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

DECISION AND ORDER

EB-2021-0107

HYDRO ONE NETWORKS INC.

Application for leave to construct: upgrade of high voltage electricity transmission line in the townships of Iroquois Falls, Black River-Matheson and Kirkland Lake

BEFORE: Robert Dodds
Presiding Commissioner

David Sword
Commissioner

December 2, 2021

Ontario Energy Board | Commission de l'énergie de l'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 upgrade two high-voltage transmission circuits in the townships of Iroquois Falls, Black River-Matheson and Kirkland Lake.

The proposed upgrade is referred to as the Ansonville by Kirkland Lake Refurbishment 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, costs, impact on price of electricity service, impact on reliability and quality of service, and land matters. The leave to construct is subject to the OEB's conditions of approval, attached as Schedule B to this Decision and Order.

2 CONTEXT AND PROCESS

Hydro One applied to the OEB on August 25, 2021, under section 92 of the OEB Act, for an order granting leave to upgrade electricity transmission circuits between the Ansonville Transformer Station and the Kirkland Lake Transformer Station. Hydro One also applied to the OEB, under 97 of the OEB Act, for approval of the form of land-use agreements it offers to landowners for the routing and construction of the project.

The OEB issued a Notice of Hearing on September 14, 2021. Environmental Defence and Pollution Probe applied for intervenor status and cost eligibility. The OEB received a letter of comment from an individual. The panel has considered the letter and it has been placed on the public record for this proceeding

Procedural Order No. 1 granted intervenor status and cost eligibility to Environmental Defence and Pollution Probe and established the procedural schedule for the Application. The OEB also approved a late intervention request from the Independent Electricity System Operator (IESO).

OEB staff, Environmental Defence and Pollution Probe filed interrogatories. Hydro One responded to them on October 29, 2021. At the request of OEB staff, Hydro One filed supplemental information on November 10, 2021 to clarify its response to one of OEB staff's interrogatories.

OEB staff, Environmental Defence and Pollution Probe filed submissions on or before November 12, 2021, in accordance with Procedural Order No. 1. Hydro One filed its reply submission on November 17, 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 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

Circuits A8K and A9K were constructed in the 1930s and are reaching end-of-life. The IESO stated that "the existing ratings of circuits A8K and A9K are inadequate for the reliable operation of the Kirkland Lake area, given a range of potential planning scenarios."

The IESO recommended that Hydro One upgrade the rating of circuits A8K and A9K to 550 Amperes (A) as part of their planned end-of-life refurbishment. The IESO noted that the replacement of the circuits offers an opportunity to right-size them in alignment "with the needs of the system in a cost-efficient manner."

Hydro One stated that the Project is most like a non-discretionary sustainment project: it involves refurbishing end-of-life assets while upgrading them at the recommendation of the IESO.

Hydro One considered increasing the ratings of circuits A8K and A9K to 390A instead of to the proposed 550A. Hydro One rejected this option because it would not achieve the operating rating recommended by the IESO. Hydro One also considered other options during the initial development of the Project, including an option to build two new circuits to replace circuits A8K and A9K. Hydro One did not recommend this option because of its higher cost and because it would strand some assets.

The IESO also considered alternatives to the Project against a range of planning conditions, which included different natural gas prices, carbon prices[1], generator replacement options and costs, and electricity demand. The IESO concluded that the

[1] As of January 1, 2019, gas-fired generation in Ontario (as well as in some other provinces) has been subject to the federal government's Greenhouse Gas Pollution Pricing Act, and the associated Output-Based Pricing System (OBPS) Regulations. That legislative regime introduced an OBPS, including compliance benchmarks, and prices on emissions above those benchmarks. Effective January 1, 2022, gas-fired generation will be subject to the government of Ontario's Emissions Performance Standards.

The IESO considered carbon pricing in its analysis of Project alternatives. The IESO's carbon price assumptions included a Federal Carbon Charge of $65/tCO2e in 2023 increasing linearly to $170/tCO2e in 2030 and held constant thereafter (all in nominal dollars). The IESO estimated the impact of changes to its carbon price assumptions on the net benefit of the project.

proposed Project is more cost effective than alternatives under the range of conditions assessed.

OEB staff submitted that it supports the proposed solution, that the IESO has demonstrated that the Project is more cost effective than the like-for-like replacement alternative, and that the IESO has demonstrated that its analysis, which supports its recommendation of the Project, is reasonably robust against a range of key sensitivities. OEB staff also accepted Hydro One and the IESO's explanations that a larger alternative would not be feasible within the required end-of-life replacement timeframe, and that the Project would not preclude the option of increasing the capacity of circuits A8K/A9K in the future, if warranted.

Environmental Defence submitted that based on the responses to its interrogatories, "it appears that upsizing conductors would likely not be cost-effective." However, Environmental Defence submitted that "there is still an outstanding question regarding the adequacy of Hydro One's methodology for assessing project alternatives with respect to transmission loss reductions and increased capacity." Environmental Defence concluded that "this question is better addressed in Hydro One's ongoing 2023-2027 rates case (EB-2021-0110)."

Pollution Probe submitted that "the assessment leading to the proposed project does not adequately consider or address non-wires alternatives". Pollution Probe submitted that "the OEB should clearly indicate the expectation that Hydro One consider non-wires alternatives including Distributed Energy Resources through future planning and project assessment." Pollution Probe submitted that "the IESO planning (IRP/IRRP) approach has been maturing and IESO has acknowledged gaps in the process and has been slowly updating its approach to ensure more effective consideration of non-wires alternatives." Pollution Probe submitted that "it is likely that the current and next generation plans will include a more robust consideration of non-wires alternative [sic]."

Pollution Probe also submitted that the "IESO did not consider increased electrification in Ontario beyond the industrial customer expansions and potential new mining development included in the forecast." Pollution Probe submitted that "given that the proposed assets would be in service for decades and likely close to a century (based on the current infrastructure age), it is important that they are designed to meet those future needs."

In summary, Pollution Probe submitted that while it "supports the proposed project's ability to provide clean electricity in an increasing electrified Ontario", there are specific gaps and issues "that are not in alignment with current regulatory and policy direction", and that "OEB direction will help ensure that those gaps are addressed for the numerous future projects that will require OEB review and approval."

In its reply submission, Hydro One disagreed with Pollution Probe's submission that the assessment leading to the proposed project did not adequately consider or address non-wires alternatives. Hydro One stated that "consideration of non-wires alternatives was adequately addressed and documented in Exhibit I, Tab 3, Schedule 3." Hydro One noted that the IESO studied the end-of-life asset replacement strategy for circuits A8K/A9K and that alternatives considered require additional local generation support. Hydro One further reminded that "the IESO considered non-wires alternatives to provide this support through output from the existing Northland Power natural-gas-fired generation complex until its contract expiry in 2030, and replacement gas-fired generation in 2031 and beyond […]." Hydro One stated that "other non-wires alternatives were ruled out given their comparative cost and the magnitude and estimated duration of the local generation support required to ensure reliability."

On Pollution Probe's submission regarding the importance of meeting future needs, Hydro One stated that while future needs were considered, "the submissions of Pollution Probe ignore that there is an imminent sustainment need driven by *the condition of the current infrastructure* that needs to be addressed." In addition, Hydro One submitted that "proceeding with the Project does not preclude additional investments to maximize ratepayer value in the future", as articulated in the supplemental information provided to clarify Hydro One's response to one of OEB staff's interrogatories.

Findings

The OEB finds that the Ansonville to Kirkland Lake Refurbishment Project is in the public interest in accordance with 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 for the following reasons:

- The project is considered non-discretionary and is being undertaken to replace end of life facilities and is being done at the request of the IESO.
- The IESO has adequately demonstrated through its analyses that the Project is reasonably robust against a range of key sensitivities.
- Hydro One and the IESO have adequately explained why a larger circuit capacity alternative would not be feasible within the required end-of-life replacement timeframe.
- Further, Hydro One and the IESO have explained that the Project would not preclude the option of increasing the capacity of circuits A8K/A9K in the future, if warranted.

While not opposing the project, both Pollution Probe and Environmental Defence have expressed concerns regarding the methodology for assessing alternatives, including non-wire alternatives. Pollution Probe also stated that it is important to consider the potential for future load growth when assessing alternatives.

As a general observation, the OEB considers that the matters raised by Pollution Probe and Environmental Defence have merit in leave to construct applications. This is consistent with the findings in Hydro One's application for leave to reconductor electricity transmission lines in the cities of Toronto and Mississauga[2], which found that these matters are beneficial elements that assist in reviewing such applications.

4.2 Project Costs

Hydro One estimated that the Project will cost $75.6 million, including $5.9 million in removal costs. The cost estimate has an AACE Class 3 level of accuracy (-20% / +30%).

Hydro One's Project cost estimate includes approximately $6.2 million in contingency. This estimate was developed with the guidance of a risk assessment framework. Hydro One stated that the contingency amount is 10% of direct costs, which is within the range of 5% to 15% of direct costs similar to other line construction projects recently undertaken by Hydro One.

Hydro One stated that its Project cost estimate is consistent with the cost to complete recent transmission line works which involved refurbishing existing 115 kV circuits in northern Ontario. Hydro estimated that the Project will cost $423,000 per circuit km. The comparator projects identified by Hydro One cost between $425,000 and $439,000 per circuit km.

OEB staff submitted that Hydro One described a reasonable basis for its project cost estimate and that it followed a reasonable process for assessing project risks and developing a contingency estimate.

Pollution Probe noted that Hydro One's draft Environmental Study Report for the Project was recently released for public review and that "it is possible that additional changes or mitigation will be required once the Environmental Report is finalized […]". Pollution Probe stated that while Hydro One has estimated $1M in environmental and socio-economic mitigation costs for the Project, "based on the evidence provided in this

[2] Decision and Order, Hydro One Networks Inc., An application for leave to reconductor electricity transmission lines in the cities of Toronto and Mississauga, pages 8 & 9. December 2, 2021 (EB-2021-0136)

proceeding, there is no way to validate that the mitigation costs are reasonable or in alignment with the environmental and socio-economic mitigation measures recommended in the Draft Environmental Study Report."

Pollution Probe submitted that, "if the project is approved, the OEB could include a condition of approval […] that Hydro One must adhere to the environmental and socio-economic mitigation recommendations included in the project Environmental Study Report."

In its reply submission, Hydro One stated that "on the matter of conditional approval, OEB direction is not required." Hydro One stated that "leave to construct approval and the Environmental Assessment are issued by two distinct regulators" and that "the standard conditions of approval issued by the OEB on a leave to construct application ensure that all other approvals necessary to construct, maintain and operate the Project are obtained."

Hydro One further submitted that although "marginal deviations in an explicit project activity budget such as environmental and socio-economic mitigation measures may occur given the pending status of the EA, […] notifying the OEB of material changes to a project is, again, a standard condition in any leave to construct approval." In addition, Hydro One stated that "the final cost of the Project that will be included in Hydro One's rate base will be decided in a future revenue requirement application." Given the above, Hydro One submitted that "OEB direction on this matter is unnecessary."

Findings

The OEB finds that Hydro One followed a reasonable process for assessing project risks and developing a contingency and, accordingly, the estimated project cost of $75.6 million, including $5.9 million in removal costs, is acceptable within the AACE Class 3 level of accuracy (-20% / +30%).

The OEB does not accept the recommendation from Pollution Probe to include a condition of approval that Hydro One be required to abide by the terms of the EA approval. This is covered under conditions of approval, (approval number 1) and it should be noted that Hydro One is also required to report any material changes to the project to the Board (approval number 3).

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 also increase the line connection pool revenue requirement, but that the change will not be large enough to impact the 2021 OEB approved rate of $0.81 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.

In its reply submission, Hydro One stated that “the Project has been, and continues to be, recommended by the [IESO] to maintain reliability in the area and to enable system benefits by allowing local generation to operate in a more cost-effective manner.” Hydro One continued that the “IESO has articulated that the ratepayer benefit of proceeding with the Project as proposed is expected to significantly exceed the cost of the incremental investment relative to a sustainment solution […].”

Findings

The OEB finds that the estimated impacts of the Project on the price of electricity service are acceptable given the need for the project, its costs and its alternatives.

4.4 Impact on Reliability and Quality of Service

Hydro One filed the Final Expedited 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 will not have any adverse effects on connected Hydro One Transmission customers.

Hydro One also filed IESO planning analysis which concluded that the Project, together with support from local generation, will ensure reliability of the Kirkland Lake Area.

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.

In its reply submission, Hydro One stated that “the Project meets the needs of the transmission system and improves quality of service and reliability.”

Findings

The OEB accepts the conclusions of the SIA and CIA that the Project is expected to have no material adverse impact on the reliability or the quality of electricity service of the integrated power system.

4.5 Land Matters

Hydro One has easement rights for most of the properties on which the Project will be located. Hydro One identified ten properties on the right of way that do not have easements registered on title. Hydro One plans to acquire a registered easement on those properties.

Hydro One requested OEB approval of four agreements that it will use to obtain land rights for the Project. Hydro One stated that the form of the proposed agreements is similar to those approved by the OEB in previous Hydro One leave to construct application proceedings.

OEB staff submitted that it had no issues or concerns with Hydro One's proposed forms of agreements.

Findings

The OEB approves the forms of agreements that Hydro One proposes to use to obtain land rights for the Project.

The OEB notes that the forms of the proposed agreements are similar to those approved by the OEB in previous Hydro One leave to construct application 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 has no concerns with the proposed standard conditions in relation to this Application.

In its reply submission, Hydro One submitted that the Ansonville by Kirkland Lake Refurbishment Project "is in the public interest, and the Application should be approved as filed with the standard leave to construct conditions."

Findings

The OEB finds that the Standard Conditions of Approval, which were attached to Procedural Order No. 1, shall be included in Schedule B of this Decision and Order.

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 Ansonville by Kirkland Lake Refurbishment 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 Ansonville by Kirkland Lake Refurbishment 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

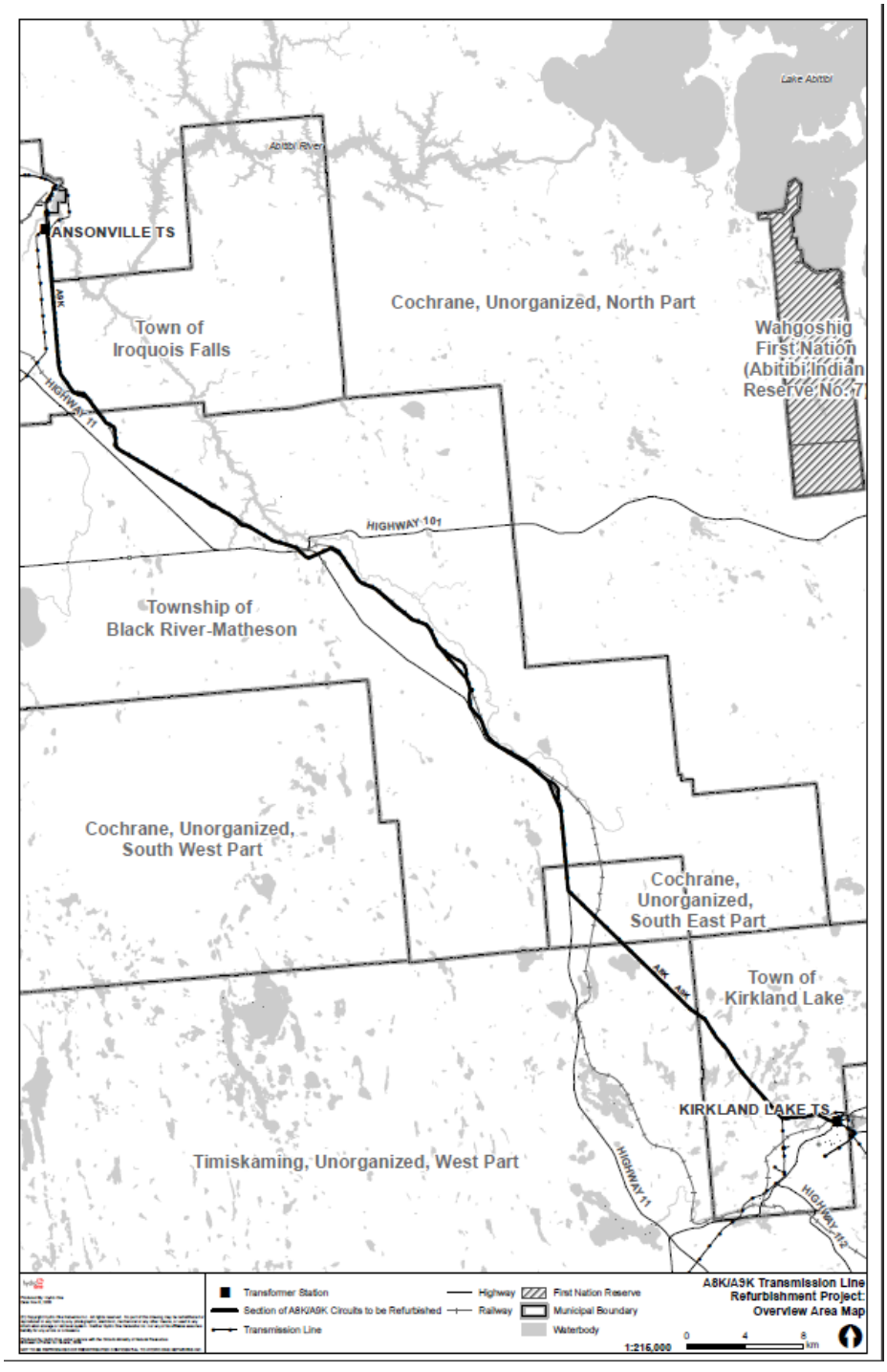
DECISION AND ORDER

HYDRO ONE NETWORKS INC

EB-2021-0107

DECEMBER 2, 2021

SCHEDULE A - ANSONVILLE BY KIRKLAND LAKE REFURBISHMENT PROJECT MAP
HYDRO ONE NETWORKS INC.
EB-2021-0107
DECEMBER 2, 2021



SCHEDULE B

DECISION AND ORDER

HYDRO ONE NETWORKS INC.

EB-2021-0107

DECEMBER 2, 2021

STANDARD CONDITIONS OF APPROVAL
FOR ELECTRICITY LEAVE TO CONSTRUCT APPLICATIONS
HYDRO ONE NETWORKS INC.
EB-2021-0107

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.