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

DECISION AND ORDER

EB-2021-0136

HYDRO ONE NETWORKS INC.

Application for leave to reconductor electricity transmission lines in the cities of Toronto and Mississauga

BEFORE: Michael Janigan
Presiding Commissioner

Robert Dodds
Commissioner

David Sword
Commissioner

December 2, 2021

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

Ontario

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1 OVERVIEW

This is a Decision and Order of the Ontario Energy Board (OEB) on an application filed by Hydro One Networks Inc. (Hydro One) for permission to reconductor existing transmission circuits in the municipalities of Toronto and Mississauga (Application). The Application also seeks approval to perform related enabling work and to replace some existing skywire with optical ground wire.

The transmission lines, associated facilities work and skywire replacement proposed by Hydro One are referred to as the Richview by Trafalgar Reconductoring Project, or Project. A map showing the location of the Project is attached as Schedule A to this Decision and Order. Hydro One also applied to the OEB for approval of the forms of agreements it offers to affected landowners.

The OEB grants Hydro One's application for leave to construct and approves the forms of land use agreements set out in the Application. This approval is based on an examination of the project need, project costs, reliability and quality of service, and forms of land use agreements. The leave granted through this Decision and Order is subject to the OEB's conditions of approval that are attached as Schedule B to this Decision and Order.

2 CONTEXT AND PROCESS

Hydro One applied to the OEB on July 16, 2021 under section 92 of the *Ontario Energy Board Act, 1998* (OEB Act) to reconductor circuits R19TH and R21TH between the Richview Transformer Station (TS) and Tomken Junction, and existing transmission circuits R14T and R17T between Richview TS and Trafalgar TS, to perform related enabling work, and to replace skywire associated with circuits R14T/R17T with optical ground wire.

Hydro One has also applied to the OEB under section 97 of the OEB Act for approval of the forms of land use agreements it proposes to offer landowners affected by the project.

The OEB issued a Notice of Hearing on August 6, 2021. The Association of Power Producers of Ontario (APPrO), Capital Power Corporation (CPC), the City of Mississauga, and Environmental Defence (ED) applied for intervenor status. APPrO, ED and the City of Mississauga also applied for cost eligibility.

Procedural Order No. 1 granted intervenor status to APPrO, CPC, the City of Mississauga and ED, granted APPrO and ED cost eligibility, and established the application's procedural schedule. The OEB also approved a late intervention request from the Independent Electricity System Operator (IESO).

OEB staff, APPrO, CPC, the City of Mississauga and ED filed interrogatories. Hydro One responded to them on October 8, 2021. Hydro One also responded to follow up questions from ED, in lieu of a technical conference.

OEB staff, APPrO and ED filed submissions. Hydro One filed its reply submission on November 12, 2021.

3 DECISION OUTLINE

Section 92 of the OEB Act requires leave of the OEB for the construction, expansion or reinforcement of electricity transmission lines. Section 96(2) of the OEB Act limits the scope of the OEB's review in an application under section 92 to the interests of consumers with respect to prices and the reliability and quality of electricity service. As part of its review of a project's impact on prices, the OEB typically considers the need for a project and alternatives to the proposed project.

The OEB's findings on the Project's costs and impacts on prices (which includes an analysis of Project need and alternatives), reliability and quality of service, forms of land use agreements, and the conditions of approval are addressed in the following chapter.

4 DECISION ON THE ISSUES

4.1 Project Need and Alternatives

Hydro One seeks approval to reconductor four existing 230 kV circuits between Richview TS and Trafalgar TS. The Project addresses a need identified by the IESO for increased transfer capability east of the Flow East Towards Toronto (FETT) interface by 2026. The need for the Project was described by the IESO in its letter dated December 10, 2020:

> Supply capacity in eastern Ontario is expected to decline over the next decade contributing to a provincial need for capacity and, because of limits on the transfer capability of the FETT interface, ~4,000 MW of that capacity will have to be sited east of the FETT interface by 2026. To reduce the amount of capacity that must be sited in eastern Ontario, the IESO is recommending this Project, which is expected to be completed by 2026 and will increase the transfer capability of the interface by ~2,000 MW. This Project would reduce the risk to reliability in having to acquire a large amount of capacity in eastern Ontario and would enable more resources to compete to meet provincial needs.[1]

The IESO stated that the decline in supply capacity that it referenced in its letter is attributable to nuclear retirements and nuclear refurbishment outages and could be further impacted as generation contracts expire towards the end of the decade.[2] The IESO concluded that, if transfer capability across the FETT interface is not increased to address anticipated generation declines to the east, applicable transmission security and resource adequacy reliability criteria will not be met starting in 2026.

The IESO considered non-transmission alternatives to the Project including conservation, new domestic supply and imports. The IESO concluded that addressing the identified need by acquiring these types of capacity represented an unacceptable reliability risk.[3] The IESO also considered one transmission alternative: a new double-circuit 230 kV line connecting Trafalgar TS and Oakville TS with new switching facilities at Trafalgar TS; however, the alternative was not recommended because it would perform worse in the long-term, involve greater environmental disturbance and present higher implementation/permitting risk.[4] The IESO also noted that the proposed Project

[1] Exhibit B / Tab 3 / Schedule 1 / Attachment 1
[2] Exhibit B / Tab 3 / Schedule 1 / Attachment 3 / p.3
[3] Exhibit B / Tab 3 / Schedule 1 / Attachment 3 / p.6
[4] Exhibit B / Tab 3 / Schedule 1 / Attachment 3 / p.10

conforms with the Provincial Policy Statement under the *Planning Act*, which establishes that the use of existing infrastructure and public service facilities should be optimized and opportunities for adaptive re-use should be considered before consideration is given to developing new infrastructure and public service facilities.

OEB staff submitted that it supports the proposed solution, considering the IESO's evidence on need, its assessment of transmission and non-transmission alternatives and Hydro One's and the IESO's interrogatory responses.

ED submitted that it "supports the efforts of [IESO] and Hydro One to increase the transfer capability in the relevant pathway to meet transmission reliability and resource adequacy needs" and that the project will "increase the geographic area in which new resources can be located, which will increase competition and result in ratepayer savings." ED further submitted that, after reviewing interrogatory responses, it would not be cost effective to upsize the conductor to reduce line losses beyond the one proposed by Hydro One. ED indicated that it has concerns with Hydro One's line loss evaluation processes, however, that such matters are more appropriately considered in Hydro One's ongoing 2023-2027 rates case proceeding[5].

APPrO submitted that the needs assessment performed by the IESO "does not satisfy the requirement under the OEB's Standard Transmission Leave to Construct Issues List to demonstrate that the RTR Project is the preferred option to address the current supply need, as opposed to implementing a different solution." Among other things, APPrO submitted that the IESO did not adequately demonstrate its conclusion that imports, or existing/new capacity are unable to meet the identified need, that the IESO inappropriately relied on its "knowledge of the market" as grounds for decision making, and that the IESO did not appropriately consult with stakeholders when determining its recommended solution.

APPrO also submitted that "the IESO's failure to complete a [locational marginal pricing (LMP)] analysis and to consider how the [Richview by Trafalgar Reconductoring Project] could influence the relevant and usefulness of the price signal, or impact market participant investment decisions". APPrO submitted that the lack of an LMP analysis "undermines the relevance of the market price to proponents capable of providing competitive alternative supply solutions and cost savings for consumers and undermines the value of LMP to the market as a whole".

[5] EB-2021-0110

APPrO did not submit that the OEB should deny Hydro One's Application. However, APPrO submitted that the OEB should include in its Decision an order requiring that any future IESO needs assessment filed in support of any leave to construct application include, at a minimum, the following additional items:

- "Results of public stakeholder engagement undertaken related to the supply need, completed sufficiently in advance so as to allow proponents enough time to develop and submit alternative solutions for consideration"

- "Comprehensive description of all assumptions and methodologies used in the underlying resource adequacy study, including supply resource attribute requirements such as run-time duration, ramp rate, peaking capacity, and seasonal preference"

- "Resource cost and performance input data comparison as part of any alternative solutions analysis "

- "Electricity grid priority connection areas for alternative supply options and imports"

- "Potential compensation framework options for alternative supply resources offering reliability services"

In its reply submission, Hydro One stated that "clear and substantial" evidence has been provided to establish project need, and that the Project has been shown to be the most cost-effective solution to address the need. Hydro One, with the assistance of the IESO, also addressed APPrO's submissions on the Project's needs assessment by stating:

- The Project has a lower implementation risk than other alternatives and will remove locational constraints on participation in future supply resource procurements

- The IESO is not confident that 2,000 MW of new supply resources east of FETT can be acquired by 2026 and that the uncertainty presents an "unacceptable risk" in its ability to meet reliability standard requirements.

- The IESO is of the view that "a specific stakeholder engagement with supply resources would not have changed the outcome of the IESO's assessment". The IESO further stated that it already provides stakeholders with opportunities to engage with the IESO and through these engagements the IESO has become aware of some interest in developing supply resources east of the FETT interface, however, most of these projects were at a preliminary stage and none

of the proponents for these projects indicated an in-service date of 2026 or earlier.

- The IESO acknowledges that the IESO's Market Renewal Program (which includes the implementation of LMP) and other market mechanisms may eventually provide the needed investment signals for supply resources. However, the IESO submitted that "the required price signals and investment decisions simply could not have been made in an acceptable timeframe to satisfy the reliability need that will arise in 2026" and that "a do-nothing scenario is not an acceptable option to address a pressing reliability need".

Hydro One also addressed APPrO's request for an OEB order to establish additional minimum criteria for future leave to construct applications. Hydro One stated that a section 92 application is not the appropriate forum for the OEB to consider such a request, and that if the OEB sees merit in the items requested by APPrO, that they are more suitably explored through a formal policy consultation. Doing so would ensure other potentially impacted OEB-licensed transmitters and impacted parties have an opportunity to provide input and make submissions on proposals. Hydro One requested the OEB to set aside APPrO's request and consider its validity and appropriateness at a future date, if it believes one is necessary.

Hydro One also submitted that "Hydro One and the IESO do not believe it would be appropriate to establish APPrO's suggested criteria as minimum requirements for a need assessment". Hydro One explained that "the circumstances of individual leave to construct applications and the corresponding need assessments vary widely, and there is no one-size-fits-all assessment". As an example, Hydro One stated that "a requirement to conduct public stakeholdering of the relevant supply need and identify potential compensation framework options for alternative supply resources in every case (as suggested by APPrO) would be cumbersome and unnecessary where non-wires alternatives are incapable of meeting an identified reliability need".

Findings

The OEB finds that the Richview by Trafalgar Reconductoring Project is in the public interest in accordance with the considerations of price, reliability, and quality of electricity service as set out in section 96(2) of the OEB Act and therefore approves a leave to construct for this project. The OEB accepts that, at this juncture, there is a need for the Richview by Trafalgar Reconductoring Project and the 2,000 MW of electricity east of FETT in anticipation of the planned shutdown of OPG's Pickering

nuclear generation in 2026. Given the proximity of the date when the replacement capacity will be needed, no alternatives are currently available to meet the anticipated demand.

While not opposing the leave to construct, APPrO has expressed dissatisfaction with the process to arrive at the application for project approval. In particular, APPrO noted shortcomings of the approach of the IESO and Hydro One to alternatives to developing sufficient power resources east of FETT - an approach that might have been more cost effective, promoted competitive supply alternatives and the implementation of LMP. APPrO recommended a number of process requirements to prevent what it felt were obstacles to meeting needs with the best solutions.

While the OEB agrees with Hydro One that specific directives concerning the requisite evidence and the expected advance preparation of a transmission leave to construct application are best addressed in the filing requirements, there are some general observations of a practical nature that the OEB wishes to make concerning the optimal circumstances for leave to construct application approval.

- The OEB acknowledges the key role of the IESO as set out in the provisions of the *Electricity Act* to ensure adequate, reliable and secure supply of electricity. The OEB recognizes as well the IESO's expert understanding of the market. Its support of this and other leave to construct applications is an important evidentiary component in the OEB's approval of a leave to construct application. However, similar to the acceptance of any expert evidence, the factual basis for IESO recommendations must be clear and understood by the OEB, and an applicant must be prepared to provide that basis beyond the support provided by the expert status of the IESO. The determination of the public interest by the OEB requires this inquiry.

- The OEB expects that, where possible, timely examinations of alternatives to construction of transmission facilities take place such that alternatives are not dismissed as being unable to be implemented simply because of a lack of time. Note the recent OEB IRP Decision with respect to natural gas facilities specifically tried to ensure that there was a sufficient time runway for the consideration of the best way to meet perceived system facilities' needs.[6] The consideration of such alternatives is in keeping with the OEB's responsibilities pursuant to section 92 of the OEB Act as well as the IESO's statutory objectives for supporting a diversification of energy sources under the *Electricity Act, 1998*. In order to carry

[6] EB-2020-0091

out those responsibilities and objectives, robust stakeholdering and advance planning with potential capacity providers need to be undertaken as part of initial project steps.

4.2 Project Costs

Hydro One estimated that the Project will cost $60.9 million, of which $56.3 million is capital and will be added to Hydro One's rate base, and $4.6 million is to fund removals and will not be capitalized. The cost estimate was prepared in accordance with the recommended practice of the AACE International Cost Estimate Classification System and has a level of accuracy +30%/-20%.

Hydro One's Project cost estimate includes a $2.7 million contingency that represents approximately 5% of the total project cost, before contingency. Hydro One stated that the contingency estimate, developed using an industry standard risk assessment framework, is within the range of 5% to 15% of direct costs similar to other line construction projects recently undertaken by Hydro One.

Hydro One cited three of its previous transmission projects for purposes of cost comparison. Each of the three comparators involved reconductoring existing 115 kV or 230 kV circuits. Hydro One explained that the scope of the Project differs from the comparator projects because it requires additional planning, safety requirements, execution time and resources. Hydro One stated that these additional complexities contribute to a comparatively higher cost per circuit km for the Project. The cost of the comparator projects was between $0.4 million and $0.6 million per circuit km. Hydro One estimated that the Richview by Trafalgar Reconductoring Project will cost $0.8 million per circuit km.

OEB staff did not take issue with Hydro One's cost estimate for the Project. OEB staff submitted that Hydro One followed a reasonable process for developing its project cost estimate and that it followed a reasonable process for assessing project risks and developing a contingency estimate. OEB staff also submitted that Hydro One provided a reasonable explanation of the differences in per circuit km costs between the Project and comparator projects.

OEB staff submitted that the transmission options assessed in Hydro One's application have different levels of cost estimate confidence and that these differences were communicated through interrogatory responses. OEB staff submitted that it has no concerns with the fact that Hydro One and/or the IESO have assessed options that have different levels of cost estimate confidence. However, OEB staff submitted that, for future applications, "it would be informative if Hydro One clarified the confidence of its

cost estimates for all options considered in the pre-filed evidence". OEB staff also submitted that "it would assist if Hydro One would explain the appropriateness of a recommended option in light of any differences and overlaps of confidence distributions among options considered."

In its reply submission, Hydro One stated that it "is open to providing these clarifications as requested by Board Staff". Hydro One stated that, if needed, such clarifications should become part of the "Chapter 4 Applications under Section 92 of the Ontario Energy Board Act", of the "Filing Requirements for Electricity Transmission Applications."

Findings

The OEB finds the estimated Project cost of $60.9 million acceptable.

Hydro One followed a reasonable process for developing its project cost estimate and followed a reasonable process for assessing project risks and developing a contingency estimate.

The OEB would note, however, that it must ultimately determine the prudence of the approved facilities' construction costs. Estimates that are provided with a leave to construct application should be qualified with the degree of confidence associated with that estimate and the reason for the same.

4.3 Impact on Price of Electricity Service

Hydro One estimated that the Project will increase the network pool revenue requirement by 0.41%, which will increase the 2021 OEB-approved rate of $4.90 kW/month to $4.92 kW/month.

Hydro One estimated that the Project will increase the typical residential customer bill by $0.03 per month, assuming a monthly consumption of 700 kWh.

OEB staff submitted that the consumer impacts of the Project are appropriate given the need for the project, its costs and its alternatives.

Findings

The OEB finds that the estimated consumer impacts of the Project are appropriate given the need for the project, its costs and its alternatives.

4.4 Reliability and Quality of Service

Hydro One filed the Final System Impact Assessment (SIA) prepared by the IESO and the Final Customer Impact Assessment (CIA) prepared by Hydro One.

The SIA concluded that the project is expected to have no material adverse impact on the reliability of the integrated power system. The CIA concluded that the project can be incorporated without any adverse impact on Hydro One Transmission customers.

Hydro One also filed IESO planning analysis which concluded that the Project will help meet reliability standards specified by the North American Electric Reliability Corporation (NERC), the Northeast Power Coordination Council (NPCC), and the IESO.

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

Findings

The OEB accepts that the Project will have no material adverse impact on the reliability of quality of service of the integrated power system. This acceptance is based Hydro One's and the IESO's evidence, interrogatory responses, and the conclusions of the SIA and CIA.

4.5 Land Matters

Hydro One stated that the Project will be completed within the existing right-of-way and that it will "rely predominantly on statutory easement rights it enjoys on Infrastructure Ontario Bill 58 lands and one City of Mississauga property to construct, operate and maintain the proposed reconductored circuit transmission facilities."[7]

Hydro One stated that no new permanent land rights are expected to be required. However, Hydro One has requested OEB approval of two agreements that it will use to obtain land rights for the Project, should they be necessary: a Temporary Land Rights Agreement and a Damage Claim Agreement. Hydro One stated that the two proposed agreements were approved by the OEB in previous leave to construct applications.

[7] Exhibit E / Tab 1 / Schedule 1 / p.3

OEB staff submitted that it has no issues or concerns with Hydro One's proposed forms of agreements, and that the agreements are consistent with those approved during previous OEB proceedings.

Findings

The OEB finds the proposed forms of agreements are acceptable. The agreements are consistent with those approved during previous OEB proceedings.

4.6 Conditions of Approval

Under subsection 23(1) of the OEB Act, the OEB may, in making an order, impose such conditions as it considers proper.

OEB staff submitted that the standard conditions of approval attached to Procedural Order No. 1 should be placed on Hydro One. Hydro One stated that it agrees to the proposed standard conditions.

Findings

The OEB finds that the standard conditions of approval attached to Procedural Order No. 1 should be placed on Hydro One.

5 ORDER

THE ONTARIO ENERGY BOARD ORDERS THAT:

1. Hydro One Networks Inc. is granted leave, pursuant to section 92 of the OEB Act, to construct the Richview by Trafalgar Reconductoring Project as described in the Application.

2. Leave to construct is subject to Hydro One Networks Inc. complying with the Conditions of Approval set forth in Schedule B.

3. The OEB approves the proposed forms of agreements that Hydro One Networks Inc. has offered or will offer to each owner of land affected by the Richview by Trafalgar Reconductoring Project.

4. Eligible intervenors shall file with the OEB and forward to Hydro One their respective cost claims in accordance with the OEB's Practice Direction on Cost Awards on or before **December 9, 2021**.

5. Hydro One shall file with the OEB and forward to intervenors any objections to the claimed costs of the intervenors on or before **December 16, 2021**.

6. If Hydro One objects to any intervenor costs, those intervenors shall file with the OEB and forward to Hydro One their responses, if any, to the objections to cost claims on or before **January 14, 2022.**

7. Hydro One Networks Inc. shall pay the OEB's costs of, and incidental to, this proceeding upon receipt of the OEB's invoice.

DATED at Toronto December 2, 2021

ONTARIO ENERGY BOARD

Original Signed By

Christine E. Long
Registrar

SCHEDULE A

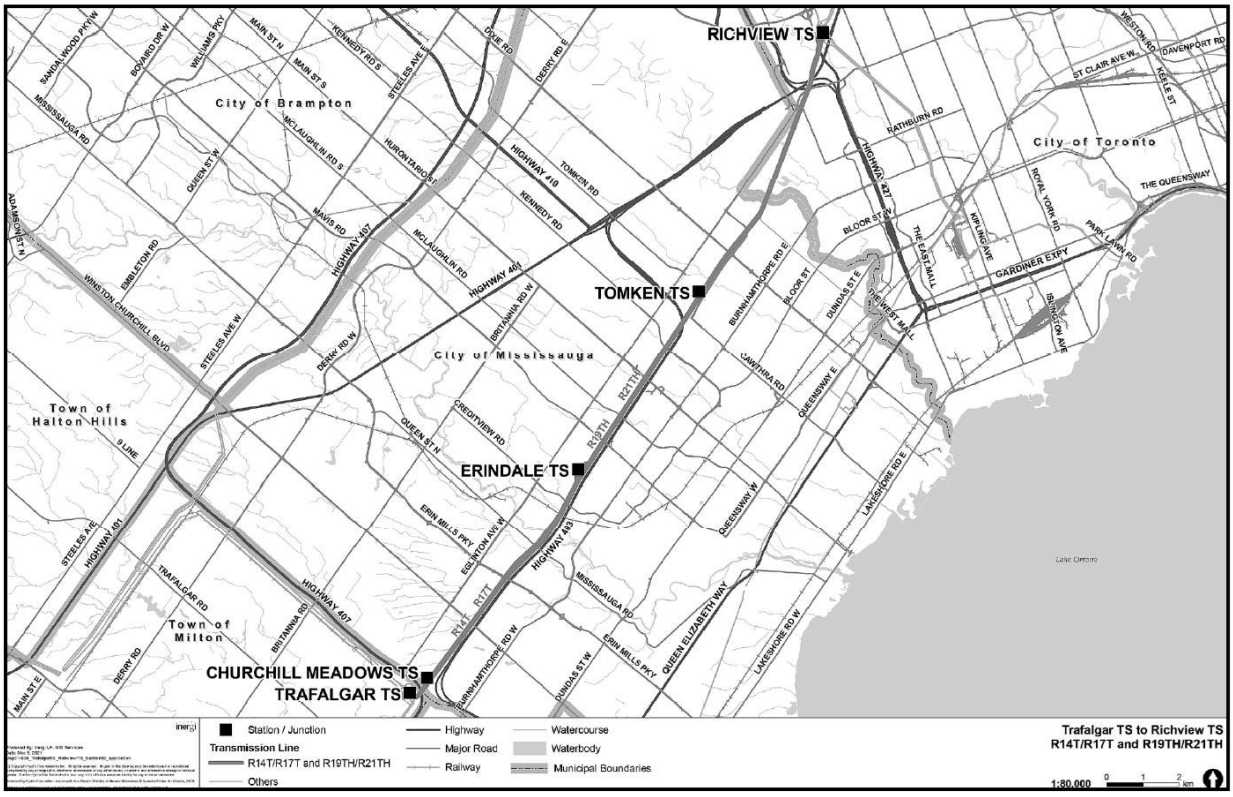
DECISION AND ORDER

HYDRO ONE NETWORKS INC

EB-2021-0136

DECEMBER 2, 2021

SCHEDULE A - RICHVIEW BY TRAFALGAR RECONDUCTORING PROJECT MAP
HYDRO ONE NETWORKS INC.
EB-2021-0136
DECEMBER 2, 2021



SCHEDULE B

DECISION AND ORDER

HYDRO ONE NETWORKS INC

EB-2021-0136

DECEMBER 2, 2021

STANDARD CONDITIONS OF APPROVAL
FOR ELECTRICITY LEAVE TO CONSTRUCT APPLICATIONS
HYDRO ONE NETWORKS INC.
EB-2021-0136

1. Hydro One shall fulfill any requirements of the SIA and the CIA, and shall obtain all necessary approvals, permits, licences, certificates, agreements and rights required to construct, operate and maintain the project.

2. Unless otherwise ordered by the OEB, authorization for leave to construct shall terminate 12 months from the date of the Decision and Order, unless construction has commenced prior to that date.

3. Hydro One shall advise the OEB of any proposed material change in the project, including but not limited to changes in: the proposed route, construction schedule, necessary environmental assessment approvals, and all other approvals, permits, licences, certificates and rights required to construct the project.

4. Hydro One shall submit to the OEB written confirmation of the completion of the project construction. This written confirmation shall be provided within one month of the completion of construction.

5. Hydro One shall designate one of their employees as project manager who will be the point of contact for these conditions, and shall provide the employee's name and contact information to the OEB and to all affected landowners, and shall clearly post the project manager's contact information in a prominent place at the construction site.