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

BY EMAIL

September 11, 2023

Nancy Marconi
Registrar
Ontario Energy Board
2300 Yonge Street, 27th Floor
Toronto ON M4P 1E4

Dear Ms. Marconi:

Re: Hydro One Sault Ste. Marie Limited Partnership (HOSSM)
Leave to Construct Application – Sault #3 Project
OEB Staff Interrogatories

In accordance with Procedural Order No. 1, please find attached the OEB staff interrogatories for the above proceeding. This document has been sent to HOSSM and to all other registered parties to this proceeding.

HOSSM is reminded that its responses to interrogatories are due by September 25, 2023. Responses to interrogatories, including supporting documentation, must not include personal information unless filed in accordance with rule 9A of the OEB's Rules of Practice and Procedure.

Yours truly,

Vithooshan Ganesanathan
Digitally signed by Vithooshan Ganesanathan
Date: 2023.09.08 09:22:43 -04'00'

Vithooshan Ganesanathan, Advisor
Generation & Transmission

Encl.

OEB Staff Interrogatories
Hydro One Sault Ste. Marie Limited Partnership
EB-2023-0061

Please note, Hydro One Sault Ste. Marie Limited Partnership (HOSSM) is responsible for ensuring that all documents it files with the OEB, including responses to OEB staff interrogatories and any other supporting documentation, do not include personal information (as that phrase is defined in the *Freedom of Information and Protection of Privacy Act*), unless filed in accordance with rule 9A of the OEB's *Rules of Practice and Procedure*.

Staff-1

Ref: (1) Exhibit B, Tab 7, Schedule 1, p. 1, Table 1
(2) Exhibit B, Tab 7, Schedule 1, p. 2, Table 2
(3) Exhibit B, Tab 7, Schedule 1, p. 3

Preamble:

Reference 1 and 2 states that the total estimated project cost of $68.8 million includes a contingency cost estimate of $6.463 million and $0.534 million for the line and station portions of the project, respectively. This contingency cost estimate represents approximately 10.2% of the pre-contingency estimate.

Reference 3 outlines project risks, including HOSSM's estimated top four project risks: outage constraints, adverse weather, scope additions, and approvals and permits.

Questions:

a) Please describe the basis for the contingency cost estimate for the project and why it is appropriate.

b) Please describe how the contingency cost estimate for the Sault #3 Project compares to contingency cost estimates developed for the comparator projects.

c) How did HOSSM develop its estimates for project material, labour, equipment rental and contractor costs?

d) How would HOSSM characterize the confidence of the cost estimate for the Sault #3 Project? What method did HOSSM use to estimate its confidence?

e) Please explain the methods HOSSM used to assess project risks for the Sault #3 Project and please clarify how HOSSM's contingency estimate relates to that analysis.

Staff-2

Ref: (1) Exhibit E, Tab 1, Schedule 1, Attachment 1
(2) Exhibit E, Tab 1, Schedule 1, Attachment 2
(3) Exhibit E, Tab 1, Schedule 1, Attachment 3

Preamble:

HOSSM has applied for approval of the forms of the agreement offered or to be offered to affected landowners pursuant to s.97 of the OEB Act, if temporary construction rights for access or staging areas are required for the duration of the construction period. HOSSM states that its proposed land agreements were approved by the OEB as part of Hydro One Network Inc.'s Ansonville by Kirkland Lake Refurbishment Project under docket EB-2021-0107.

The three references above contain the forms for the land right agreements that HOSSM proposes to use to obtain any identified land rights for the Sault #3 Project:

1. Temporary Access and Temporary Access Road (for off-corridor access)
2. Temporary Rights Agreement (for construction staging)
3. Full and Final Release form (used as the basis for construction-related compensation, including crop or property damage)

Questions:

a) Please confirm which forms approved under the Ansonville by Kirkland Lake Refurbishment Project correspond to the forms at reference 1, 2 and 3 above.

b) Please advise whether there are any substantive differences between the previously OEB approved forms referenced above and the forms that HOSSM requests approval of as part of the Sault #3 Project.

c) Please confirm that all impacted landowners will have the option to receive independent legal advice regarding the proposed land agreements.

d) Please clarify whether HOSSM has committed to or will commit to reimbursing landowners for reasonably incurred legal fees associated with the review and completion of the necessary land rights agreements.

Staff-3

Preamble:

HOSSM has applied for leave to construct approval pursuant to s.92 of the OEB Act.

The OEB typically imposes a set of standard conditions of approval (Schedule 1) as part of its leave to construct approvals. As stated in the OEB's Filing Requirements for Electricity Transmission leave to construct applications, applicants should expect to meet those standard conditions. If an applicant believes that a condition should be modified, the applicant must request any proposed changes and provide supporting rationale in its application.

Question:

a) Please comment on the OEB's standard conditions of approval for electricity transmission leave to construct applications noted above. If HOSSM does not agree with any of the specific draft conditions of approval noted below, please identify the specific conditions that HOSSM disagrees with and explain why. For conditions in respect of which HOSSM would like to recommend changes, please provide the proposed changes.

Staff-4

Ref: (1) Exhibit B, Tab 7, Schedule 1, p. 5, Table 3
(2) Exhibit B, Tab 7, Schedule 1, p. 6

Preamble:

In relation to the line work, HOSSM cited three recent single circuit 115 kV wood pole line refurbishment projects in Northern Ontario: the D2L Line Refurbishment, the A7L/R1LB/A6P Line Refurbishment, and the Kapuskasing Area Reinforcement projects.

HOSSM estimates that the Sault #3 Project will cost $655K per circuit km, while the total project costs per circuit km of the comparator projects were between $410K and $488K. The Sault #3 Project is estimated to cost between 25% and 37% higher than the comparator projects.

HOSSM states that the higher cost per km forecasted for the Sault #3 Project relative to the three comparators is due to price increases for essential commodities used in the project (i.e., copper, aluminum, wood, and steel) and global supply chain issues. At

reference 1, the “Escalation Adjustment” inflates costs for future years consistent with the OEB’s inflation parameters. HOSSM states that the OEB inflation parameters were used for the escalation adjustment and noted that although these parameters are based on historical data and do not reflect true inflation, the OEB inflation parameters were used to maintain a conservative escalation adjustment.

HOSSM states that the price of essential commodities has a significant impact on project costs. Equipment purchased to construct transmission lines (e.g., conductors and wood poles) is heavily impacted by certain raw material indices. Essential commodities such as copper, aluminum, wood, and steel have undergone price increases and supply shortages. As such, the difference in the per kilometer costs of the comparable projects to the Sault #3 Project does not reflect the true escalation costs for specific Project elements.

Questions:

a) Please provide the detailed calculations for the derivation of the “Escalation Adjustment” and the “Total Comparable Project Costs” for all three comparator projects.

b) Please confirm that details in Table 1 below regarding the three comparator projects and the Sault #3 Project are correct, otherwise, please clarify:

Table 1: Length of Line Being Reconductored in Comparable Line Projects

	D2L Line Refurbishment	A6P Refurbishment	H9K Reinforcement	Sault #3 Project
Total Length of Line Reconductored (km)	43	15	32	69.3
Total Length of Line used in Line Unit Cost Analysis (km)	43	15	32	90.5

c) For the Sault #3 Project, please separate the line cost into two portions: 1) 69.3 km of line being reconductored, and 2) the 21.2 km of line not being reconductored.

d) Using the answer from part c) above, please develop a weighted average of the line unit cost for the Sault #3 Project. Please provide detailed calculations for the derivation of the weighted average line unit cost.

e) At reference 1, for the Sault #3 Project, the $655K/km of line was calculated by dividing the OEB-approved cost estimate of $59,304K by the total transmission line length of 90.5 km. However, only 69.3 km of line in the Sault #3 Project is being reconductored. Please explain why it is appropriate to use the entire 90.5 km of line to calculate the line unit cost of the Sault #3 Project rather than completing a weighted calculation similar to the one proposed in part d) above.

f) Please provide a revised estimate for the project costs for the line portion of the project using true inflation instead of the OEB's inflation factors. Please provide detailed calculations for the derivation of the revised cost estimate.

Staff-5

Ref: (1) Exhibit B, Tab 7, Schedule 1, p. 3

Preamble:

In its pre-filed evidence, HOSSM includes a detailed 50-year Net Present Value (NPV) analysis using a 5.65% discount rate and a NPV sensitivity analysis using varying values for the price of energy. The results of the NPV energy price sensitivity analysis is provided in Table 2.

HOSSM notes that losses calculated based on 2022 average Hourly Ontario Energy Price (HOEP) of $47.3/MWH. HOSSM states that it does not have any basis to deviate from the HOEP and it is the only current settlement mechanism to recover transmission line loss costs.

Table 2: NPV Energy Price Sensitivity Analysis

Refurbishment Options[1]	Alt 1	Alt 2 (preferred)	Alt 3	Alt 4	Alt 5
Capital cost ($M)	68.72	68.81	69.43	69.56	74.57

[1] Cost estimates for alternatives are Association for the Advancement of Cost Engineering Class 3 estimates.

Annual Losses (MWh)	5,031.5	4,476.4	4,848.4	4,179	3,287.7

Energy Price $/MWHR	**Alt 1**	**Alt 2 (preferred)**	**Alt 3**	**Alt 4**	**Alt 5**
47.30	-63.18	-62.63	-63.58	-62.92	-66.15
89.00	-68.22	-67.11	-68.43	-67.11	-69.44
120.00	-71.96	-70.44	-72.04	-70.21	-71.88

Question:

a) Please confirm why it is appropriate to use HOEP to conduct the NPV sensitivity analysis opposed to including Global Adjustment in addition to HOEP.

Staff-6

Ref: (1) Exhibit B, Tab 5, Schedule 1, pp. 1-3

Preamble:

When describing the alternatives for the refurbishment between Third Line TS and Mackay TS, HOSSM notes that under Alternative 2, the existing 336 kcmil conductor between Third Line TS and Goulais Bay TS is retained but the 266.8 kcmil conductor between Goulais Bay TS and Mackay TS is replaced with a new 477 kcmil conductor. The conductor section from Third Line TS to Goulais Bay TS was replaced in 1991 with the 336 kcmil conductor that is currently in place.

Alternative 4 is described to be similar to Alternative 2, with the exception that the conductor on the entire line is replaced with the new 477 kcmil conductor.

Table 1 notes Total Annual Cost under Alternative 2 to be $5.65 million and under Alternative 4 to be $5.68 million. Alternative 2 is noted to be HOSSM's preferred option.

Questions:

a) Please elaborate on HOSSM's rationale for preferring Alternative 2 over Alternative 4, given the small difference in Total Annual Cost.

b) As part of the cost analysis for Alternative 2, to what extent has HOSSM factored in the future replacement cost of the conductor between Third line TS and Goulais Bay TS when it reaches its end of life. This would be in reference to Alternative 4, where such a replacement would likely occur at a much later time.