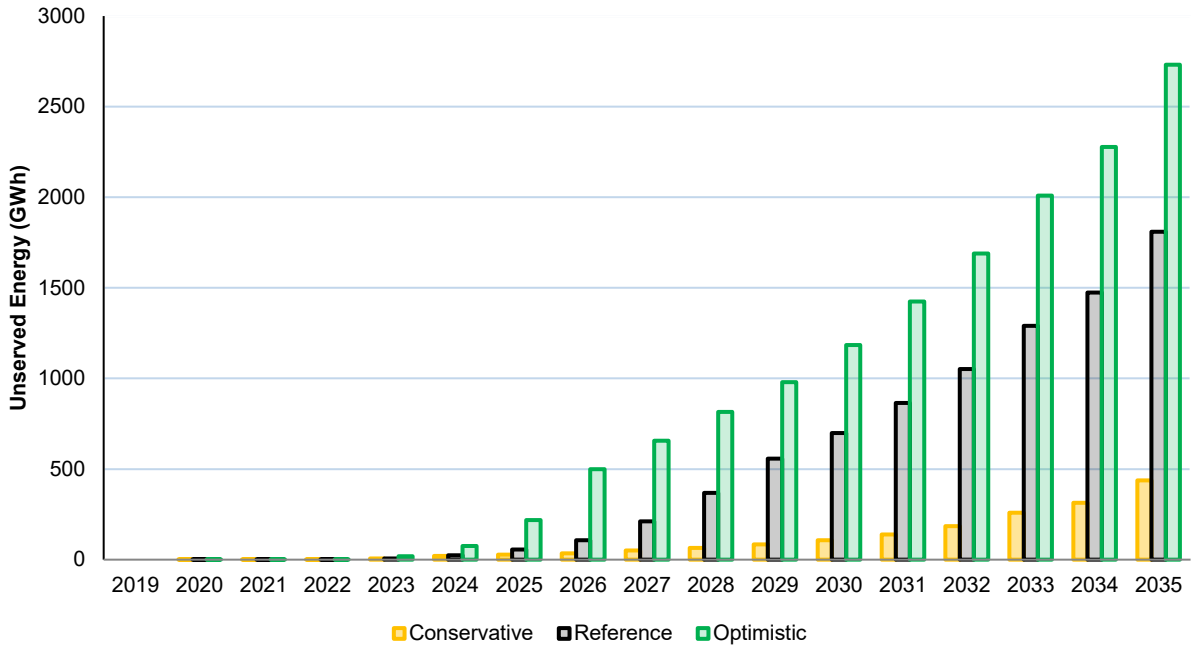


Figure 11 and Figure 12 present the unconstrained flow across the West of Chatham interface for the year 2026 along with the existing westbound interface limit (less the portion for maintaining interchange capability with Michigan). This provides an indication of the number of hours the West of Chatham interface is congested and generation located in the area is relied on to meet local needs, as well as hours when dispatching all local generation may be insufficient to meet the Windsor-Essex Region's needs (i.e., when the capacity need arises).

Figure 11: Unconstrained Flow Across the West of Chatham Interface for Winter 2026

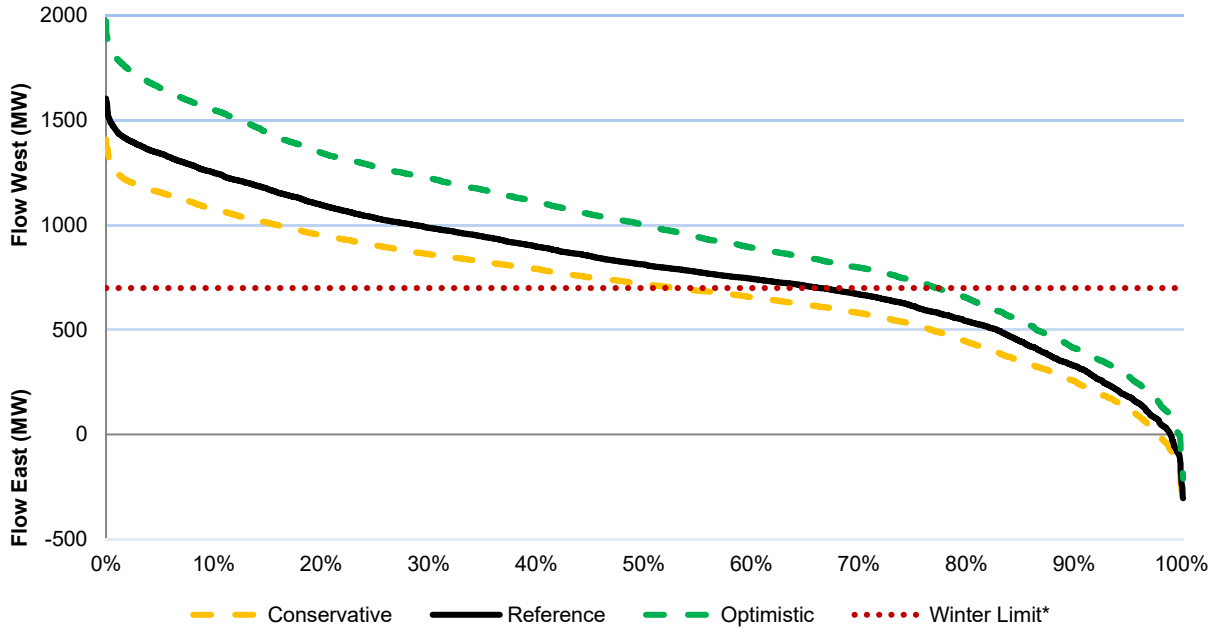
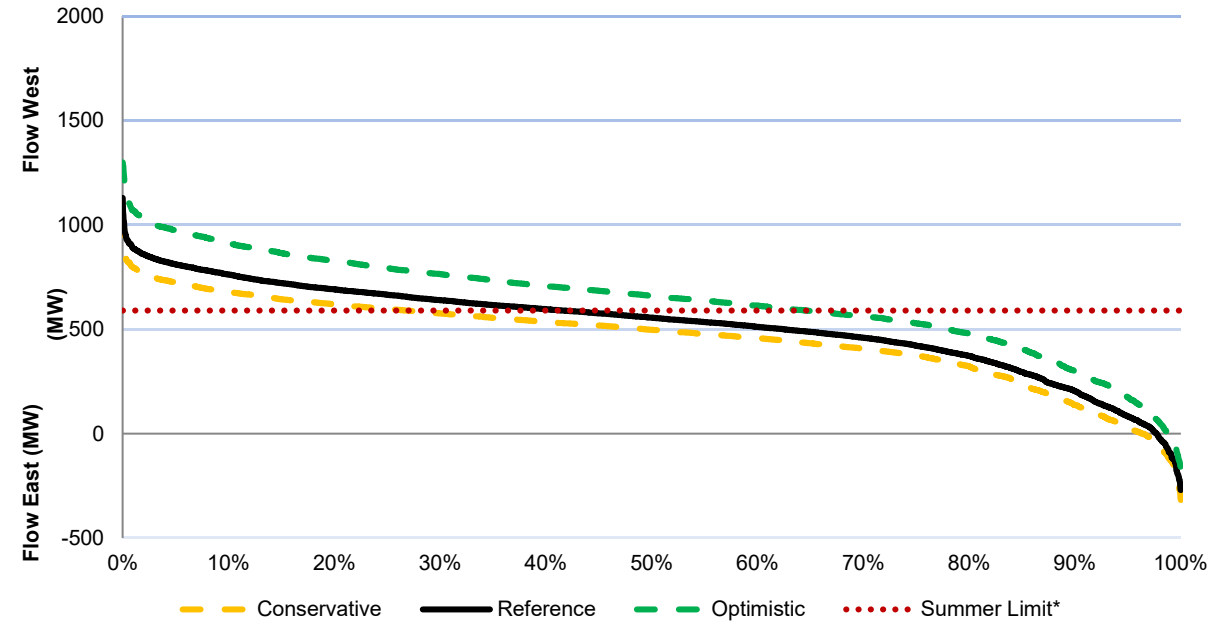


Figure 12: Unconstrained Flow Across the West of Chatham Interface for Summer 2026



The frequency with which resources in the Windsor-Essex Region may be used to relieve congestion on the West of Chatham interface increases as load in the region grows. For the year presented in Figure 11 and Figure 12, looking at the conservative load growth scenario, there is westbound congestion on the West of Chatham interface for approximately 40% of hours and,

in approximately 10% of those hours, generation within the Windsor-Essex region is insufficient to meet demand, resulting in unserved energy events.[15] While the majority of unserved energy events occur in the winter months, as load grows, unserved energy events are also occurring in the summer months.

7 Analysis of Alternatives to Meet Supply Needs West of Chatham

This study compares the two lowest cost alternatives to meeting the identified mid-term supply need west of Chatham, assuming that the Leamington switching station is in place in 2022 and existing registered generation continues to be available. These options are described below:

1) **Reinforce the existing West of Chatham interface** – In this option a new 230 kV double circuit transmission line from Chatham SS to the switching station at the Leamington Junction forms a second stage of transmission development in the region. The approximately 50-km transmission line would increase the West of Chatham transfer capability to 1,500 MW.
2) **No transmission expansion west of Chatham** – In this option, all the identified capacity and energy needs are met through the addition of the least-cost resource alternative. After an assessment of the capabilities and cost of potential resources, a new natural gas-fired simple cycle gas turbine ("SCGT"), located west of the switching station at Leamington Junction was identified as the lowest cost resource alternative capable of supplying the magnitude of energy and capacity required. The initial stage of generation considered in this analysis included 400 MW in the mid-2020s.

Note that in Option 1, the total West of Chatham interface capability achievable with a new transmission circuit from Chatham SS to the switching station at the Leamington Junction is 2,050 MW of winter capability. However, the full transfer capability is restricted by transmission limitations from east and north of Chatham, i.e., from London or Sarnia.[16]

In Option 2, additional resource alternatives were considered. Significant demand response is currently infeasible since the risk to disruption of greenhouse crop growth cycles, the primary large load customers in the area, was determined to be prohibitive at this time.[17] Other generation types were considered (i.e., wind, solar, storage, combined cycle gas turbine),

[15] This is on an annual basis, i.e., it. includes both the summer and winter hours from Figure 11 and Figure 12.
[16] Any system changes east of Chatham including new load connections could impact the capability of the proposed West of Chatham interface reinforcement.
[17] Use of demand response, primarily to meet local needs, is explored in further detail in the IRRP for the Windsor-Essex Region.

however the profile of energy required to meet this need made these options less cost-effective compared to a SCGT.

The assumptions and results from the economic analysis comparing these two options are presented in section 7.1. To be prudent, the IESO considered system needs for all demand growth scenarios; however, the analysis focused on the investments needed to meet near- and mid-term needs while preserving cost-effective options for meeting the potential mid- to long-term requirements based on the demand growth scenarios studied. To account for the risk that arises from demand growth in the region being driven by a single sector, the IESO will continue to monitor long-term growth west and east of Chatham and further refine the scoping of options east of Chatham prior to proceeding with any additional stages of transmission or generation reinforcement beyond what is outlined in section 8. As the IESO's Market Renewal Program is implemented, it is also expected that more transparent price signals (e.g., locational marginal prices reflecting transmission congestion) can help drive market activities in the region which can contribute to addressing the region's mid- to long-term needs.[18]

In addition to the NPV cost difference between the options, the IESO's analysis discusses risks associated with the generation alternative that may result in implementation difficulties or unanticipated costs.

7.1 Cost-Effectiveness Comparison of Generation and Transmission Alternatives

The IESO compared the NPV of total costs for a transmission reinforcement west of Chatham to the least-cost resource alternative, a new SCGT. This economic evaluation was based on cost estimates for similar-sized resources. Sensitivity analysis was conducted to test the robustness of the results under a variety of conditions. Among the tested sensitivities were the three demand growth scenarios, ranges in the cost of generation and transmission, and other cost related assumptions.

The following is a list of the assumptions made in the economic analysis:

- The NPV of the cash flows is expressed in 2019 CAD.
- The NPV analysis was conducted using a 4% real social discount rate. Sensitivities at 2% and 8% were performed. An annual inflation rate of 2% is assumed.
- The life of the station upgrades was assumed to be 45 years; the life of the line was assumed to be 70 years; and the life of the generation assets was assumed to be 30 years.

[18] More information on the IESO's Market Renewal Program can be found here: http://www.ieso.ca/en/Market-Renewal

A capital injection of 20% of the initial capital for the SCGT is assumed to occur in year 21.

- An SCGT was identified as the least-cost resource alternative. The estimated overnight cost of capital assumed is about $780/kW (2019 CAD), based on escalating values from a previous study independently conducted for the IESO.
- The reference demand forecast is presented in section 5.2. Sensitivities to test the impacts of the conservative and optimistic growth scenarios on the NPV were performed. Once the need in each scenario surpassed the capability of the solutions being evaluated (i.e., 400 MW), the demand was flat lined for the purposes of the production cost analysis.
- The existing supply resources described in section 6 were reflected in the analysis.
- The transmission cost is assumed to be $270M (2015 CAD), informed by the 2015 SECTR cost estimate in the Leave to Construct application evidence on file with the Ontario Energy Board. A 50% contingency was assumed for the purpose of this analysis.
- A sensitivity of +/- 20% was assessed on the capital and ongoing fixed costs for generation.
- The NPV study period extended from the start of 2026, the year that either option would need to be in service, to the end of 2095, when a transmission asset replacement decision would be required.
- Natural gas prices were assumed to be an average of about $4/MMBtu throughout the study period.
- The assessment was performed from an electricity consumer perspective and included all costs incurred by project developers, which were assumed to be passed on to consumers.
- The cost of constraining the generating alternative to produce energy for a local need versus the cost of system supply was considered.

Comparing the required initial stage of transmission reinforcement to the generation alternative, the transmission option results in net present cost savings of approximately $500M for supplying load under reference load growth assumptions.

For all load growth scenarios considered in the analysis, additional system reinforcements would be required in the mid-term or in tandem with the next stage of reinforcement in order to maintain system reliability. Studies of these scenarios showed that transmission still offered an overall lower net present cost compared to generation.

These results indicate that transmission reinforcement is the most economical next stage of bulk system reinforcement and provides the basis to meet long-term needs in the most cost-effective way for the various load growth scenarios considered.

A reinforcement of the transmission system west of Chatham would provide additional benefits beyond meeting the reliability requirements of the broader Windsor-Essex area, which are unique to a transmission solution. Transmission reinforcement would provide system flexibility, relieve congestion to provide access to lower cost provincial generation and improve the economic dispatch of local resources to supply needs, decrease losses along the West of Chatham interface, and decrease exposure to local generation and transmission outages.

The IESO's future capacity auctions are designed to meet system resource adequacy needs, and while local generation could contribute to the overall provincial capacity need, its ability to do so is limited by the existing transmission infrastructure in the West of London area. For example, limitations on the FETL interface would significantly restrict the amount of capacity that can be transferred out of the area (or that would be able to compete in the auction).

However, a purely cost-based analysis of the local generation option potentially overestimates the generation cost, since it does not account for the contribution of this resource to meeting the forecast provincial capacity need. A sensitivity analysis comparing the cost of the transmission to the generation alternative while varying the provincial capacity contribution and the capacity value of the new SCGT yielded the same preferred solution. Assuming a system capacity value of $125/kW-year, the generation option only starts to become a viable economic alternative when more than 60% of the generator's capacity is considered deliverable to contribute to the overall provincial capacity need.

For generation to be technically capable of meeting the magnitude and timing of the need, a large gas facility would be required; at the same time options to site a facility of that nature are limited, resulting in very specific project requirements. In terms of siting, locating generation at the new switching station would be optimal for the bulk system. However, given the prevalence of agriculture in Essex county, siting and zoning approvals may be difficult. A more likely siting option would be the Windsor area, where gas infrastructure and existing generation are already in place. In any case, environmental approvals and permitting would be lengthy.

A proponent's choice of any location west of Chatham SS could also require new or reinforced transmission infrastructure to ensure the installed generator is able to meet the identified need (e.g., potential reinforcement from Windsor to the Leamington Junction may be required if generation were located in the Windsor area). These additional costs were not included in the economic evaluation.

Finally, in terms of the resource solution itself, a SCGT was determined to be the lowest-cost resource alternative for a next phase of system reinforcement. The selection of this option for comparison to the transmission alternative did not account for potential operational issues that may arise during planned maintenance activities or forced outages to the unit. For reliability

purposes, diversification of this resource would be preferred, which would result in higher costs, due to loss of economies of scale, not accounted for in this analysis.

8 Conclusions and Recommendations

Early within this bulk planning process, the urgent need for additional electricity supply capacity to supply load to the Leamington area was identified. To address the near-term supply needs in the area west of Chatham, the IESO determined that the need for a new switching station at the Leamington Junction with an in-service date of 2022 was common to all scenarios considered. As a result, the need for a new switching station at the Leamington Junction was triggered on January 31, 2019, when the IESO issued a hand-off letter to Hydro One requesting that development work for this switching station be initiated.

To further address near- to mid-term supply needs in the area west of Chatham, the IESO recommends proceeding with a second stage of transmission reinforcement: a new 230 kV double circuit transmission line from Chatham SS to the new switching station at the Leamington Junction, with an in-service date prior to the winter of 2025/2026.

The IESO will continue to monitor the progress of load and generation connections in the area while studying future system needs east of Chatham. Future stages of system reinforcement will be triggered as required. As the Market Renewal Program is implemented, it is also expected that more transparent price signals (e.g., locational marginal prices reflecting transmission congestion) can help drive market activities in the region, contributing to addressing the region's mid- to long-term needs.

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June 11, 2019

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 Chatham SS to Lakeshore TS to reinforce the bulk transmission system west of Chatham

The purpose of this letter is to request Hydro One to initiate the work and activities, including seeking Environmental Assessment and Leave-to-Construct approvals, and subsequent construction of a new 230 kV double-circuit line from the Chatham Switching Station ("SS") to the new Lakeshore Transformer Station ("TS") located at Leamington Junction and associated station facilities at the terminal stations. The required in-service date for these facilities is prior to the winter of 2025/2026.

The purpose of these new facilities is to:

- Increase the overall transfer capability of the bulk transmission system west of Chatham in order to reliably supply the forecast load growth in the Kingsville-Leamington area and the broader Windsor-Essex Region in the near- to mid-term,
- Permit the resources and bulk facilities in this region to operate efficiently for local and system needs, and
- Maintain existing interchange capability on the Ontario-Michigan interconnection between Windsor and Detroit.

More details regarding the needs and solution options for reinforcing the bulk transmission system west of Chatham are documented in an IESO's report entitled "Need for Bulk Transmission Reinforcement in the Windsor-Essex Region, June 13, 2019".

Background

The west of Chatham bulk transmission system extends from Chatham in the east to Windsor in the west and is part of the larger west of London bulk transmission network, as shown in Figure 1.

This system is comprised of a 230 kV and 115 kV high voltage network interconnecting the load centers and large generators in the region to the Ontario electricity grid. As well, it provides a point of interconnection with the power system in Michigan. The west of Chatham system plays an important role in providing an adequate and reliable electricity supply to customers in the

Windsor-Essex region and enabling efficient operations of the resources in the region and on the interconnection.

There has been a significant increase in the demand forecast for electricity in the Kingsville-Leamington area. Primarily, this is driven by rapid expansion in the greenhouse sector and aggressive adoption of artificial crop lighting. As a result, the electricity demand in the Windsor-Essex region is forecast to double over the next five years and continue to grow in the longer term beyond that.

While the current demand in this region is being adequately supplied from local generation and from the region's bulk transmission system at this time, the significant and sustained growth forecast for the Kingsville-Leamington area and the broader Windsor-Essex region will require reinforcement of the existing supply. Studies conducted by the IESO, with support from Hydro One and the local LDCs, concluded that reinforcement of the existing transmission system, both the bulk and regional networks, is necessary and is the most economical solution to address the region's near- to mid-term electricity needs. New supply options were considered, but found to be less economic than the transmission solution. The studies also identify that supplementing the available supply with demand-side and interim solutions, while the transmission solution is being implemented, is also beneficial.

Integrated Transmission Solution

The recommended transmission solution comprises two stages:

- Stage 1: A new switching station at the Leamington Junction ("Lakeshore TS") to be in-service by the end of 2022, as identified in the hand-off letter[1] issued by the IESO to Hydro One on January 31, 2019. This will improve the capability of the system to connect and supply additional transformer stations and large transmission customers that are currently planning to connect.

- Stage 2: A new 230 kV double-circuit transmission line connecting Chatham SS to Lakeshore TS and associated terminal facilities, with an in-service date prior to the winter of 2025/2026, in order to address the specified bulk system level needs, as documented in the aforementioned report.

The ongoing Windsor-Essex Integrated Regional Resource Plan ("IRRP") will incorporate these transmission solution recommendations and continue to look at needs of the local area, focus on investigation of non-wires alternatives to manage evolving capacity needs in the region, and provide customers in the region with adequate line connection and step-down transformation capacity, while maintaining a level of reliability consistent with accepted planning standards.

West of Chatham (Chatham to Lakeshore) Transmission Line Project Scope

Based on the above considerations, the IESO recommends that Hydro One initiate the work and activities, including seeking Environmental Assessment and Leave-to-Construct approvals, and subsequent construction of a new 230 kV double-circuit line from Chatham SS to the new

[1] Further details on the switching station can be found here: http://www.ieso.ca/-/media/Files/IESO/Document-Library/regional-planning/Windsor-Essex/Switching-Station-in-the-Leamington-Area_Signed_Jan-31-2018.pdf?la=en

Lakeshore TS and associated station facilities at the terminal stations. Single-line diagrams of the existing and proposed facilities are shown in Figures 2 and 3 respectively. The work for the new line will need to be coordinated with the Lakeshore TS development, in order to appropriately plan the station layout for connection and allow for the installation of any reactive facilities, as required.

The project and its related costs and timelines have been discussed with Hydro One. The IESO understands that an in-service date of prior to the winter of 2025/2026 is achievable, while recognizing that earlier implementation will only further support growth in the region. Hydro One has indicated that costs for the project are projected to range between $115 M and $150 M. If project costs are forecasted to exceed the upper end of this range, and/or the delivery timeline cannot meet the targeted in-service date, Hydro One will notify the IESO so that the assessment of the bulk system reinforcement plan in the Windsor-Essex region can be updated.

Future Activities

The subject transmission line is the second stage of a number of improvements to the bulk transmission system that will be required to support load growth in the Windsor-Essex region. Together, the new line and station form the basis for accommodating mid- and long-term needs in the Windsor-Essex region and into the broader West of London area. The IESO will continue to monitor the progress of load and generation developments in the area. Future stages of system reinforcement will be triggered as required. The IESO feels that this is a prudent approach to meeting the need in the region.

IESO will continue to work with, and provide support to, 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,

Leonard Kula, P. Eng.
Vice President, Planning, Acquisition and Operations, and Chief Operating Officer

cc:
Terry Young, IESO
Jessica Savage, IESO
Bob Chow, IESO
IESO Records

Figures: System Maps

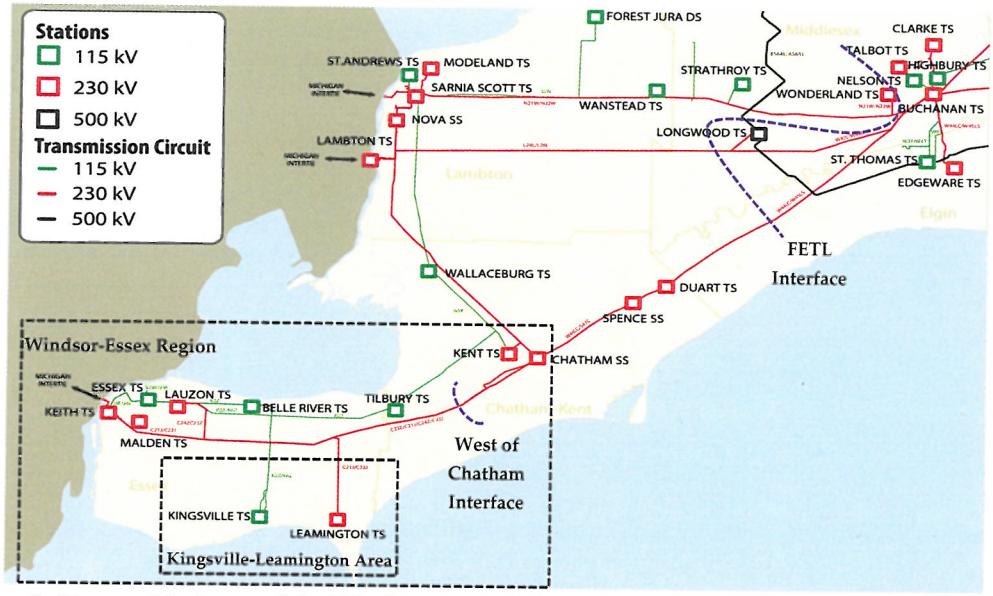

Figure 1: Geographical map of the Windsor-Essex Region

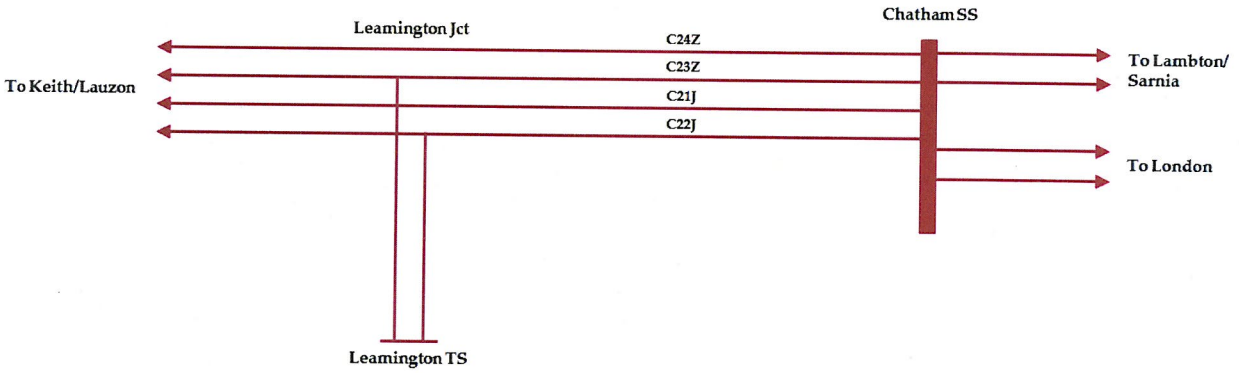

Figure 2: Single line diagram of existing facilities in the Leamington area

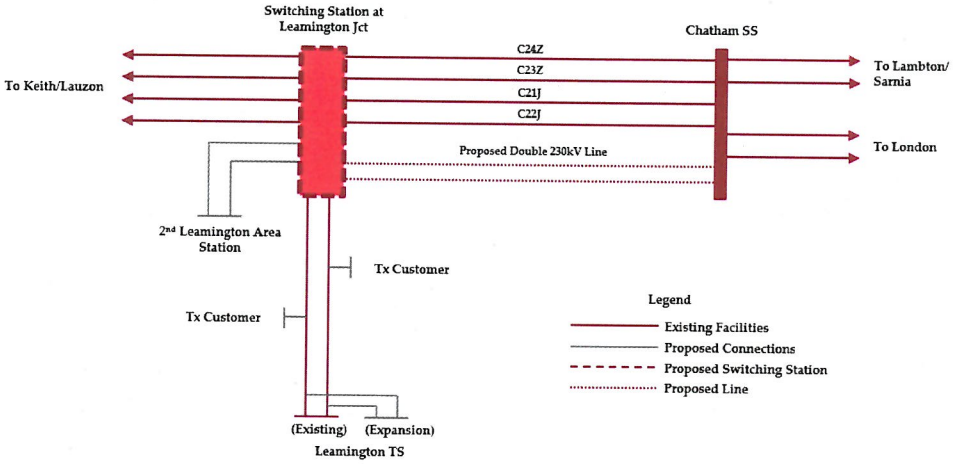

Figure 3: Single line diagram of existing and proposed facilities in the Leamington area

PROJECT CLASSIFICATION AND CATEGORIZATION

Project Classification

In accordance with the Board's Filing Requirements[1], rate regulated projects are classified into three groups based on their purpose.

- Development Projects are those which
  - (i) provide an adequate supply capacity and/or maintain an acceptable or prescribed level of customer or system reliability for load growth or for meeting increased stresses on the system; or
  - (ii) enhance system efficiency such as minimizing congestion on the transmission system and reducing system losses.
- Connection Projects are those which provide connection of a load or generation customer or group of customers to the transmission system.
- Sustainment Projects are those which maintain the performance of the transmission network at its current standard or replace end-of-life facilities on a "like for like" basis.

Based on the above criteria, the Project is a Development Project as the proposed transmission facilities provide for additional system capacity and maintain reliability and quality of electricity supply.

Project Categorization

Subsection 4.3.2.3.2 of the Board's Filing Requirements requires applications to categorize projects as being either discretionary or non-discretionary. Non-discretionary project characteristics include:

a) a mandatory requirement to satisfy obligations specified by regulatory organizations including NPCC/NERC or by the Independent Electricity System Operator (IESO);
b) a need to connect new load (of a distributor or large user) or new generation connection;

[1] See: Ontario Energy Board Filing Requirements for Electricity Transmission Applications, subsection 4.3.2.3.1

c) a need to address equipment loading or voltage/short circuit stresses when their rated capacities are exceeded;
d) projects identified in a provincial government approved plan;
e) projects that are required to achieve provincial government objectives that are prescribed in governmental directives or regulations; and
f) a need to comply with direction from the Ontario Energy Board in the event it is determined that the transmission system's reliability is at risk.

Based upon the above criteria, Hydro One submits that the CxL Project is properly categorized as a non-discretionary project as it is being undertaken to comply with a mandatory requirement to satisfy obligations specified by the Ontario Energy Board in Hydro One's transmission licence as directed by government directives described in **Exhibit B, Tab 3, Schedule 1.**

Categorization and Classification

		Project Need	
		Non-discretionary	Discretionary
Project Class	Development	**X**	

COST BENEFIT ANALYSIS AND OPTIONS

There are no practical alternatives to the scope of work for which Hydro One is seeking the OEB's approval. An analysis of the alternatives to meet supply needs in the west of Chatham area were undertaken by the IESO and are included in Section 7 of **Exhibit B, Tab 3, Schedule 1, Attachment 2**. As the IESO's letter describing system need as found at **Exhibit B, Tab 3, Schedule 1, Attachment 3**, is specific, no other alternatives were considered.

QUANTITATIVE AND QUALITATIVE BENEFITS OF THE PROJECT

System benefits delivered by the Project are predominantly documented in the IESO Report found at **Exhibit B, Tab 3, Schedule 1, Attachment 2**.

The new transmission line facilities will ensure that load in the Windsor-Essex area can be adequately supplied and avoid the potential for increased congestion in the west of Chatham area. The new line will also improve the reliability and quality of energy supply by providing an additional transmission path for system generation to be delivered to the area west of Chatham as well as preserve the Ontario-Michigan intertie capability.

Hydro One also conducted economic analysis to investigate ratepayer impacts with respect to transmission line losses. The NPV energy price sensitivity analysis confirms that the 1443 kcmil conductor is the most prudent method to meet the needs of the Project. The results of that analysis are further discussed in **Exhibit B, Tab 9, Schedule 1**.

APPORTIONING PROJECT COSTS & RISKS

The estimated capital cost of the CxL Project is shown below:

Table 1 - Line Cost

	Estimated Cost ($000's)
Materials	27,811
Labour	10,170
Equipment Rental & Contractor Costs	68,686
Sundry	235
Contingencies	20,936
Overhead [1]	17,100
Allowance for Funds Used During Construction [2]	20,651
Real Estate	69,683
Total Line Work	**$235,272**

[1] Overhead Costs allocated to the Project are for corporate services costs. These costs are charged to capital projects through a standard overhead capitalization rate. As such they are considered "Indirect Overhead".
[2] AFUDC is calculated using the Board's approved interest rate methodology (EB-2016-0160) to the Project's forecast monthly cash flow and carrying forward closing balances from the preceding month.

Table 2 - Station Cost

	Estimated Cost ($000's)
Materials	8,320
Labour	4,235
Equipment Rental & Contractor Costs	13,345
Sundry	47
Contingencies	1,500
Overhead [3]	2,258
Allowance for Funds Used During Construction [4]	2,698
Total Station Work	**$32,403**

The cost of the work provided above allows for the schedule of approval, design and construction activities provided in **Exhibit B, Tab 11, Schedule 1**.

The cost estimates provided in Table 1 and 2 of this Schedule, and similarly the Project Schedule provided at **Exhibit B, Tab 11, Schedule 1,** are based on a project definition equivalent to a Class 3[5] under the AACE International (formerly the Association for the Advancement of Cost Engineering) estimate classification system[6].

Accordingly, the Project has finalized preliminary engineering and design activities (approximately 20% complete) and subsurface verification needs to be completed through geotechnical studies. The preferred route for the Project has been established and the comment period for the draft Environmental Study Report (**"ESR"**) has elapsed with a decision from the Ministry of Environment Conservation and Parks on the ESR expected shortly. To date, a significant number of appraisals for the real estate component of the estimate have been finalized and, as further described in **Exhibit E, Tab 1, Schedule 1**

[3] Overhead Costs allocated to the project are for corporate services costs. These costs are charged to capital projects through a standard overhead capitalization rate. As such they are considered "Indirect Overheads".
[4] Capitalized Interest is calculated using the Board's approved interest rate methodology (EB-2016-0160) to the Project's forecast monthly cash flow and carrying forward closing balances from the preceding month.
[5] An estimate range of -20%/+30%
[6] As per 96r-18 Cost Estimate Classification System – EPC Power Transmission Line Infrastructure Industries recommended practice document

Hydro One has achieved voluntary early access agreements on 64% of the properties affected by the corridor and secured 28 voluntary property settlements. Given these completed development activities, the estimate is considered an AACE Class 3 estimate.

The project estimate was developed using internal cost estimates and a fixed price bid from the selected EPC contractor. The selection of the EPC contractor used a two-stage process. The first stage was to qualify EPC bidders based on experience and capacity. During the second stage, EPC contractors developed independent competitive proposals. The extended duration of this procurement process allowed the EPC contractors to obtain competitive market pricing from their suppliers and vendors and to identify and evaluate, engineering, procurement, construction, risks and opportunities during the development of their offers. Thus the cost estimate reflects current market-tested EPC pricing to deliver the Project and corresponding risk premiums that will be transferred to the EPC contractor**.**

1.0 RISKS AND CONTINGENCIES

As with most projects, there are risks associated with estimating costs. Hydro One's cost estimate includes an allowance for contingencies in recognition of these risks.

The top 3 project risks are outlined below. These risks are the major contributors to the total contingency suggested for this project:

- **Land Acquisition** – Risk of owners refusing Hydro One voluntary agreements leading to the necessity of expropriation.
- **Subsurface Conditions** – Unforeseen subsurface or environmental conditions may require additional mitigations or delay or stop construction progress
- **Approvals and Permits** – Risk of delays obtaining required approvals including Environmental Assessment and Leave to Construct.

Cost contingencies that have not been included, due to the unlikelihood or uncertainty of occurrence, include:

- Labour disputes;
- Safety or environmental incidents;

- Significant changes in costs of materials outside the control of Hydro One since the estimate preparation; and
- Any other unforeseen and potentially significant event/occurrence.

2.0 COSTS OF COMPARABLE PROJECTS - LINES

The OEB Filing Requirements for *Electricity Transmission and Distribution Applications, Chapter 4*, requires the Applicant to provide information about a cost comparable project constructed by the Applicant. Table 3 compares the line cost of the Supply to Essex County Transmission and Woodstock Area Reinforcement projects. These projects were selected as reasonable comparables because they are double-circuit 230 kV transmission lines constructed in southwestern Ontario that are less than 50km in length. Additionally, they utilize the 1443 kcmil conductor and are either completely or predominantly built on steel lattice structures.

For the purposes of the comparison, Hydro One has excluded real estate costs that are forecast to be incurred for the CxLProject and similarly excluded real estate costs from comparable projects. The real estate estimate for this Project is far more significant relative to the comparable projects. The primary reasons for excluding real estate costs from the comparison is (1) significant escalation in the real estate market since the time the comparable projects were placed in-service; and (2) the scope of the real estate acquisition program is far greater for the CxL Project as described in **Exhibit E, Tab 1, Schedule 1.**

Hydro One highlights that the real estate acquisition cost for the Supply to Essex County Transmission **("SECTR")**Project should not be used as a comparable for assessing real estate costs. Real estate costs for the SECTR Project were mitigated because the preferred route for that project ran partly along a municipal trail resulting in fewer access roads needed to be constructed which not only reduced construction costs but also reduced the number of access agreements that needed to be secured. Additionally, it is important to note that in comparison to the CxL Project, because the SECTR Project ran partly along the municipal trail, the SECTR Project did not significantly impact agricultural production, it utilized a more compact right-of-way necessitating less area for land acquisition elements and impacted fewer privately owned properties.

Hydro One provides that although real estate costs are excluded from the comparison provided in Table 3, the costs are reasonable as the real estate estimate for the CxL Project is supported by independent third party appraisals, agriculture expert analysis of commodity prices and a contingency amount that is reserved for potential expropriation.

Table 3 - Costs of Comparable Line Projects

Project	Supply to Essex County Transmission Project (Line Cost)	Woodstock Area Reinforcement (Line Cost)	Chatham x Lakeshore Transmission Line
Circuit Operating Designation(s)	C21J and C22J	M32W/M31W plus K12/K7	C87H and C88H
Voltage	230 kV	230 kV	230 kV
Structure Type	Steel Lattice	Steel Lattice (88%) and Steel Pole (12%)	Steel Lattice
Single or Double Circuit	Double	Double	Double
Conductor	1443 kcmil	1443 kcmil	1443 kcmil
Location	Southwest Ontario	Southwest Ontario	Southwest Ontario
In-Service Year	2017	2012	2025
Estimate or Actual	Actual	Actual	Estimate
Cost	$28,725K	$35,835K	$235,272K
Less			
Real estate or Bypass Cost	$6,498K	$5,806K	$99,682[7]
Adjusted Comparable Costs	$22,227K	$30,029K	$135,590K
Approximate Length	13 km	14 km	49 km
Inflated cost at 2% per year for 2025	$26,043K	$38,846K	$135,590K
Unit Cost	**$2,003K/km**	**$2,775K/km**	**$2,767K/km**

[7] This amount includes the direct real estate costs identified in Table 1 ($69,683) plus contingency carried for expropriation, interest and overhead.

When considering the cost per km ratio for all other transmission line costs in Table 3, the comparables demonstrate that the estimate for the CxL Project is consistent with the cost to complete comparable transmission line works and is reasonable.

The variances in the unadjusted per/km cost to execute these projects is driven by the timing differences in the in-service date. Therefore, Table 3 has been adjusted to show comparable projects in 2025 dollars utilizing a conservative 2% escalation factor that *does not account for current market dynamics*. Much has changed in the industry since the comparable projects were placed in service that has significantly impacted costs for linear infrastructure projects, e.g., COVID-19, global supply chain issues and escalating inflation levels. As described in Hydro One's revenue requirement application[8], external pressures on the industry have caused significant price increases across the industry. The price of essential commodities has a significant impact on project costs. Equipment purchased to construct transmission lines (e.g., power transformers, breakers and tower steel) is heavily impacted by certain raw material indices. Essential commodities such as copper, aluminum and steel have undergone price increases and supply shortages. For reference, from January 2021 to January 2022, the price of copper has increased by 27.1%, aluminum has increased by 41.6% and steel has increased by 111.6%[9].

3.0 COSTS OF COMPARABLE PROJECTS – STATIONS

For station cost comparison purposes, Table 4 below shows the cost, construction and technical comparisons of the Chatham SS works to the recently in-serviced Wawa TS in Northwestern Ontario. This project was considered a reasonable comparable because the scope of work in the comparison was limited to connecting the East West Tie (EWT) lines that was recently placed in service is very similar scope to Chatham SS. The scope of Wawa TS included installation of one new diameter, three 230kV breakers, six 230kV disconnect switches and a new relay building. The cost of the stations as described in Table 2, is $32.4M and that is divided between two stations, Chatham SS representing $28.8M and Lakeshore TS $3.6M.

[8] EB-2021-0110 – Exhibit 0, Tab 1, Schedule 2 - Filed March 31, 2022
[9] Based on the following indices for copper, aluminum, and steel, respectively: Copper (New York), Aluminum N. America, and Steel Plate N. America from January 2021 to January 2022.

Table 4 - Costs of Comparable Station Projects

Project	Wawa TS	Chatham Switching Station (Estimate)
Technical	Add one new diameter, three (3) 230kV circuit breakers, six (6) disconnect switches, new relay building	Add one new diameter, three (3) 230kV circuit breakers, six (6) disconnect switches, new relay building
Project Surroundings	Mostly rural	Mostly rural
Environmental Issues	None	None
In-Service Date	2022	2025
Total Project Cost	**$30,372k**	**$28,788k**
Less: Land Cost	$169k	N/A
Less: Line Entrance	$633k	N/A
Adjusted cost	**$29,570k**	**$28,788**
Escalation Adjustment (2%/year)	**$1,218k**	**N/A**
Total Comparable Project Costs	**$31,380k**	**$28,788k**

Based on Table 4, the project costs for Chatham SS are in-line with other recently in-serviced Hydro One facilities. Hydro One has adjusted the comparable project to reflect the fact that Wawa TS costs to connect the EWT lines included land acquisition and line entrance costs that are not comparable to Chatham SS. The reason the escalated Wawa TS costs are slightly higher than Chatham SS is mainly attributed to differences in soil conditions to construct the building.

The cost of the Lakeshore TS work is less than 1.5% of the total project cost and the scope significantly skews the comparables and thus those works have not been included in Table 4.

For works at both Chatham SS and Lakeshore TS, Hydro One obtained competitive EPC market pricing for their scope from several vendors. Bids were evaluated based on key criteria including techincical compliance, experience, capacity, cost, and other metrics. Compliant bids have been short listed and negotiations with short listed EPC's are ongoing.

CONNECTION PROJECTS REQUIRING NETWORK REINFORCEMENT

This is not a connection project. Facilities being constructed as part of this Project are limited to those discussed in the details of the work being undertaken in **Exhibit C, Tab 1, Schedule 1.**

TRANSMISSION RATE IMPACT ASSESSMENT

1.0 ECONOMIC FEASIBILITY

The Project costs will be included in the network connection pool for cost classification purposes and not allocated to any individual customer. See **Exhibit B, Tab 2, Schedule 1**, for information on the proposed work. No customer contribution is required for the Project.

Once in service, the Project will increase transfer capability in Southwestern Ontario by 400MW. This additional capacity is intended to support incremental load growth of 400MW from within southwestern Ontario and neighboring regions, resulting in approximately $24.6 million in annual incremental network revenue over a 25-year evaluation period utilizing the 2022 UTR.

Tables 1 and 2 provide the 25 year discounted cash flow analysis of the network pool work associated with the Project. Incremental operating and maintenance costs of the Project were forecast using system average OM&A estimates for the $32.4 million capital expenditures related to the sustainment activities of the station capital and 49 km of line connection facilities. The stations sustainment OM&A is $90.4k in the initial years and is forecast to increase to $180.8k in year 6 and to $226.0k in year 16 as the assets age. The line sustainment OM&A of $63.1k annually is forecast to be consistent as it mainly relates to vegetation management. These sustainment rates are 2022 OM&A factors and do not include an inflation forecast. The forecast expenditures represent the system average cost that a similar asset in year 6 or 16 would require for regular sustainment OM&A. This is so the OM&A factors align with other inputs used in the analysis, including the current OEB approved UTR rate used to calculate incremental revenue which also does not have an escalation factor assigned to it in accordance with section 6.5 and Appendix 5 of the Transmission System Code as well as isolating the rate impact of the investment on today's system to the rate payers.

The discounted cash flow analysis shown in Table 1 and 2 conclude that based on the estimated initial cost of $267.8[1] million, plus the assumed impact on the future capital cost allowance and Hydro One corporate income tax, the capacity enhancement associated with this Project will have a positive net present value of $5.8 million.

2.0 COST RESPONSIBILITY

Network Pool

The CxL Project will increase the West of Chatham interface limit by about 400 MW, from 1100 MW (with the incorporation of Lakeshore TS) to 1500 MW. The two new circuits will result in a total of six 230 kV circuits between the two main stations. This Project is not associated with any specific load increase or customer load application. As identified by the IESO[2], the purpose of the new circuits is to:

- Increase the overall transfer capability of the bulk transmission system west of Chatham in order to reliably supply the forecast load growth in the Windsor – Essex region in the near- to medium-term.
- Permit the resources and bulk facilities in the region to operate efficiently for local and system needs.
- Maintain existing interchange capability on the Ontario - Michigan interconnection between Windsor and Detroit.

Both Chatham SS and Lakeshore TS are network stations, hence the two new circuits are to be included in the Network Pool as they directly connect these stations and meet the above stated IESO-identified needs. No customer capital contribution is required, consistent with the provisions of Section 6.3.5 of the Transmission System Code.

[1] Initial costs of $267.8 million include $267.7 million of up front capital costs plus $0.1 million cost of removals.
[2] Exhibit B, Tab 3, Schedule 1, Attachment 2

3.0 LINE LOSS ASSESSMENT

Hydro One evaluated three technical methods to meet the incremental capacity requirements of the Project. These are based on different conductor sizing. The methods evaluated are: 1) 1192 kcmil conductor ("Method 1"), 2) 1443 kcmil conductor ("Method 2"), and 3) 1780 kcmil conductor ("Method 3").

Consistent with Hydro One's current Transmission Line Loss Guideline[3], a screening tool was used to determine which conductor sizing was optimal. Transmission losses were deemed to be material because loss levels altered the relative ranking of the optimal conductor size. This resulted in Hydro One conducting a detailed 50-year Net Present Value (NPV) analysis using a 5.31% discount rate[4], in order to evaluate which conductor alternative provided the best NPV result.

The results of the NPV energy price sensitivity analysis are provided below. Hydro One notes that at the time of evaluation, the cost comparison was limited to line work only and accordingly, excluded all costs that were anticipated to be common to all technical methods (real estate, station work, etc).

When comparing Method 1 and 2, Figure 1 below demonstrates that regardless of the energy price, there is positive incremental NPV when selecting Method 2 over Method 1. This economic result supports Hydro One's plan to upgrade to the 1443 kcmil ACSR conductor.

[3] EB-2021-0110 – Exhibit B, Tab 2, Schedule 1, Attachment 4, Appendix A – August 5, 2021
[4] EB-2019-0082 - Hydro One Networks' 2020-2022 Transmission Revenue Requirement, Draft Rate Order, May 28, 2020 – Exhibit 1.4 page 1.

	Method 1: 1192 kcmil ACSR	Method 2: 1443 kcmil ACSR	Difference
Capital Cost ($M)	92.0	93.0	1.0
Annual Losses (MWHR)	19,389	16,024	-3,364
Net Present Value ($M)			
Energy Price ($/MWHR)	**Method 1: 1192 kcmil ACSR**	**Method 2: 1443 kcmil ACSR**	**Difference**
$23.2	-88.8	-87.6	1.1
$75.0	-114.3	-108.8	5.6
$120.0	-136.5	-127.1	9.4

Figure 1

Conversely, when comparing Methods 2 and 3, Figure 2 below demonstrates that the incremental NPV result for Method 2 and 3 differs with the energy price used. If the energy price is $23.2[5], Method 2 is favourable. However if the energy price is valued at $120, Method 3 is favourable.

	Method 2: 1443 kcmil ACSR	Method 3: 1780 kcmil ACSR	Difference
Capital Cost ($M)	93.0	100.0	7.0
Annual Losses (MWHR)	16,024	13,178	-2,846
Net Present Value ($M)			
Energy Price ($/MWHR)	**Method 2: 1443 kcmil ACSR**	**Method 3: 1780 kcmil ACSR**	**Difference**
$23.2	-87.6	-91.8	-4.2
$75.0	-108.8	-109.2	-0.5
$120.0	-127.1	-124.3	2.8

Figure 2

As outlined in **Exhibit C, Tab 1, Schedule 1,** Hydro One's proposed CxL Project will utilize 1443 kcmil ACSR conductor. Transmission line losses remain within the scope of the IESO's stakeholder engagement on transmission line losses. Hydro One does not have any basis to deviate from the HOEP value of $23.2/MWHR which is the only current settlement mechanism to recover transmission line loss costs. Hydro One's assessment

[5] 2021 average HOEP cost from IESO.

of these technical considerations incorporated losses and was underpinned by valuing losses at HOEP in accordance with the Hydro One Transmission Line Loss Guideline.

The results of the NPV energy price sensitivity analysis provided in Figure 1 and 2 outline that for the incremental costs of the 1780 kcmil conductor to be at least economically neutral to the rate payer, the average increase to HOEP would have to be over $50/ MWHR greater than the $23.2 HOEP for the entire 50 years used in the analysis. The incremental NPV for Method 3, the 1780 kcmil, becomes positive near the end of the TSC's section 6.5 economic evaluation period (after the 24th year) only if the highest energy price point of $120 is used and maximum line losses savings are achieved for the entire period. As a result, the NPV energy price sensitivity analysis confirms that the 1443 kcmil conductor is the most prudent method based on this information as the 1443 kcmil conductor;

- Represents the lower capital cost option vs the 1780 kcmil; and
- Is economically superior to the 1192 kcmil conductor under all the assessed scenarios and does not depend upon a consistently higher commodity cost for the entire 50 years that the 1780 kcmil conductor requires to be economically superior to rate payers.

4.0 RATE IMPACT ASSESSMENT

The analysis of the network pool rate impacts has been carried out on the basis of Hydro One's transmission revenue requirement for the year 2022, and the 2022 approved Ontario Transmission Rate Schedules. The network pool revenue requirements would be affected by the Project based on the project cost allocation.

Network Pool

Based on the total Project's initial cost of $267.8 million and the associated network pool incremental cash flows, there will be a change in the network pool revenue requirement once the Project's impacts are reflected in the transmission rate base at the projected in-service date of December 15, 2025. Due to the enabled growth in the south-western Ontario area, the steady net incremental revenue will have an overall rate mitigating impact over the 25-year time horizon. The 2022 OEB approved rate of $5.13 kW/month

decreases over a 25-year time horizon to $5.08 kW/month in the 1st year due to half-year rule tax implications, $5.11 kW/month from 2nd to 21st years and $5.10 kW/month from 22nd year onwards. The detailed analysis illustrating the calculation of the incremental network revenue and rate impact is provided in Table 3 and 4 below.

Impact on Typical Residential Customer

Based on the load forecast, initial capital costs and ongoing maintenance costs, adding the costs of the required facilities to the network pool will cause a $0.03 per month decrease in a typical residential customer's rates under the Regulated Price Plan ("RPP"). The table below shows this result for a typical residential customer who is under the RPP, utilizing the maximum impact by rate pool, regardless of year.

A. Typical monthly bill	$132.53 per month
B. Transmission component of monthly bill	$14.24 per month
C. Line Connection Pool share of Transmission component	$1.45 per month
D. Transformation Connection Pool share of Transmission component	$4.65 per month
E. Network Connection Pool share of Transmission component	$8.13 per month
F. Impact on Line Connection Pool Provincial Uniform Rates	0.00%
G. Impact on Transformation Connection Pool Provincial Uniform Rates	0.00%
H. Impact on Network Connection Pool Provincial Uniform Rates	-0.39%
I. Increase in Transmission costs for typical monthly bill (E x H)	$-0.03 per month or $-0.38 per year
J. Net increase on typical residential customer bill (I / A)	-0.02%

1

Table 1 - Net Present Value, page 1

			In-Service Date	<------- Project year ended - annualized from In-Service Date ------->											
		Month Year	Dec-15 **2025**	Dec-15 **2026**	Dec-15 **2027**	Dec-15 **2028**	Dec-15 **2029**	Dec-15 **2030**	Dec-15 **2031**	Dec-15 **2032**	Dec-15 **2033**	Dec-15 **2034**	Dec-15 **2035**	Dec-15 **2036**	Dec-15 **2037**
			0	*1*	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	*11*	*12*
Revenue & Expense Forecast															
Load Forecast (MW)				400.0	400.0	400.0	400.0	400.0	400.0	400.0	400.0	400.0	400.0	400.0	400.0
Load adjustments (MW)				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
				400.0	400.0	400.0	400.0	400.0	400.0	400.0	400.0	400.0	400.0	400.0	400.0
Tariff Applied ($/kW/Month)				5.13	5.13	5.13	5.13	5.13	5.13	5.13	5.13	5.13	5.13	5.13	5.13
Incremental Revenue - $M				24.6	24.6	24.6	24.6	24.6	24.6	24.6	24.6	24.6	24.6	24.6	24.6
Removal Costs - $M			(0.1)												
On-going OM&A Costs - $M			0.0	(0.2)	(0.2)	(0.2)	(0.2)	(0.2)	(0.2)	(0.2)	(0.2)	(0.2)	(0.2)	(0.2)	(0.2)
Municipal Tax - $M				(0.9)	(0.9)	(0.9)	(0.9)	(0.9)	(0.9)	(0.9)	(0.9)	(0.9)	(0.9)	(0.9)	(0.9)
Net Revenue/(Costs) before taxes - $M			(0.1)	23.6	23.6	23.6	23.6	23.5	23.5	23.5	23.5	23.5	23.5	23.5	23.5
Income Taxes			0.0	(4.1)	(2.2)	(2.5)	(2.8)	(3.1)	(3.3)	(3.6)	(3.8)	(4.0)	(4.2)	(4.3)	(4.5)
Operating Cash Flow (after taxes) - $M			(0.1)	19.4	21.3	21.0	20.7	20.5	20.1	19.9	19.7	19.5	19.3	19.1	19.0
		Cumulative PV @ 5.31%													
PV Operating Cash Flow (after taxes) - $M	**(A)**	**272.4**	**(0.1)**	**18.9**	**19.8**	**18.5**	**17.3**	**16.2**	**15.1**	**14.2**	**13.4**	**12.6**	**11.8**	**11.1**	**10.5**
Capital Expenditures - $M															
Upfront - capital cost before overheads & AFUDC			(225.0)												
- Overheads			(19.4)												
- AFUDC			(23.3)												
Total upfront capital expenditures			**(267.7)**												
On-going capital expenditures				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PV On-going capital expenditures			0.0												
Total capital expenditures - $M			**(267.7)**												
Capital Expenditures - $M															
PV CCA Residual Tax Shield - $M			**1.1**												
PV Working Capital - $M			**(0.0)**												
PV Capital (after taxes) - $M	**(B)**	**(266.6)**	**(266.6)**												
Cumulative PV Cash Flow (after taxes) - $M	**(A) + (B)**	**5.8**	**(266.7)**	**(247.7)**	**(228.0)**	**(209.5)**	**(192.2)**	**(176.0)**	**(160.9)**	**(146.7)**	**(133.3)**	**(120.7)**	**(108.9)**	**(97.8)**	**(87.3)**

Discounted Cash Flow Summary

Economic Study Horizon - Years:		**25**
Discount Rate - %		**5.31%**
		Before Cont $M
PV Incremental Revenue		345.3
PV OM&A Costs		(3.3)
PV Municipal Tax		(12.7)
PV Income Taxes		(87.3)
PV CCA Tax Shield		31.5
PV Capital - Upfront	(267.7)	
Add: PV **Capital Contribution**	**0.0**	(267.7)
PV Capital - On-going		0.0
PV Working Capital		(0.0)
PV Surplus / (Shortfall)		**5.8**
Profitability Index*		**1.0**

Notes:
*PV of total cash flow, excluding net capital expenditure & on-going capital & proceeds on disposal / PV of net capital expenditure & on-going capital & proceeds on disposal

Other Assumptions

In-Service Date:	15-Dec-25
Payback Year:	2049
No. of years required for payback:	24

Table 2 - Net Present Value, page 2

		<-------- Project year ended - annualized from In-Service Date -------->												
Month		Dec-15	Dec-15	Dec-15	Dec-15	Dec-15	Dec-15	Dec-15	Dec-15	Dec-15	Dec-15	Dec-15	Dec-15	Dec-15
Year		2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
		13	14	15	16	17	18	19	20	21	22	23	24	25
Revenue & Expense Forecast														
Load Forecast (MW)		400.0	400.0	400.0	400.0	400.0	400.0	400.0	400.0	400.0	400.0	400.0	400.0	400.0
Load adjustments (MW)		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		400.0	400.0	400.0	400.0	400.0	400.0	400.0	400.0	400.0	400.0	400.0	400.0	400.0
Tariff Applied ($/kW/Month)		5.13	5.13	5.13	5.13	5.13	5.13	5.13	5.13	5.13	5.13	5.13	5.13	5.13
Incremental Revenue - $M		24.6	24.6	24.6	24.6	24.6	24.6	24.6	24.6	24.6	24.6	24.6	24.6	24.6
Removal Costs - $M														
On-going OM&A Costs - $M		(0.2)	(0.2)	(0.2)	(0.3)	(0.3)	(0.3)	(0.3)	(0.3)	(0.3)	(0.3)	(0.3)	(0.3)	(0.3)
Municipal Tax - $M		(0.9)	(0.9)	(0.9)	(0.9)	(0.9)	(0.9)	(0.9)	(0.9)	(0.9)	(0.9)	(0.9)	(0.9)	(0.9)
Net Revenue/(Costs) before taxes - $M		23.5	23.5	23.5	23.4	23.4	23.4	23.4	23.4	23.4	23.4	23.4	23.4	23.4
Income Taxes		(4.6)	(4.7)	(4.9)	(5.0)	(5.1)	(5.1)	(5.2)	(5.3)	(5.4)	(5.4)	(5.5)	(5.6)	(5.6)
Operating Cash Flow (after taxes) - $M		18.9	18.7	18.6	18.5	18.4	18.3	18.2	18.1	18.0	18.0	17.9	17.9	17.8
PV Operating Cash Flow (after taxes) - $M	**(A)**	**9.9**	**9.3**	**8.8**	**8.3**	**7.8**	**7.4**	**7.0**	**6.6**	**6.2**	**5.9**	**5.6**	**5.3**	**5.0**
Capital Expenditures - $M														
Upfront - capital cost before overheads & AFUDC														
- Overheads														
- AFUDC														
Total upfront capital expenditures														
On-going capital expenditures		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PV On-going capital expenditures														
Total capital expenditures - $M														
Capital Expenditures - $M														
PV CCA Residual Tax Shield - $M														
PV Working Capital - $M														
PV Capital (after taxes) - $M	**(B)**													
Cumulative PV Cash Flow (after taxes) - $M	**(A) + (B)**	**(77.4)**	**(68.1)**	**(59.3)**	**(51.0)**	**(43.2)**	**(35.8)**	**(28.8)**	**(22.2)**	**(16.0)**	**(10.1)**	**(4.5)**	**0.8**	**5.8**

1

Table 3 - Revenue Requirement and Network Pool Rate Impact, page 1

Chatham SS x Lakeshore TS line		Project YE 15-Dec 2026	15-Dec 2027	15-Dec 2028	15-Dec 2029	15-Dec 2030	15-Dec 2031	15-Dec 2032	15-Dec 2033	15-Dec 2034	15-Dec 2035	15-Dec 2036	15-Dec 2037
Calculation of Incremental Revenue Requirement ($000)		1	2	3	4	5	6	7	8	9	10	11	12
In-service date	15-Dec-25												
Capital Cost	267,677												
Less: Capital Contribution Required	-												
Net Project Capital Cost	267,677												
Average Rate Base		131,859	261,737	257,777	253,817	249,858	245,898	241,938	237,978	234,018	230,058	226,098	222,138
Incremental OM&A Costs		154	154	154	154	154	244	244	244	244	244	244	244
Grants in Lieu of Municipal tax		908	908	908	908	908	908	908	908	908	908	908	908
Depreciation		3,960	3,960	3,960	3,960	3,960	3,960	3,960	3,960	3,960	3,960	3,960	3,960
Interest and Return on Rate Base		7,903	15,686	15,449	15,212	14,974	14,737	14,500	14,262	14,025	13,788	13,551	13,313
Income Tax Provision		192	-839	-449	-94	229	522	787	1,028	1,245	1,441	1,617	1,776
REVENUE REQUIREMENT PRE-TAX		**13,116**	**19,869**	**20,022**	**20,139**	**20,224**	**20,370**	**20,399**	**20,402**	**20,382**	**20,340**	**20,279**	**20,201**
Incremental Revenue		24,617	24,617	24,617	24,617	24,617	24,617	24,617	24,617	24,617	24,617	24,617	24,617
SUFFICIENCY/(DEFICIENCY)		**11,501**	**4,748**	**4,596**	**4,478**	**4,393**	**4,247**	**4,219**	**4,216**	**4,236**	**4,277**	**4,338**	**4,417**
	Base Year												
Network Pool Revenue Requirement including sufficiency/(deficiency)	1,225,682	1,238,798	1,245,551	1,245,703	1,245,821	1,245,906	1,246,052	1,246,080	1,246,083	1,246,063	1,246,022	1,245,961	1,245,882
Network MW	238,988	243,788	243,788	243,788	243,788	243,788	243,788	243,788	243,788	243,788	243,788	243,788	243,788
Network Pool Rate ($/kw/month)	5.13	5.08	5.11	5.11	5.11	5.11	5.11	5.11	5.11	5.11	5.11	5.11	5.11
Increase/(Decrease) in Network Pool Rate ($/kw/month), relative to base year		-0.05	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02
RATE IMPACT relative to base year		**-0.97%**	**-0.39%**	**-0.39%**	**-0.39%**	**-0.39%**	**-0.39%**	**-0.39%**	**-0.39%**	**-0.39%**	**-0.39%**	**-0.39%**	**-0.39%**

Assumptions

Incremental OM&A		Determined using system average OM&A estimates for $32.4 million of station capital and 49 km of line connection facilities.
Grants in Lieu of Municipal tax	0.34%	Transmission system average
Depreciation	2.00%	Reflects 50 year average service life for towers, conductors and station equipment, excluding land
Interest and Return on Rate Base	5.99%	Includes OEB-approved ROE of 8.52%, 2.75% on ST debt, and 4.42% on LT debt. 40/4/56 equity/ST debt/ LT debt split
Income Tax Provision	26.50%	2022 federal and provincial corporate income tax rate
Capital Cost Allowance	8.00%	100% Class 47 assets except for Land

2

1 **Table 4 - Revenue Requirement and Network Pool Rate Impact, page 2**

Chatham SS x Lakeshore TS line			15-Dec	15-Dec	15-Dec	15-Dec	15-Dec	15-Dec	15-Dec	15-Dec	15-Dec	15-Dec	15-Dec	15-Dec	15-Dec
			2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050
Calculation of Incremental Revenue Requirement ($000)			13	14	15	16	17	18	19	20	21	22	23	24	25
In-service date	15-Dec-25														
Capital Cost	267,677														
Less: Capital Contribution Required	-														
Net Project Capital Cost	267,677														
Average Rate Base			218,179	214,219	210,259	206,299	202,339	198,379	194,419	190,459	186,499	182,540	178,580	174,620	170,660
Incremental OM&A Costs			244	244	244	289	289	289	289	289	289	289	289	289	289
Grants in Lieu of Municipal tax			908	908	908	908	908	908	908	908	908	908	908	908	908
Depreciation			3,960	3,960	3,960	3,960	3,960	3,960	3,960	3,960	3,960	3,960	3,960	3,960	3,960
Interest and Return on Rate Base			13,076	12,839	12,601	12,364	12,127	11,889	11,652	11,415	11,177	10,940	10,703	10,465	10,228
Income Tax Provision			1,918	2,044	2,157	2,256	2,344	2,421	2,488	2,546	2,595	2,636	2,670	2,698	2,719
REVENUE REQUIREMENT PRE-TAX			**20,105**	**19,994**	**19,870**	**19,777**	**19,628**	**19,467**	**19,297**	**19,117**	**18,929**	**18,733**	**18,530**	**18,320**	**18,104**
Incremental Revenue			24,617	24,617	24,617	24,617	24,617	24,617	24,617	24,617	24,617	24,617	24,617	24,617	24,617
SUFFICIENCY/(DEFICIENCY)			**4,512**	**4,623**	**4,748**	**4,840**	**4,990**	**5,150**	**5,321**	**5,500**	**5,688**	**5,884**	**6,088**	**6,298**	**6,513**
	Base Year														
Network Pool Revenue Requirement including sufficiency/(deficiency)	1,225,682		1,245,787	1,245,676	1,245,551	1,245,459	1,245,309	1,245,149	1,244,978	1,244,799	1,244,611	1,244,415	1,244,211	1,244,001	1,243,786
Network MW	238,988		243,788	243,788	243,788	243,788	243,788	243,788	243,788	243,788	243,788	243,788	243,788	243,788	243,788
Network Pool Rate ($/kw/month)	5.13		5.11	5.11	5.11	5.11	5.11	5.11	5.11	5.11	5.11	5.10	5.10	5.10	5.10
Increase/(Decrease) in Network Pool Rate ($/kw/month), relative to base year			-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.02	-0.03	-0.03	-0.03	-0.03
RATE IMPACT relative to base year			**-0.39%**	**-0.39%**	**-0.39%**	**-0.39%**	**-0.39%**	**-0.39%**	**-0.39%**	**-0.39%**	**-0.39%**	**-0.58%**	**-0.58%**	**-0.58%**	**-0.58%**

Table 5 - DCF Assumptions

Hydro One Networks -- Transmission Connection Economic Evaluation Model
2022 Parameters and Assumptions

Transmission rates are based on current OEB-approved uniform provincial transmission rates.

	Monthly Rate ($ per kW)
Network	**5.13**
Transformation	**2.81**
Line	**0.88**

Grants in lieu of Municipal tax (% of up-front capital expenditure, a proxy for property value):		**0.34%**	Based on Transmission system average
Income taxes:			
Basic Federal Tax Rate - % of taxable income:	2022	**15.00%**	Current rate
Ontario corporation income tax - % of taxable income:	2022	**11.50%**	Current rate
Capital Cost Allowance Rate:			
Class 47 costs	2022	**8%**	Current rate
Decision Support defined costs (1)	2022	**0%**	
Decision Support defined costs (2)	2022	**0%**	
Decision Support defined costs (3)	2022	**0%**	
After-tax Discount rate:		**5.31%**	Based on OEB-approved ROE of 8.52% on common equity and 2.75% on short-term debt, 4.42% forecast cost of long-term debt and 40/60 equity/debt split, and current enacted income tax rate of 26.5%

DEFERRAL ACCOUNT REQUESTS

There are no new deferral account requests being made as part of this Application. Though the station specific facilities of the Project will be owned and operated by Hydro One, the line component of the facilities that Hydro One is seeking approval to construct in this Application will be owned by a future Hydro One partnership that as of the time of this Application has not yet been finalized.

Consistent with the OEB-approved Affiliate Transmission Partnership regulatory Account ("ATP Account") Hydro One will record and track costs for the Project in the ATP Account because the following criteria apply:

i) Hydro One has or will receive a letter from the Independent Electricity System Operator (IESO) identifying transmission system needs, and/or an Order in Council or direction of the Minister of Energy (the Ministry) in respect of Hydro One or its OEB Transmission Licence for the development or construction of a transmission project; and

ii) All or part of the project is expected to be owned by and included in the rate base of a new partnership between Hydro One and one or more partners, as a licensed transmitter, and will not form part of Hydro One's rate base.

The CxL Project was explicitly identified in the Application to establish the ATP Account[1] and thus Hydro One's evidence is that no new evidence is required to be reviewed as part of this Application and this documentation is provided for reference purposes only.

[1] EB-2021-0169 – OEB Decision and Order – October 7, 2021

PROJECT SCHEDULE

TASK	START	FINISH
Submit Section 92		29-Apr-22
Projected Section 92 Approval	22-Apr-22	15-Dec-22
LINES		
Detailed Engineering	21-Mar-22	31-Mar-23
Procurement	01-Sep-22	31-Apr-23
Receive Material	09-Jan-23	30-Nov-23
Construction	03-Jan-23	31-Dec-25
IN SERVICE		15-Dec-25
STATIONS		
Detailed Engineering	1-Sep-22	31-Jul-23
Procurement	2-Jan-23	29-Sep-23
Receive Material	31-Mar-23	28-Feb-24
Construction	1-May-23	31-Dec-25
IN SERVICE		15-Dec-25

DESCRIPTIONS OF THE PHYSICAL DESIGN

1.0 LINE FACILITIES

Details of Proposed Line Facilities

Hydro One is proposing to build a new double circuit 230kV transmission line between Chatham SS and Lakeshore TS. The Project will increase overall transfer capability of the bulk transmission system west of Chatham in order to reliably meet near to mid term the increasing load demand in the Kingsville-Leamington area and the broader Windsor-Essex Region. The new line primarily involves using steel lattice structures.

2.0 ROUTE DESCRIPTION

The transmission line will be located in southwestern Ontario in the Municipality of Chatham-Kent and the County of Essex near the communities of Chatham, Tilbury and Comber. The line will run from the existing Chatham SS to Lakeshore Transmformer TS. The line will start from the Chatham SS located southeast of Chatham, ON and utilize a 46m wide right of way. The total line length of the Project is approximately 49km and ends at Lakeshore TS located approximately 5km southwest of Comber, ON.

2.1 ROUTE DETAILS

i. The Project route starts at Chatham SS located adjacent to Hwy 40, approximately 700m north of Hwy 401. The line exits south from the station and heads west paralleling the north side of Hwy 401 for approximately 5km.

ii. At Hwy 10, the Project heads straight west for approximately 8km deviating from Hwy 401 to the existing idle 115kV line (K6Z) northwest of Queen's Line west of Chatham.

iii. The Project will use and replace an idle 115kV line corridor south of the CP rail and will continue southwest approximately 16km to northeast of Tilbury.

iv. The Project then heads west, north of Tilbury for approximately 2km before heading southwest for approximately 8km towards Hwy 401.

v. The Project then crosses Hwy 401 just east of Essex Rd 37 (Gracey Sideroad) and heads southwest following Hwy 401 for approximately 4km to just north of Comber.

vi. Finally, the Project continues southwest for the remaining 6km entering Lakeshore TS located southwest of County Road 46 and Rochester Townline Rd.

A map showing the general route of the Project is provided as Attachment 1 of Exhibit B, Tab 2, Schedule 1.

3.0 LINE DESCRIPTION

The transmission line will have two (2) circuits comprised of one 1443.7 Kcmil Aluminum Conductor Steel Reinforced, trapezoidal shaped (ACSR/TW) “Superior” conductor per phase, one 19#8 Alumoweld shield wire, and one optical fibre ground wire (OPGW), primarily supported on self-supporting lattice towers. Further, the transmission line will have the following attributes:

i. The line will have a continuous ampacity of 1160A (summer 35C);
ii. Glass insulators will be used for both suspension and tension applications in accordance with Hydro One standards;
iii. Stockbridge-type vibration dampers to dampen the conductor in accordance with Hydro One standard, based on the final line configuration and per the manufacturer’s design;
iv. Spiral vibration dampers to dampen shield wires, which are more effective than Stockbridge-type vibration dampers on small diameter conductors;
v. Typical structure foundations will be Helical Pile type; and
vi. The line will make use of 159 self supported lattice towers with nominal spans of 350m (figure 1). There will also be 10 H-frame structures used to cross other transmission lines (figure 2).

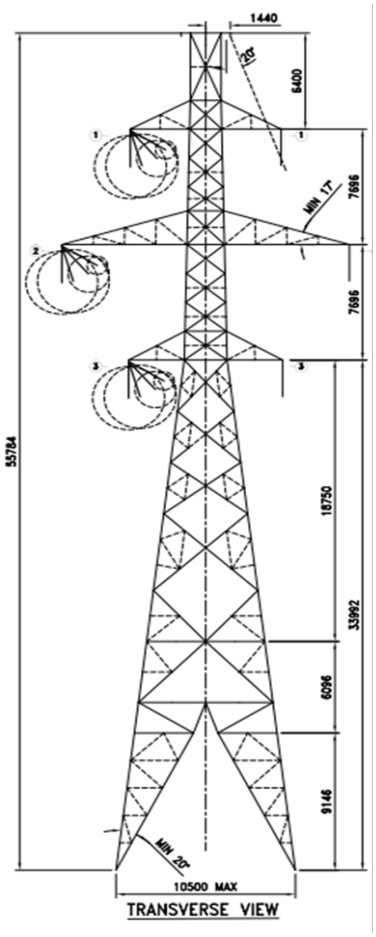

Figure 1: Suspension Tower CLS (0°-3°)

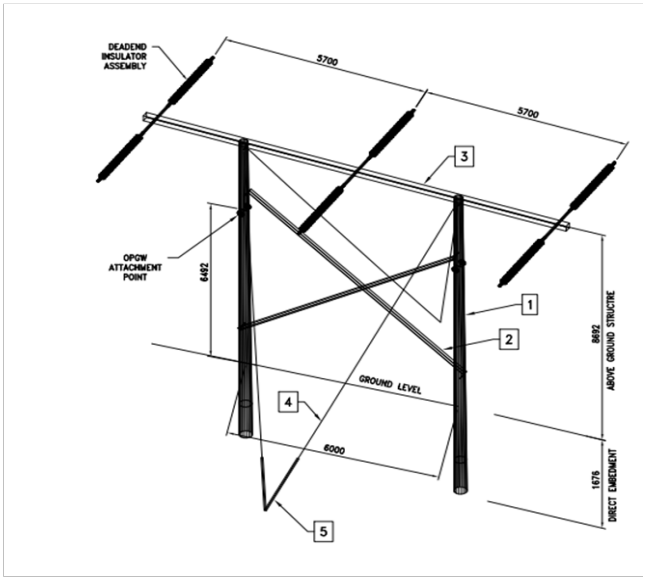

Figure 2: H-Frame Under-crossing

4.0 LINE REMOVAL

The Project will make use of an existing corridor paralleling a CP rail line southwest of Chatham for approximately 16km. The existing corridor currently has an idle 115kV (K6Z) transmission line facility. 16km of the K6Z line will be removed including 91 towers. The corridor will be widened to accommodate the Project's 230kV double circuit line.

5.0 STATION WORK

This work will require expansion of the 230kV yard at Chatham SS to the East to include a new diameter. Three new 3000A circuit breakers, six new 230kV breakers disconnect switches, six new 230kV CVTs, and two new 230kV line disconnect switches are required. All new protections are to be installed in a new relay building, to be installed on the East of existing control building.

The work in Lakeshore TS will involve installation of two new 230kV line disconnect switches, and six new 230kV CVTs.

OPERATIONAL DETAILS

The proposed facilities will be part of the Southwestern Ontario bulk transmission system and is a critical circuit section of the electrical system that allows management of flows towards and away from the Windsor-Essex area. Hydro One Protection, Control and Telecom facilities installed as part of the Project will protect the new 230 kV transmission lines by detecting faults and isolating faulted elements. The proposed facilities will be operated by Hydro One's Ontario Grid Control Centre as directed by the IESO. The terminal stations for the proposed facilities will be Lakeshore TS and Chatham SS as aforementioned in the Application.

LAND MATTERS

1.0 THE ROUTE

The Chatham x Lakeshore Transmission Project (the "**Project**"), for which Hydro One is seeking approval, involves the construction of a new 230 kilovolt ("**kV**") double circuit transmission line that is 49 kilometres in length extending from Chatham Switching Station in a southwesterly direction to Lakeshore Switching Station located in the Municipality of Lakeshore.

The new transmission corridor will be approximately 46 metres (150 feet) wide. The corridor will make use of approximately 19 kilometers of Bill 58 corridor lands (i.e., land owned by the Province with Hydro One holding a statutory easement on these lands). Approximately 16 kilometers of the Bill 58 corridor lands are occupied by an existing 115 kV transmission line (K6Z) between Tilbury TS and Kent TS, which is currently idle and will be decommissioned, removed, and replaced, with the new 230 kV double-circuit transmission line.

The new transmission corridor passes through primarily agricultural lands, a small portion of commercial lands in the community of Comber towards the southwest end of the corridor, and a small portion of rural industrial zoned lands near Chatham. The new transmission corridor is sited alongside an existing Hydro One transmission corridor or will be using the aforementioned Bill 58 corridor lands for approximately 50% of the route. Utilizing existing infrastructure and facilities is consistent with the *Ministry of Municipal Affairs and Housing Provincial Policy Statement, 2020*[1] under the *Planning Act* specifically utilizing existing utility Right-of-Ways where achievable.

2.0 DESCRIPTION OF LAND RIGHTS

The Project will require Hydro One to acquire land rights from 126 directly impacted property owners, consisting of 120 privately or municipally held properties and 6 railway crossings. The majority of properties will require Hydro One to acquire easement or fee simple corridor takings, at the property owner's election. A small number of properties will have dwellings and or major farm buildings within the new Hydro One corridor. Hydro

[1] Sections 1.6.8.4 and 1.6.8.5

One will work with directly impacted property owners and attempt to negotiate amicable voluntary agreements, which may include full property buyouts, at the property owner's election.

The relative area proportions specific to the properties affected requiring permanent land rights are as follows:

Land Ownership Type	Area (Hectares)	Proportion of Route (%)
Private Lands	174.93	98.458%
Municipal Lands	.11	.001%
Railway Lands	2.63	1.541%

3.0 DESCRIPTION OF NEW LAND RIGHTS REQUIRED

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

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

Hydro One will document all required new land rights to construct, operate and maintain the line in a number of agreements. On affected properties, the following land rights agreements are or may be required:

- Early Access Agreement;
- Option to Purchase a Limited Interest – Easement;
- Compensation and Incentive Agreement – Easement;
- Option to Purchase – Fee Simple;
- Compensation and Incentive Agreement – Fee Simple;

- Rail Crossing Agreement (provided by rail company at a later date);
- Encroachment Permit (provided by Ministry of Transportation at a later date);
- Agreement for Temporary Rights;
- Off Corridor Access;
- Crop Land Out of Production Agreement; and
- Damage Claim Agreement/Waiver.

4.0 EARLY ACCESS TO LAND

Hydro One requires early access to the corridor to perform various activities/studies associated with the Project which include specific environmental studies, engineering and design studies, and property specific land valuations/studies. In order to facilitate the required access to the properties affected by the corridor in advance of Leave to Construct approval, Hydro One has been and will continue to be entering into early access agreements with affected land owners. To date, Hydro One has achieved voluntary early access agreements on 64% of the properties affected by the corridor.

5.0 LAND ACQUISITION PROCESS

Hydro One is seeking voluntary property rights agreements with affected property owners based on its Project specific Land Acquisition Compensation Principles. The principles are founded upon Hydro One's past experience pertaining to land acquisition matters for new transmission projects, and act as a roadmap for affected property owners to understand Hydro One's acquisition process. Hydro One's central consideration is the need for affected property owners to have flexibility and choice while balancing Hydro One's desire to achieve timely acquisition of land interests and its obligation to ensure that expenditures are fair and reasonable to Ontario uniform transmission ratepayers.

Hydro One's property agents have been meeting with affected property owners since March 2021. The objective of these meetings has been to introduce Hydro One's land acquisition process. Independent site-specific property appraisals are on-going, and Hydro One is preparing voluntary property settlement offers based on these appraisals and the Company's Land Acquisition Compensation Principles. Hydro One began providing offers to affected property owners in late 2021. As of the date of this

application, 71 voluntary property settlement offers have been made, and 28 offers have been accepted. All remaining offers will be extended to affected property owners on an as-ready basis. All offers that have been extended to date are being reviewed by property owners or their legal counsel. Hydro One property agents will continue working with each property owner with the objective of reaching voluntary property rights settlements. It should be noted that during these discussions, affected property owners will be advised that they have the option to receive independent legal advice and that Hydro One is committed to reimbursing affected property owners for reasonably incurred legal fees associated with the review and execution of the necessary land rights agreements.

All voluntary property rights agreements will be in the form of an option agreement. Hydro One will exercise these options and conclude the land rights agreements once it has received the Ontario Energy Board's Leave to Construct approval of the Project. Once the option agreements are exercised, Hydro One will register easements on title for properties, or Hydro One will acquire the fee simple interest in the properties as required.

All other applicable agreements (e.g. rail crossing agreements, temporary rights agreements, etc.) will be utilized as part of the land acquisition process as required.

5.0 LAND-RELATED FORMS

Provided as Attachments 1 through 10 of this Schedule, are the land rights agreements that Hydro One intends to utilize in order to obtain the required new land rights for the Project and for related Project activities. The chart below indicates the proceeding where the form of these agreements is similar to what was previously approved and there are no substantive changes to what was previously approved.

Form of Agreement	Attachment in this Schedule	Previous OEB Docket
Early Access Agreement	1	EB-2019-0077
Agreement for Temporary Rights	2	EB-2019-0077
Damage Claim Agreement/Waiver	3	EB-2019-0077

The chart below indicates the proceeding where the form of these agreements is similar to what was previously approved; except for the changes noted below.

Form of Agreement	Attachment to this Schedule	Previous OEB Docket
Option to Purchase a Limited Interest – Easement	4	EB-2019-0077
Compensation and Incentive Agreement – Easement	5	EB-2019-0077
Option to Purchase – Fee Simple	6	EB-2019-0077
Compensation and Incentive Agreement – Fee Simple	7	EB-2019-0077

The change to both of the above Option Agreements is Early Access (Schedule B, clause 8b of the Easement Option; and Schedule B, clause 7b of the Fee Simple Option) while Hydro One's external conveyancer closes the Option Agreements. Another change to the Option to Purchase a Limited Interest – Easement is the addition of a liability clause (clause 3 of Schedule C). The change to the above Compensation and Incentive Agreements is a market value top-up (clause 1b) to recognize the dynamic real estate market in Ontario.

The below agreements have not been approved by the OEB in past proceedings.

Form of Agreement	Attachment to this Schedule	Previous OEB Docket
Off Corridor Access	8	To be approved
Crop Land Out of Production Agreement	9	To be approved
Option to Purchase a Limited Interest – Easement with a Voluntary Buyout Offer	10	To be approved

It should be noted that the rights and obligations of Hydro One and the property owner for the Off Corridor Access agreement are similar to the previously approved Agreement for Temporary Rights.

The Crop Land Out of Production Agreement will be utilized to compensate eligible property owners for the inability to produce crops on the corridor lands during pre-construction and construction; and to compensate for soil compaction impacts on crop production during post-construction.

The Option to Purchase a Limited Interest, Easement, with a Voluntary Buyout Offer is the same as the Option to Purchase a Limited Interest, Easement; except there is a limited number of instances where Hydro One will offer to purchase the entire holdings at the property owner's election.

THIS AGREEMENT made in duplicate the _____day of _____2021

Between:

(hereinafter referred to as the "Grantor")

OF THE FIRST PART

--- and ---

HYDRO ONE NETWORKS INC.

(hereinafter referred to "HONI")

OF THE SECOND PART

WHEREAS the Grantor is the owner in fee simple and in possession of certain lands legally described as XXXXXX, as in PIN XXXXX-XXXX (LT), (the "Lands").

WHEREAS HONI in connection with the Chatham x Lakeshore Line Project (the "Project") desires the right to enter onto a portion of the Lands in order to carry out all necessary real estate, environmental and engineering studies and testing including but not limited to borehole testing, archaeological studies, soil assessments, property appraisals and surveys on, over and upon the Lands associated with the "Project".

WHEREAS the Grantor is agreeable in allowing HONI to enter onto a portion of the Lands for the purpose of all necessary studies and testing on, over and upon the Lands, subject to the terms and conditions contained herein.

NOW THEREFORE THIS AGREEMENT WITNESSETH that in consideration of the sum of **XXXXX DOLLARS** ($XXXXX.00) to be paid by HONI to the Grantor, and the mutual covenants herein contained and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the parties agree as follows:

1. The Grantor hereby grants, conveys and transfers to HONI in, over, along and upon that part of the Lands highlighted in green as shown in Schedule "A" attached hereto (the "Preferred Route"), the rights and privileges as follows:

(a) for the servants, agents, contractors and workmen of HONI at all times with all necessary vehicles and equipment to pass and repass over the Preferred Route for the purpose of real estate, environment and engineering studies and testing associated with the Project, subject to payment of compensation for damages including payment for crop land out of production caused thereby;

(b) to cut and remove all trees, brush and other obstructions made necessary by the exercise of the rights granted hereunder with prior consent of the Grantor, subject to payment of compensation for damages.

2. The term of this Agreement and the permission granted herein shall be two (2) years from the date written above (the "Term"). HONI may, in its sole discretion, and upon 5 days notice to the Grantor, extend the Term for an additional length of one (1) year for an amount of $XXXXX under the same provisions and conditions contained in this agreement.

3. Upon the expiry of the Term or any extension thereof, HONI shall repair any physical damage to the Preferred Route and/or Lands resulting from HONI's use of the Preferred Route and the permission granted herein; and, shall restore the Preferred Route to its original condition so far as possible and practicable.

4. All agents, representatives, officers, directors, employees and contractors and property of HONI located at any time on the Preferred Route shall be at the sole risk of HONI and the Grantor shall not be liable for any loss or damage or injury (including loss of life) to them or it however occurring except and to the extent to

which such loss, damage or injury is caused by the negligence or willful misconduct of the Grantor.

5. HONI agrees that it shall indemnify and save harmless the Grantor from and against all claims, demands, costs, damages, expenses and liabilities (collectively the "Costs") whatsoever arising out of HONI's presence on the Preferred Route or of its activities on or in connection with the Preferred Route arising out of the permission granted herein except to the extent any of such Costs arise out of or are contributed to by the negligence or willful misconduct by the Grantor.

6. Notices to be given to either party shall be in writing, personally delivered or sent by registered mail (except during a postal disruption or threatened postal disruption), telegram, electronic facsimile to the applicable address set forth below (or to such other address as such party may from time to time designate in such manner):

TO HONI:

Hydro One Networks Inc.
Real Estate Services
1800 Main Street East
Milton, Ontario L9T 7S3

Attention: Real Estate Acquisitions
Tel:
Fax:

TO GRANTOR:

Attention:

Tel:

7. Notices personally delivered shall be deemed to have been validly and effectively given on the day of such delivery. Any notice sent by registered mail shall be deemed to have been validly and effectively given on the fifth (5^{th}) business day following the date on which it was sent. Any notice sent by telegram, electronic facsimile or shall be deemed to have been validly and effectively given on the Business Day next following the day on which it was sent. "Business Day" shall mean any day which is not a Saturday or Sunday or a statutory holiday in the Province of Ontario. This Agreement shall be governed by and construed in accordance with the laws of the Province of Ontario and the laws of Canada applicable herein. The parties hereto submit themselves to the exclusive jurisdiction of the Courts of the Province of Ontario.

8. Any amendments, modifications or supplements to this Agreement or any part thereof shall not be valid or binding unless set out in writing and executed by the parties with the same degree of formality as the execution of this Agreement.

9. The burden and benefit of this Agreement shall run with the Lands and everything herein contained shall operate to the benefit of, and be binding upon, the respective heirs; successors, permitted assigns and other legal representatives, as the case may be, or each of the Parties hereto.

IN WITNESS WHEREOF the parties hereto have caused this Agreement to be executed by their duly authorized representatives as of the day and year first above written.

OWNER NAME INSERTED HERE

Per:

_____

Print Name:

Print Title:

Per:

_____

Print Name:

Print Title:

We/I have authority to bind the Corporation

HYDRO ONE NETWORKS INC.

Per:

_____

Name:

Title:

I have authority to bind the Corporation

SCHEDULE “A”

PROPERTY SKETCH

Conceptual sketch only.

THIS AGREEMENT made in duplicate the _____ day of_____ 202X.

Between:

[INSERT SUBJECT PROPERTY LEGAL OWNER]

(hereinafter referred to as the "Grantor")

OF THE FIRST PART

--- and ---

HYDRO ONE NETWORKS INC.

(hereinafter referred to "HONI")

OF THE SECOND PART

WHEREAS the Grantor is the owner in fee simple and in possession of certain lands legally described as [INSERT SUBJECT PROPERTY LEGAL DESCRIPTION] being PIN: [INSERT SUBJCT PROPERTY PIN], collectively referred to as the "Lands".

WHEREAS HONI desires the right to enter onto and use a portion of the Lands in connection with the [INSERT PROJECT REQUIRING THE TEMPORARY SITE] (the "Project").

NOW THEREFORE THIS AGREEMENT WITNESSETH that in consideration of the fee of XXXXX Dollars ($XXXX) plus harmonized sales tax ("HST") per month (the "Monthly Rent") to be paid by HONI to the Grantor, and the mutual covenants herein contained and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the parties agree as follows:

1. The Grantor hereby grants, conveys and transfers to HONI in, over, along and upon that part of the Lands highlighted in red as shown in Schedule "A" attached hereto (the "Material Laydown Area"), the rights and privileges as follows:

(a) for the servants, agents, contractors and workmen of HONI at all times with all necessary vehicles and equipment to pass and repass over the Lands for the purpose of access to the Material Laydown Area;
(b) to store, use and maintain upon the Material Laydown Area, construction equipment and machinery as may be necessary for HONI's purposes;
(c) to place upon the Material Laydown Area, temporary trailers as may be necessary for HONI's purposes of a construction field office for the purposes of the Project; and
(d) to cut and remove all trees, brush and other obstructions made necessary by the exercise of the rights granted hereunder

2. The term of this Agreement and the permission granted herein shall be a term of XX (XX) months commencing on [INSERT DATE OF COMMENCEMENT] and ending [INSERT DATE OF EXPIRY] (the "Term"). HONI may, in its sole option, and upon 30 days' notice to the Grantor, extend the Term on a month to month basis for up to an additional XX (XX) months, under the same provisions and conditions contained in this Agreement, including the Monthly Rent.

3. Upon the expiry of the Term or any extension thereof, HONI shall remove and repair any physical damage to the Material Laydown Area and/or Lands resulting from HONI's use of the Material Laydown Area and the permission granted herein; and, shall restore the Material Laydown Area to its original condition so far as reasonably practicable.

4. The total amount of the Monthly Rent shall be paid in full by HONI at the commencement of the Term. For clarity, HONI shall pay the total amount of XXXX Dollars ($XXX) plus HST at the commencement of the Term.

5. All agents, representatives, officers, directors, employees and contractors and property of HONI located at any time on the Material Laydown Area shall be at the sole risk of HONI and the Grantor shall not be liable for any loss or damage or injury (including loss of life) to them or it however occurring except and to the extent to which such loss, damage or injury is caused by the negligence or willful misconduct of the Grantor.

6. HONI agrees that it shall indemnify and save harmless the Grantor from and against all claims, demands, costs, damages, expenses and liabilities (collectively the "Costs") whatsoever arising out of HONI's presence on the Material Storage Yard Area or of its activities on or in connection with the Material Storage Yard Area arising out of the permission granted herein except to the extent any of such Costs arise out of or are contributed to by the negligence or willful misconduct by the Grantor.

7. Notices to be given to either party shall be in writing, personally delivered or sent by registered mail (except during a postal disruption or threatened postal disruption), telegram, electronic facsimile or other similar means of prepaid recorded communication to the applicable address set forth below (or to such other address as such party may from time to time designate in such manner):

TO HONI:

Hydro One Networks Inc.
Real Estate Services
1800 Main Street East
Milton, Ontario L9T 753

Attention:
Tel:

TO GRANTOR:

XXXXXXX
XXXXXXX
XXXXXXX

Attention:
Tel:

8. Notices personally delivered shall be deemed to have been validly and effectively given on the day of such delivery. Any notice sent by registered mail shall be deemed to have been validly and effectively given on the fifth (5^{th}) business day following the date on which it was sent. Any notice sent by telegram, electronic facsimile or other similar means of prepaid recorded communication shall be deemed to have been validly and effectively given on the Business Day next following the day on which it was sent. "Business Day" shall mean any day which is not a Saturday or Sunday or a statutory holiday in the Province of Ontario. This Agreement shall be governed by and construed in accordance with the laws of the Province of Ontario and the laws of Canada applicable herein. The parties hereto submit themselves to the exclusive jurisdiction of the Courts of the Province of Ontario.

9. Any amendments, modifications or supplements to this Agreement or any part thereof shall not be valid or binding unless set out in writing and executed by the parties with the same degree of formality as the execution of this Agreement.

IN WITNESS WHEREOF the parties hereto have caused this Agreement to be executed by their duly authorized representatives as of the day and year first above written.

[INSERT SUBJECT PROPERTY LEGAL OWNER]

_____
Grantor's HST Registration Number

_____
Name:
Title:

I have authority to bind the Corporation

HYDRO ONE NETWORKS INC.

_____
Name:
Title:

I have authority to bind the Corporation

Material Laydown Area

SCHEDULE “A”

*Sketch for reference only, not to scale.

Damage Claim

THIS MEMORANDUM OF AGREEMENT dated the ____ day of _____, 20____

Between:

[INSERT NAME OF OWNER]

herein called the "**Claimant**"

- and-

Hydro One Networks Inc.

herein called the "**Hydro One**"

Witnesseth:

The Claimant agrees to accept: XXXXXXX ($XXX.XX) in full payment and satisfaction of all claims or demands for damages of whatsoever kind, nature or extent which may have been done to date by Hydro One during the construction, completion, operation or maintenance of the works of Hydro One constructed on [INSERT LEGAL DESCRIPTION] which property the Claimant is the legal owner and which damages may be approximately summarized and itemized as:

[INSERT DESCRIPTION OF DAMAGE]

Area

TOTAL $

.

Subject to Approval by Hydro One Networks Inc.

Witness

_____

Signature

_____

Signature

OPTION AGREEMENT - EASEMENT

THIS OPTION AGREEMENT made as of the _____ day of _____, 20__ (the "**Agreement Date**").

B E T W E E N:

«OWNER_1_NAME_FOR_LETTERS» & «OWNER_2_NAME_FOR_LETTERS» & «OWNER_3_NAME_FOR_LETTERS»

(hereinafter collectively called the "**Owner**")

OF THE FIRST PART

- and -

HYDRO ONE NETWORKS INC.

(hereinafter called "**Hydro One**")

OF THE SECOND PART

- and -

SPOUSE NAME

(hereinafter collectively called the "**Spouse**") This section is only filled if the spouse is not on title

OF THE THIRD PART

RECITALS:

A. The Owner is the owner of the lands and premises described in Schedule "A" (the "**Lands**");

B. The Owner has agreed to grant to Hydro One for the consideration and on the terms and conditions set out herein and attached hereto as Schedule "B" (the "**Standard Terms and Conditions**") an option to purchase a right-of-way and easement in, on, over, under, across and through (the "**Easement**") that portion of the Lands described and shown on Schedule "A-1" attached hereto (the "**Easement Lands**"), the terms of which are more particularly set out in the Transfer and Grant of Easement (the "**Easement Agreement**") attached hereto as Schedule "C".

C. Hydro One has entered into an agreement with the Owner having a date the same as this Option Agreement (the "**Compensation and Incentive Agreement**") whereby Hydro One has offered to compensate the Owner for injurious affection damages in accordance with the terms and conditions contained therein.

NOW THEREFORE, the parties hereby agree as follows:

1. GRANT OF OPTION

In consideration of the sum of **XXXXX ($XXXXX)** of lawful money of Canada paid by Hydro One to the Owner, the receipt and sufficiency of which is hereby acknowledged by the Owner, (the **"Option Payment"**) the Owner hereby grants to Hydro One an irrevocable option (the "**Option**"), to purchase the Easement upon and subject to the terms and conditions set out herein, the Standard Terms and Conditions and the Schedules hereto.

2. PURCHASE PRICE

In accordance with the terms and conditions set out herein, the Standard Terms and Conditions and the Schedules hereto, Hydro One agrees to pay to or to the order of the Owner the amount of **XXXX Dollars ($ ●)** for the Easement Lands (the "**Purchase Price**") on the Closing Date.

IN WITNESS WHEREOF the parties hereto have duly executed this Option Agreement as of the Agreement Date.

WITNESS:

Name: «Real_Estate_Representative»

Address: 1800 Main Street East
Milton, ON L9T 7S3

OWNER:

l/s

Name: **«Owner_1_name_for_letters»**

l/s

Name: «Real_Estate_Representative»

Address: 1800 Main Street East
Milton, ON L9T 7S3

Name: **«Owner_2_name_for_letters»**

l/s

Name: «Real_Estate_Representative»

Address: 1800 Main Street East
Milton, ON L9T 7S3

Name: **«Owner_3_name_for_letters»**

WITNESS:

Name: Real Estate Representative

Address: 1800 Main Street East
Milton, ON L9T 7S3

The spouse of the Owner hereby consents to this Agreement

SPOUSE OF OWNER:

l/s

Name: **Property Owner Spouse Name**

HYDRO ONE NETWORKS INC.

Per: _____

Name:

Title:

I have authority to bind the Corporation

HYDRO ONE
HST 870865821RT0001

SCHEDULE "A"
LEGAL DESCRIPTION

«LEGAL_DESCRIPTION»

SCHEDULE "A-1"
EASEMENT LANDS

Legal description to be determined by deposited Reference Plan; Easement Lands shown outlined in green.

****NOTE – Sketch shall be replaced by servient lands description once applicable Reference Plan is deposited.**

Screenshot of ortho map with tower placements here

SCHEDULE "B"
STANDARD TERMS AND CONDITIONS

1. **EXERCISE OF OPTION**

The Option shall be open for exercise at any time from the Agreement Date until the 2nd anniversary of the Agreement Date, as same may have been extended in accordance with the terms hereof, (the "**Option Term**"), by providing written notice to the Owner (the "**Exercise Notice**"), after which time, subject to Section 2, this Option Agreement shall be null and void and no longer binding upon either of the parties. If the Option is exercised within the Option Term, then this Option Agreement shall become a binding agreement for the purchase and sale of the Easement and this Option Agreement shall be completed on the terms set out herein.

2. **EXTENSION OF OPTION TERM**

At any time during the Option Term, Hydro One may, by written notice delivered to the Owner prior to the expiration of the Option Term, as same may have been extended, extend the Option Term with respect to the Lands for one (1) additional period of one (1) year, provided that upon such election, Hydro One pays to the Owner the amount of $XXXXX in consideration for the extension of the Option Term.

3. **PURCHASE PRICE**

(a) Hydro One shall pay the Purchase Price to or to the order of the Owner by way of a single payment by uncertified cheque or electronic funds transfer on the Closing Date (as hereinafter defined).

(b) The Owner acknowledges receipt of an appraisal report commissioned by Hydro One and, prepared by an external, independent appraiser with the Accredited Appraiser Canadian Institute ("AACI") designation, (the "**HONI Appraisal**").

(c) The parties acknowledge that the Purchase Price is based on a purchase price per acre as set out in Schedule "B" of the Compensation and Incentive Agreement and the actual area of the Easement Lands shall be confirmed by a survey to be prepared by Hydro One in accordance with section 9 herein, and in the event the surveyed area of the Easement Lands is greater than as provided for in Schedule "B" of the Compensation and Incentive Agreement, and Purchase Price shall be adjusted accordingly.

4. **CLOSING**

The transaction of purchase and sale contemplated by this Option Agreement shall, subject to resolution of any title issues identified by Hydro One, be completed on the date that is ninety (90) days after Hydro One delivers the Exercise Notice to the Owner or on such earlier date as Hydro One, through its solicitors, may elect (the **"Closing Date"**). If the Closing Date is a date on which the Land Registry Office (the "**Land Registry Office**") in which the Lands are registered is closed, the Closing Date shall be on the next following day when such Land Registry Office is open. In the event that there is a delay in the completion of the transaction beyond the Closing Date as established by Hydro One upon delivery of the Exercise Notice that arises through no fault of Hydro One, then Hydro One shall not be responsible for any resulting delay in the Closing Date.

5. **ACKNOWLEDGEMENT AND DIRECTION**

The Owner and, if applicable, the Spouse, acknowledges and agrees that execution of the Option Agreement shall constitute execution of the Acknowledgement and Direction attached as Schedule "D" to the Option Agreement (the "**Acknowledgement and Direction**") authorizing Hydro One and its solicitors to register the Option and subsequent Easement on title to the Lands. Hydro One covenants and agrees to hold the Acknowledgement and Direction in escrow until Hydro One has paid the Purchase Price at which time the executed Acknowledgement and Direction and Option shall be released from escrow and may be acted upon by Hydro One.

6. **REGISTRATION OF EASEMENT**

The Owner acknowledges and agrees that Hydro One will register the Easement on title to the Lands on the Closing Date pursuant hereto and the Acknowledgement and Direction. Hydro

One will provide notice to the Owner within a reasonable period of time after the Closing Date of the registration particulars of the Easement.

7. RIGHT TO TRANSFER

The Owner covenants and agrees with Hydro One that it has the right to grant the Easement without restriction and that Hydro One will quietly possess and enjoy the Easement Lands.

8. INSPECTION PERIOD AND EARLY ACCESS PERIOD

(a) The Owner agrees and consents to Hydro One, its respective officers, employees, agents, contractors, sub-contractors, surveyors, workers and permittees or any of them entering on, exiting and passing and repassing in, on, over, along, upon, across, through and under the Easement Lands and so much of the Lands as may be reasonably necessary at all reasonable times from the Agreement Date until the later of the expiration of the Option Term (as same may be extended) and the Closing Date, with or without all plant, machinery, material, supplies, vehicles, and equipment, for all purposes necessary or convenient to conduct such inspections, tests, audits, reports as Hydro One sees fit in connection with the acquisition, exercise or enjoyment of the Easement. Hydro One shall restore the Lands to their prior condition so far as reasonably possible following such inspections, tests, audits and reports.

(b) The Owner agrees and consents to Hydro One, its respective officers, employees, agents, contractors, sub-contractors, surveyors, workers and permittees or any of them entering on, exiting and passing and repassing in, on, over, along, upon, across, through and under the Easement Lands and so much of the Lands as may be as reasonably necessary at all reasonable times from date Hydro One delivers the Exercise Notice to commence construction activities on the Easement Lands. Hydro One shall restore the Lands to their prior condition so far as reasonably possible in the event that the purchase transaction contemplated by this Option Agreement is not completed as contemplated herein.

9. SURVEY/REFERENCE PLAN

Hydro One agrees to obtain and register, at its sole expense, any new Reference Plan with respect to the Easement Lands that may be required by Hydro One for completion of this Option Agreement.

10. INCOME TAX ACT

The Owner represents and warrants and covenants that the Owner is not now and on Closing will not be a non-resident of Canada within the meaning of the *Income Tax Act (Canada).*

11. HARMONIZED SALES TAX

The Owner and Hydro One acknowledge and agree that the grant of easement which is proposed under this Option Agreement constitutes a purchase and sale transaction of an interest in real property, and therefore, in conformance with subsections 221(2) and 228(4) of the *Excise Tax Act* R.S.C. 1985, c E-15, as amended ("the Act"), Hydro One shall report and pay to the Receiver General for Canada the Harmonized Sales Tax ("HST") applicable to the purchase and sale of the Easement. For the purposes of this section 11, Hydro One shall warrants that it is an HST registrant in good standing under the Act, that its HST registration number is 870865821RT0001, and that it is acquiring the Easement for use primarily in the course of its commercial activities.

12. NOTICE OF OPTION

Hydro One may, in its sole discretion and at its sole expense register this Option Agreement or notice thereof on title to the Lands.

13. NO OTHER RIGHTS

The Owner covenants and agrees with Hydro One that the Owner shall not grant, create or transfer any easement, right, covenant, restriction, privilege, permission, or other agreement in, through, under, over or in respect of the Easement Lands prior to the registration of the Easement without the prior written consent of Hydro One.

14. PRIOR ENCUMBRANCES

The Owner hereby grants Hydro One permission, should Hydro One elect in its sole discretion, to approach any encumbrancer having an interest in the Easement Lands in priority to the Easement Agreement and to obtain (in registrable form) and register all necessary consents, postponements or subordinations from all current and future encumbrancers having an interest in the Easement Lands in priority to the Easement Agreement or this Option Agreement consenting, postponing or subordinating such encumbrance and their respective rights, title and interest to the Easement and this Option Agreement or to place the Easement Agreement and this Option Agreement in first priority on title to the Easement Lands.

15. **TIME OF ESSENCE**

Time shall in all respects be of the essence hereof; provided, however, that the time for doing or completing any matter provided for herein may be extended or abridged by an agreement in writing between the parties or their respective counsel.

16. **NOTICES**

Notices to be given to either party shall be in writing, and will be sent via electronic mail ("email"), personally delivered or sent by registered mail (except during a postal disruption or threatened postal disruption), telegram, electronic facsimile or other similar means of prepaid recorded communication to the applicable address set forth below (or to such other address as such party may from time to time designate in such manner):

HYDRO ONE:

Hydro One Networks Inc.
Facilities and Real Estate
P.O. Box 4300
Markham, Ontario L2R 5Z5

185 Clegg Road
Markham, Ontario L3G 1B7

Attention:
Fax: (905) 946-6242

with a copy to its solicitors,

Barriston LLP
90 Mulcaster Street
Barrie, ON L4M 4Y5

Attention: Jim McIntosh
Fax: 705-721-4025

OWNER:

«Owner_1_name_for_letters»
«Owner_2_name_for_letters»
«Owner_3_name_for_letters»
«STREET_NUM» «STREET_NAME1»
«MUNICIPALITY», «PROVINCE»
«POSTAL_CODE»

«SAP_Phone_Number»
«SAP_email_address»

with a copy to their solicitors,

Solicitors Name
Solicitors Address 1
Solicitors Address 2
Solicitors Address 3

Notices personally delivered shall be deemed to have been validly and effectively given on the day of such delivery. Any notice sent by registered mail shall be deemed to have been validly and effectively given on the fifth (5th) Business Day following the date on which it was sent. Any notice sent by email, telegram, electronic facsimile or other similar means of prepaid recorded communication shall be deemed to have been validly and effectively given on the Business Day next following the day on which it was sent. "Business Day" shall mean any day which is not a Saturday or Sunday or a statutory holiday in the Province of Ontario.

17. **ASSIGNMENT OF OPTION BY HYDRO ONE**

Hydro One shall have the right to assign all or any part of its interest in this Option Agreement and any or all rights, privileges and benefits accruing to Hydro One hereunder without the consent of the Owner prior to or on the Closing Date. Upon and to the extent of such assignment, this Option Agreement shall thenceforth be construed as if originally made with such assignee or assignees instead of Hydro One and Hydro One shall, to the extent of such

assignment, thereupon be relieved of all liabilities and obligations whatsoever arising out of this Option Agreement.

18. **SURVIVAL OF REPRESENTATIONS**

The parties hereto agree that any representations or covenants contained in this Option Agreement shall not merge on closing, but survive and continue in full force and effect thereafter, but only as to the accuracy of the representation or covenant as at the date of completion of this Option Agreement.

19. **ENTIRE AGREEMENT**

The parties acknowledge that there are no covenants, representations, warranties, agreements or conditions, express or implied, collateral or otherwise, forming part of or in any way affecting or relating to this Option Agreement save as expressly set out in this Option Agreement and that this Option Agreement and all Schedules hereto constitute the entire agreement between the parties and may not be modified except as expressly agreed between the Owner and Hydro One in writing.

20. **SEVERABILITY**

Any provision or provisions of this Option Agreement is declared illegal or unenforceable, it or they shall be considered separate and severable from the Option Agreement and the remaining provisions shall remain in force and be binding upon the parties hereto as though the said provision or provisions had never been included.

21. **GOVERNING LAW**

This Option Agreement shall be governed by and construed in accordance with the laws of the Province of Ontario.

22. **SUCCESSORS AND ASSIGNS**

This Option Agreement shall enure to the benefit of and be binding upon the parties hereto and their respective heirs, attorneys, guardians, estate trustees, executors, trustees, successors and permitted assigns.

23. **EXECUTION AND DELIVERY**

This Option Agreement may be executed in any number of counterparts, each of which is deemed to be an original and all of which taken together constitutes one agreement. To evidence the fact that it has executed this Option Agreement, a party may send a copy of its executed counterpart to all other parties by a delivery method set out in Section 16 herein (the "Transmission") and the signature transmitted by such Transmission is deemed to be its original signature for all purposes.

24. **PLANNING ACT**

This Option Agreement is subject to the express condition that it is to be effective only if the provisions of the *Planning Act, R.S.O. 1990, c. P.13* and amendments thereto are complied with.

25. **FURTHER ASSURANCES**

The Owner covenants and agrees to execute if necessary, at no further cost or condition to Hydro One such other instruments, plans and documents as may reasonably be required by Hydro One to effect the registration of the Easement or notice of this Option Agreement on title to the Lands.

26. **SPOUSAL CONSENT**

The Owner represents that, except to the extent such consent has been obtained, spousal consent to this transaction is not necessary and on closing will not be necessary under the provisions of the *Family Law Act*, R.S.O. 1990, c. F.3.

27. **AGE**

The Owner represents that the Owner is at least 18 years of age.

SCHEDULE "C"
TRANSFER AND GRANT OF EASEMENT

«Owner_1_name_for_letters» & «Owner_2_name_for_letters» & «Owner_3_name_for_letters» (the "**Transferor**") is the owner in fee simple and in possession of the certain lands legally described as «Legal_Description» (the "**Lands**").

Hydro One Networks Inc. (the "**Transferee**") has erected, or is about to erect, certain Works (as more particularly described in paragraph 1(a) hereof) in, through, under, over, across, along and upon the Lands.

1. The Transferor hereby grants and conveys to the Transferee, its successors and assigns the rights and easement, free from all encumbrances and restrictions, the following unobstructed rights, easements, rights-of-way, covenants, agreements and privileges in perpetuity (the "**Rights**") in, through, under, over, across, along and upon that portion of the Lands of the Transferor described herein as ● and described as Part ● on Reference Plan ● hereto annexed (the "**Strip**"), for the following purposes:

(a) To enter and lay down, install, construct, erect, maintain, open, inspect, add to, enlarge, alter, repair and keep in good condition, move, remove, replace, reinstall, reconstruct, relocate, supplement and operate and maintain at all times in, through, under, over, across, along and upon the Strip an electrical transmission systems and telecommunications systems consisting in both instances of pole structures, steel towers, anchors, guys and braces and all such aboveground or underground lines, wires, cables, telecommunications cables, grounding electrodes, conductors, apparatus, works, accessories, associated material and equipment, and appurtenances pertaining to or required by either such system (all or any of which are herein individually or collectively called the ("Works")) as in the opinion of the Transferee are necessary or convenient thereto for use as required by Transferee in its undertaking from time to time, or a related business venture.

(b) To enter on and selectively cut or prune, and to clear and keep clear, and remove all trees, branches, bush and shrubs and other obstructions and materials in, over or upon the Strip, and without limitation, to cut and remove all leaning or decayed trees located on the Lands whose proximity to the Works renders them liable to fall and come in contact with the Works or which may in any way interfere with the safe, efficient or serviceable operation of the Works or this easement by the Transferee.

(c) To conduct all engineering, legal surveys, and make soil tests, soil compaction and environmental studies and audits in, under, on and over the Strip as the Transferee in its discretion considers requisite.

(d) To erect, install, construct, maintain, repair and keep in good condition, move, remove, replace and use bridges and such gates in all fences which are now or may hereafter be on the Strip as the Transferee may from time to time consider necessary.

(e) Except for fences and permitted paragraph 2(a) installations, to clear the Strip and keep it clear of all buildings, structures, erections, installations, or other obstructions of any nature (hereinafter collectively called the "**obstruction**") whether above or below ground, including removal of any materials and equipment or plants and natural growth, which in the opinion of the Transferee, endanger its Works or any person or property or which may be likely to become a hazard to any Works of the Transferee or to any persons or property or which do or may in any way interfere with the safe, efficient or serviceable operation of the Works or this easement by the Transferee.

(f) To enter on and exit by the Transferor's access routes and to pass and repass at all times in, over, along, upon and across the Strip and so much of the Lands as is reasonably required, for the Transferee, its employees, agents, contractors, subcontractors, workmen and permittees with or without all plant machinery, material, supplies, vehicles and equipment for all purposes necessary or

convenient to the exercise and enjoyment of this easement, subject to compensation afterwards for any crop or other physical damage only to the Lands or permitted structures sustained by the Transferor caused by the exercise of this right of entry and passageway.

(g) To remove, relocate and reconstruct the line on or under the Strip subject to payment by the Transferee of additional compensation for any damage caused thereby.

2. The Transferor agrees that:

(a) It will not interfere with any Works established on or in the Strip and shall not, without the Transferee's consent in writing erect or cause to be erected or permit in, under or upon the Strip any obstruction or plant or permit any trees, bush, shrubs, plants or natural growth which does or may interfere with the Rights granted herein. The Transferor agrees it shall not, without the Transferee's consent in writing, change or permit the existing configuration, grade or elevation of the Strip to be changed and the Transferor further agrees that no excavation or opening or work which may disturb or interfere with the existing surface of the Strip shall be done or made unless consent therefore in writing has been obtained from Transferee, provided however, that the Transferor shall not be required to obtain such permission in case of emergency. Notwithstanding the foregoing, in cases where in the reasonable discretion of the Transferee, there is no danger or likelihood of danger to the Works of the Transferee or to any persons or property and the safe or serviceable operation of this easement by the Transferee is not interfered with, the Transferor may at its expense and with the prior written approval of the Transferee, construct and maintain roads, lanes walks, drains, sewers water pipes, oil and gas pipelines, fences (not to exceed 2 metres in height) and service cables on or under the Strip (the "Installation") or any portion thereof; provided that prior to commencing such Installation, the transferor shall give to the Transferee thirty (30) days notice in writing thereof to enable the Transferee to have a representative present to inspect the proposed Installation during the performance of such work, and provided further that Transferor comply with all instructions given by such representative and that all such work shall be done to the reasonable satisfaction of such representative. In the event of any unauthorised interference aforesaid or contravention of this paragraph, or if any authorised interference, obstruction or Installation is not maintained in accordance with the Transferee's instructions or in the Transferee's reasonable opinion, may subsequently interfere with the Rights granted herein, the Transferee may at the Transferor's expense, forthwith remove, relocate, clear or correct the offending interference, obstruction, Installation or contravention complained of from the Strip, without being liable for any damages cause thereby.

(b) Notwithstanding any rule of law or equity, the Works installed by the Transferee shall at all times remain the property of the Transferee, notwithstanding that such Works are or may become annexed or affixed to the Strip and shall at anytime and from time to time be removable in whole or in part by the Transferee.

(c) No other easement or permission will be transferred or granted and no encumbrances will be created over or in respect to the Strip, prior to the registration of a Transfer of this grant of Rights.

(d) The Transferor will execute such further assurances of the Rights in respect of this grant of easement as may be requisite.

(e) The Rights hereby granted:

(i) shall be of the same force and effect to all intents and purposes as a covenant running with the Strip.

(ii) is declared hereby to be appurtenant to and for the benefit of the Works and undertaking of the Transferee described in paragraph 1(a).

3. Provided that the lands are used for agricultural purposes, the Transferee hereby releases and forever discharges the Transferor from and against any and all action, causes of action, costs,

claims, demands, expenses and liability for upon or by reason of any damage to the Works (collectively the "Claims") which may arise from, be sustained, suffered or incurred in consequence of the Transferor using the lands for agricultural purposes save and except for any Claims resulting from or arising out of the Transferor's negligence or willful misconduct.

4. The Transferor agrees that the Transferee may, at the Transferee's sole discretion, obtain at the Transferee's sole cost and expense all necessary postponements and subordinations (in registrable form) from all current and future prior encumbrancers, postponing their respective rights, title and interests to the Transfer of Easement herein so as to place such Rights and easement in first priority on title to the Lands.

5. There are no representations, covenants, agreements, warranties and conditions in any way relating to the subject matter of this grant of Rights whether expressed or implied collateral or otherwise except those set forth herein.

6. No waiver of a breach or any of the covenants of this grant of Rights shall be construed to be a waiver of any succeeding breach of the same or any other covenant.

7. The burden and benefit of this transfer of Rights shall run with the Strip and the Works and undertaking of the Transferee and shall extend to, be binding upon and enure to the benefit of the parties hereto and their respective heirs, executors, administrators, successors and assigns.

SCHEDULE "D"
ACKNOWLEDGEMENT AND DIRECTION

TO:	Hydro One Networks Inc. ("**Hydro One**") and its solicitors, Barriston LLP
AND TO:	Any and all designees of the above
RE:	Option Agreement dated _____, 20____, (the "Option Agreement) and the Transfer and Grant of Easement in substantially the form attached **[as Schedule "C" to the Option Agreement or hereto]** (the "Easement Agreement")

This will confirm that:

- Hydro One and the Owner have reviewed the information set out in the Option Agreement and the draft document(s) attached to the Option Agreement, and that this information is accurate;
- You are authorized and directed to sign and register electronically on behalf of the undersigned the Option Agreement and the Easement Agreement as well as any other document(s) required to complete the transaction described above;
- You are authorized to amend the Option Agreement and the Easement Agreement as may be required to effect registration of such document including the insertion of a registerable legal description to describe the lands subject to the easement being granted pursuant to the Easement Agreement in the event one is not available at the time of execution of the Option Agreement; provided such amendments are non-material to the terms of the Option Agreement and the Easement Agreement and do not expand the description of the Easement Lands as described and/or illustrated in the Option Agreement in any material manner;
- The effect of the electronic documents described in this Acknowledgement and Direction has been fully explained to the Owner and Hydro One, and the Owner and Hydro One understand that each are parties to and bound by the terms and provisions of these electronic document(s) to the same extent as if each had signed these documents;
- You are directed to insert the names set forth in the signatory section of the Option Agreement as persons authorized (or other authorized signing officers of Hydro One) to act on behalf of Hydro One and the Owner, as applicable;
- The Owner acknowledges that Barriston LLP has not met with them nor been engaged by them, is not entering into a solicitor-client relationship with them and is not representing them solely or jointly with Hydro One for the purposes of the preparation, negotiation, completion or registration of the Option Agreement or the Easement Agreement. Barriston LLP will act in a limited capacity as agent for the undersigned for the purposes of registering the Option Agreement and the Easement Agreement; and
- Hydro One and the Owner are in fact the parties named in the electronic documents described in this Acknowledgement and Direction and each has not misrepresented the identity of same to you.

Dated _____, 20__.

WITNESS:	**OWNER:**
	l/s
Name: «Real_Estate_Representative»	Name: **«Owner_1_name_for_letters»**
Address: 1800 Main Street East Milton, ON L9T 7S3	
	l/s
Name: «Real_Estate_Representative»	Name: **«Owner_2_name_for_letters»**
Address: 1800 Main Street East Milton, ON L9T 7S3	
	l/s
Name: «Real_Estate_Representative»	Name: **«Owner_3_name_for_letters»**
Address: 1800 Main Street East Milton, ON L9T 7S3	

WITNESS:

The spouse of the Owner hereby consents to this Acknowledgement and Direction

SPOUSE OF OWNER:

l/s

Name: Real Estate Representative
Address: 1800 Main Street East
Milton, ON L9T 7S3

Name: **Property Owner Spouse Name**

«OWNER_1_NAME_FOR_LETTERS»

Per: _____

Name:

Title:

We/I have authority to bind the Corporation

COMPENSATION AND INCENTIVE AGREEMENT - EASEMENT

THIS COMPENSATION AND INCENTIVE AGREEMENT made as of the _____day of _____ , 20___ (the "**Agreement Date**").

B E T W E E N:

«OWNER_1_NAME_FOR_LETTERS» & «OWNER_2_NAME_FOR_LETTERS» & «OWNER_3_NAME_FOR_LETTERS»

(hereinafter collectively called the "**Owner**")

OF THE FIRST PART

- and -

HYDRO ONE NETWORKS INC.

(hereinafter called "**Hydro One**")

OF THE SECOND PART

- and -

SPOUSE NAME

(hereinafter collectively called the "**Spouse**") This section is only filled out if the spouse is not on title

OF THE THIRD PART

RECITALS:

A. The Owner is the owner of the lands and premises described in Schedule "A" attached hereto (the "**Lands**").

B. Hydro One desires to purchase a right of way and easement, in, on, over, under, across and through that portion of the Lands, as more particularly described in an Option Agreement between the parties hereto and having a date the same as this Compensation and Incentive Agreement (the "**Option Agreement**") (the "**Easement Lands**"), upon the terms and conditions set out in the Option Agreement (the "**Easement**").

C. Hydro One has offered to pay the Option Payment to the Owner upon execution of the Option Agreement and upon closing to purchase the Easement from the Owner for the Purchase Price.

D. Hydro One has offered, on the terms and conditions set out herein, to compensate the Owner for injurious affection damages, if applicable (the "**IA Compensation**") in respect of that portion of the Lands which are not part of the Easement Lands. Such injurious affection damages are calculated as shown on the calculation sheet attached hereto as Schedule "B" (the "**Calculation Sheet**").

E. To achieve a timely resolution of its land acquisition arrangements, Hydro One has also offered to pay certain incentives to the Owner on the terms and conditions set out in this Compensation and Incentive Agreement and as shown on the Calculation Sheet.

F. Any capitalized terms not defined in this Compensation and Incentive Agreement shall have the meaning ascribed to them in the Option Agreement.

NOW THEREFORE, the parties agree as follows:

1. VALUATION

(a) Hydro One has retained an external, independent AACI designated appraiser to determine the fair market value of the Easement Lands and any applicable amount of IA Compensation, if any, as of October 1st, 2021 and to prepare a report in respect thereof (the "**HONI Appraisal**"). The Owner acknowledges receiving a copy of the HONI Appraisal, and agrees to accept the amounts set out in the HONI Appraisal as a fair evaluation of the market value of the Owner's fee simple interest in the Easement Lands as of the date of the HONI Appraisal.

(b) In recognition of a dynamic real estate market and that the effective date of HONI's appraised values in the HONI Appraisal are only relevant for a limited period of time, Hydro One shall provide a market value top-up where the passage of time between the effective date of the HONI Appraisal and the date Hydro One receives project approval pursuant to section 92 of the *Ontario Energy Board Act, 1998*, S.O. 1998, c. 15, Sched. B. (the "Section 92 Approval") warrants such top-up (the "Top-Up").

Provided that the Owner and Hydro One have entered into an Option Agreement prior to Hydro One receiving the Section 92 Approval, the Owner shall be entitled to the Top-Up, if applicable. The amount of the Top-Up is the difference between the HONI Appraisal, and the market value as of the date of the Section 92 Approval (if such market value is greater than the amount in the HONI Appraisal), adjusted for time only (change in market conditions) and based on an independent land rate study considering this singular factor. The land rate study will be prepared by an independent third party appraiser with an Accredited Appraiser Canadian Institute designation from the Appraisal Institute of Canada.

The Top-Up amounts will be paid by Hydro One to the Owner by adding the applicable amounts to the Purchase Price, Premium Above Fair Market Value, and the IA Compensation, if applicable.

(c) The actual area of the Easement Lands will be confirmed by a survey to be prepared by Hydro One and in the event the surveyed area of the Easement Lands is greater than as provided for in the Calculation Sheet, the payments set out in section 2 herein will be adjusted accordingly.

2. INCENTIVE PAYMENTS

(a) Upon execution of the Option Agreement and this Compensation and Incentive Agreement by all parties thereto, Hydro One shall pay to or to the order of the Owner the Option Payment in the amount of **XXXXX ($XXXXX)** as set out on the Calculation Sheet.

(b) On the Closing Date, Hydro One shall make a further incentive payment to or to the order of the Owner in the amount of **XXXXX ($XX)**, (the "**Acceptance of the Hydro One Offer**") as set out on the Calculation Sheet.

(c) On the Closing Date, Hydro One shall make a further incentive payment to or to the order of the Owner in the amount of **XXXXX ($XX), (the "Premium Above Fair Market Value")** such amount being equal to XX% of the appraised fair market value of the Owner's fee simple interest in the Easement Lands as set out on the Calculation Sheet.

3. WAIVER

The Owner waives the right to be reimbursed by Hydro One for the reasonable costs the Owner incurs for a third party independent appraisal report and/or legal review of the HONI Appraisal, the Option Agreement and this Compensation and Incentive Agreement, up to the amount of Seven Thousand Five Hundred Dollars ($7,500.00) and hereby accepts the Acceptance of the Hydro One Offer as defined in 2(b) above.

4. IA COMPENSATION

Hydro One agrees to pay to or to the order of the Owner on the Closing Date the IA Compensation, if applicable, in the amount of **XXXXX ($XX)** as set out on the Calculation Sheet.

5. CONVEYANCING

Hydro One agrees to reimburse the Owner for reasonably incurred legal fees, if any, associated with the review of applicable conveyancing documents.

6. TENANTS

The Owner agrees to indemnify and save harmless Hydro One from all actions, suits, costs, losses, charges, demands, claims and expenses for and in respect of any claims any person having a possessory interest in the Easement Lands.

7. NOTICES

Notices to be given to either party shall be in writing, and will be sent via electronic mail ("email"), personally delivered or sent by registered mail (except during a postal disruption or threatened postal disruption), telegram, electronic facsimile or other similar means of prepaid recorded communication to the applicable address set forth below (or to such other address as such party may from time to time designate in such manner):

HYDRO ONE:

Hydro One Networks Inc.
Facilities and Real Estate
P.O. Box 4300
Markham, Ontario L2R 5Z5

185 Clegg Road
Markham, Ontario L3G 1B7

Attention:
Fax: (905) 946-6242

with a copy to its solicitors,

Barriston LLP
90 Mulcaster Street
Barrie, ON L4M 4Y5

Attention: Jim McIntosh
Fax: 705-721-4025

OWNER:

«Owner_1_name_for_letters» &
«Owner_2_name_for_letters» &
«Owner_3_name_for_letters»
«STREET_NUM» «STREET_NAME1»
«MUNICIPALITY», «PROVINCE»
«POSTAL_CODE»

«SAP_Phone_Number»
«SAP_email_address»

with a copy to their solicitors,

Solicitors Name
Solicitors Address 1
Solicitors Address 2
Solicitors Address 3

Notices personally delivered shall be deemed to have been validly and effectively given on the day of such delivery. Any notice sent by registered mail shall be deemed to have been validly and effectively given on the fifth (5^{th}) business day following the date on which it was sent. Any notice sent by telegram, email, electronic facsimile or other similar means of prepaid recorded communication shall be deemed to have been validly and effectively given on the Business Day next following the day on which it was sent. "Business Day" shall mean any day which is not a Saturday or Sunday or a statutory holiday in the Province of Ontario.

8. ASSIGNMENT OF AGREEMENT BY OWNER

The Owner shall not assign all or any part of its interest in this Compensation and Incentive Agreement or any of the rights, privileges and benefits accruing to the Owner hereunder without the consent of the Hydro One, which consent may not be unreasonably withheld or delayed. Upon and to the extent of such assignment, this Compensation and Incentive Agreement shall thenceforth be construed as if originally made with such assignee or assignees instead of the

Owner and the Owner shall, to the extent of such assignment, thereupon be relieved of all liabilities and obligations whatsoever arising out of this Compensation and Incentive Agreement.

The Owner and, if applicable, the Spouse, each covenant and agree that if they transfer, assign, charge, lease or otherwise dispose of all or any part of their interest in the Lands (collectively, a "**Transfer**") they will obtain an agreement from such Transferee assuming and agreeing to be bound by all of the terms of this Compensation and Incentive Agreement as if the Transferee had been an original signatory to this Compensation and Incentive Agreement.

9. NOTICE OF AGREEMENT

Hydro One may, in its sole discretion and at its sole expense register this Compensation and Incentive Agreement or notice thereof on title to the Lands.

10. NO MERGER

The parties hereto agree that any representations or covenants contained in this Compensation and Incentive Agreement shall not merge on closing, but survive and continue in full force and effect thereafter, but only as to the accuracy of the representation or covenant as at the date of completion of this Compensation and Incentive Agreement.

11. ENTIRE AGREEMENT

The parties hereto acknowledge that there are no covenants, representations, warranties, agreements or conditions, express or implied, collateral or otherwise, forming part of or in any way affecting or relating to this Compensation and Incentive Agreement save as expressly set out in this Compensation and Incentive Agreement and that this Compensation and Incentive Agreement and all Schedules hereto constitute the entire agreement between the parties and may not be modified except as expressly agreed between the parties in writing.

12. SEVERABILITY

Any provision or provisions of this Compensation and Incentive Agreement is declared illegal or unenforceable, it or they shall be considered separate and severable from this Compensation and Incentive Agreement and the remaining provisions shall remain in force and be binding upon the parties hereto as though the said provision or provisions had never been included.

13. GOVERNING LAW

This Compensation and Incentive Agreement shall be governed by and construed in accordance with the laws of the Province of Ontario.

14. SPOUSAL CONSENT

The Owner represents that, except to the extent such consent has been obtained, spousal consent to this transaction is not necessary under the provision of the *Family Law Act*, R.S.O. 1990, c. F.3.

15. SUCCESSORS AND ASSIGNS

This Compensation and Incentive Agreement shall enure to the benefit of and be binding upon the parties hereto and their respective heirs, attorneys, guardians, estate trustees, executors, trustees, successors and permitted assigns.

16. EXECUTION AND DELIVERY

This Compensation and Incentive Agreement may be executed in any number of counterparts, each of which is deemed to be an original and all of which taken together constitutes one agreement. To evidence the fact that it has executed this Compensation and Incentive Agreement, a party may send a copy of its executed counterpart to all other parties by a delivery method set out in Section 7 herein (the "**Transmission**") and the signature transmitted by such Transmission is deemed to be its original signature for all purposes.

17. FURTHER ASSURANCES

The parties hereto agree to do, make and execute, if necessary, at no further cost or condition to the other except payment of reasonable out-of-pocket costs, such other instruments, plans, documents, acts, matters and things and take such further action as may reasonably be required by the other party in order to effectively carry out the true intent of this Compensation and Incentive Agreement.

18. AGE

The Owner represents that the Owner is at least 18 years of age.

IN WITNESS WHEREOF the parties hereto have duly executed this Compensation and Incentive Agreement as of the Agreement Date.

WITNESS:

Name: «Real_Estate_Representative»

Address: 1800 Main Street East
Milton, ON L9T 7S3

OWNER:

l/s

Name: **«Owner_1_name_for_letters»**

l/s

Name: «Real_Estate_Representative»

Address: 1800 Main Street East
Milton, ON L9T 7S3

Name: **«Owner_2_name_for_letters»**

l/s

Name: «Real_Estate_Representative»

Address: 1800 Main Street East
Milton, ON L9T 7S3

Name: **«Owner_3_name_for_letters»**

WITNESS:

Name: «Real_Estate_Representative»

Address: 1800 Main Street East
Milton, ON L9T 7S3

The spouse of the Owner hereby consents to this Compensation and Incentive Agreement

SPOUSE OF OWNER:

l/s

Name: **Property Owner Spouse Name**

HYDRO ONE NETWORKS INC.

Per: _____

Name:

Title:

I have authority to bind the Corporation

HYDRO ONE
HST 870865821RT0001

SCHEDULE "A"

LANDS

«LEGAL_DESCRIPTION»

SCHEDULE “B”

CALCULATION SHEET

OPTION AGREEMENT - FEE SIMPLE CORRIDOR

THIS OPTION AGREEMENT made as of the _____ day of _____, 202__ (the "**Agreement Date**").

B E T W E E N:

«OWNER_1_NAME_FOR_LETTERS» & «OWNER_2_NAME_FOR_LETTERS» & «OWNER_3_NAME_FOR_LETTERS»

(hereinafter collectively called the "**Owner**")

OF THE FIRST PART

- and -

HYDRO ONE NETWORKS INC.

(hereinafter called "**Hydro One**")

OF THE SECOND PART

- and -

SPOUSE NAME

(hereinafter collectively called the "**Spouse**") This section is only filled if the spouse is not on title

OF THE THIRD PART

RECITALS:

A. The Owner is the owner of the lands and premises described in Schedule "A" attached hereto (the "**Lands**");

B. The Owner has agreed to grant to Hydro One for the consideration and on the terms and conditions set out herein and attached hereto as Schedule "B" (the "**Standard Terms and Conditions**") an option to purchase that portion of the Lands described on Schedule "A-1" attached hereto (the "**Corridor Lands**") on the terms and conditions set out herein and attached hereto as Schedule "C" (the **"Agreement of Purchase and Sale"**).

C. Hydro One has entered into an agreement with the Owner having a date the same as this Option Agreement (the "Compensation and Incentive Agreement") whereby Hydro One has offered to compensate the Owner for injurious affection damages in accordance with the terms and conditions contained therein.

NOW THEREFORE, the parties hereby agree as follows:

1. GRANT OF OPTION

In consideration of the sum of **XXX ($XXX)** of lawful money of Canada paid by Hydro One to the Owner, the receipt and sufficiency of which is hereby acknowledged by the Owner, (the **"Option Payment"**) the Owner hereby grants to Hydro One the an irrevocable option (the "**Option**"), to purchase the Owner's fee simple interest in the Corridor Lands upon and subject to the terms and conditions set out herein, the Standard Terms and Conditions and the Schedules hereto.

2. PURCHASE PRICE

In accordance with the terms and conditions set out herein, the Standard Terms and Conditions and the Schedules hereto, Hydro One agrees to pay to or to the order of the Owner the amount of **XXXX Dollars ($ ●)** for the Corridor Lands (the "**Purchase Price**") on the Closing Date.

IN WITNESS WHEREOF the parties hereto have duly executed this Option Agreement as of the Agreement Date.

WITNESS:

Name: «Real_Estate_Representative»

Address: 1800 Main Street East
Milton, ON L9T 7S3

OWNER:

l/s

Name: **«Owner_1_name_for_letters»**

l/s

Name: «Real_Estate_Representative»

Address: 1800 Main Street East
Milton, ON L9T 7S3

Name: **«Owner_2_name_for_letters»**

l/s

Name: «Real_Estate_Representative»

Address: 1800 Main Street East
Milton, ON L9T 7S3

Name: **«Owner_3_name_for_letters»**

WITNESS:

Name: Real Estate Representative

Address: 1800 Main Street East
Milton, ON L9T 7S3

The spouse of the Owner hereby consents to this Agreement

SPOUSE OF OWNER:

l/s

Name: **Property Owner Spouse Name**

HYDRO ONE NETWORKS INC.

Per: _____

Name:

Title:

I have authority to bind the Corporation

HYDRO ONE
HST 870865821RT0001

SCHEDULE "A"
LEGAL DESCRIPTION

«LEGAL_DESCRIPTION»

SCHEDULE "A-1"
CORRIDOR LANDS

Legal description to be determined by deposited Reference Plan; Corridor Lands shown outlined in green.

****NOTE – Sketch shall be replaced by Corridor Lands description once applicable Reference Plan is deposited.**

Screenshot of ortho map with tower placements here

SCHEDULE "B"
STANDARD TERMS AND CONDITIONS

1. EXERCISE OF OPTION

The Option shall be open for exercise at any time from the Agreement Date until the 2nd anniversary of the Agreement Date, as same may have been extended in accordance with the terms hereof, (the "**Option Term**"), by providing written notice to the Owner (the "**Exercise Notice**"), after which time, subject to Section 2, this Option Agreement shall be null and void and no longer binding upon either of the parties. If the Option is exercised within the Option Term, then this Option Agreement shall become a binding agreement for the purchase and sale of the Corridor Lands and this Option Agreement shall be completed on the terms set out herein.

2. EXTENSION OF OPTION TERM

At any time during the Option Term, Hydro One may, by written notice delivered to the Owner prior to the expiration of the Option Term, as same may have been extended, extend the Option Term with respect to the Lands for one (1) additional period of one (1) year, provided that upon such election, Hydro One pays to the Owner the amount of $XXXXX in consideration for the extension of the Option Term.

3. PURCHASE PRICE

Hydro One shall pay the Purchase Price to or to the order of the Owner by way of a single payment by uncertified cheque or electronic funds transfer on the Closing Date (as hereinafter defined).

The Owner acknowledges receipt of an appraisal report commissioned by Hydro One and, prepared by an external, independent appraiser with the Accredited Appraiser Canadian Institute ("AACI") designation, (the "**HONI Appraisal**").

4. CLOSING

The transaction of purchase and sale contemplated by this Option Agreement and the Agreement of Purchase and Sale shall, subject to resolution of any title issues identified pursuant to Article 5 of the Agreement of Purchase and Sale, be completed on the date that is ninety (90) days after Hydro One delivers the Exercise Notice to the Owner or on such earlier date as Hydro One, through its solicitors, may elect (the **"Closing Date"**). If the Closing Date is a date on which the Land Registry Office (the "**Land Registry Office**") in which the Lands are registered is closed, the Closing Date shall be on the next following day when such Land Registry Office is open. In the event that there is a delay in the completion of the transaction beyond the Closing Date as established by Hydro One upon delivery of the Exercise Notice that arises through no fault of Hydro One, then Hydro One shall not be responsible for any resulting delay in the Closing Date.

5. AGREEMENT OF PURCHASE AND SALE

The Owner and, if applicable, the Spouse, acknowledge and agree that execution of this Option Agreement shall constitute execution of the Agreement of Purchase and Sale attached as Schedule "C" to this Option Agreement.

6. RIGHT TO TRANSFER AND TITLE

The Owner covenants and agrees with Hydro One that it has good and marketable title to the Corridor Lands and has the full and exclusive power to convey the fee simple interest in the Corridor Lands to Hydro One free and clear of any financial encumbrances, and that Hydro One will quietly possess and enjoy the Corridor Lands.

7. INSPECTION PERIOD AND EARLY ACCESS PERIOD

(a) The Owner agrees and consents to Hydro One, its respective officers, employees, agents, contractors, sub-contractors, surveyors, workers and permittees or any of them entering on, exiting and passing and repassing in, on, over, along, upon, across, through and under the Corridor Lands and so much of the Lands as may be reasonably necessary at all reasonable times from the Agreement Date until the later of the expiration of the Option Term (as same may be extended) and the Closing Date, with or without all plant,

machinery, material, supplies, vehicles, and equipment, for all purposes necessary or convenient to conduct such inspections, tests, audits, reports as Hydro One sees fit in connection with the acquisition, exercise or enjoyment of the Corridor Lands. Hydro One shall restore the Lands to their prior condition so far as reasonably possible following such inspections, tests, audits and reports.

(b) The Owner agrees and consents to Hydro One, its respective officers, employees, agents, contractors, sub-contractors, surveyors, workers and permittees or any of them entering on, exiting and passing and repassing in, on, over, along, upon, across, through and under the Corridor Lands and so much of the Lands as may be reasonably necessary at all reasonable times from date Hydro One delivers the Exercise Notice to commence construction activities on the Corridor Lands. Hydro One shall restore the Lands to their prior condition so far as reasonably possible in the event that the purchase transaction contemplated by this Option Agreement is not completed as contemplated herein.

8. SURVEY/REFERENCE PLAN

Hydro One agrees to obtain and register, at its sole expense, any new Reference Plan with respect to the Corridor Lands that may be required by Hydro One for completion of this Option Agreement.

9. INCOME TAX ACT

The Owner represents and warrants and covenants that the Owner is not now and on Closing will not be a non-resident of Canada within the meaning of the *Income Tax Act (Canada).*

10. HARMONIZED SALES TAX

The Owner and Hydro One acknowledge and agree that the transfer of the fee simple of the Corridor Lands which is proposed under this Option Agreement constitutes a purchase and sale transaction of an interest in real property, and therefore, in conformance with subsections 221(2) and 228(4) of the *Excise Tax Act* R.S.C. 1985, c E-15, as amended ("the Act"), Hydro One shall report and pay to the Receiver General for Canada the Harmonized Sales Tax ("HST") applicable to the purchase and sale of the Corridor Lands. For the purposes of this section 11, Hydro One shall warrants that it is an HST registrant in good standing under the Act, that its HST registration number is 870865821RT0001, and that it is acquiring the Corridor Lands for use primarily in the course of its commercial activities.

11. NOTICE OF OPTION

Hydro One may, in its sole discretion and at its sole expense register this Option Agreement or notice thereof on title to the Lands.

12. NO OTHER RIGHTS

The Owner covenants and agrees with Hydro One that the Owner shall not grant, create or transfer any easement, right, covenant, restriction, privilege, permission, or other agreement in, through, under, over or in respect of the Corridor Lands prior to the registration of the Closing of the transaction contemplated herein without the prior written consent of Hydro One.

13. PRIOR ENCUMBRANCES

The Owner hereby grants Hydro One permission, should Hydro One elect in its sole discretion, to approach any encumbrancer having an interest in the Corridor Lands in priority to the Option Agreement and to obtain (in registrable form) and register all necessary consents, postponements or subordinations from all current and future encumbrancers having an interest in the Corridor Lands in priority this Option Agreement consenting, postponing or subordinating such encumbrance and their respective rights, title and interest to the Corridor Lands and this Option Agreement or to place the this Option Agreement in first priority on title to the Corridor Lands.

14. TIME OF ESSENCE

Time shall in all respects be of the essence hereof; provided, however, that the time for doing or completing any matter provided for herein may be extended or abridged by an agreement in writing between the parties or their respective counsel.

15. NOTICES

Notices to be given to either party shall be in writing, and will be sent via electronic mail ("email"), personally delivered or sent by registered mail (except during a postal disruption or threatened postal disruption), telegram, electronic facsimile or other similar means of prepaid recorded communication to the applicable address set forth below (or to such other address as such party may from time to time designate in such manner):

HYDRO ONE:

Hydro One Networks Inc.
Facilities and Real Estate
P.O. Box 4300
Markham, Ontario
L2R 5Z5

185 Clegg Road
Markham, Ontario
L3G 1B7

Attention:
Fax: (905) 946-6242

with a copy to its solicitors,

Barriston LLP
90 Mulcaster Street
Barrie, ON L4M 4Y5

Attention: Jim McIntosh
Fax: (705)-721-4025

OWNER:

«Owner_1_name_for_letters»
«Owner_2_name_for_letters»
«Owner_3_name_for_letters»
«STREET_NUM» «STREET_NAME1»
«MUNICIPALITY», «PROVINCE»
«POSTAL_CODE»

«SAP_Phone_Number»
«SAP_email_address»

with a copy to their solicitors,

Solicitors Name
Solicitors Address 1
Solicitors Address 2
Solicitors Address 3

Notices personally delivered shall be deemed to have been validly and effectively given on the day of such delivery. Any notice sent by registered mail shall be deemed to have been validly and effectively given on the fifth (5th) Business Day following the date on which it was sent. Any notice sent by email, telegram, electronic facsimile or other similar means of prepaid recorded communication shall be deemed to have been validly and effectively given on the Business Day next following the day on which it was sent. "Business Day" shall mean any day which is not a Saturday or Sunday or a statutory holiday in the Province of Ontario.

16. ASSIGNMENT OF OPTION BY HYDRO ONE

Hydro One shall have the right to assign all or any part of its interest in this Option Agreement and any or all rights, privileges and benefits accruing to Hydro One hereunder without the consent of the Owner prior to or on the Closing Date. Upon and to the extent of such assignment, this Option Agreement shall thenceforth be construed as if originally made with such assignee or assignees instead of Hydro One and Hydro One shall, to the extent of such assignment, thereupon be relieved of all liabilities and obligations whatsoever arising out of this Option Agreement.

17. SURVIVAL OF REPRESENTATIONS

The parties hereto agree that any representations or covenants contained in this Option Agreement shall not merge on closing, but survive and continue in full force and effect thereafter, but only as to the accuracy of the representation or covenant as at the date of completion of this Option Agreement.

18. ENTIRE AGREEMENT

The parties acknowledge that there are no covenants, representations, warranties, agreements or conditions, express or implied, collateral or otherwise, forming part of or in any way affecting or relating to this Option Agreement save as expressly set out in this Option Agreement and that this Option Agreement and all Schedules hereto constitute the entire agreement between the parties and may not be modified except as expressly agreed between the Owner and Hydro One in writing.

19. SEVERABILITY

Any provision or provisions of this Option Agreement is declared illegal or unenforceable, it or they shall be considered separate and severable from the Option Agreement and the remaining provisions shall remain in force and be binding upon the parties hereto as though the said provision or provisions had never been included.

20. GOVERNING LAW

This Option Agreement shall be governed by and construed in accordance with the laws of the Province of Ontario.

21. SUCCESSORS AND ASSIGNS

This Option Agreement shall enure to the benefit of and be binding upon the parties hereto and their respective heirs, attorneys, guardians, estate trustees, executors, trustees, successors and permitted assigns.

22. EXECUTION AND DELIVERY

This Option Agreement may be executed in any number of counterparts, each of which is deemed to be an original and all of which taken together constitutes one agreement. To evidence the fact that it has executed this Option Agreement, a party may send a copy of its executed counterpart to all other parties by a delivery method set out in Section 15 herein (the "Transmission") and the signature transmitted by such Transmission is deemed to be its original signature for all purposes.

23. PLANNING ACT

This Option Agreement is subject to the express condition that it is to be effective only if the provisions of the *Planning Act*, R.S.O. 1990, c. P.13and amendments thereto are complied with.

24. FURTHER ASSURANCES

The Owner covenants and agrees to execute if necessary, at no further cost or condition to Hydro One such other instruments, plans and documents as may reasonably be required by Hydro One to effect the registration of the transfer of the Corridor Lands or notice of this Option Agreement on title to the Lands.

25. SPOUSAL CONSENT

The Owner represents that, except to the extent such consent has been obtained, spousal consent to this transaction is not necessary and on closing will not be necessary under the provisions of the *Family Law Act*, R.S.O. 1990, c. F.3.

26. AGE

The Owner represents that the Owner is at least 18 years of age.

SCHEDULE "C"
AGREEMENT OF PURCHASE AND SALE

THIS AGREEMENT made as of the _____ day of _____ , 20____ (the "**Agreement Date**").

B E T W E E N:

«OWNER_1_NAME_FOR_LETTERS» & «OWNER_2_NAME_FOR_LETTERS» & «OWNER_3_NAME_FOR_LETTERS»

(hereinafter collectively called the "**Owner**")

OF THE FIRST PART

- and -

HYDRO ONE NETWORKS INC.

(hereinafter called "**Hydro One**")

OF THE SECOND PART

- and -

SPOUSE NAME

(hereinafter collectively called the "**Spouse**") This section is only filled if the spouse is not on title

OF THE THIRD PART

WITNESSETH THAT in consideration of the mutual covenants, agreements and payments herein provided, the parties hereto covenant and agree as follows:

ARTICLE 1
OFFER

1.1 The Vendor, being the owner of the lands and premises more particularly described in Schedule "A" (the "**Lands**") hereby agrees to sell to the Purchaser and the Purchaser agrees to purchase from the Vendor, on the terms and conditions set out in this Agreement, a portion of the Lands more particularly described on Schedule "A-1" attached hereto (the "**Property**") upon and subject to the terms and conditions hereinafter set forth.

1.2 The Vendor acknowledges and understands that upon execution of this Agreement by the Vendor and the Purchaser there shall be a binding agreement of Purchase and Sale between the Purchaser and the Vendor.

1.3 Included in the Purchase Price is the purchase of all of the Vendor's interest in all fixtures, improvements, and appurtenances located on the Property except those listed below which are expressly excluded:

NIL

ARTICLE 2
PURCHASE PRICE

2.1 (a) The total compensation to be paid by the Purchaser to the Vendor for the Property shall be the sum of **«TotalCompensationRounded»** Canadian Dollars, (the "**Total Compensation**"), subject to usual adjustments, if any, payable on Closing by uncertified cheque or electronic funds transfer on the Closing (as hereinafter defined).

(b) The Total Compensation is comprised as follows:

(i)	Purchase Price of the Property	**$XXXX**
(ii)	IA Compensation	**$XXXX**
(iii)	Option Payment	**$XXXX**
(iv)	Acceptance of the Hydro One Offer	**$XXXX**
(v)	Premium Above Fair Market Value	**$XXXX**
(vi)	Allowance Payment	**$XXXX**
(vii)	Access Agreement	**$XXXX**
	TOTAL COMPENSATION	**$XXXX.00**

2.2 The Vendor acknowledges receipt of an appraisal report and update, if any, prepared by an external, independent AACI accredited appraiser commissioned by the Purchaser.

2.3 The Purchaser agrees to obtain and register, at its sole expense, any new Reference Plan with respect to the Property that may be required by the Purchaser for completion of this Agreement of Purchase and Sale.

2.4 The calculation of the Total Compensation is shown on the calculation sheet attached hereto as Schedule "C" (the **"Calculation Sheet"**).

ARTICLE 3
CLOSING

3.1 The transaction of purchase and sale contemplated by this Agreement of Purchase and Sale shall, subject to resolution of any title issues identified pursuant to Article 5 of the Agreement of Purchase and Sale, be completed on the date that is ninety (90) days after Hydro One delivers the Exercise Notice to the Owner or on such earlier date as Hydro One, through its solicitors, may elect (the **"Closing Date"**). If the Closing Date is a date on which the Land Registry Office (the "**Land Registry Office**") in which the Lands are registered is closed, the Closing Date shall be on the next following day when such Land Registry Office is open. In the event that there is a delay in the completion of the transaction beyond the Closing Date as established by Hydro One upon delivery of the Exercise Notice that arises through no fault of Hydro One, then Hydro One shall not be responsible for any resulting delay in the Closing Date.

3.2 On Closing,

(a) Vacant possession of the Property shall be given to the Purchaser;

(b) The Purchaser shall pay the Total Compensation to the Vendor in accordance with section 2.1 of this Agreement;

(c) If applicable, rents, realty taxes, local improvement charges, water and unmetered utility charges and the cost of fuel as applicable shall be apportioned and allowed to the date of completion (the day itself to be apportioned to the Purchaser);

(d) In conformance with subsections 221(2) and 228(4) of the *Excise Tax Act* R.S.C. 1985, c E-15, as amended ("the Act"), Purchaser shall report and pay to the Receiver General, the Harmonized Sales Tax ("HST") applicable to the purchase and sale of the Property. For the purposes of this clause 3.2(b), the Purchaser warrants that it is an HST registrant in good standing under the Act, that its HST registration number is 870865821RT0001, and that it is acquiring the Property for use primarily in the course of its commercial activities.

ARTICLE 4
INSPECTION PERIOD

4.1 The Purchaser shall be allowed thirty (30) days from the date of this Agreement (the **"Inspection Period"**) to satisfy itself with respect to all matters respecting the Property including its present state of repair and condition and any structures thereon, all encumbrances and all regulations and by-laws governing the Property and the Vendor grants to the Purchaser the right to enter upon the Property and to conduct such inspections, surveys and tests as the Purchaser, acting reasonably, deems necessary in this regard, provided the Purchaser takes all reasonable care in the conduct of such inspections, surveys and tests and restores the Property to its prior condition so far as reasonably possible following such inspections and tests. The Vendor assumes no responsibility for and the Purchaser shall indemnify and save harmless the Vendor from and against all claims, demands, costs, damages, expenses and liabilities whatsoever arising out of its presence on the Property or of its activities on or in connection with the Property during the Inspection Period.

4.2 If for any reason, the Purchaser, acting reasonably, is not satisfied with respect to such matters arising from its activities in Section 4.1 herein, it may deliver a notice (the **"Notice of Termination"**) to the Vendor prior to the expiry of the Inspection Period indicating that it is not satisfied with respect to such matters and desires to terminate this Agreement and release the Vendor from any further obligations. Upon delivery by the Purchaser of a Notice of Termination to the Vendor, and this Agreement shall be at an end and neither Party shall have any further obligation to the other respecting the Agreement.

ARTICLE 5
TITLE

5.1 The Purchaser shall be allowed thirty (30) days from the date of this Agreement to investigate title to the Property at its own expense (the "**Title Search Period**"), to satisfy itself that there are no outstanding encumbrances, or liens save and except those listed in Schedule "B" attached hereto and until the earlier of: (i) thirty (30) days from the later of the last date of the title search period or the date or which the conditions in this Agreement are fulfilled or otherwise waived or; (ii) five (5) days prior to completion, to satisfy itself that there are no outstanding work orders or deficiency notices affecting the property. Vendor hereby consents to the Municipality or other governmental agencies releasing to the Purchaser details of all outstanding work orders affecting the Property and the Vendor agrees to execute and deliver such further authorizations in this regard as Purchaser may reasonably require.

5.2 Provided that the title to the Property is good and free from all registered restrictions, charges, liens and encumbrances except those listed in Schedule "B" attached hereto, if within the Title Search Period, any valid objection to title is made by the Purchaser in writing to the Vendor together with documentary verification thereof, and which the Vendor shall be unwilling or unable to remove and which the Purchaser will not waive, this Agreement, notwithstanding any intermediate acts or negotiations in respect of such objections, shall be at an end and the Vendor shall not be liable for any costs or damages and the Vendor and the Purchaser shall be released from all obligations hereunder, and the Vendor shall also be released from all obligations under this Agreement, save and except those covenants of the Purchaser expressly stated to survive Closing or other termination of this Agreement. Save as to any valid objection to title made in accordance with this Agreement and within the Title Search Period, and except for any objection going to the root of title, Purchaser shall be conclusively deemed to have accepted Vendor's title to the Property.

5.3 The Vendor and Purchaser agree that there is no condition, express, or implied, representation or warranty of any kind that the future intended use of the Property by the Purchaser is or will be lawful except as may be specifically stipulated elsewhere in this Agreement.

5.4 The Vendor agrees to provide to the Purchaser any existing survey of the Property, within Fifteen (15) days from the date of this Agreement.

ARTICLE 6
PURCHASER'S INVESTIGATION RESULTS

6.1 Purchaser shall, at its own cost, forthwith make such investigation as the Purchaser deems appropriate of the Property and Vendor's title as provided for in this Agreement and shall notify the Vendor of any objection to title, together with a complete copy of any documents and other material information related thereto prior to the expiry of the Title Search Period.

ARTICLE 7
INSURANCE

7.1 The Vendor covenants and agrees that the Property and all structures or fixtures being purchased are insured, and that such insurance will remain in force until closing. The Property and all structures or fixtures being purchased shall be and remain at the risk of the Vendor until Closing.

7.2 Pending completion, Vendor shall hold all insurance policies and the proceeds thereof in trust for the parties as their interests may appear and in the event of substantial damage to the Property the Purchaser may either terminate this Agreement and have all monies paid by the Purchaser returned to the Purchaser without interest or deduction or else take the proceeds of any insurance and complete the purchase.

ARTICLE 8
PLANNING ACT

8.1 This Agreement is subject to the express condition that it is to be effective only if the subdivision control provisions of the *Planning Act* R.S.O. 1990, c. P.13 as amended (the "*Planning Act*") are complied with prior to Closing. The Vendor shall forthwith make any application to the local Committee of Adjustment or Land Division Committee for any consent that may be required pursuant to the *Planning Act*. In the event that any such application for consent is denied, or any condition imposed by such body is unacceptable to the Vendor, this Agreement shall be terminated.

ARTICLE 9
ADDITIONAL PROVISIONS

9.1 The Transfer/Deed of Land (the "**Transfer**"), and the Land Transfer Tax Affidavit, shall be prepared in registrable form by the Purchaser, and the Purchaser covenants at its cost to register the Transfer on Closing. If requested by Purchaser, Vendor covenants that the Transfer Deed to be delivered on completion shall contain the statements contemplated by s. 50(22) of the *Planning Act*.

9.2 Time shall in all respects be of the essence hereof provided that the time for doing or completing of any matter provided for herein may be extended or abridged by an agreement in writing signed by the Parties or by their respective solicitors who are specifically authorized in that regard.

9.3 Any tender of documents or money hereunder may be made upon the Parties or their respective solicitors on the day set for Closing. Money may be tendered by bank draft, uncertified cheque, or electronic funds transfer.

9.4 Notices to be given to either party shall be in writing, and will be sent via email, personally delivered or sent by registered mail (except during a postal disruption or threatened postal disruption), telegram, electronic facsimile or other similar means of prepaid recorded communication to the applicable address set forth below (or to such other address as such party may from time to time designate in such manner):

HYDRO ONE:

Hydro One Networks Inc.
Facilities and Real Estate
P.O. Box 4300
Markham, Ontario L2R 5Z5

185 Clegg Road
Markham, Ontario L3G 1B7

Attention:
Fax: (905) 946-6242

with a copy to its solicitors,

Barriston LLP
90 Mulcaster St
Barrie, ON L4M 4Y5

Attention: Jim McIntosh
Fax: (705) 721-4025

OWNER:

«Owner_1_name_for_letters»
«Owner_2_name_for_letters»
«Owner_3_name_for_letters»
«STREET_NUM» «STREET_NAME1»
«MUNICIPALITY», «PROVINCE»
«POSTAL_CODE»

«SAP_Phone_Number»
«SAP_email_address»

with a copy to their solicitors,

Solicitors Name
Solicitors Address 1
Solicitors Address 2
Solicitors Address 3

Notices personally delivered shall be deemed to have been validly and effectively given on the day of such delivery. Any notice sent by registered mail shall be deemed to have been validly and effectively given on the fifth (5^{th}) business day following the date on which it was sent. Any notice sent by email, telegram, electronic facsimile or other similar means of prepaid recorded communication shall be deemed to have been validly and effectively given on the Business Day next following the day on which it was sent. "Business Day" shall mean any day which is not a Saturday or Sunday or a statutory holiday in the Province of Ontario.

9.5 The parties acknowledge that there are no covenants, representations, warranties, agreements or conditions, express or implied, collateral or otherwise, forming part of or in any way affecting or relating to this Agreement save as expressly set out in this Agreement and that this Agreement and all Schedules hereto constitute the entire agreement between the parties and may not be modified except as expressly agreed between the Vendor and Purchaser in writing. This Agreement shall be read with all changes of gender or number required by the context

9.6 If any provision or provisions of this Agreement be declared illegal or unenforceable, it or they shall be considered separate and severable from the Agreement and its remaining provisions shall remain in force and be binding upon the parties hereto as though the said provision or provisions had never been included.

9.7 No act or omission or delay in exercising any right or enforcing any term, covenant or agreement to be performed under this Agreement shall impair such right or be construed as to be a waiver of any default or acquiescence in such failure to perform, unless such waiver shall be given or acknowledged in writing.

9.8 This Agreement to Purchase shall be governed by and construed in accordance with the laws of the Province of Ontario.

9.9 This Agreement to Purchase shall enure to the benefit of and be binding upon the parties hereto and their respective heirs, attorneys, guardians, estate trustees, executors, trustees, successors and permitted assigns.

9.10 The Vendor warrants that, except to the extent such consent has been obtained, spousal consent is not necessary to this transaction and on Closing will not be necessary under the provision of the *Family Law Act*, R.S.O. 1990, c. F.3.

9.11 The Purchaser may, in its sole discretion and at its sole expense register this Agreement to Purchase or notice thereof on title to the Lands.

9.12 Where each of the Vendor and the Purchaser retain a solicitor to complete this Agreement and where the transaction contemplated herein will be completed by electronic registration pursuant to Part III of the *Land Registration Reform Act*, R.S.O. 1990, c. L.4 and any amendments thereto, the Vendor and the Purchaser acknowledge and agree that the delivery of documents and the release thereof to the Vendor and the Purchaser may, at the solicitor's discretion; (a) not occur contemporaneously with the registration of the Transfer/Deed of Land (and other registrable) documentation), and (b) be subject to conditions whereby the solicitor receiving documents and/or money will be required to hold them in trust and not release them except in accordance with the terms of a written agreement between the solicitors

9.13 The provisions of the attached Schedules "A", "A-1", "B" and "C" shall form part of this Agreement as if set out herein.

9.14 The Vendor represents and warrants and covenants that it is not now and on Closing will not be a non-resident of Canada within the meaning of the *Income Tax Act (Canada)*.

9.15 The Purchaser shall have the right to assign all or any part of its interest in this Agreement and any or all rights, privileges and benefits accruing to the Purchaser hereunder without the consent of the Vendor prior to or on the Closing. Upon and to the extent of such assignment, this Agreement shall thenceforth be construed as if originally made with such assignee or assignees instead of the Purchaser and the Purchaser shall, to the extent of such assignment, thereupon be relieved of all liabilities and obligations whatsoever arising out of this Agreement.

9.16 The parties hereto agree that any representations or covenants contained in this Agreement shall not merge on closing, but survive and continue in full force and effect thereafter, but only as to the accuracy of the representation or covenant as at the date of completion of this Agreement.

9.17 This Agreement may be executed in one or more counterparts, each of which shall be deemed an original and together shall constitute one and the same agreement. Counterparts may be executed either in original or by electronic means, including, without limitation, by facsimile transmission or by electronic delivery in portable document format (".pdf") or tagged image file format (".tif") and the parties shall adopt any signatures received by electronic means as original signatures of the Parties; provided, however that any party providing its signature in such manner shall promptly forward to the other party an original signed copy of this Agreement which was so delivered electronically.

9.18 The Vendor covenants and agrees to execute if necessary, at no further cost or condition to the Purchaser except payment of the Vendor's reasonable out-of-pocket costs, such other instruments, plans and documents as may reasonably be required by the Purchaser to effect the registration of any right or interest transferred hereunder or notice of this Agreement on title to the Lands.

9.19 The Purchaser agrees to pay the Vendor's reasonable legal costs in connection with this transaction.

9.20 The Vendor represents that the Vendor is at least 18 years of age.

IN WITNESS WHEREOF the parties hereto have duly executed this Agreement as of the Agreement Date.

WITNESS:

Name: «Real_Estate_Representative»

Address: 1800 Main Street East
Milton, ON L9T 7S3

OWNER:

l/s

Name: **«Owner_1_name_for_letters»**

Name: «Real_Estate_Representative»

Address: 1800 Main Street East
Milton, ON L9T 7S3

l/s

Name: **«Owner_2_name_for_letters»**

Name: «Real_Estate_Representative»

Address: 1800 Main Street East
Milton, ON L9T 7S3

l/s

Name: **«Owner_3_name_for_letters»**

WITNESS:

Name: Real Estate Representative

Address: 1800 Main Street East
Milton, ON L9T 7S3

The spouse of the Owner hereby consents to this Agreement

SPOUSE OF OWNER:

l/s

Name: **Property Owner Spouse Name**

HYDRO ONE NETWORKS INC.

Per:

Name:

Title:

I have authority to bind the Corporation

HYDRO ONE
HST 870865821RT0001

SCHEDULE "A"
LEGAL DESCRIPTION OF LANDS

«LEGAL_DESCRIPTION

SCHEDULE "A-1"
LEGAL DESCRIPTION OF PROPERTY

Legal description to be determined by deposited Reference Plan; Corridor Lands shown outlined in green.

****NOTE – Sketch shall be replaced by Corridor Lands description once applicable Reference Plan is deposited.**

Screenshot of ortho map with tower placements here

SCHEDULE “B”

PERMITTED ENCUMBRANCES

NIL

SCHEDULE "C"

CALCULATION SHEET

COMPENSATION AND INCENTIVE AGREEMENT – FEE SIMPLE

THIS COMPENSATION AND INCENTIVE AGREEMENT made as of the __day of _____, 20___ (the "**Agreement Date**").

B E T W E E N:

«OWNER_1_NAME_FOR_LETTERS» & «OWNER_2_NAME_FOR_LETTERS» & «OWNER_3_NAME_FOR_LETTERS»

(hereinafter collectively called the "**Owner**")

OF THE FIRST PART

- and -

HYDRO ONE NETWORKS INC.

(hereinafter called "**Hydro One**")

OF THE SECOND PART

- and -

SPOUSE NAME

(hereinafter collectively called the "**Spouse**") This section is only filled out if the spouse is not on title

OF THE THIRD PART

RECITALS:

A. The Owner is the Owner of the lands and premises described in Schedule "A" attached hereto (the "**Lands**").

B. Hydro One desires to purchase a portion of the Lands (the "**Corridor Lands**"), as more particularly described in an Option Agreement between the parties hereto and having a date the same as this Compensation and Incentive Agreement (the "**Option Agreement**"), upon the terms and conditions set out in the Option Agreement.

C. Hydro One has offered to pay the Option Payment to the Owner upon execution of the Option Agreement and upon closing to purchase the Corridor Lands from the Owner for the Purchase Price (collectively, the "**Corridor Compensation**").

D. Hydro One has offered, on the terms and conditions set out herein, to compensate the Owner for injurious affection damages, if applicable (the "**IA Compensation**") in respect of that portion of the Lands which are not part of the Corridor Lands. Such injurious affection damages are calculated as shown on the calculation sheet attached hereto as Schedule "B" (the "**Calculation Sheet**").

E. To achieve a timely resolution of its land acquisition arrangements, Hydro One has also offered to pay certain incentives to the Owner on the terms and conditions set out in this Compensation and Incentive Agreement and as shown on the Calculation Sheet.

F. Any capitalized terms not defined in this Compensation and Incentive Agreement shall have the meaning ascribed to them in the Option Agreement.

NOW THEREFORE, the parties agree as follows:

1. VALUATION

(a) Hydro One has retained an external, independent AACI designated appraiser to determine the fair market value of the Corridor Lands and any applicable amount of IA Compensation, if any, as of October 1st, 2021 and to prepare a report in respect thereof (the "**HONI Appraisal**"). The Owner acknowledges receiving a copy of the HONI Appraisal, and agrees to accept the amounts set out in the HONI Appraisal as a fair evaluation of the market value of the Owner's fee simple interest in the Corridor Lands as of the date of the HONI Appraisal.

(b) In recognition of a dynamic real estate market and that the effective date of HONI's appraised values in the HONI Appraisal are only relevant for a limited period of time, Hydro One shall provide a market value top-up where the passage of time between the effective date of the HONI Appraisal and the date Hydro One receives project approval pursuant to section 92 of the *Ontario Energy Board Act, 1998*, S.O. 1998, c. 15, Sched. B. (the "Section 92 Approval") warrants such top-up (the "Top-Up").

Provided that the Owner and Hydro One have entered into an Option Agreement prior to Hydro One receiving the Section 92 Approval, the Owner shall be entitled to the Top-Up, if applicable. The amount of the Top-Up is the difference between the HONI Appraisal, and the market value as of the date of the Section 92 Approval (if such market value is greater than the amount in the HONI Appraisal), adjusted for time only (change in market conditions) and based on an independent land rate study considering this singular factor. The land rate study will be prepared by an independent third party appraiser with an Accredited Appraiser Canadian Institute designation from the Appraisal Institute of Canada.

The Top-Up amounts will be paid by Hydro One to the Owner by adding the applicable amounts to the Purchase Price and the IA Compensation, if applicable.

2. INCENTIVE PAYMENTS

(a) Upon registration of the Option Agreement and this Compensation and Incentive Agreement by all parties thereto, Hydro One shall pay to or to the order of the Owner the Option Payment in the amount of **XXXXX ($XXXXX)** as set out on the Calculation Sheet.

(b) On the Closing Date, Hydro One shall make a further incentive payment to or to the order of the Owner in the amount of **XXXXX ($XX)**, (the "**Acceptance of the Hydro One Offer**") as set out on the Calculation Sheet.

(c) On the Closing Date, Hydro One shall make a further incentive payment to or to the order of the Owner in the amount of **XXXXX ($XX), (the "Premium Above Fair Market Value")** such amount being equal to 25% of the appraised fair market value of the Owner's fee simple interest in the Corridor Lands as set out on the Calculation Sheet.

3. WAIVER

The Owner waives the right to be reimbursed by Hydro One for the reasonable costs the Owner incurs for a third party independent appraisal report and/or legal review of the HONI Appraisal, the Option Agreement and this Compensation and Incentive Agreement, up to the amount of Seven Thousand Five Hundred Dollars ($7,500.00) and hereby accepts the Second Incentive Payment as defined in 2(b) above.

4. IA COMPENSATION

Hydro One agrees to pay to or to the order of the Owner on the Closing Date the IA Compensation, if applicable, in the amount of **XXXXX ($XX)** as set out on the Calculation Sheet.

5. CONVEYANCING

Hydro One agrees to reimburse the Owner for reasonably incurred legal fees, if any, associated with the review of applicable conveyancing documents.

6. TENANTS

The Owner agrees to indemnify and save harmless Hydro One from all actions, suits, costs, losses, charges, demands, claims and expenses for and in respect of any claims any person having a possessory interest in the Corridor Lands.

7. NOTICES

Notices to be given to either party shall be in writing, and will be sent via electronic mail ("email"), personally delivered or sent by registered mail (except during a postal disruption or threatened postal disruption), telegram, electronic facsimile or other similar means of prepaid recorded communication to the applicable address set forth below (or to such other address as such party may from time to time designate in such manner):

HYDRO ONE:

Hydro One Networks Inc.
Facilities and Real Estate
P.O. Box 4300
Markham, Ontario L2R 5Z5

185 Clegg Road
Markham, Ontario L3G 1B7

Attention:
Fax: (905) 946-6242

with a copy to its solicitors,

Barriston LLP
90 Mulcaster Street
Barrie, ON L4M 4Y5

Attention: Jim McIntosh
Fax: 705-721-4025

OWNER:

«Owner_1_name_for_letters» &
«Owner_2_name_for_letters» &
«Owner_3_name_for_letters»
«STREET_NUM» «STREET_NAME1»
«MUNICIPALITY», «PROVINCE»
«POSTAL_CODE»

«SAP_Phone_Number»
«SAP_email_address»

with a copy to their solicitors,

Solicitors Name
Solicitors Address 1
Solicitors Address 2
Solicitors Address 3

Notices personally delivered shall be deemed to have been validly and effectively given on the day of such delivery. Any notice sent by registered mail shall be deemed to have been validly and effectively given on the fifth (5th) business day following the date on which it was sent. Any notice sent by telegram, email, electronic facsimile or other similar means of prepaid recorded communication shall be deemed to have been validly and effectively given on the Business Day next following the day on which it was sent. "Business Day" shall mean any day which is not a Saturday or Sunday or a statutory holiday in the Province of Ontario.

8. ASSIGNMENT OF AGREEMENT BY OWNER

The Owner shall not assign all or any part of its interest in this Compensation and Incentive Agreement or any of the rights, privileges and benefits accruing to the Owner hereunder without the consent of the Hydro One, which consent may not be unreasonably withheld or delayed. Upon and to the extent of such assignment, this Compensation and Incentive Agreement shall thenceforth be construed as if originally made with such assignee or assignees instead of the Owner and the Owner shall, to the extent of such assignment, thereupon be relieved of all liabilities and obligations whatsoever arising out of this Compensation and Incentive Agreement.

The Owner and, if applicable, the Spouse, each covenant and agree that if they transfer, assign, charge, lease or otherwise dispose of all or any part of their interest in the Lands (collectively, a "**Transfer**") they will obtain an agreement from such Transferee assuming and agreeing to be bound by all of the terms of this Compensation and Incentive Agreement as if the Transferee had been an original signatory to this Compensation and Incentive Agreement.

9. NOTICE OF AGREEMENT

Hydro One may, in its sole discretion and at its sole expense register this Compensation and Incentive Agreement or notice thereof on title to the Lands.

10. NO MERGER

The parties hereto agree that any representations or covenants contained in this Compensation and Incentive Agreement shall not merge on closing, but survive and continue in full force and effect thereafter, but only as to the accuracy of the representation or covenant as at the date of completion of this Compensation and Incentive Agreement.

11. ENTIRE AGREEMENT

The parties hereto acknowledge that there are no covenants, representations, warranties, agreements or conditions, express or implied, collateral or otherwise, forming part of or in any way affecting or relating to this Compensation and Incentive Agreement save as expressly set out in this Compensation and Incentive Agreement and that this Compensation and Incentive Agreement and all Schedules hereto constitute the entire agreement between the parties and may not be modified except as expressly agreed between the parties in writing.

12. SEVERABILITY

Any provision or provisions of this Compensation and Incentive Agreement is declared illegal or unenforceable, it or they shall be considered separate and severable from this Compensation and Incentive Agreement and the remaining provisions shall remain in force and be binding upon the parties hereto as though the said provision or provisions had never been included.

13. GOVERNING LAW

This Compensation and Incentive Agreement shall be governed by and construed in accordance with the laws of the Province of Ontario.

14. SPOUSAL CONSENT

The Owner represents that, except to the extent such consent has been obtained, spousal consent to this transaction is not necessary under the provision of the *Family Law Act*, R.S.O. 1990, c. F.3.

15. SUCCESSORS AND ASSIGNS

This Compensation and Incentive Agreement shall enure to the benefit of and be binding upon the parties hereto and their respective heirs, attorneys, guardians, estate trustees, executors, trustees, successors and permitted assigns.

16. EXECUTION AND DELIVERY

This Compensation and Incentive Agreement may be executed and delivered in counterparts by original, facsimile or scanned e-mail copy and each Compensation and Incentive Agreement shall constitute and be deemed to be the entire agreement notwithstanding that all copies of this Compensation and Incentive Agreement may not have all signatures.

17. FURTHER ASSURANCES

The parties hereto agree to do, make and execute, if necessary, at no further cost or condition to the other except payment of reasonable out-of-pocket costs, such other instruments, plans, documents, acts, matters and things and take such further action as may reasonably be required by the other party in order to effectively carry out the true intent of this Compensation and Incentive Agreement.

18. AGE

The Owner represents that the Owner is at least 18 years of age.

IN WITNESS WHEREOF the parties hereto have duly executed this Compensation and Incentive Agreement as of the Agreement Date.

WITNESS:

Name: «Real_Estate_Representative»

Address: 1800 Main Street East
Milton, ON L9T 7S3

OWNER:

l/s

Name: **«Owner_1_name_for_letters»**

l/s

Name: «Real_Estate_Representative»

Address: 1800 Main Street East
Milton, ON L9T 7S3

Name: **«Owner_2_name_for_letters»**

l/s

Name: «Real_Estate_Representative»

Address: 1800 Main Street East
Milton, ON L9T 7S3

Name: **«Owner_3_name_for_letters»**

WITNESS:

Name: «Real_Estate_Representative»

Address: 1800 Main Street East
Milton, ON L9T 7S3

The spouse of the Owner hereby consents to this Compensation and Incentive Agreement

SPOUSE OF OWNER:

l/s

Name: **Property Owner Spouse Name**

HYDRO ONE NETWORKS INC.

Per: _____
Name:
Title:

I have authority to bind the Corporation

HYDRO ONE
HST 870865821RT0001

SCHEDULE "A"

LANDS

«LEGAL_DESCRIPTION»

SCHEDULE “B”

CALCULATION SHEET

Off-Corridor Access Road

THIS AGREEMENT made in duplicate the _____day of _____2021

Between:

XXXXXXXXX

(hereinafter referred to as the "Grantor")
OF THE FIRST PART

--- and ---

HYDRO ONE NETWORKS INC.

(hereinafter referred to as "HONI")
OF THE SECOND PART

WHEREAS the Grantor is the owner in fee simple and in possession of certain lands legally described as ***(INSERT LEGAL DESCRIPTION)*** **(the "Lands").**

WHEREAS The Grantor has entered into a Temporary Access Agreement with HONI on a portion of the Lands highlighted in green in Schedule "A" (the "Access Lands"). HONI will be utilizing a portion of the Lands as a means of off-corridor access highlighted in red in Schedule "A" ("Off-Corridor Access Lands").

WHEREAS the Owner is agreeable in allowing HONI to enter onto the Lands to use the Off-Corridor Access Lands in order to commence activities which shall include necessary real estate, environmental and engineering studies and testing including but not limited to borehole testing, archaeological studies, soil assessments, property appraisals and surveys in, on or below the Lands subject to the terms and conditions contained herein (the "Activities").

NOW THEREFORE THIS AGREEMENT WITNESSES THAT in consideration of the lump sum of **$XXXXX.00** now paid by HONI to the Owner, and the respective covenants and agreements of the parties hereinafter contained and other valuable consideration, the receipt and sufficiency of which are hereby acknowledged by the parties hereto, the parties hereto agree as follows:

1. The Grantor hereby grants to HONI the right to enter upon the Lands for the purpose of Off-Corridor Access Lands.

2. The Grantor hereby grants to HONI, as of the date this Agreement, (i) the right to enter upon and exit from, and to pass and repass at any and all times in, over, along, upon, across, through and under the Off-Corridor Access Lands as may be reasonably necessary, at all reasonable times, for HONI and its respective officers, employees, workers, permittees, servants, agents, contractors and subcontractors, with or without vehicles, supplies, machinery, plant, material and equipment for the purpose of the Activities, subject to payment of compensation for damages including payment for crops caused thereby. HONI agrees that it shall take all reasonable care while undertaking the Activities.

3. The term of this Agreement and the permission granted herein shall be two (2) years from the date written above (the "Term"). HONI may, in its sole discretion, and upon 10 days notice to the Grantor, extend the Term for an additional length of time, which shall be negotiated between the parties.

4. Upon the expiry of the Term or any extension thereof, HONI shall repair any physical damage to the Off-Corridor Access Lands and/or Lands resulting from HONI's use of the Access Lands and the permission granted herein; and, shall restore the Access Lands to its original condition so far as possible and practicable.

5. All agents, representatives, officers, directors, employees and contractors and property of HONI located at any time on the Off-Corridor Access Lands shall be at the sole risk of HONI and the Grantor shall not be liable for any loss or damage or injury (including loss of life) to them or it however occurring except and to the extent to which such loss, damage or injury is caused by the negligence or willful misconduct of the Grantor.

6. HONI agrees that it shall indemnify and save harmless the Grantor from and against all claims, demands, costs, damages, expenses and liabilities (collectively the "Costs") whatsoever arising out of HONI's presence on the Off-Corridor Access Lands or of its activities on or in connection with the Off-Corridor Access Lands arising out of the permission granted herein except to the extent any of such Costs arise out of or are contributed to by the negligence or willful misconduct by the Grantor.

7. Notices to be given to either party shall be in writing, personally delivered or sent by registered mail (except during a postal disruption or threatened postal disruption), telegram, electronic facsimile to the applicable address set forth below (or to such other address as such party may from time to time designate in such manner):

TO HONI:

Hydro One Networks Inc.
Real Estate Services
1800 Main Street East
Milton, Ontario L9T 7S3

Attention: Real Estate Acquisitions
Tel: 905-875-2508
Fax: 905-878-8356

TO GRANTOR:

XXXXXXXX
XXXXXXXX

8. Notices personally delivered shall be deemed to have been validly and effectively given on the day of such delivery. Any notice sent by registered mail shall be deemed to have been validly and effectively given on the fifth (5^{th}) business day following the date on which it was sent. Any notice sent by telegram, electronic facsimile or shall be deemed to have been validly and effectively given on the Business Day next following the day on which it was sent. "Business Day" shall mean any day which is not a Saturday or Sunday or a statutory holiday in the Province of Ontario. This Agreement shall be governed by and construed in accordance with the laws of the Province of Ontario and the laws of Canada applicable herein. The parties hereto submit themselves to the exclusive jurisdiction of the Courts of the Province of Ontario.

9. Any amendments, modifications or supplements to this Agreement or any part thereof shall not be valid or binding unless set out in writing and executed by the parties with the same degree of formality as the execution of this Agreement.

IN WITNESS WHEREOF the parties hereto have caused this Agreement to be executed by their duly authorized representatives as of the day and year first above written.

SIGNED, SEALED & DELIVERED
In the presence of:

_____
Witness

OWNER(S):

_____
Name:

SIGNED, SEALED & DELIVERED
In the presence of:

_____
Witness

_____
Name:

HYDRO ONE
HST # 870 865 821 RT001

HYDRO ONE NETWORKS INC.

By: _____
Name:
Title:

I have authority to bind the Corporation

SCHEDULE "A"

PROPERTY SKETCH

CROPLAND OUT-OF-PRODUCTION FOR 202X CROP GROWING SEASON

Full and Final Release

IN CONSIDERATION of the payment in the amount of **$XXXXXX ($00.00)** (the **"Settlement Amount"**) by Hydro One Networks Inc. to **«Owner_1_name_for_letters» & «Owner_2_name_for_letters» & «Owner_3_name_for_letters»** and for other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, each of the undersigned, on behalf of himself/herself, his/her heirs, executors, administrators, successors and assigns (hereinafter the "Releasors"), hereby releases and forever discharges **HYDRO ONE NETWORKS INC.** and its respective officers, directors, employees, servants and agents and its parent, affiliates, subsidiaries, and their respective successors and assigns (hereinafter collectively the "Releasee") jointly and severally from any and all actions, causes of action, claims and demands for damages, indemnity, costs, interest and loss or injury of every nature and kind whatsoever, howsoever arising, which the Releasors now have, may have had or may hereafter have arising from or in any way related or as a result of the loss of crop land being out of production for the 202X crop growing season on the lands legally described as **«Legal_Description» being PIN «PIN» (LT) (the "Property").**

The Releasors acknowledge that the Settlement Amount was calculated (hereto attached as Schedule "A") in accordance with the Annual Market Price Option set out in the Cropland Out–of-Production Booklet, as selected by the Releasors.

AND THE RELEASORS hereby confirm and acknowledge that for the Annual Market Price Option, any cropland out-of-production will not be offered to the Property Owner if the Property Owner transacts, sells, transfers, assigns, conveys or suspends agricultural operations on the lands subject to the Cropland Out-of-Production Program.

AND FOR THE SAID CONSIDERATION, the Releasors further agree not to make any claim or take any proceedings against any other person or corporation who might claim contribution or indemnity under the provisions of the *Negligence Act* and the amendments thereto from the persons or corporations discharged by the release.

AND THE RELEASORS hereby confirm and acknowledge that the Releasors have sought or declined to seek independent legal advice before signing this Release, that the terms of this Release are fully understood, and that the said amounts and benefits are being accepted voluntarily, and not under duress, and in full and final compromise, adjustment and settlement of all claims against the Releasees.

IT IS UNDERSTOOD AND AGREED that the said payment or promise of payment is deemed to be no admission whatsoever of liability on the part of the Releasees.

AND IT IS UNDERSTOOD AND AGREED that this Release may be executed in separate counterparts (and may be transmitted by email) each of which shall be deemed to be an original and that such counterparts shall together constitute one and the same instrument, notwithstanding the date of actual execution.

IN WITNESS WHEREOF, the Releasors have hereunto set their respective hands this _____ day of _____, 202X.

SIGNED, SEALED AND DELIVERED
In the presence of)
)
)
)
_____) _____(seal)
Print Name of Witness ***«Owner_1_name_for_letters»***

)
)
)
)
_____) _____(seal)
Print Name of Witness ***«Owner_2_name_for_letters»***

)
)
)
)
_____ _____(seal)
Print Name of Witness ***«Owner_3_name_for_letters»***

HYDRO ONE NETWORKS INC.

Per: _____
Name:

Title:

I have authority to bind the Corporation

Schedule "A"

The area of cropland out-of-production for the growing season of 2023 being calculated and accepted by Releasors is shown below:

***EXAMPLE ONLY					
Number of Acres:	2.08				
Rate Per Acre:	$1,000				
Crop Loss out of Production Payment Schedule:					
Year 202X (TOTAL) =		$	2,080.00		
Total Crop Loss Out of Production Payable (202X):					**$2,080.00**
Rounded to Nearest Hundredth:			**$2,100.00**		

OPTION AGREEMENT - EASEMENT

THIS OPTION AGREEMENT made as of the _____ day of _____, 20__ (the "**Agreement Date**").

B E T W E E N:

«OWNER_1_NAME_FOR_LETTERS» & «OWNER_2_NAME_FOR_LETTERS» & «OWNER_3_NAME_FOR_LETTERS»

(hereinafter collectively called the "**Owner**")

OF THE FIRST PART

- and -

HYDRO ONE NETWORKS INC.

(hereinafter called "**Hydro One**")

OF THE SECOND PART

- and -

SPOUSE NAME

(hereinafter collectively called the "**Spouse**") This section is only filled if the spouse is not on title

OF THE THIRD PART

RECITALS:

A. The Owner is the owner of the lands and premises described in Schedule "A" (the "**Lands**");

B. The Owner has agreed to grant to Hydro One for the consideration and on the terms and conditions set out herein and attached hereto as Schedule "B" (the "**Standard Terms and Conditions**") an option to purchase a right-of-way and easement in, on, over, under, across and through (the "**Easement**") that portion of the Lands described and shown on Schedule "A-1" attached hereto (the "**Easement Lands**"), the terms of which are more particularly set out in the Transfer and Grant of Easement (the "**Easement Agreement**") attached hereto as Schedule "C".

C. Hydro One has entered into an agreement with the Owner having a date the same as this Option Agreement (the "**Compensation and Incentive Agreement**") whereby Hydro One has offered to compensate the Owner for injurious affection damages in accordance with the terms and conditions contained therein.

D. As the Owner's primary residence is located on the Lands within 100 metres from the centreline of the proposed new transmission line to be constructed on the Easement Lands, Hydro One has agreed that if Hydro One exercises the Option it will offer to purchase the Lands up to December 31, 2026 on the terms and conditions of the Voluntary Buyout Offer (the "Voluntary Buyout Offer") attached as Schedule "E" to this Option Agreement which Voluntary Buyout Offer shall be made on the Closing Date.

NOW THEREFORE, the parties hereby agree as follows:

1. GRANT OF OPTION

In consideration of the sum of **XXXXX ($XXXXX)** of lawful money of Canada paid by Hydro One to the Owner, the receipt and sufficiency of which is hereby acknowledged by the Owner, (the **"Option Payment"**) the Owner hereby grants to Hydro One an irrevocable option (the "**Option**"), to purchase the Easement upon and subject to the terms and conditions set out herein, the Standard Terms and Conditions and the Schedules hereto.

2. **PURCHASE PRICE**

In accordance with the terms and conditions set out herein, the Standard Terms and Conditions and the Schedules hereto, Hydro One agrees to pay to or to the order of the Owner the amount of **XXXX Dollars ($ ●)** for the Easement Lands (the "**Purchase Price**") on the Closing Date.

IN WITNESS WHEREOF the parties hereto have duly executed this Option Agreement as of the Agreement Date.

WITNESS:

Name: «Real_Estate_Representative»

Address: 1800 Main Street East
Milton, ON L9T 7S3

OWNER:

l/s

Name: **«Owner_1_name_for_letters»**

l/s

Name: «Real_Estate_Representative»

Address: 1800 Main Street East
Milton, ON L9T 7S3

Name: **«Owner_2_name_for_letters»**

l/s

Name: «Real_Estate_Representative»

Address: 1800 Main Street East
Milton, ON L9T 7S3

Name: **«Owner_3_name_for_letters»**

WITNESS:

Name: «Real_Estate_Representative»

Address: 1800 Main Street East
Milton, ON L9T 7S3

The spouse of the Owner hereby consents to this Agreement

SPOUSE OF OWNER:

l/s

Name: **Property Owner Spouse Name**

«OWNER_1_NAME_FOR_LETTERS»

Per: _____

Name:

Title:

We/I have authority to bind the Corporation

HYDRO ONE NETWORKS INC.

Per: _____

Name: Aaron Fair

Title: Real Estate Services Supervisor

I have authority to bind the Corporation

HYDRO ONE
HST 870865821RT0001

HYDRO ONE NETWORKS INC.

HYDRO ONE
HST 870865821RT0001

Per: _____

Name: Ranjit Multani

Title: Manager, Facilities & Real Estate Acquisition

I have authority to bind the Corporation

HYDRO ONE NETWORKS INC.

HYDRO ONE
HST 870865821RT0001

Per: _____

Name: Erin Kelly

Title: Director, Facilities & Real Estate

I have authority to bind the Corporation

SCHEDULE "A"
LEGAL DESCRIPTION

«LEGAL_DESCRIPTION»

SCHEDULE "A-1"
EASEMENT LANDS

Legal description to be determined by deposited Reference Plan; Easement Lands shown outlined in green.

****NOTE – Sketch shall be replaced by servient lands description once applicable Reference Plan is deposited.**

Screenshot of ortho map with tower placements here

SCHEDULE "B"
STANDARD TERMS AND CONDITIONS

1. EXERCISE OF OPTION

The Option shall be open for exercise at any time from the Agreement Date until the 2nd anniversary of the Agreement Date, as same may have been extended in accordance with the terms hereof, (the "**Option Term**"), by providing written notice to the Owner (the "**Exercise Notice**"), after which time, subject to Section 2, this Option Agreement shall be null and void and no longer binding upon either of the parties. If the Option is exercised within the Option Term, then this Option Agreement shall become a binding agreement for the purchase and sale of the Easement and this Option Agreement shall be completed on the terms set out herein.

2. EXTENSION OF OPTION TERM

At any time during the Option Term, Hydro One may, by written notice delivered to the Owner prior to the expiration of the Option Term, as same may have been extended, extend the Option Term with respect to the Lands for one (1) additional period of one (1) year, provided that upon such election, Hydro One pays to the Owner the amount of $10,000 in consideration for the extension of the Option Term.

3. PURCHASE PRICE

(a) Hydro One shall pay the Purchase Price to or to the order of the Owner by way of a single payment by uncertified cheque or electronic funds transfer on the Closing Date (as hereinafter defined).

(b) The Owner acknowledges receipt of an appraisal report commissioned by Hydro One and, prepared by an external, independent appraiser with the Accredited Appraiser Canadian Institute ("AACI") designation, (the "**HONI Appraisal**").

(c) The parties acknowledge that the Purchase Price is based on a purchase price per acre as set out in Schedule "B" of the Compensation and Incentive Agreement and the actual area of the Easement Lands shall be confirmed by a survey to be prepared by Hydro One in accordance with section 9 herein, and in the event the surveyed area of the Easement Lands is greater than as provided for in Schedule "B" of the Compensation and Incentive Agreement, and Purchase Price shall be adjusted accordingly.

4. CLOSING

The transaction of purchase and sale contemplated by this Option Agreement shall, subject to resolution of any title issues identified by Hydro One, be completed on the date that is ninety (90) days after Hydro One delivers the Exercise Notice to the Owner or on such earlier date as Hydro One, through its solicitors, may elect (the **"Closing Date"**). If the Closing Date is a date on which the Land Registry Office (the "**Land Registry Office**") in which the Lands are registered is closed, the Closing Date shall be on the next following day when such Land Registry Office is open. In the event that there is a delay in the completion of the transaction beyond the Closing Date as established by Hydro One upon delivery of the Exercise Notice that arises through no fault of Hydro One, then Hydro One shall not be responsible for any resulting delay in the Closing Date.

5. ACKNOWLEDGEMENT AND DIRECTION

The Owner and, if applicable, the Spouse, acknowledges and agrees that execution of the Option Agreement shall constitute execution of the Acknowledgement and Direction attached as Schedule "D" to the Option Agreement (the "**Acknowledgement and Direction**") authorizing Hydro One and its solicitors to register the Option and subsequent Easement on title to the Lands. Hydro One covenants and agrees to hold the Acknowledgement and Direction in escrow until Hydro One has paid the Purchase Price at which time the executed Acknowledgement and Direction and Option shall be released from escrow and may be acted upon by Hydro One.

6. REGISTRATION OF EASEMENT

The Owner acknowledges and agrees that Hydro One will register the Easement on title to the Lands on the Closing Date pursuant hereto and the Acknowledgement and Direction. Hydro

One will provide notice to the Owner within a reasonable period of time after the Closing Date of the registration particulars of the Easement.

7. RIGHT TO TRANSFER

The Owner covenants and agrees with Hydro One that it has the right to grant the Easement without restriction and that Hydro One will quietly possess and enjoy the Easement Lands.

8. INSPECTION PERIOD AND EARLY ACCESS PERIOD

(a) The Owner agrees and consents to Hydro One, its respective officers, employees, agents, contractors, sub-contractors, surveyors, workers and permittees or any of them entering on, exiting and passing and repassing in, on, over, along, upon, across, through and under the Easement Lands and so much of the Lands as may be reasonably necessary at all reasonable times from the Agreement Date until the later of the expiration of the Option Term (as same may be extended) and the Closing Date, with or without all plant, machinery, material, supplies, vehicles, and equipment, for all purposes necessary or convenient to conduct such inspections, tests, audits, reports as Hydro One sees fit in connection with the acquisition, exercise or enjoyment of the Easement. Hydro One shall restore the Lands to their prior condition so far as reasonably possible following such inspections, tests, audits and reports.

(b) The Owner agrees and consents to Hydro One, its respective officers, employees, agents, contractors, sub-contractors, surveyors, workers and permittees or any of them entering on, exiting and passing and repassing in, on, over, along, upon, across, through and under the Easement Lands and so much of the Lands as may be as reasonably necessary at all reasonable times from date Hydro One delivers the Exercise Notice to commence construction activities on the Easement Lands. Hydro One shall restore the Lands to their prior condition so far as reasonably possible in the event that the purchase transaction contemplated by this Option Agreement is not completed as contemplated herein.

9. SURVEY/REFERENCE PLAN

Hydro One agrees to obtain and register, at its sole expense, any new Reference Plan with respect to the Easement Lands that may be required by Hydro One for completion of this Option Agreement.

10. INCOME TAX ACT

The Owner represents and warrants and covenants that the Owner is not now and on Closing will not be a non-resident of Canada within the meaning of the *Income Tax Act (Canada).*

11. HARMONIZED SALES TAX

The Owner and Hydro One acknowledge and agree that the grant of easement which is proposed under this Option Agreement constitutes a purchase and sale transaction of an interest in real property, and therefore, in conformance with subsections 221(2) and 228(4) of the *Excise Tax Act* R.S.C. 1985, c E-15, as amended ("the Act"), Hydro One shall report and pay to the Receiver General for Canada the Harmonized Sales Tax ("HST") applicable to the purchase and sale of the Easement. For the purposes of this section 11, Hydro One shall warrants that it is an HST registrant in good standing under the Act, that its HST registration number is 870865821RT0001, and that it is acquiring the Easement for use primarily in the course of its commercial activities.

12. NOTICE OF OPTION

Hydro One may, in its sole discretion and at its sole expense register this Option Agreement or notice thereof on title to the Lands.

13. NO OTHER RIGHTS

The Owner covenants and agrees with Hydro One that the Owner shall not grant, create or transfer any easement, right, covenant, restriction, privilege, permission, or other agreement in, through, under, over or in respect of the Easement Lands prior to the registration of the Easement without the prior written consent of Hydro One.

14. **PRIOR ENCUMBRANCES**

The Owner hereby grants Hydro One permission, should Hydro One elect in its sole discretion, to approach any encumbrancer having an interest in the Easement Lands in priority to the Easement Agreement and to obtain (in registrable form) and register all necessary consents, postponements or subordinations from all current and future encumbrancers having an interest in the Easement Lands in priority to the Easement Agreement or this Option Agreement consenting, postponing or subordinating such encumbrance and their respective rights, title and interest to the Easement and this Option Agreement or to place the Easement Agreement and this Option Agreement in first priority on title to the Easement Lands.

15. **TIME OF ESSENCE**

Time shall in all respects be of the essence hereof; provided, however, that the time for doing or completing any matter provided for herein may be extended or abridged by an agreement in writing between the parties or their respective counsel.

16. **NOTICES**

Notices to be given to either party shall be in writing, and will be sent via electronic mail ("email"), personally delivered or sent by registered mail (except during a postal disruption or threatened postal disruption), telegram, electronic facsimile or other similar means of prepaid recorded communication to the applicable address set forth below (or to such other address as such party may from time to time designate in such manner):

HYDRO ONE:

Hydro One Networks Inc.
Facilities and Real Estate
P.O. Box 4300
Markham, Ontario L2R 5Z5

185 Clegg Road
Markham, Ontario L3G 1B7

Attention: Real Estate Manager
Fax: (905) 946-6242

with a copy to its solicitors,

Barriston LLP
90 Mulcaster Street
Barrie, ON L4M 4Y5

Attention: Jim McIntosh
Fax: 705-721-4025

OWNER:

«Owner_1_name_for_letters»
«Owner_2_name_for_letters»
«Owner_3_name_for_letters»
«STREET_NUM» «STREET_NAME1»
«MUNICIPALITY», «PROVINCE»
«POSTAL_CODE»

«SAP_Phone_Number»
«SAP_email_address»

with a copy to their solicitors,

Solicitors Name
Solicitors Address 1
Solicitors Address 2
Solicitors Address 3

Notices personally delivered shall be deemed to have been validly and effectively given on the day of such delivery. Any notice sent by registered mail shall be deemed to have been validly and effectively given on the fifth (5th) Business Day following the date on which it was sent. Any notice sent by email, telegram, electronic facsimile or other similar means of prepaid recorded communication shall be deemed to have been validly and effectively given on the Business Day next following the day on which it was sent. "Business Day" shall mean any day which is not a Saturday or Sunday or a statutory holiday in the Province of Ontario.

17. **ASSIGNMENT OF OPTION BY HYDRO ONE**

Hydro One shall have the right to assign all or any part of its interest in this Option Agreement and any or all rights, privileges and benefits accruing to Hydro One hereunder without the consent of the Owner prior to or on the Closing Date. Upon and to the extent of such

assignment, this Option Agreement shall thenceforth be construed as if originally made with such assignee or assignees instead of Hydro One and Hydro One shall, to the extent of such assignment, thereupon be relieved of all liabilities and obligations whatsoever arising out of this Option Agreement.

18. SURVIVAL OF REPRESENTATIONS

The parties hereto agree that any representations or covenants contained in this Option Agreement shall not merge on closing, but survive and continue in full force and effect thereafter, but only as to the accuracy of the representation or covenant as at the date of completion of this Option Agreement.

19. ENTIRE AGREEMENT

The parties acknowledge that there are no covenants, representations, warranties, agreements or conditions, express or implied, collateral or otherwise, forming part of or in any way affecting or relating to this Option Agreement save as expressly set out in this Option Agreement and that this Option Agreement and all Schedules hereto constitute the entire agreement between the parties and may not be modified except as expressly agreed between the Owner and Hydro One in writing.

20. SEVERABILITY

Any provision or provisions of this Option Agreement is declared illegal or unenforceable, it or they shall be considered separate and severable from the Option Agreement and the remaining provisions shall remain in force and be binding upon the parties hereto as though the said provision or provisions had never been included.

21. GOVERNING LAW

This Option Agreement shall be governed by and construed in accordance with the laws of the Province of Ontario.

22. SUCCESSORS AND ASSIGNS

This Option Agreement shall enure to the benefit of and be binding upon the parties hereto and their respective heirs, attorneys, guardians, estate trustees, executors, trustees, successors and permitted assigns.

23. EXECUTION AND DELIVERY

This Option Agreement may be executed in any number of counterparts, each of which is deemed to be an original and all of which taken together constitutes one agreement. To evidence the fact that it has executed this Option Agreement, a party may send a copy of its executed counterpart to all other parties by a delivery method set out in Section 16 herein (the "Transmission") and the signature transmitted by such Transmission is deemed to be its original signature for all purposes.

24. PLANNING ACT

This Option Agreement is subject to the express condition that it is to be effective only if the provisions of the *Planning Act, R.S.O. 1990, c. P.13* and amendments thereto are complied with.

25. FURTHER ASSURANCES

The Owner covenants and agrees to execute if necessary, at no further cost or condition to Hydro One such other instruments, plans and documents as may reasonably be required by Hydro One to effect the registration of the Easement or notice of this Option Agreement on title to the Lands.

26. SPOUSAL CONSENT

The Owner represents that, except to the extent such consent has been obtained, spousal consent to this transaction is not necessary and on closing will not be necessary under the provisions of the *Family Law Act*, R.S.O. 1990, c. F.3.

27. **AGE**

The Owner represents that the Owner is at least 18 years of age.

28. **VOLUNTARY BUYOUT OFFER**

a) If Hydro One exercises the Option in accordance with the terms hereof then, on Closing in addition to delivery of a cheque for the Purchase Price, Hydro One shall deliver to the Owner an offer to purchase the Lands on the terms set out in the Voluntary Buyout Offer attached as Schedule "E".

b) The Purchase Price of the Voluntary Buyout Offer shall be the fair market value of the Lands as determined by a new appraisal commissioned by Hydro One and, prepared by an external, independent appraiser with the Accredited Appraiser Canadian Institute ("AACI") designation at the time the Owner accepts the offer set out in Schedule "E" of this Option Agreement.

If the Owner does not accept the Voluntary Buyout Offer within the prescribed time specified therein, Hydro One shall not be required to purchase the Owner's interest in the Lands, and the Voluntary Buyout Offer shall be of no further force or effect and Hydro One shall be released of all obligations in respect thereof.

SCHEDULE "C"
TRANSFER AND GRANT OF EASEMENT

«Owner_1_name_for_letters» & «Owner_2_name_for_letters» & «Owner_3_name_for_letters» (the "**Transferor**") is the owner in fee simple and in possession of the certain lands legally described as **«Legal_Description»** (the "**Lands**").

Hydro One Networks Inc. (the "**Transferee**") has erected, or is about to erect, certain Works (as more particularly described in paragraph 1(a) hereof) in, through, under, over, across, along and upon the Lands.

1. The Transferor hereby grants and conveys to the Transferee, its successors and assigns the rights and easement, free from all encumbrances and restrictions, the following unobstructed rights, easements, rights-of-way, covenants, agreements and privileges in perpetuity (the "**Rights**") in, through, under, over, across, along and upon that portion of the Lands of the Transferor described herein as ● and described as Part ● on Reference Plan ● hereto annexed (the "**Strip**"), for the following purposes:

(a) To enter and lay down, install, construct, erect, maintain, open, inspect, add to, enlarge, alter, repair and keep in good condition, move, remove, replace, reinstall, reconstruct, relocate, supplement and operate and maintain at all times in, through, under, over, across, along and upon the Strip an electrical transmission systems and telecommunications systems consisting in both instances of pole structures, steel towers, anchors, guys and braces and all such aboveground or underground lines, wires, cables, telecommunications cables, grounding electrodes, conductors, apparatus, works, accessories, associated material and equipment, and appurtenances pertaining to or required by either such system (all or any of which are herein individually or collectively called the ("Works")) as in the opinion of the Transferee are necessary or convenient thereto for use as required by Transferee in its undertaking from time to time, or a related business venture.

(b) To enter on and selectively cut or prune, and to clear and keep clear, and remove all trees, branches, bush and shrubs and other obstructions and materials in, over or upon the Strip, and without limitation, to cut and remove all leaning or decayed trees located on the Lands whose proximity to the Works renders them liable to fall and come in contact with the Works or which may in any way interfere with the safe, efficient or serviceable operation of the Works or this easement by the Transferee.

(c) To conduct all engineering, legal surveys, and make soil tests, soil compaction and environmental studies and audits in, under, on and over the Strip as the Transferee in its discretion considers requisite.

(d) To erect, install, construct, maintain, repair and keep in good condition, move, remove, replace and use bridges and such gates in all fences which are now or may hereafter be on the Strip as the Transferee may from time to time consider necessary.

(e) Except for fences and permitted paragraph 2(a) installations, to clear the Strip and keep it clear of all buildings, structures, erections, installations, or other obstructions of any nature (hereinafter collectively called the "**obstruction**") whether above or below ground, including removal of any materials and equipment or plants and natural growth, which in the opinion of the Transferee, endanger its Works or any person or property or which may be likely to become a hazard to any Works of the Transferee or to any persons or property or which do or may in any way interfere with the safe, efficient or serviceable operation of the Works or this easement by the Transferee.

(f) To enter on and exit by the Transferor's access routes and to pass and repass at all times in, over, along, upon and across the Strip and so much of the Lands as is reasonably required, for the Transferee, its employees, agents, contractors, subcontractors, workmen and permittees with or without all plant machinery, material, supplies, vehicles and equipment for all purposes necessary or

convenient to the exercise and enjoyment of this easement, subject to compensation afterwards for any crop or other physical damage only to the Lands or permitted structures sustained by the Transferor caused by the exercise of this right of entry and passageway.

(g) To remove, relocate and reconstruct the line on or under the Strip subject to payment by the Transferee of additional compensation for any damage caused thereby.

2. The Transferor agrees that:

(a) It will not interfere with any Works established on or in the Strip and shall not, without the Transferee's consent in writing erect or cause to be erected or permit in, under or upon the Strip any obstruction or plant or permit any trees, bush, shrubs, plants or natural growth which does or may interfere with the Rights granted herein. The Transferor agrees it shall not, without the Transferee's consent in writing, change or permit the existing configuration, grade or elevation of the Strip to be changed and the Transferor further agrees that no excavation or opening or work which may disturb or interfere with the existing surface of the Strip shall be done or made unless consent therefore in writing has been obtained from Transferee, provided however, that the Transferor shall not be required to obtain such permission in case of emergency. Notwithstanding the foregoing, in cases where in the reasonable discretion of the Transferee, there is no danger or likelihood of danger to the Works of the Transferee or to any persons or property and the safe or serviceable operation of this easement by the Transferee is not interfered with, the Transferor may at its expense and with the prior written approval of the Transferee, construct and maintain roads, lanes walks, drains, sewers water pipes, oil and gas pipelines, fences (not to exceed 2 metres in height) and service cables on or under the Strip (the "Installation") or any portion thereof; provided that prior to commencing such Installation, the transferor shall give to the Transferee thirty (30) days notice in writing thereof to enable the Transferee to have a representative present to inspect the proposed Installation during the performance of such work, and provided further that Transferor comply with all instructions given by such representative and that all such work shall be done to the reasonable satisfaction of such representative. In the event of any unauthorised interference aforesaid or contravention of this paragraph, or if any authorised interference, obstruction or Installation is not maintained in accordance with the Transferee's instructions or in the Transferee's reasonable opinion, may subsequently interfere with the Rights granted herein, the Transferee may at the Transferor's expense, forthwith remove, relocate, clear or correct the offending interference, obstruction, Installation or contravention complained of from the Strip, without being liable for any damages cause thereby.

(b) Notwithstanding any rule of law or equity, the Works installed by the Transferee shall at all times remain the property of the Transferee, notwithstanding that such Works are or may become annexed or affixed to the Strip and shall at anytime and from time to time be removable in whole or in part by the Transferee.

(c) No other easement or permission will be transferred or granted and no encumbrances will be created over or in respect to the Strip, prior to the registration of a Transfer of this grant of Rights.

(d) The Transferor will execute such further assurances of the Rights in respect of this grant of easement as may be requisite.

(e) The Rights hereby granted:

(i) shall be of the same force and effect to all intents and purposes as a covenant running with the Strip.

(ii) is declared hereby to be appurtenant to and for the benefit of the Works and undertaking of the Transferee described in paragraph 1(a).

3. Provided that the lands are used for agricultural purposes, the Transferee hereby releases and forever discharges the Transferor from and against any and all action, causes of action, costs,

claims, demands, expenses and liability for upon or by reason of any damage to the Works (collectively the "Claims") which may arise from, be sustained, suffered or incurred in consequence of the Transferor using the lands for agricultural purposes save and except for any Claims resulting from or arising out of the Transferor's negligence or willful misconduct.

4. The Transferor agrees that the Transferee may, at the Transferee's sole discretion, obtain at the Transferee's sole cost and expense all necessary postponements and subordinations (in registrable form) from all current and future prior encumbrancers, postponing their respective rights, title and interests to the Transfer of Easement herein so as to place such Rights and easement in first priority on title to the Lands.

5. There are no representations, covenants, agreements, warranties and conditions in any way relating to the subject matter of this grant of Rights whether expressed or implied collateral or otherwise except those set forth herein.

6. No waiver of a breach or any of the covenants of this grant of Rights shall be construed to be a waiver of any succeeding breach of the same or any other covenant.

7. The burden and benefit of this transfer of Rights shall run with the Strip and the Works and undertaking of the Transferee and shall extend to, be binding upon and enure to the benefit of the parties hereto and their respective heirs, executors, administrators, successors and assigns.

SCHEDULE "D"
ACKNOWLEDGEMENT AND DIRECTION

TO: Hydro One Networks Inc. ("**Hydro One**") and its solicitors, Barriston LLP

AND TO: Any and all designees of the above

RE: Option Agreement dated _____, 20____, (the "Option Agreement) and the Transfer and Grant of Easement in substantially the form attached **[as Schedule "C" to the Option Agreement or hereto]** (the "Easement Agreement")

This will confirm that:

- Hydro One and the Owner have reviewed the information set out in the Option Agreement and the draft document(s) attached to the Option Agreement, and that this information is accurate;
- You are authorized and directed to sign and register electronically on behalf of the undersigned the Option Agreement and the Easement Agreement as well as any other document(s) required to complete the transaction described above;
- You are authorized to amend the Option Agreement and the Easement Agreement as may be required to effect registration of such document including the insertion of a registerable legal description to describe the lands subject to the easement being granted pursuant to the Easement Agreement in the event one is not available at the time of execution of the Option Agreement; provided such amendments are non-material to the terms of the Option Agreement and the Easement Agreement and do not expand the description of the Easement Lands as described and/or illustrated in the Option Agreement in any material manner;
- The effect of the electronic documents described in this Acknowledgement and Direction has been fully explained to the Owner and Hydro One, and the Owner and Hydro One understand that each are parties to and bound by the terms and provisions of these electronic document(s) to the same extent as if each had signed these documents;
- You are directed to insert the names set forth in the signatory section of the Option Agreement as persons authorized (or other authorized signing officers of Hydro One) to act on behalf of Hydro One and the Owner, as applicable;
- The Owner acknowledges that Barriston LLP has not met with them nor been engaged by them, is not entering into a solicitor-client relationship with them and is not representing them solely or jointly with Hydro One for the purposes of the preparation, negotiation, completion or registration of the Option Agreement or the Easement Agreement. Barriston LLP will act in a limited capacity as agent for the undersigned for the purposes of registering the Option Agreement and the Easement Agreement; and
- Hydro One and the Owner are in fact the parties named in the electronic documents described in this Acknowledgement and Direction and each has not misrepresented the identity of same to you.

Dated _____, 20__.

WITNESS:	**OWNER:**
	l/s
Name: «Real_Estate_Representative»	Name: **«Owner_1_name_for_letters»**
Address: 1800 Main Street East Milton, ON L9T 7S3	
	l/s
Name: «Real_Estate_Representative»	Name: **«Owner_2_name_for_letters»**
Address: 1800 Main Street East Milton, ON L9T 7S3	

l/s

Name: «Real_Estate_Representative»

Address: 1800 Main Street East
Milton, ON L9T 7S3

l/s

Name: **«Owner_3_name_for_letters»**

WITNESS:

The spouse of the Owner hereby consents to this Acknowledgement and Direction

SPOUSE OF OWNER:

l/s

Name: «Real_Estate_Representative»

Address: 1800 Main Street East
Milton, ON L9T 7S3

Name: **Property Owner Spouse Name**

«OWNER_1_NAME_FOR_LETTERS»

Per: _____
Name:
Title:

We/I have authority to bind the Corporation

SCHEDULE "E"
VOLUNTARY BUYOUT OFFER

B E T W E E N:

«OWNER_1_NAME_FOR_LETTERS» & «OWNER_2_NAME_FOR_LETTERS» & «OWNER_3_NAME_FOR_LETTERS»

(hereinafter called the "**Vendor**")

OF THE FIRST PART

- and -

HYDRO ONE NETWORKS INC.

(hereinafter called the "Purchaser")

OF THE SECOND PART

- and -

XXXXXXXX

(hereinafter called the "**Spouse**")

OF THE THIRD PART

RECITALS

A. The Vendor entered into an Option Agreement with the Purchaser dated ● (the "**Option Agreement**") pursuant to which the Vendor granted the Purchaser an option to purchase a right-of-way and easement (the "**Easement**") in, on, over, under, across and through that portion of the Lands described on Schedule "A-1" attached thereto (the "**Easement Lands**"), the terms of which are more particularly set out in the Transfer and Grant of Easement (the "**Easement Agreement**") attached thereto as Schedule "C".

B. The Purchaser entered into an agreement with the Vendor having a date the same as the Option Agreement (the "**Compensation and Incentive Agreement**") whereby the Purchaser offered to compensate the Vendor for injurious affection damages, if applicable.

C. The Purchaser has exercised the Option to acquire the Easement pursuant to the Option Agreement.

D. As the Vendor's primary residence is located on the Lands within 100 metres from the centreline of the proposed new transmission line to be constructed on the Easement Lands, pursuant to the Option Agreement the Purchaser agreed to offer to purchase the Lands on the terms and conditions set out herein.

E. Initially capitalized terms not otherwise defined in this agreement shall have the meaning given to them in the Option Agreement and Compensation and Incentive Agreement.

WITNESSETH THAT in consideration of the mutual covenants, agreements and payments herein provided, the parties hereto covenant and agree as follows:

ARTICLE 1
OFFER

1.1 The Purchaser hereby offers to purchase from the Vendor the lands and premises more particularly described in Schedule "A" attached hereto (the "**Lands**") upon and subject to the terms and conditions hereinafter set forth.

1.2 The Vendor acknowledges and understands that upon acceptance of this Offer by the Vendor there shall be a binding Agreement of Purchase and Sale between the Purchaser and the Vendor.

1.3 Included in the Purchase Price is the purchase of all of the Vendor's interest in all fixtures, improvements, and appurtenances located on the Property except those listed below which are expressly excluded:

To be determined

1.4 The parties acknowledge and agree that this offer shall be irrevocable by the Purchaser until 3:30PM on the earlier of:

(a) December 31, 2026; or

(b) the date on which the Vendor ceases to be the registered and beneficial owner of the Lands (the "Irrevocable Date").

If the Vendor has not delivered a copy of this Agreement executed by the Vendor to the Purchaser on or before 3:30PM on the Irrevocable Date, this offer shall be null and void.

ARTICLE 2
PURCHASE PRICE

2.1 The purchase price for the Lands (the "Purchase Price") shall be the fair market value of the Lands as determined, as of the date of acceptance of this offer by the Vendor, by an external, independent AACI accredited appraiser retained by the Purchaser, at its expense, less an amount equal to the aggregate of the following amounts paid by the Purchaser to the Vendor pursuant to the Option Agreement and the Compensation and Incentive Agreement:

(a) the Purchase Price for the Easement (as defined in the Option Agreement) in the amount of XXXXX Dollars ($XXXXX.00);
(b) the IA Compensation, if any, in the amount of XXXXX Dollars ($XXXXX.00);
(c) Other compensation, if any, in the amount of XXXXX Dollars ($XXXXX.00).

2.2 The amount to be paid by the Purchaser to the Vendor on Closing for the Lands shall be the Purchase Price, as adjusted, after deducting the amounts as set out in Section 2.1 hereof, being the minimum amount of SEVEN HUNDRED FOURTY-NINE THOUSAND EIGHT HUNDRED FIFTY DOLLARS ($749,850.00) representing the current fair market value of the land after adjustments. Should the appraised value of the land at the time of acceptance by the Vendor yield a result after adjustments that exceeds the minimum, the Vendor shall be entitled to the excess value. Should the appraised value of the land at the time of acceptance by the Vendor yield a result after adjustments that is less than the minimum, the Vendor shall be entitled to the minimum.

2.3 The Purchaser agrees to obtain and register, at its sole expense, any new Reference Plan with respect to the Lands that may be required by the Purchaser for completion of the transaction contemplated herein.

ARTICLE 3
CLOSING

3.1 The closing of this transaction shall be completed on the day that is ninety (90) days after the Vendor notifies the Purchaser of its intention to accept the Offer. If the Closing falls on a day when the Land Registry Office (the "Land Registry Office") in which the Lands are registered is closed, then the Closing shall be extended to the next day on which the Land Registry Office is open. 3.2 On Closing:

(a) Vacant possession of the Lands shall be given to the Purchaser;

(b) The Purchaser shall pay to the Vendor by uncertified cheque or electronic funds transfer the Purchase Price as adjusted and subject to the deductions made in accordance with section 2.1 of this Agreement;

(c) Rents, realty taxes, local improvement charges, water and unmetered utility charges and the cost of fuel as applicable shall be apportioned and allowed to the date of completion (the day itself to be apportioned to the Purchaser);

(d) In conformance with subsections 221(2) and 228(4) of the *Excise Tax Act* R.S.C. 1985, c E-15, as amended ("the Act"), Purchaser shall report and pay to the Receiver General, the Harmonized Sales Tax ("HST") applicable to the purchase and sale of the Property. For the purposes of this clause 3.2(b), the Purchaser warrants that it is an HST registrant in good standing under the Act, that its HST registration number is 870865821RT0001, and that it is acquiring the Property for use primarily in the course of its commercial activities.

3.3 In the event that there is a delay in the completion of the transaction beyond the Closing Date as established by Hydro One upon delivery of the Exercise Notice that arises through no fault of Hydro One, then Hydro One shall not be responsible for any resulting delay in the Closing Date.

ARTICLE 4
TITLE

4.1 The Purchaser shall be allowed thirty (30) days from the date of acceptance of this Agreement to investigate title to the Property at its own expense (the "**Title Search Period**"), to satisfy itself that there are no outstanding encumbrances, or liens save and except those listed in Schedule "B" attached hereto (the "Permitted Encumbrances") and until the earlier of: (i) thirty (30) days from the later of the last date of the title search period or the date or which the conditions in this Agreement are fulfilled or otherwise waived or; (ii) five (5) days prior to completion, to satisfy itself that there are no outstanding work orders or deficiency notices affecting the Lands. Vendor hereby consents to the Municipality or other governmental agencies releasing to the Purchaser details of all outstanding work orders affecting the Lands and the Vendor agrees to execute and deliver such further authorizations in this regard as Purchaser may reasonably require.

4.2 Provided that the title to the Lands is good and free from all registered restrictions, charges, liens and encumbrances except the Permitted Encumbrances, if within the Title Search Period, any valid objection to title is made by the Purchaser in writing to the Vendor together with documentary verification thereof, and which the Vendor shall be unwilling or unable to remove and which the Purchaser will not waive, this Agreement, notwithstanding any intermediate acts or negotiations in respect of such objections, shall be at an end and the Vendor shall not be liable for any costs or damages and the Vendor and the Purchaser shall be released from all obligations hereunder, and the Vendor shall also be released from all obligations under this Agreement, save and except those covenants of the Purchaser expressly stated to survive Closing or other termination of this Agreement. Save as to any valid objection to title made in accordance with this Agreement and within the Title Search Period, and except for any objection going to the root of title, Purchaser shall be conclusively deemed to have accepted Vendor's title to the Lands.

4.3 The Vendor agrees to provide to the Purchaser any existing survey of the Lands in the Vendor's possession, within fifteen (15) days from the date of the Vendor's acceptance of the offer.

ARTICLE 5
PURCHASER'S INVESTIGATION RESULTS

5.1 Purchaser shall, at its own cost, forthwith make such investigation as the Purchaser deems appropriate of the Lands and Vendor's title as provided for in this Agreement and shall notify the Vendor of any objection to title, together with a complete copy of any documents and other material information related thereto prior to the expiry of the Title Search Period.

ARTICLE 6
INSURANCE

6.1 The Vendor covenants and agrees that the Lands and all structures or fixtures being purchased are insured, and that such insurance will remain in force until closing. The Lands and all structures or fixtures being purchased shall be and remain at the risk of the Vendor until Closing.

6.2 Pending completion, Vendor shall hold all insurance policies and the proceeds thereof in trust for the parties as their interests may appear and in the event of substantial damage to the Lands the Purchaser will take the proceeds of any insurance and complete the purchase.

ARTICLE 7
PLANNING ACT

7.1 This Agreement is subject to the express condition that it is to be effective only if the subdivision control provisions of the *Planning Act* R.S.O. 1990, c. P.13 as amended (the "*Planning Act*") are complied with by the Vendor prior to Closing. The Vendor shall forthwith make any application to the local Committee of Adjustment or Land Division Committee for any consent that may be required pursuant to the *Planning Act*. In the event that any such application for consent is denied, or any condition imposed by such body is unacceptable to the Vendor, this Agreement shall be terminated.

ARTICLE 8
ADDITIONAL PROVISIONS

8.1 The Transfer/Deed of Land (the "**Transfer**"), and the Land Transfer Tax Affidavit, shall be prepared in registrable form by the Purchaser, and the Purchaser covenants at its cost to register the Transfer on Closing. If requested by Purchaser, Vendor covenants that the Transfer Deed to be delivered on completion shall contain the statements contemplated by s. 50(22) of the *Planning Act*.

8.2 Time shall in all respects be of the essence hereof provided that the time for doing or completing of any matter provided for herein may be extended or abridged by an agreement in writing signed by the Parties or by their respective solicitors who are specifically authorized in that regard.

8.3 Any tender of documents or money hereunder may be made upon the Parties or their respective solicitors on the day set for Closing. Money may be tendered by bank draft, uncertified cheque, or electronic funds transfer.

8.4 Notices to be given to either party shall be in writing, and will be sent via electronic mail ("email"), personally delivered or sent by registered mail (except during a postal disruption or threatened postal disruption), telegram, electronic facsimile or other similar means of prepaid recorded communication to the applicable address set forth below (or to such other address as such party may from time to time designate in such manner):

HYDRO ONE:

Hydro One Networks Inc.
Facilities and Real Estate
P.O. Box 4300
Markham, Ontario L2R 5Z5

185 Clegg Road
Markham, Ontario L3G 1B7

Attention: Real Estate Manager
Fax: (905) 946-6242

with a copy to its solicitors,

Barriston LLP
90 Mulcaster St
Barrie, ON L4M 4Y5

Attention: Jim McIntosh
Fax: (705) 721-4025

OWNER:

«Owner_1_name_for_letters»
«Owner_2_name_for_letters»
«Owner_3_name_for_letters»
«STREET_NUM» «STREET_NAME1»
«MUNICIPALITY», «PROVINCE»
«POSTAL_CODE»

«SAP_Phone_Number»
«SAP_email_address»

with a copy to their solicitors,

Notices personally delivered shall be deemed to have been validly and effectively given on the day of such delivery. Any notice sent by registered mail shall be deemed to have been validly and effectively given on the fifth (5^{th}) business day following the date on which it was sent. Any notice sent by email, telegram, electronic facsimile or other similar means of prepaid recorded communication shall be deemed to have been validly and effectively given on the Business Day next following the day on which it was sent. "Business Day" shall mean any day which is not a Saturday or Sunday or a statutory holiday in the Province of Ontario.

8.5 The parties acknowledge that there are no covenants, representations, warranties, agreements or conditions, express or implied, collateral or otherwise, forming part of or in any way affecting or relating to this Agreement save as expressly set out in this Agreement and that this Agreement and all Schedules hereto constitute the entire agreement between the parties and may not be modified except as expressly agreed between the Vendor and Purchaser in writing. This Agreement shall be read with all changes of gender or number required by the context

8.6 If any provision or provisions of this Agreement be declared illegal or unenforceable, it or they shall be considered separate and severable from the Agreement and its remaining provisions shall remain in force and be binding upon the parties hereto as though the said provision or provisions had never been included.

8.7 No act or omission or delay in exercising any right or enforcing any term, covenant or agreement to be performed under this Agreement shall impair such right or be construed as to be a waiver of any default or acquiescence in such failure to perform, unless such waiver shall be given or acknowledged in writing.

8.8 This Agreement to Purchase shall be governed by and construed in accordance with the laws of the Province of Ontario.

8.9 The offer to purchase contained herein is personal to the Vendor and shall not be assigned by the Vendor and does not enure to the benefit of the Vendor's successors or assigns.

8.10 The Vendor warrants that, except to the extent such consent has been obtained, spousal consent is not necessary to this transaction and on Closing will not be necessary under the provision of the *Family Law Act*, R.S.O. 1990, c. F.3.

8.11 The Purchaser may, in its sole discretion and at its sole expense register this Agreement to Purchase or notice thereof on title to the Lands.

8.12 Where each of the Vendor and the Purchaser retain a solicitor to complete this Agreement and where the transaction contemplated herein will be completed by electronic registration pursuant to Part III of the *Land Registration Reform Act*, R.S.O. 1990, c. L.4 and any amendments thereto, the Vendor and the Purchaser acknowledge and agree that the delivery of documents and the release thereof to the Vendor and the Purchaser may, at the solicitor's discretion; (a) not occur contemporaneously with the registration of the Transfer/Deed of Land (and other registrable) documentation), and (b) be subject to conditions whereby the solicitor receiving documents and/or money will be required to hold them in trust and not release them except in accordance with the terms of a written agreement between the solicitors

8.13 The provisions of the attached Schedules "A" and "B" shall form part of this Agreement as if set out herein.

8.14 The Vendor represents and warrants and covenants that it is not now and on Closing will not be a non-resident of Canada within the meaning of the *Income Tax Act (Canada)*.

8.15 The Purchaser shall have the right to assign all or any part of its interest in this Agreement and any or all rights, privileges and benefits accruing to the Purchaser hereunder without the consent of the Vendor prior to or on the Closing. Upon and to the extent of such assignment, this Agreement shall thenceforth be construed as if originally made with such assignee or assignees instead of the Purchaser and the Purchaser shall, to the extent of such assignment, thereupon be relieved of all liabilities and obligations whatsoever arising out of this Agreement.

8.16 The parties hereto agree that any representations or covenants contained in this Agreement shall not merge on Closing, but survive and continue in full force and effect thereafter, but only as to the accuracy of the representation or covenant as at the date of completion of this Agreement.

8.17 This Agreement may be executed in one or more counterparts, each of which shall be deemed an original and together shall constitute one and the same agreement. Counterparts may be executed either in original or by electronic means, including, without limitation, by facsimile transmission or by electronic delivery in portable document format (".pdf") or tagged image file format (".tif") and the parties shall adopt any signatures received by electronic means as original signatures of the Parties; provided, however that any party providing its signature in such manner shall promptly forward to the other party an original signed copy of this Agreement which was so delivered electronically.

8.18 The Vendor covenants and agrees to execute if necessary, at no further cost or condition to the Purchaser except payment of the Vendor's reasonable out-of-pocket costs, such other instruments, plans and documents as may reasonably be required by the Purchaser to effect the registration of any right or interest transferred hereunder or notice of this Agreement on title to the Lands.

8.19 The Purchaser agrees to pay the Vendor's reasonable legal costs in connection with this transaction.

8.20 The Vendor represents that the Vendor is at least 18 years of age.

IN WITNESS WHEREOF the parties hereto have hereunto set their respective hands and seals to this Agreement of Purchase and Sale.

PURCHASER:

This Offer is dated the day of 20__.

HYDRO ONE NETWORKS INC.

HYDRO ONE
HST 870865821RT0001

Per: _____
Name: Ranjit Multani
Title: Manager, Facilities & Real Estate Acquisition

I have authority to bind the Corporation

HYDRO ONE NETWORKS INC.

HYDRO ONE
HST 870865821RT0001

Per: _____
Name: Erin Kelly
Title: Director, Facilities & Real Estate

I have authority to bind the Corporation

VENDOR:

The undersigned Vendor hereby accepts the above offer and covenants, promises and agrees to and with the Purchaser to duly carry out the same on the terms and conditions above mentioned.

Dated and accepted as at this day of 20___.

WITNESS: **VENDOR:**

_____ _____ l/s
Name: «Real_Estate_Representative» Name: **«Owner_1_name_for_letters»**

Address: 1800 Main Street East
Milton, ON L9T 7S3

_____ _____ l/s
Name: «Real_Estate_Representative» Name: **«Owner_2_name_for_letters»**

Address: 1800 Main Street East
Milton, ON L9T 7S3

_____

_____ _____ l/s
Name: «Real_Estate_Representative» Name: **«Owner_3_name_for_letters»**

Address: 1800 Main Street East
Milton, ON L9T 7S3

The undersigned Spouse of the Vendor hereby consents to the disposition evidenced herein pursuant to the provisions of the *Family Law Act*, R.S.O. 1990, c.F.3, and amendments thereto.

In consideration of One Dollar ($1.00), the receipt of which from the Purchaser is hereby acknowledged, the undersigned Spouse of the Vendor hereby agrees with the Purchaser that he/she will execute all necessary or incidental documents to give full force and effect to the sale evidenced herein.

WITNESS:	**SPOUSE OF VENDOR:**
	l/s
Name: «Real_Estate_Representative»	Name: **Property Vendor Spouse Name**

Address: 1800 Main Street East
Milton, ON L9T 7S3

SCHEDULE “A”

The Property is more particularly described as follows:

«Legal_Description»

SCHEDULE “B”

PERMITTED ENCUMBRANCES

The parties agree that title on Closing may be subject to, and will be acceptable to the Purchaser, as follows:

[NTD: the Easement Agreement.]

SYSTEM IMPACT ASSESSMENT

Please refer to **Attachment 1** for the Final System Impact Assessment ("SIA") prepared by the Independent Electricity System Operator (SIA reference # CAA 2019-666).

The SIA concludes that the proposed connection of the project is expected to have no material adverse impact on the reliability of the integrated power system, provided that all requirements in this report are implemented.

Hydro One confirms that it will implement the requirements noted by the IESO in the SIA.

System Impact Assessment Report

Final - Public

CAA ID: 2019-666
Project: West of Chatham Transmission Development
Connection Applicant: Hydro One Networks Inc.

April 1st, 2022

ieso
Connecting Today.
Powering Tomorrow.

Acknowledgement

The IESO wishes to acknowledge the assistance of Hydro One in completing this assessment.

Disclaimers

IESO

This report has been prepared solely for the purpose of assessing whether the connection applicant's proposed connection with the IESO-controlled grid would have an adverse impact on the reliability of the integrated power system and whether the IESO should issue a notice of conditional approval or disapproval of the proposed connection under Chapter 4, section 6 of the Market Rules.

Conditional approval of the project is based on information provided to the IESO by the connection applicant and Hydro One at the time the assessment was carried out. The IESO assumes no responsibility for the accuracy or completeness of such information, including the results of studies carried out by Hydro One at the request of the IESO. Furthermore, the conditional approval is subject to further consideration due to changes to this information, or to additional information that may become available after the conditional approval has been granted.

If the connection applicant has engaged a consultant to perform connection assessment studies, the connection applicant acknowledges that the IESO will be relying on such studies in conducting its assessment and that the IESO assumes no responsibility for the accuracy or completeness of such studies including, without limitation, any changes to IESO base case models made by the consultant. The IESO reserves the right to repeat any or all connection studies performed by the consultant if necessary to meet IESO requirements.

Conditional approval of the proposed connection means that there are no significant reliability issues or concerns that would prevent connection of the proposed project to the IESO-controlled grid. However, the conditional approval does not ensure that a project will meet all connection requirements. In addition, further issues or concerns may be identified by the transmitter(s) during the detailed design phase that may require changes to equipment characteristics and/or configuration to ensure compliance with physical or equipment limitations, or with the Transmission System Code, before connection can be made.

This report has not been prepared for any other purpose and should not be used or relied upon by any person for another purpose. This report has been prepared solely for use by the connection applicant and the IESO in accordance with Chapter 4, section 6 of the Market Rules. This report does not in any way constitute an endorsement of the proposed connection for the purposes of obtaining a contract with the IESO for the procurement of supply, generation, demand response, demand management or ancillary services.

The IESO assumes no responsibility to any third party for any use, which it makes of this report. Any liability which the IESO may have to the connection applicant in respect of this report is governed by Chapter 1, section 13 of the Market Rules. In the event that the IESO provides a draft of this report to the connection applicant, the connection applicant must be aware that the IESO may revise drafts of this report at any time in its sole discretion without notice to the connection applicant. Although the IESO will use its best efforts to advise you of any such changes, it is the responsibility of the connection applicant to ensure that the most recent version of this report is being used.

Hydro One

The results reported in this report are based on the information available to Hydro One, at the time of the study, suitable for a System Impact Assessment of this connection proposal.

The short circuit and thermal loading levels have been computed based on the information available at the time of the study. These levels may be higher or lower if the connection information changes as a result of, but not limited to, subsequent design modifications or when more accurate test measurement data is available.

This study does not assess the short circuit or thermal loading impact of the proposed facilities on load and generation customers.

In this report, short circuit adequacy is assessed only for Hydro One circuit breakers. The short circuit results are only for the purpose of assessing the capabilities of existing Hydro One circuit breakers and identifying upgrades required to incorporate the proposed facilities. These results should not be used in the design and engineering of any new or existing facilities. The necessary data will be provided by Hydro One and discussed with any connection applicant upon request.

The ampacity ratings of Hydro One facilities are established based on assumptions used in Hydro One for power system planning studies. The actual ampacity ratings during operations may be determined in real-time and are based on actual system conditions, including ambient temperature, wind speed and facility loading, and may be higher or lower than those stated in this study.

The additional facilities or upgrades which are required to incorporate the proposed facilities have been identified to the extent permitted by a System Impact Assessment under the current IESO Connection Assessment and Approval process. Additional facility studies may be necessary to confirm constructability and the time required for construction. Further studies at more advanced stages of the project development may identify additional facilities that need to be provided or that require upgrading.

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List of Tables

Project Description

Hydro One Networks Inc. (the "connection applicant" and "transmitter") is planning to build the following facilities (the "project") to supply the expected load growth west of Chatham:

- Lakeshore Transformer Station (TS): a new transmission facility at Leamington Junction, 49 km from Chatham Switching Station (SS), which will sectionalize and provide termination for 230 kV circuits C21J, C22J, C23Z, and C24Z. Lakeshore TS will also include termination for the existing H38 and H39 circuits from Leamington Junction supplying Leamington TS, and will have two capacitor banks rated 195 Mvar at 249.4 kV each.
- South Middle Road TS: a new transformation facility supplied by two 1 km, 230 kV lines from Lakeshore TS, namely H75 and H76. South Middle Road TS is planned to include two Dual Element Spot Networks (DESNs), namely DESN 1 and DESN 2. Each DESN includes two 215.5/27.6/27.6 kV transformers that will each supply up to 206 MW of load starting in Q3, 2022.
- Circuits C87H and C88H: two new 49 km, 230 kV circuits from Chatham SS to Lakeshore TS.

The connection applicant understands that the load addition at South Middle Road TS could result in thermal overloads on the 230 kV circuits between Lambton TS and Chatham SS and has started working with the IESO to reinforce the transmission system to address this problem. During the interim period before future transmission reinforcement is in place, the connection applicant will allow the use of higher ratings for L28C and L29C, as shown in Table 16 in Appendix D of this report.

The connection applicant understands that the load addition at South Middle Road TS could result in voltage level violations during outage conditions; thus, all capacitors at South Middle Road TS are proposed to be automatically tripped for system over-voltage conditions as shown in Table 36 in Appendix E of this report, and all load at South Middle Road TS will automatically be tripped for system under-voltage conditions as shown in section E.11 of this report.

Figure 1 in Appendix C of this report shows a simplified single line diagram for the connection of the project to the local transmission system. It also shows the preliminary names for the circuits after sectionalized at Lakeshore TS.

The project is planned to connect in three stages:

- Stage 1: Lakeshore TS and DESN 1 at South Middle Road TS (Q3, 2022)
- Stage 2: DESN 2 at South Middle Road TS (Q3, 2025)
- Stage 3: C87H and C88H (Q4, 2025)

Notification of Conditional Approval

This assessment concludes that the proposed connection of the project is expected to have no material adverse impact on the reliability of the integrated power system, provided that all requirements in this report are implemented. Therefore, the assessment supports the release of the Notification of Conditional Approval for connection of the project.

Assessment Findings

System studies were carried out to identify the impact of the project on loading of transmission facilities, system voltages, voltage stability, load security and restoration of the Ontario Resource and Transmission Adequacy Criteria (ORTAC) and in line with applicable reliability standards. The studied scenarios and main assumptions are available in Appendix D of this report. The detailed study results are available in Appendix E of this report. Based on the assessment results, we have identified the following assessment findings.

Findings applicable to the completion of all stages of the project

1. The incorporation of the project and the sectionalising of the 230 kV circuits C21J, C22J, C23Z and C24Z will result in:
    a. new contingencies, including loss of two adjacent circuits on common structure, as described in Table 1. The complete list of new contingencies are described in 0Appendix C of this report.

Table 1: New Contingencies due to Loss of Two Adjacent Circuits on Common Structure

C42H and C64H	C43H and C65H	C87H and C88H
H25J and H26J	H38 and H39	H53 and H54
H25J and H53	H26J and H54	H75 and H76

    b. changes to the selection matrices of Keith Remedial Action Scheme (RAS), Lauzon RAS, and Lakeshore RAS (formally know as Leamington RAS) as described in Section E.11 of this report.
2. With all transmission elements in-service and with Brighton Beach Customer Generation Station (CGS) out-of-service, under peak load conditions and with no transfers to or from Michigan on J5D, the incorporation of the project could result in:
    a. thermal overloads on L28C (or L29C) following the loss of its companion circuit L29C (or L28C). Up to the total South Middle Road TS load, 412 MW, would need to be rejected to prevent flows exceeding short-term emergency ratings. Under these system conditions, interrupting more than 150 MW of load is a violation of the ORTAC load security criteria.
    b. thermal overloads on L28C immediately following recognized double contingencies: simultaneous loss of L29C and L24L, simultaneous loss of W44LC and S47C, and simultaneous loss of W44LC and W45LS. Up to 283 MW of load at South Middle Road TS would need to be rejected by the revised Lakeshore RAS to prevent flows exceeding short-term emergency ratings. Interrupting 283 MW of load is acceptable under ORTAC load security criteria for these system conditions.
3. With all transmission elements in-service and with Brighton Beach CGS in-service, under peak load conditions and with no transfers on J5D, the incorporation of the project could result in exacerbated thermal overloads on J3E and/or J4E following contingencies: loss of J3E, loss of J4E, or the simultaneous loss of H25J and H26J contingency. The issues could be mitigated by automatically disconnecting Brighton Beach CGS plant by the Keith RAS following the loss of J3E and loss of J4E, and by Lakeshore RAS following the simultaneous loss of H25J and H26J.
4. During either L28C or L29C outages and with Brighton Beach CGS in-service, under peak load conditions, the incorporation of the project will reduce the power transfer capability out of Lambton and Scott area by more than 5%, violating the ORTAC transfer capability criterion. Up to 125 MW of load at South Middle Road TS would need to be curtailed to prevent the ORTAC

transfer capability criterion violation. Under these system conditions, curtailing any load is a violation of the ORTAC load security criteria.

5. During either L28C or L29C outages and with Brighton Beach CGS in-service, under peak load conditions and with no transfers on J5D, the incorporation of the project could result in:
    a. thermal overloads on either L29C or L28C following the loss of Brighton Beach. CGS This can be the result of a fault within the Brighton Beach facility, or action of the Keith RAS or Lakeshore RAS in response to any of the events listed in finding #3. The overloads could be mitigated by rejecting up the total South Middle Road TS load, 412 MW, by the revised Lakeshore RAS. Under these system conditions, interrupting more than 150 MW of load is a violation of the ORTAC load security criteria;
    b. thermal overloads on L28C or L29C following recognized double contingencies: simultaneous loss of W44LC and S47C, simultaneous loss of W44LC and W45LS. Up to 412 MW of load at South Middle Road TS is to be rejected by the revised Lakeshore RAS to prevent ORTAC thermal and voltage criteria violations. Rejecting 412 MW of load is acceptable under ORTAC load security criteria for these system conditions.
6. During either C42H, C43H, C64H, C65H, C87H or C88H outages and with Brighton Beach CGS in-service, under peak load conditions and with no transfers on J5D, the incorporation of the project could result in thermal overloads on C43H and C65H following recognized double contingencies: simultaneous loss of C87H and C88H and simultaneous loss of C42H and C64H. Up to 50 MW of load at South Middle Road TS would need to be rejected by the revised Lakeshore RAS to prevent ORTAC thermal and voltage criteria violations. Rejecting 50 MW of load is acceptable under ORTAC load security criteria for these system conditions.
7. With all transmission elements in-service and with Brighton Beach CGS in-service, under peak load conditions and maximum import levels from Michigan (i.e. 1550 MW), the incorporation of the project could result in exacerbated thermal overloads on Z1E (or Z7E) following the loss of Z7E (or Z1E). The issues could be mitigated by rejecting up to the entire Brighton Beach CGS plant through arming Keith RAS. Consequently, the loss of entire Brighton Beach CGS causes thermal overloads on either L29C or L28C as identified in finding #3. Thermal overloads on either L29C or L28C could be mitigated by rejecting up to the total South Middle Road TS load,412 MW, through arming the revised Lakeshore RAS. Under these system conditions, rejecting Disconnecting more than 150 MW of load is a violation of the ORTAC load security criteria.
8. With all transmission elements in-service and with Brighton Beach CGS out-of-service, under peak load conditions and with existing maximum import level from Michigan, the incorporation of the project could result in:
    a. pre-contingency thermal overloads on L28C in summer. The issue could be mitigated by reducing the import from 1550 MW to 1500 MW or by dispatching Brighton Beach CGS in-service;
    b. thermal overloads on L28C following the loss of J5D. Up to the total South Middle Road TS load, 412 MW, would need to be rejected by the revised Lakeshore RAS to prevent ORTAC thermal violations. Under these system conditions, disconnecting more than 150 MW of load is a violation of the ORTAC load security criteria.
9. With all transmission elements in-service and with Brighton Beach CGS out-of-service, the exports to Michigan can reach the existing maximum export level (i.e. 1650 MW).
10. The project could increase the likelihood that the Phase Angle Regulator (PAR) on 230 kV intertie circuit J5D is not able to control the free power flow from Michigan to Ontario on J5D from 3 %

to 13 %, and decreases the likelihood of the PAR not being able to control the free power flow from Ontario to Michigan on J5D from 15 %to 5 %.

11. After the incorporation of the project, more than 250 MW of load at South Middle Road TS could be interrupted as identified in Findings #2a, #2b #5, #7, and #8b. The ORTAC requires all load in excess of 250 MW to be restored within 30 minutes. Hydro One has indicated that this restoration target cannot be met.

Findings, in addition to those above, applicable prior to completion of Stage 3

12. Before the incorporation of C87H and C88H, with all transmission elements in-service and with Brighton Beach CGS out-of-service, under peak load conditions and with no transfers on J5D, the incorporation of South Middle Road TS could result in:
    a. thermal overloads on C43H and/or C65H following the loss of C42H, C43H, C64H or C65H. Up to 115 MW of load at South Middle Road TS would need to be rejected by the revised Lakeshore RAS to prevent ORTAC thermal violations. Rejecting 115 MW of load is acceptable under ORTAC load security criteria for these system conditions;
    b. thermal overloads on the remaining circuits in the Chatham to Lakeshore corridor following recognized double contingencies: simultaneous loss of C42H and C64H, and simultaneous loss of C43H and C65H. Up to 412 MW of load at South Middle Road TS would need to be rejected by the revised Lakeshore RAS to prevent ORTAC thermal criteria violations. Rejecting 412 MW of load is acceptable under ORTAC load security criteria for these system conditions.
13. Before the incorporation of C87H and C88H, during either C42H, C43H, C64H or C65H outages and with Brighton Beach CGS in-service, under peak load conditions and with no transfers on J5D, the incorporation of South Middle Road TS could result in thermal overloads on the remaining circuits in the Chatham to Lakeshore corridor following recognized double contingencies: simultaneous loss of C42H and C64H, and simultaneous loss of C43H and C65H. Up to 315 MW of load at South Middle Road TS would need to be rejected by the revised Lakeshore RAS to prevent ORTAC thermal and voltage criteria violations. Rejecting 315 MW of load is acceptable under ORTAC load security criteria for these system conditions.
14. Before the incorporation of C87H and C88H, with all transmission elements in-service and with Brighton Beach CGS out-of-service, under peak load conditions, the maximum export to Michigan on J5D, L4D, L51D and B3N could be reduced from 1650 MW to 1200 MW in both summer and winter due to pre-contingency thermal overloads on C43H and C65H. If Brighton Beach CGS is assumed in-service, the maximum export to Michigan on these circuits will remain unchanged.
15. Before the incorporation of C87H and C88H, more than 250 MW of load at South Middle Road TS, Leamington TS, Double Diamond II CTS (formerly Aphria CTS) and Mastron II CTS could be interrupted as identified in Findings #12b and # 13. The ORTAC requires all load in excess of 250 MW to be restored within 30 minutes. Hydro One has indicated that this restoration target cannot be met.

IESO Requirements for Connection

Specific Requirements

The following specific requirements are applicable for the incorporation of the project and its connection facilities. Specific requirements pertain to the level of reactive power compensation

needed, operation restrictions, remedial action scheme, upgrading of equipment and any project specific items not covered in the general requirements.

1. Hydro One is required to revise Keith RAS, Lauzon RAS, and Lakeshore RAS (formally Leamington RAS) as identified in Section E.11 of this report. The revised Lakeshore RAS must have full redundancy and separation of the communication channels, and must satisfy the requirements of the NPCC Type I RAS criteria in accordance to section 3.4.1 in ORTAC. Hydro One is required to submit a new Facility Description Document (FDD) for these RASs to the IESO for approval during the Market Registration process, as soon as possible prior to the in-service date of the project. The FDD must contain the finalized RAS matrix as well as expected operating times. The actual operating times must be measured and accepted by the IESO during commissioning, documented as a Performance Validation Record, and posted on Hydro One - IESO secured web portal.

   If the FDD or performance testing as per the Performance Validation Record indicates a change in design or slower than expected operating times than what was assumed in this assessment, then further analysis of the project will need to be done by the IESO.

2. Since the ORTAC load security criteria cannot be met after incorporation of the project as identified in Findings #2a, #4, #5a, #7 and # 8b, Hydro One, is required to obtain an exemption from satisfying the load security criteria, as per Section 7.5 of the ORTAC, for the loads supplied by South Middle Road TS.

3. Since the ORTAC load restoration criteria cannot be met after the project as identified in Findings #11 and #15, Hydro One is required to obtain an exemption from satisfying the load restoration criteria, as per Section 7.5 of the ORTAC, for the loads at South Middle Road TS.

4. Hydro One is also required to install the following:

   a. A local under-voltage L/R scheme that will automatically trip South Middle Road TS load in four equal stages if the voltage at any of South Middle Road 230 kV buses is below 207 kV for more than 5 seconds, with a delay of 3 seconds between stages.

   b. Coordinated local area over-voltage capacitor protection that will include automatically tripping the capacitors at South Middle Road TS as per the settings in Table 36 of section E.11 of this report.

5. Hydro One is required to establish a methodology acceptable to the IESO that addresses the principles for load reduction and load restoration as agreed with their customers, which will inform IESO's operations planning and real time operations of the grid.

6. To facilitate outage planning, Hydro One is required to submit an operating plan that must be finalized and accepted by the IESO at least 6 months before the date of the first outage to incorporate the project that at a minimum includes:

   a. a procedure for taking outages related to the incorporation of Lakeshore TS, C87H and C88H;

   b. a procedure for taking outages to L28C, L29C, W44LC, W45LS and S47C;

   c. a procedure describing how to manually curtail up to the total load at South Middle Road TS within 30 minutes;

   d. a procedure for taking outages related to bringing into service the new Lakeshore RAS and the steps for transitioning away from the existing Leamington RAS.

General Requirements

The connection applicant shall satisfy all applicable requirements specified in the Market Rules, the Transmission System Code (TSC) and reliability standards. Some of the general requirements that are applicable to this project are presented in detail in Appendix A: General Requirements of this report.

Recommendation

Power transformers with a high side, wye grounded winding with terminal voltage greater than 200 kV are subject to North American Electric Reliability Corporation (NERC) standard TPL-007, Transmission System Planned Performance for Geomagnetic Disturbance Events. As per NERC standard TPL-007, the Planning Coordinator in conjunction with its Transmission Planner are required to implement a process(es) to obtain Geomagnetic Disturbance (GMD) measurement data, via geomagnetically-induced currents (GIC) monitors, which will aid in model validation and situational awareness. This data will more accurately support the owner of the applicable power transformer(s) to conduct a thermal impact assessment if required in the future. As such, it is recommended that the connection applicant makes provision(s) to install monitoring equipment for GIC on the new transformer(s).

Appendix A: General Requirements

The connection applicant shall satisfy all applicable requirements specified in the Market Rules, the Transmission System Code and reliability standards. This Section highlights some of the general requirements that are applicable to the project.

1. The connection applicant must notify the IESO at connection.assessments@ieso.ca as soon as they become aware of any changes to the project scope or data used in this assessment. The IESO will determine whether these changes require a re-assessment.
2. Table 3 in the confidential Appendix B: New BPS, BES Elements and Key Facilities (Confidential), shows the new elements after the incorporation of stage 1 for the project that fall within the Northeast Power Coordinating Council's (NPCC) definition of the Bulk Power System (BPS) and/or the North American Electric Reliability Corporation's (NERC) definition of the Bulk Electric System (BES).

   The transmitter shall ensure that the BPS elements are in compliance with the applicable NPCC criteria, and the BES elements in compliance with the applicable NERC reliability standards. To determine the standard requirements that are applicable, the IESO provides mapping tools titled "NPCC Criteria Mapping Spreadsheet" for BPS elements and "NERC Reliability Standard Mapping Tool/Spreadsheet" for BES elements at the IESO's website of Applicability Criteria for Compliance with Reliability Requirements.

   Note, the transmitter may request an exception to the application of the BES definition. The procedure for submitting an application for exemption can be found in Market Manual 11.4: "Ontario Bulk Electric System (BES) Exception" at the IESO's website.

   The IESO's criteria for determining applicability of NERC reliability standards and NPCC Criteria can be found in the Market Manual 11.1: "Applicability Criteria for Compliance with NERC Reliability Standards and NPCC Criteria" at the IESO's website.

   Compliance with these reliability standards will be monitored and assessed as part of the IESO's Ontario Reliability Compliance Program. For more details about compliance with applicable reliability standards reliability standards, the transmitter is encouraged to contact orcp@ieso.ca and also visit the Ontario Reliability Compliance Program webpage.
3. In accordance with Appendix 4.3 of the Market Rules, the connection applicant shall ensure that DESN 1 and DESN 2 at South Middle Road TS have the capability to maintain the power factor within the range of 0.9 lagging and 0.9 leading as measured at the defined meter point of the project.
4. The connection applicant shall ensure that the project's equipment meet the voltage requirements specified in section 4.2 and section 4.3 of the Ontario Resource and Transmission Assessment Criteria (ORTAC).
5. According to Section 6.1.2 of the TSC, the connection applicant must ensure the project's transmission connection equipment is designed to withstand the fault levels in the area. According to Section 6.4.4 of the TSC, if any future system changes result in an increased fault level higher than the project's equipment capability, the connection applicant is required to replace that equipment with higher rated equipment capable of withstanding the increased fault level, up to the maximum fault level specified in Appendix 2 of the TSC.

It is the connection applicant's responsibility to verify that all equipment and circuit breakers within the project are appropriately sized for the local fault levels.The connection applicant shall ensure that the circuit breakers/switchers installed at the project have rated interrupting time that satisfies Appendix 2 of the TSC. Fault interrupting devices installed at the project must be able to interrupt fault currents at the applicable maximum continuous voltage as specified in Section 4.2 and Section 4.3 of ORTAC.

6. The connection applicant shall ensure that the protection systems are designed to satisfy all the requirements of the TSC. New protection systems must be coordinated with existing protection systems. Protection systems within the project shall only trip the appropriate equipment isolating the fault.

   Associated overvoltage protective relaying must be set to ensure that the project's equipment does not automatically trip for voltages up to 5% above the equipment's corresponding maximum continuous voltage as specified in section 4.2 of the ORTAC.

   BPS elements are deemed by the IESO to be essential to system reliability and security and must be protected by redundant protection systems in accordance with Section 8.2 of the TSC. These redundant protection systems must satisfy all requirements of the TSC, and in particular, they must be physically separated and not use common components, common battery banks, or common instrument transformer secondary windings.

   The protection systems for transmission voltage BES elements (whose rated voltage is higher than 100 kV) must be redundant. Redundancy must be present in protective relaying for normal fault clearing and control circuitry associated with protective functions including trip coils of the circuit breakers or other interrupting devices. These redundant protection systems must not use common instrument transformer secondary windings. A single communication system, if used, must be monitored and reported and a single DC supply, if used, must be monitored and reported for both low voltage and open circuit.

   As the electrical system evolves, transmission voltage non-BPS or non-BES elements (whose rated voltage is higher than 100 kV) within the project, may be re-classified as BPS elements or BES elements. The connection applicant is recommended to design the protection systems for these elements according to the protection requirements for BPS elements or have adequate provisions for future upgrade to meet those requirements.

7. In accordance to Reference 4 of Appendix 4.3 of the Market Rules, distributors connected to the IESO-controlled grid with directly connected load facilities of aggregated rating above 20 MVA and with the capability to regulate distribution voltages under load, shall install and maintain facilities and equipment to provide voltage reduction capability. After connecting the project, the connection applicant will have directly connected load facilities of aggregated rating above 20 MVA and the project has the capability to regulate voltages under load. As such, the connection applicant shall install and maintain facilities and equipment to provide voltage reduction capability at the project. Voltage reduction capability represents the capability of reducing demand by lowering the distribution voltage by 3% and 5% within five minutes from receiving directions from the IESO. The IESO uses voltage reductions to reduce load when supply resources are limited. The voltage reduction capability can be provided using the proposed under-load tap changers (ULTC) at the project.
8. The connection applicant has a total peak load at all its owned facilities, including the project, which is greater than 25 MW. According to Section 10.4.6 of Chapter 5 of the Market Rules and

Section 11.3 of the Market Manual 7.1, the connection applicant is required to participate in the automatic Under-Frequency Load Shedding (UFLS) program and must select 35% of total peak load among its owned facilities for under-frequency tripping, based on a date and time specified by the IESO that approximates system peak, according to Section 10.4 of Chapter 5 of the Market Rules.

The UFLS relay connected loads shall be set to achieve the amounts to be shed as stated in Section 11.3 of Market Manual 7.1. Table 2: UFLS Relay Settings summarizes UFLS relay settings as a function of the total peak load of all facilities, including the project, owned by the connection applicant.

Table 2: UFLS Relay Settings

Aggregate Summer Peak Load	UFLS Stage	Frequency Threshold (Hz)	Total Nominal Operating Time (s)	Load Shed at stage as % of Connection Applicant's Load	Cumulative Load Shed at stage as % of Connection Applicant's Load
25 MW or more and less than 50 MW	1	59.5	0.3	≥ 35	≥ 35
50 MW or more and less than 100 MW	1	59.5	0.3	≥ 17	≥ 17
	2	59.1	0.3	≥ 18	≥ 35
100 MW or greater	1	59.5	0.3	7 – 9	7 – 9
	2	59.3	0.3	7 – 9	15 – 17
	3	59.1	0.3	7 – 9	23 – 25
	4	58.9	0.3	7 - 9	32 - 34
	Anti-Stall	59.5	10.0	3 – 4	35 - 37

The connection applicant, in conjunction with the transmitter, must also ensure that capacitor banks connected to the same station bus as the load are shed by UFLS facilities at 59.5 Hz with a time delay of 3 seconds.

The maximum load that can be connected to any single UFLS relay is 150 MW to ensure that the inadvertent operation of a single under-frequency relay during the transient period following a system disturbance does not lead to further system instability.

The IESO will review the requirements annually and inform the relevant market participants of their automatic UFLS obligations.

9. The connection applicant shall ensure that the connection equipment is designed to be fully operational in all reasonably foreseeable ambient conditions. Failures of the connection equipment must be contained within the project and have no adverse impact on the IESO-controlled grid.
10. In accordance with Section 7.4 of Chapter 4 of the Market Rules, the connection applicant shall provide to the IESO the applicable telemetry data listed in Appendix 4.16 of the Market Rules on a continual basis. The data shall be provided in accordance with the performance standards set forth in Appendix 4.20 and Appendix 4.21, subject to Section 7.6A of Chapter 4 of the Market Rules. The whole telemetry list will be finalized during the IESO's Market Registration process.

The connection applicant must install monitoring equipment that meets the requirements set forth in Appendix 2.2 of Chapter 2 of the Market rules. As part of the IESO's Market Registration process, the connection applicant must also complete end to end testing of all necessary telemetry points with the IESO to ensure that standards are met and that sign conventions are understood. All found anomalies must be corrected before IESO's final approval to connect any phase of the project is granted.

11. The connection applicant must initiate the IESO's Market Registration process at least eight months prior to the commencement of any project related outages.

    The connection applicant is required to provide "as-built" equipment data for the project during the IESO Market Registration process. If the submitted equipment data differ materially from the ones used in this assessment, then further analysis of the project may need to be done by the IESO before final approval to connect is granted.

    At the sole discretion of the IESO, performance tests may be required at generation and transmission facilities. The objectives of these tests are to demonstrate that equipment performance meets the IESO requirements, and to confirm models and data are suitable for IESO purposes. The transmitter may also have its own testing requirements. The IESO and the transmitter will coordinate their tests, share measurements and cooperate on analysis to the extent possible.

    Once the IESO's Market Registration process has been successfully completed, the IESO will provide the connection applicant with a Registration Approval Notification (RAN) document, confirming that the project is fully authorized to connect to the IESO-controlled grid. For more details about this process, the connection applicant is encouraged to contact IESO's Market Registration at market.registration@ieso.ca.

12. The connection applicant shall ensure that wholesale revenue metering installations comply with Chapter 6 of the Market Rules. This includes any intermediate project stages such as installation of temporary equipment or the use of mobile transformers. For more details, the connection applicant is encouraged to seek advice from their Metering Service Provider (MSP) or from the IESO metering group in early stages of project design.

13. The connection applicant is currently a participant in the Ontario Power System Restoration Plan. The connection applicant is required to update its restoration participant attachment to include details regarding its proposed project. For more details, please refer to the Market Manual 7.8. Details regarding restoration participant requirements will be finalized during the IESO Market Registration process.

    As currently assessed by the IESO, Table 4 in the confidential Appendix B, shows the new facilities that are classified as Key Facilities after the incorporation of the project. Key Facilities are facilities that are required to establish a Basic Minimum Power System following a system blackout. Testing requirements of Critical Components belonging to Key Facilities are provided in Market Manual 7.8. Key Facility, Basic Minimum Power System and Critical Component terms are defined in the NPCC Glossary of Terms.

14. As per Market Manual 1.4: Connection Assessment and Approval, the connection applicant will be required to provide a status report of its proposed project with respect to its progress upon request of the IESO using the project status report form on the IESO website. Failure to comply with project status requirements listed in Market Manual 1.4: Connection Assessment and Approval will result in the project being withdrawn.

The connection applicant will be required to also provide updates and notifications in order for the IESO to determine if the project is "committed" as per Section 3.3 of Market Manual 1.4: Connection Assessment and Approval.

Appendix B: New BPS, BES Elements and Key Facilities (Confidential)

Appendix C: Project Data (Confidential)

Appendix D: Study Scope of Work (Confidential)

Appendix E: Detailed Study Results (Confidential)

Appendix F: Short Circuit Assessments (Confidential)

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CUSTOMER IMPACT ASSESSMENT

Please refer to **Attachment 1** for the Final Customer Impact Assessment prepared by Hydro One.

483 Bay Street
Toronto, Ontario
M5G 2P5

CUSTOMER IMPACT ASSESSMENT

WEST OF CHATHAM TRANSMISSION DEVELOPMENT

Lakeshore TS
South Middle Road TS
2 - Circuit 230kV Chatham SS x Lakeshore TS Line

CIA ID: 2020-09

Revision: **FINAL**

Date: **April 13, 2022**

Issued by: **Transmission Planning Department**
Hydro One Networks Inc.

Prepared by:

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DISCLAIMER

This Customer Impact Assessment was prepared based on information available about the connection of the West of Chatham Transmission Development projects. It is intended to highlight significant impacts, if any, to affected transmission customers early in the project development process and thus allow an opportunity for these parties to bring forward any concerns that they may have including those needed for the review of the connection and for any possible application for "leave to construct". Subsequent changes **to the required modifications** or the implementation plan may affect the impacts of the proposed connection identified in Customer Impact Assessment. The results of this Customer Impact Assessment are also subject to change to accommodate the requirements of the IESO and other regulatory or municipal authority requirements.

Hydro One Networks shall not be liable to any third party which uses the results of the Customer Impact Assessment and Addendums under any circumstances whatsoever, for any indirect or consequential damages, loss of profit or revenues, business interruption losses, loss of contract or loss of goodwill, special damages, punitive or exemplary damages, whether any of the said liability, loss or damages, arises in contract, tort or otherwise.

EXECUTIVE SUMMARY

Hydro One Inc. proposes to develop four projects in the Windsor – Essex Region in the medium term to reinforce the bulk transmission west of Chatham to provide necessary facilities to meet the requirements of the rapidly increasing load demand in the Kingsville – Leamington area. The West of Chatham Transmission Development projects (Figure 1) involve the establishment of:

- Lakeshore TS near the existing Leamington Junction (planned in-service, Q2 2022);
- South Middle Road TS near Lakeshore TS (planned in-service, Q2 2022);
- A second DESN at South Middle Road TS (planned in-service, Q3 2025); and
- A 2-circuit 230 kV line, about 49 km, between Chatham SS and Lakeshore TS (planned in-service, Q4 2025).

The project also involves the modification, expansion and relocation of the existing Leamington Remedial Action System (RAS) which would become the Lakeshore RAS, and the modification of the existing Keith RAS and Lauzon RAS.

This Customer Impact Assessment (CIA) is concerned with the potential impact of the above facilities on transmission connected customers in the area.

An assessment of voltage performance and loading capability of the transmission facilities in the area has been carried out and documented in an IESO System Impact Assessment (**SIA**) Final Report, CAA ID 2019-666: West of Chatham Transmission Development, dated April 1, 2022. The report indicates that voltage performance of all connection points would remain within the Market Rules requirements, and that with the application of modified Keith RAS, Lauzon RAS and Lakeshore RAS (currently Leamington RAS), as specified by the SIA, the thermal loading of the facilities would remain within their ratings.

The following potential impacts on existing customers in the area are reviewed in this CIA:

- Short circuit impact
- Impact on customer power supply reliability.

The findings of this CIA are as follows:

1. The short-circuit levels observed at customer connection points, following the incorporation of the West of Chatham Transmission Development projects, are within the requirements of the Transmission System Code (TSC). The largest percentage increase in symmetrical short circuit current due to these projects is about 146%.

2. The incorporation of the West of Chatham Transmission Development projects, specifically the Lakeshore TS and the new Chatham SS x Lakeshore TS 2-circuit 230 kV line, will materially improve the power supply reliability for customers in the Windsor – Essex area. The establishment of Lakeshore TS into which all the 230 kV circuits (C21J, C22J, C23Z and C24Z) would be terminated, with full switching, effectively reduces to 60% or less, the length of each circuit. Hence the exposure of each resulting circuit to faults would be reduced and supply reliability for connected customers would be increased.

3. The Lakeshore RAS would affect only customers connected to the radial Lakeshore TS x Leamington TS circuits (H38, H39) and the new South Middle Road TS. Hence the reliability of supply to other customers in the Windsor – Essex Region would not be affected.

CUSTOMER IMPACT ASSESSMENT
WEST OF CHATHAM TRANSMISSION DEVELOPMENT

1.0 INTRODUCTION

1.1 Background

Hydro One Inc. proposes to develop four projects in the Windsor – Essex Region in the medium term to reinforce the bulk transmission west of Chatham and to provide necessary facilities to meet the requirements of the rapidly increasing load demand in the Kingsville – Leamington area. The projects (Figure 1) are:

- **Lakeshore TS**
  This station will be established in the vicinity of the existing Leamington Junction in the Town of Lakeshore in Essex County. All the 230 kV circuits C21J, C22J, C23Z and C24Z at this junction will be terminated at this station with full switching. It is planned to be in-service in Q2 2022.

- **South Middle Road TS**
  This station will be established in the vicinity of the new Lakeshore TS. Both stations will be located in the same Hydro One property. The station will be sized for two 2 x 75/100/125 MVA, 230/27.6-27.6 kV DESNs. For each DESN, low voltage facilities will consist of 12 feeder positions, 2 capacitor banks, and associated switching facilities.
  - DESN #1 is planned to be in-service in Q2 2022.
  - DESN #2 is planned to be in-service in Q3 2025.

- **2-Circuit 230 kV Chatham SS x Lakeshore TS Line**
  A new 2-circuit 230 kV line, about 49 km, is planned to be developed between Chatham SS and Lakeshore TS. This line is planned to be in-service in Q4 2025.

The existing Leamington Remedial Action System (RAS) is to be modified to account for circuit changes as a result of Lakeshore TS; and to include the following: South Middle Road TS feeders, the new Chatham SS x Lakeshore TS circuits, and contingencies of some circuits east of Chatham. The modified RAS will be relocated to Lakeshore TS. The Keith RAS and Lauzon RAS will also be modified to reflect changes in circuit configuration due to Lakeshore TS.

In accordance with Section 6 of the Ontario Energy Board's Transmission System Code, Hydro One Networks Inc (Hydro One) has carried out this Customer Impact Assessment (CIA) study to assess the impact of the proposed projects on existing customers in the affected area. The primary focus of this assessment is possible short circuit and reliability impact on transmission connected customers following the incorporation of the West of Chatham Transmission Development projects. This study does not evaluate the overall impact of these projects on the bulk electricity system. The impact of the new facilities on the bulk electricity system is the subject of the System Impact Assessment (SIA) carried out by the Independent Electricity System Operator (IESO).

As part of the Connection Assessment and Approval (**CAA**) process, the IESO has carried out a System Impact Assessment (**SIA**) for the West of Chatham Transmission Development projects, and has documented the findings in the Final Report, CAA ID 2019-666: West of Chatham Transmission Development, dated April 1, 2022.

Transmission connected customers potentially impacted by the incorporation of this project were requested to provide comments to a draft report of this CIA study. The review period ended on December 1, 2021. All comments received on the draft report were addressed.

1.3 Customer List

The transmission customers in the area are;

- Brighton Beach Power LP
- East Lake St Clair Wind LP
- East Windsor Cogeneration LP
- E.L.K. Energy Inc
- Entegrus Powerlines Inc
- Enwin Utilities Ltd.
- Erieau Wind LP
- Essex Powerlines Corp.
- Gosfield Wind LP
- Greenfield South Power Corporation
- Hydro One Networks Inc
- Kruger Energy Port Alma LP
- North Kent Wind 1 LP
- Pte-Aux Roches Wind Inc
- Romney Energy Centre LP
- South Kent Wind LP
- SP Belle River Wind LP
- Talbot Windfarm LP
- TerraForm IWG Ontario Holdings, LLC
- TransAlta Energy Corporation
- West Windsor Power
- Windsor Solar LP
- 2016 Comber Wind LP

Table 1 lists all stations and supply circuits of the existing transmission customers in the area.

Table 1: Transmission Customers in the Area

No.	Station	Connection	Connected Customer
1	Leamington TS	230 kV C21J, C22J	• Hydro One Networks Inc
2	Malden TS	230 kV C21J, C22J	• Enwin Utilities Ltd. • Essex Powerlines Corp. • Hydro One Networks Inc.
3	Keith TS	230 kV C21J, C22J, J5D 115 kV J3E, J4E, J1B, J2N	• Brighton Beach Power LP • West Windsor Power • Enwin Utilities Ltd. • Essex Powerlines Corp. • Hydro one Networks Inc.
4	Lauzon TS	230 kV C23Z, 24Z	• Enwin Utilities Ltd. • Hydro One Networks Inc. • Essex Powerlines Corp.
5	Essex TS	115 kV J3E, J4E Z1E, Z7E	• Enwin Utilities Ltd.
6	Crawford TS	115 kV J3E, J4E	• Enwin Utilities Ltd.
7	Chrysler MTS, General Motors MTS, Ford Annex MTS, Ford Windsor MTS	115 kV E8F, E9F	• Enwin Utilities Ltd.
8	Walker TS	115 kV Z1E, Z7E	• Enwin Utilities Ltd.
9	Walker MTS #2	115 kV Z1E, Z7E	• Enwin Utilities Ltd.
10	Ford Essex CTS	115 kV Z1E, Z7E	• Enwin Utilities Ltd.

11	Windsor TransAlta CGS	115 kV Z1E	• TransAlta Energy Corporation
12	Belle River TS	115 kV K2Z, K6Z	• Hydro One Networks Inc.
13	Kingsville TS	115 kV K2Z, K6Z	• E.L.K. Energy Inc. • Essex Powerlines Corp. • Hydro One Networks Inc.
14	Tilbury TS	115 kV K2Z	• Hydro One Networks Inc.
15	Tilbury West DS	115 kV K2Z	• Hydro One Networks Inc.
16	Comber WFCGS	230 kV C23Z, C24Z	• 2016 Comber Wind LP
17	Port Alma #1 WFCGS	230 kV C23Z, C24Z	• Kruger Energy Port Alma LP
18	Port Alma #2 WFCGS	230 kV C23Z, C24Z	• Kruger Energy Port Alma LP
19	Dillon WFCGS	230 kV C23Z	• TerraForm IWG Ontario Holdings, LLC
20	Belle River CGS	230 kV C23Z	• SP Belle River Wind LP
21	Gosfield WFCGS	115 kV K2Z	• Gosfield Wind LP
22	Pte-Aux Roches WFCGS	115 kV K6Z	• Pte-Aux Roches Wind Inc.
23	East Windsor CGS	115 kV E8F and E9F	• East Windsor Cogeneration LP
24	Windsor Solar CGS	115 kV Z1E	• Windsor Solar LP
25	Romney CGS	230 kV C21J	• Romney Energy Centre LP
26	South Kent Sattern CGS, Railbed CGS	230 kV C31	• South Kent Wind LP
27	East Lake St Clair CGS	230 kV L29C	• East Lake St Clair Wind LP
28	North Kent 1 CGS	230 kV L29C	• North Kent Wind 1 LP
29	GSPC CGS	230 kV L28C	• Greenfield South Power Corporation
30	Spence CGS	230 kV Spence SS	• Talbot Windfarm LP
31	Erieau WF CGS	230 kV S47C	• Erieau Wind LP
32	Kent TS	230 kV L28C, L29C	• Hydro One Inc • Entegrus Powerlines Inc

2.0 Customer Impact Assessment Scope

The purpose of this CIA is to assess the potential impacts of the West of Chatham Transmission Development projects on the existing transmission-connected load and generation customers in the Windsor - Essex area. This is in accordance with the requirements of the Ontario Energy Board's Transmission System Code.

A review of the following potential impacts on existing customers is conducted in this CIA:

- Short circuit impact at the connection point
- Impact on customer power supply reliability

3.0 LOAD FLOW

As documented in the SIA report, the results of load flow studies indicate thermal overload of various circuits following recognized contingencies. These overloads will be managed using the modified Remedial Action Systems (RAS). The report indicates that voltage levels and voltage changes are within Ontario Resource and Transmission Criteria (ORTAC) criteria for all 230 kV and 115 kV buses in the West system. The thermal overload of circuits is the consequence of the inadequacy of the existing transmission network facilities in the West system. The modified Remedial Action Systems, which will include contingencies east of Chatham in the Lakeshore RAS, will be used to manage this inadequacy pending future transmission development.

Only South Middle Road TS and stations connected to the Lakeshore TS x Leamington TS circuits (H38, H39) will participate in the Lakeshore RAS load rejection.

4.0 SHORT-CIRCUIT STUDY ANALYSIS

Short-circuit studies were carried out to determine fault levels at customer connection points in the Windsor – Essex area before, and after the incorporation of the West of Chatham Transmission Development projects in Q4 2025. These results would help customers determine if the proposed projects result in short-circuit levels that are within the ratings of their existing equipment.

For the determination of fault levels, pre-fault voltages of 250 kV, 127 kV, 29 kV and 14.2 kV are assumed at 230 kV, 115 kV, 27.6 kV and 13.8 kV buses, respectively.

4.1 Prior to Incorporation of the West of Chatham Transmission Development Projects

Short-circuit studies were initially carried out to determine fault levels in the Windsor – Essex area before the incorporation of any of the West of Chatham Transmission Development projects in Q2 2022. The study results are summarized in Table 2, showing both symmetric and asymmetric fault currents.

As shown in Table 2, short circuit levels at all connection points are within the limits set out in Appendix 2 of the TSC. The applicable TSC limits for this project are summarized below for reference:

Nominal Voltage (kV)	Max 3-Phase Fault (kA)	Max SLG Fault (kA)
230	63	63
115	50	50
27.6 (4-wire)	17	12
13.8	21	10

4.2 With the Incorporation of West of Chatham Transmission Development Projects

The results of short circuit studies following the incorporation of all the West of Chatham Transmission Development projects are shown in Table 3 along with the relative increase due to the projects.

The results in Table 3 show that short circuit levels increase at all customers' interconnection points in the Windsor – Essex area. Though the 230 kV connection points in the surrounding area of Lakeshore TS will experience an increase of up to 146% compared to their present short-circuit levels, these levels remain within the limits of the Transmission System Code. The area 115 kV, 27.6 kV and 13.8 kV customers will encounter a slight increase of up to 6%.

All area customers are advised to review the short circuit results to ensure that their equipment ratings are adequate.

5.0 SUPPLY RELIABILITY TO CUSTOMERS

The IESO SIA report concluded that the West of Chatham Transmission Development projects do not have a material adverse impact on the reliability of the integrated power system. It further

concluded that no thermal overload concerns were identified in the course of the assessment, and that voltage performance at customer connection points meets Market Rules requirements.

The incorporation of the West of Chatham Transmission Development projects, specifically the Lakeshore TS and the new Chatham SS x Lakeshore TS line, will materially improve the power supply reliability for customers in the Windsor – Essex area.

The addition of the new 2-circuit Chatham SS x Lakeshore TS line will reinforce the bulk transmission system in the Windsor – Essex area in order to reliably supply the forecast load in the Kingsville - Leamington area and the broader Windsor – Essex region.

The establishment of Lakeshore TS into which all the 230 kV circuits (C21J, C22J, C23Z and C24Z) would be terminated with full switching reduces, to 60% or less, the length of each existing Chatham x Keith/Lauzon circuit. This substantially reduces the exposure of each existing circuit to faults. This reduction would improve the reliability of supply to customers connected to these circuits (Table 4). For example, the frequency of supply interruptions, due to both planned and forced outages, would be reduced by about 34% at Malden TS, 37% at Leamington TS, and 16% at Lauzon TS. The annual interruption duration, due to both planned and forced outages, is also reduced: Malden TS (21%), Leamington TS (17%), Lauzon TS (12%). For each generating station connected to the 230 kV circuit(s), the frequency of the loss of the point of common coupling, due to both planned and forced outages, would be reduced by at least 34%. For each point of common coupling, the annual interruption duration due to both planned and forced outages, is also reduced by at least 53%.

6.0 CONCLUSIONS AND RECOMMENDATIONS

This CIA report presents results of incorporating the West of Chatham Transmission Development projects which are planned to be completed in Q4 2025. In particular, the results of short circuit analyses and a qualitative assessment of the impact on supply reliability to area customers have been presented.

The assessment as reported in the SIA document shows that voltage performance is within applicable criteria, and that circuit loading is within applicable criteria with the application of load and generation rejection.

The establishment of the West of Chatham Transmission Development projects will substantially reduce the exposure of each circuit to faults thereby significantly improving the reliability of supply to area customers.

Short-circuit studies were carried out to determine the expected fault levels at customer transmission connection points following the incorporation of the West of Chatham Transmission Development projects. The short circuit levels observed at transmission connection points are substantially increased at some locations.

It is recommended that area customers review the impact of the short-circuit changes on their facilities and take appropriate and timely action to address any safety/technical issues arising out of the changes which will result following the incorporation the first of the West of Chatham Transmission Development projects, Lakeshore TS, in Q2 2022.

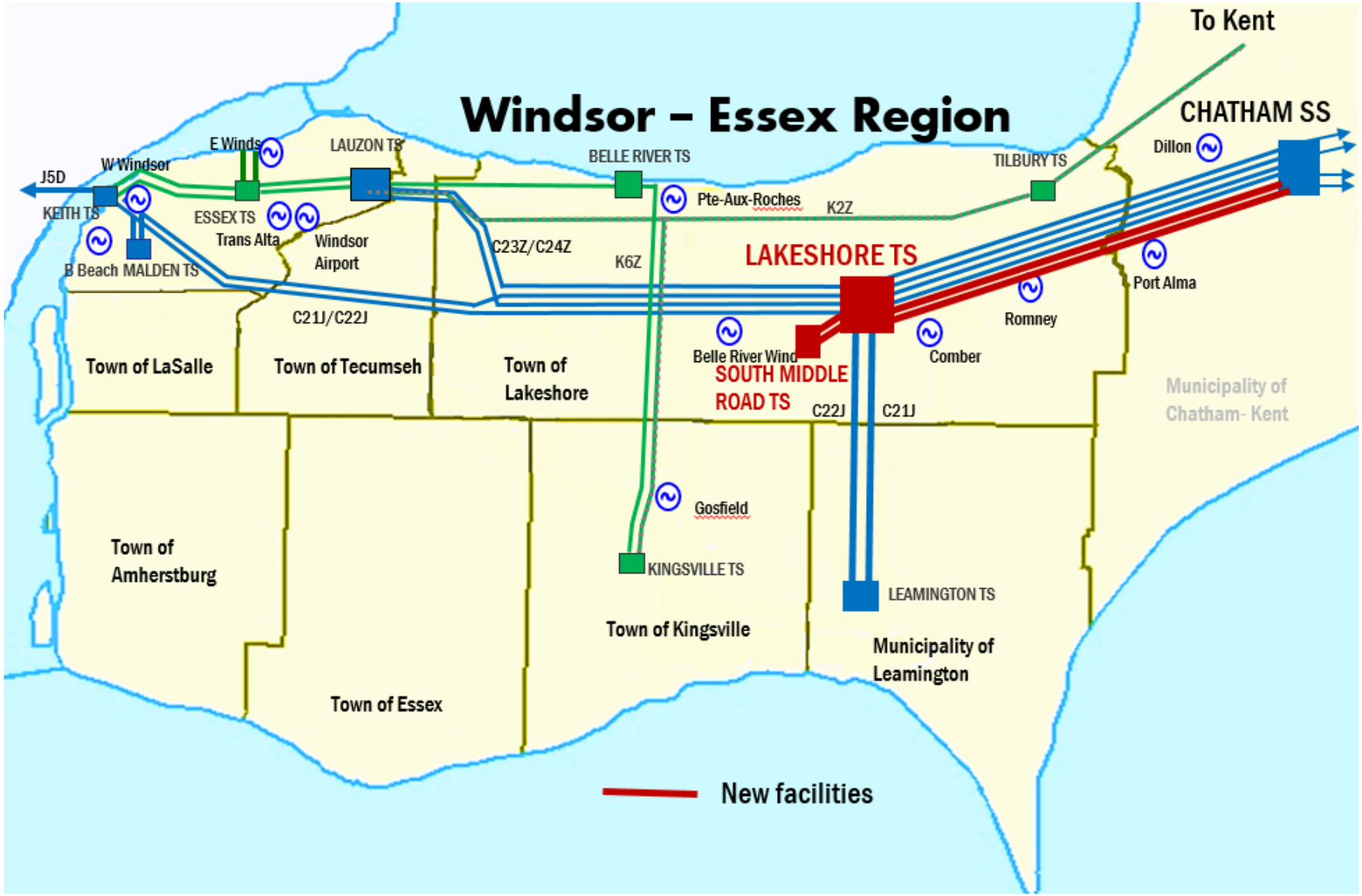

Figure 1: Map of Windsor – Essex Area: With Planned Facilities

Table 2: Fault Levels (kA) Before West of Chatham Transmission Development Projects

	3-Phase		L-G	
Location	Symmetrical	Asymmetrical	Symmetrical	Asymmetrical
Chatham 230 kV	26.20	32.14	22.80	27.62
Keith 230 kV	20.51	29.21	22.48	32.38
Belle Rv CGS Jct 230 kV	8.34	10.31	8.65	10.60
Dillon RWEC Jct 230 kV	14.20	17.02	12.37	14.13
KEPA WF JC23Z 230 kV	10.77	12.82	9.66	10.86
KEPA WF JC24Z 230 kV	10.97	13.06	11.00	12.73
Comber JC23Z 230 kV	8.68	9.84	9.32	11.07
Comber JC24Z 230 kV	8.43	9.32	9.04	10.47
C31 SKWP CMS Jct	26.13	32.05	22.74	27.53
Romney Jct 230 kV	10.77	11.73	8.73	9.26
Brighton B J20B 230 kV	20.32	28.96	22.27	32.07
Spence CSS 230 kV	13.72	16.43	11.05	12.95
Erieau WF Jct 230 kV	25.87	31.68	22.50	27.21
GSPC Jct 230 kV	36.11	45.13	34.04	42.87
North Kent Jct 230 kV	16.95	20.23	14.66	16.56
East Lk St Claire Jct 230 kV	15.58	18.76	13.67	15.96
Windsor Airport Solar Jct 115 kV	22.12	24.99	24.05	27.32
Brighton B J1B 115 kV	28.61	38.38	33.80	46.37
W Windsor Power 115 kV	28.04	36.73	32.76	43.84
E Windsor Power E8F 115 kV	21.02	23.10	20.84	22.68
E Windsor Power E9F 115 kV	21.10	23.20	20.92	22.82
Gosfield Jct 115 kV	5.15	5.59	4.72	5.44
Pte-Aux-Roches Jct 115 kV	7.75	8.66	6.75	7.95
Windsor TransAlt Jct 115 kV	25.15	29.11	27.03	31.56
Keith TS 115 kV	28.96	34.27	34.62	44.36
Ford Essex Z1E 115 kV	20.46	22.76	20.84	22.70
Ford Essex Z7E 115 kV	20.41	22.67	20.69	22.41
Walker TS Z1E	23.89	27.30	24.75	27.93
Walker TS Z7E	23.79	27.13	24.64	27.68
Ford Windsor E8F 115 kV	21.18	23.30	21.06	22.96
Ford Windsor E9F 115 kV	21.18	23.31	21.04	22.97
GM Windsor E8F 115 kV	23.22	26.01	24.15	26.88
GM Windsor E9F 115 kV	23.22	26.01	24.12	27.03
Chrysler WAP E8F 115 kV	24.93	28.61	26.74	30.85
Chrysler WAP E9F 115 kV	24.93	28.62	26.73	30.87
Ford Annex E8F 115 kV	22.33	24.80	22.71	24.78
Ford Annex E9F 115 kV	22.33	24.81	22.69	24.84
Keith TS Y 27.6 kV	12.77	17.27	10.21	14.37
Keith TS B 27.6 kV	13.06	17.74	9.97	14.13
Lauzon TS BQ 27.6 kV	14.93	19.32	11.19	15.53
Lauzon TS E 27.6 kV	11.91	15.49	9.40	12.99
Lauzon TS J 27.6 kV	11.65	15.34	9.30	12.96
Malden TS B 27.6 kV	15.16	19.72	10.95	15.24
Malden TS Y 27.6 kV	15.30	20.10	11.01	15.42
Crawford EY 27.6 kV	15.08	19.87	11.10	15.52
Essex TS JQ 27.6 kV	15.68	20.60	11.00	15.37
Walker TS E 27.6 kV	14.55	18.93	9.91	13.84
Walker TS Q 27.6 kV	12.14	15.93	9.09	12.73
Walker#2 BY 27.6 kV	15.18	17.51	9.46	12.27
Ford Essex 13.8 kV	18.25	20.80	8.91	11.52
Ford Windsor 27.6 kV	13.78	15.91	8.42	10.37
GM Windsor 27.6 kV	12.42	14.00	8.08	9.85
Chrysler WAP 27.6 kV	11.48	13.41	7.82	9.70
Ford Annex 27.6 kV	18.81	21.89	0.80	0.80
Tilbury W B2 27.6 kV	2.96	3.00	3.19	3.43
Tilbury W B1 27.6 kV	2.66	2.70	2.94	3.17
Belle River 27.6 kV	11.31	13.50	7.91	10.42
Kingsville Y 27.6 kV	11.39	12.67	9.72	11.75
Kingsville B 27.6 kV	12.31	13.61	10.32	12.31
Leamington J 27.6 kV	12.09	14.03	9.74	12.57
Leamington Q 27.6 kV	12.04	13.93	9.71	12.51
Leamington B 27.6 kV	16.39	21.43	12.39	17.03
Leamington Y 27.6 kV	14.50	18.95	11.05	15.29

Table 3: Fault Levels After West of Chatham Transmission Development Projects

	3-Phase (kA)		L-G (kA)		Increase (%)	
Location	Symmetrical	Asymmetrical	Symmetrical	Asymmetrical	3-Ph Sym.	L-G Sym.
Chatham 230 kV	27.30	33.61	24.79	30.01	4.21	8.72
Keith 230 kV	22.13	31.29	24.02	34.38	7.93	6.82
Belle Rv CGS Jct 230 kV	20.49	25.00	18.92	22.42	145.63	118.79
Dillon RWEC Jct 230 kV	15.48	18.44	13.25	15.02	9.01	7.12
KEPA WF JC23Z 230 kV	13.53	15.90	11.44	12.65	25.62	18.43
KEPA WF JC24Z 230 kV	13.92	16.27	13.10	14.88	26.84	19.10
Comber JC23Z 230 kV	19.28	21.58	18.71	21.69	122.11	100.83
Comber JC24Z 230 kV	19.42	21.44	18.99	21.73	130.28	110.20
C31 SKWP CMS Jct	27.23	33.50	24.72	29.89	4.20	8.69
Romney Jct 230 kV	15.14	16.54	13.10	13.90	40.53	50.00
Brighton B J20B 230 kV	21.91	30.98	23.75	34.00	7.80	6.66
Spence CSS 230 kV	13.89	16.63	11.20	13.11	1.20	1.35
Erieau WF Jct 230 kV	26.94	33.10	24.41	29.49	4.13	8.50
GSPC Jct 230 kV	36.18	45.21	34.09	42.93	0.19	0.15
North Kent Jct 230 kV	17.22	20.55	15.00	16.91	1.61	2.31
East Lk St Claire Jct 230 kV	15.73	18.93	13.83	16.12	0.98	1.16
Windsor Airport Solar Jct 115 kV	23.52	26.60	25.26	28.66	6.35	5.03
Brighton B J1B 115 kV	28.90	38.73	34.11	46.75	1.03	0.93
W Windsor Power 115 kV	28.32	37.06	33.06	44.18	1.01	0.90
E Windsor Power E8F 115 kV	21.64	23.72	21.25	23.09	2.91	1.93
E Windsor Power E9F 115 kV	21.71	23.82	21.33	23.22	2.92	1.94
Gosfield Jct 115 kV	5.21	5.65	4.75	5.47	1.05	0.66
Pte-Aux-Roches Jct 115 kV	7.89	8.80	6.82	8.03	1.83	1.11
Windsor TransAlt Jct 115 kV	26.08	30.14	27.75	32.36	3.68	2.68
Keith TS 115 kV	29.27	34.59	34.95	44.74	1.05	0.96
Ford Essex Z1E 115 kV	21.54	23.96	21.64	23.54	5.29	3.87
Ford Essex Z7E 115 kV	21.49	23.86	21.49	23.23	5.30	3.87
Walker TS Z1E	24.77	28.27	25.40	28.61	3.68	2.60
Walker TS Z7E	24.67	28.10	25.28	28.35	3.69	2.60
Ford Windsor E8F 115 kV	21.80	23.93	21.47	23.37	2.93	1.96
Ford Windsor E9F 115 kV	21.80	23.94	21.45	23.38	2.93	1.95
GM Windsor E8F 115 kV	23.98	26.81	24.70	27.44	3.28	2.29
GM Windsor E9F 115 kV	23.98	26.81	24.67	27.60	3.28	2.29
Chrysler WAP E8F 115 kV	25.82	29.59	27.43	31.59	3.57	2.58
Chrysler WAP E9F 115 kV	25.82	29.59	27.43	31.61	3.57	2.58
Ford Annex E8F 115 kV	23.03	25.52	23.20	25.27	3.13	2.14
Ford Annex E9F 115 kV	23.03	25.53	23.17	25.32	3.13	2.13
Keith TS Y 27.6 kV	12.84	17.36	10.24	14.41	0.57	0.30
Keith TS B 27.6 kV	13.14	17.84	10.00	14.16	0.57	0.29
Lauzon TS BQ 27.6 kV	15.49	20.05	11.39	15.83	3.70	1.81
Lauzon TS E 27.6 kV	12.27	15.95	9.55	13.19	2.96	1.53
Lauzon TS J 27.6 kV	11.99	15.79	9.44	13.17	2.88	1.52
Malden TS B 27.6 kV	15.28	19.87	11.00	15.30	0.83	0.40
Malden TS Y 27.6 kV	15.43	20.26	11.05	15.48	0.83	0.40
Crawford EY 27.6 kV	15.11	19.91	11.11	15.53	0.23	0.12
Essex TS JQ 27.6 kV	15.77	20.74	11.03	15.42	0.59	0.27
Walker TS E 27.6 kV	14.61	19.02	9.93	13.87	0.41	0.19
Walker TS Q 27.6 kV	12.20	16.01	9.11	12.77	0.44	0.22
Walker#2 BY 27.6 kV	15.26	17.62	9.48	12.30	0.56	0.23
Ford Essex 13.8 kV	18.35	20.95	8.92	11.55	0.58	0.18
Ford Windsor 27.6 kV	13.81	15.95	8.42	10.39	0.28	0.11
GM Windsor 27.6 kV	12.47	14.06	8.10	9.87	0.43	0.19
Chrysler WAP 27.6 kV	11.53	13.47	7.83	9.72	0.40	0.18
Ford Annex 27.6 kV	18.87	21.97	0.80	0.80	0.33	0.00
Tilbury W B2 27.6 kV	2.97	3.00	3.19	3.44	0.17	0.13
Tilbury W B1 27.6 kV	2.67	2.71	2.94	3.18	0.19	0.14
Belle River 27.6 kV	11.39	13.61	7.94	10.46	0.78	0.37
Kingsville Y 27.6 kV	11.44	12.72	9.74	11.77	0.42	0.24
Kingsville B 27.6 kV	12.37	13.67	10.34	12.34	0.48	0.26
Leamington J 27.6 kV	12.58	14.93	9.95	13.00	4.07	2.15
Leamington Q 27.6 kV	12.52	14.82	9.92	12.94	4.05	2.13
Leamington B 27.6 kV	16.90	22.56	12.59	17.50	3.12	1.55
Leamington Y 27.6 kV	14.99	20.01	11.23	15.76	3.37	1.67
Lakeshore TS 230 kV	24.44	30.27	23.23	29.27	N/A	N/A
South Middle Road TS 230 kV	23.45	28.95	22.00	27.28	N/A	N/A
South Middle Road J 27.6 kV	13.03	15.71	10.13	13.35	N/A	N/A
South Middle Road Q 27.6 kV	12.97	15.56	10.11	13.28	N/A	N/A

Table 4: Reliability Impact of Lakeshore TS (for both planned and forced outages) for stations connected to circuits C21J, C22J, C23Z and C24Z

Station	**Reduction in Frequency of supply Interruptions (%)**	**Reduction in Annual Interruption Duration (%)**
Malden TS (B or Y bus)	33.81	21.49
Leamington TS (B, Y, J or Q bus)	37.39	16.51
Lauzon TS (B or J bus)	18.38	13.238
Lauzon TS (Q or E bus)	16.075	12.498
Romney WGS (C21J)	61.79	53.56
Comber CGS (C23Z)	35.963	94.272
Comber CGS (C24Z)	34.181	62.139
Port Alma CGS (C24Z)	35.963	55.667
Dillon CGS (C23Z)	35.963	94.272
Belle River CGS (C23Z)	51.119	56.269

Note: Reliability indices were computed for every delivery point of each station. A delivery point of a station can be a low voltage bus of a load station, or a point of connection of a customer owned generating station.