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File No. 14898.13

June 7, 2024

BY EMAIL & RESS
registrar@oeb.ca

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

Dear Ms. Marconi:

Re: PUC (Transmission) LP ("PUC Transmission") and Hydro One Sault Ste. Marie ("HOSSM") Application for Leave to Construct and Related Matters ("Application")
Ontario Energy Board ("OEB") File No. EB-2023-0360
Argument-in-chief

In accordance with Procedural Order No. 3 issued by the OEB on May 24, 2024, please find enclosed the argument-in-chief of PUC Transmission and HOSSM.

Yours truly,

BORDEN LADNER GERVAIS LLP

Colm Boyle

CB/JV

ONTARIO ENERGY BOARD

PUC (TRANSMISSION) LP

HYDRO ONE SAULT STE. MARIE

ARGUMENT IN CHIEF

Filed: June 7, 2024

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1. Introduction and Procedural Background

On January 2, 2024 PUC (Transmission) LP ("**PUC Transmission**") and Hydro One Sault Ste. Marie LP ("**HOSSM**") applied to the Ontario Energy Board ("**OEB**") under sections 74, 78, 92 and 97 of the *Ontario Energy Board Act*, 1998, S.O. 1998, c. 15, (Schedule B) (the "**Act**") for various approvals to build high-voltage transmission facilities in Sault Ste. Marie. The application was subsequently revised on January 26, 2024 ("**Application**").

1.1 PUC Transmission Application

PUC Transmission applied to the OEB pursuant to s. 92 of the Act for an Order, or Orders, granting leave to construct the following:

(a) approximately 10 km of new 230 kV transmission lines that will cross the northerly and westerly areas of the city of Sault Ste. Marie, starting at the Third Line Transformer Station ("**Third Line TS**"), which is owned and operated by HOSSM, and ending at a new 230 kV transformer station to be constructed at the easterly limit of Yates Avenue in Sault Ste. Marie (the "**230 kV Line**"); and

(b) a new 230 kV transformer station, that will step-down voltage from 230 kV to 115 kV, to be constructed, owned, and operated by PUC Transmission, and located at the easterly end of Yates Avenue within the boundaries of the city of Sault Ste. Marie (the "**Tagona West TS**")

(collectively, the "**PUC Project**").

PUC Transmission is also applying to the OEB pursuant to s. 97 of the Act for approval of the forms of the agreement offered, or to be offered, to affected landowners in the Application at Exhibit E.

PUC Transmission's scope includes all sections of the Application except Exhibit C, Tab 4, Schedule 1 of the Application and all interrogatory responses except interrogatory responses Staff-18 through Staff-24. PUC Transmission has provided information regarding the cost, scope, and economic impacts of the work PUC Transmission will be undertaking to deliver the PUC Project.

1.2 HOSSM Application

HOSSM, as a licensed transmitter, is required to perform transmission station and other transmission facilities work to enable PUC Transmission to connect its proposed transmission facilities. The proposed PUC Transmission facilities are the primary subject, and driver of the need, for this Application.

The PUC Project requires certain modifications at the Third Line TS that will be designed, constructed, owned, and operated by HOSSM and which are necessary to enable the interconnection of the PUC Project to the Third Line TS. The proposed station scope of work at Third Line TS will consist of three project components; 1) Line Connection Component, 2) Refurbishment Component, and 3) New Transmission Line Component to accommodate the future new 230 kV Transmission Line Project from Mississagi TS to Third Line TS (per the November 14, 2023, OEB amendment to Hydro One's transmission licence requiring it to develop and seek approval for three new transmission lines, including the New Transmission Line Project), as further described in Exhibit C, Tab 4, Schedule 1 of the Application (together, the "**HOSSM Station Project**").

HOSSM is applying to the OEB pursuant to s. 92 of the Act for an Order, or Orders, granting leave to construct the HOSSM Station Project. HOSSM is also seeking:

(a) approval of a new Regulatory Deferral Account under s. 78 of the Act to capture costs related to station work scope that will facilitate the connection of a new priority transmission line in the region in the near future. HOSSM requests that the OEB approve the same cost allocation treatment for the Third Line TS station connection component, as that which the Board deems appropriate for the PUC Project; and

(b) an exemption from the Transmission System Code ("**TSC**") from the requirement to require Algoma Steel Inc. ("**Algoma Steel**" or "**Algoma**") to pay bypass compensation to HOSSM under Section 11.2.1 of the TSC in respect of 30 MW of its load that will be served by Hydro One on an interim basis for three years with the intention that the 30 MW of load will be served by PUC Transmission once its facilities come into service.

Exhibit C, Tab 4, Schedule 1 of the Application and interrogatory responses Staff-4, Staff-18 through Staff-24, and 2.EPC-3 provide information regarding the cost, scope, and economic impacts of the work HOSSM will be undertaking to deliver the HOSSM Station Project. As stated in the evidence, the planning, development, and coordination of the three project components at Third Line TS concurrently, including a 'common cost scope' that will benefit all components, will result in a more efficient and cost-effective process that also maintains work crew safety.

1.3 Argument-in-Chief

This Argument in Chief is organized to address each of the issues listed in the Issues List attached to the OEB's Decision on Issues List as Schedule "A" and dated April 16, 2024. Therefore, the submissions that follow are limited to address only the issues which the OEB has determined to be relevant and within the scope of the Application.

2. Prices: Need for the Project

2.1 Has the application demonstrated that the project is needed or would be beneficial in the case of discretionary projects? What factor(s) are driving the need – e.g. new customer demand, increased system capacity requirement, reliability, sustainment, system resilience, etc.?

2.1.1 PUC TRANSMISSION ARGUMENT IN CHIEF

As provided at Exhibit B, Tabs 1, 2 and 3, the evidence demonstrates the significant need for the PUC Project as it supports PUC Distribution's infrastructure renewal, future Batchewana First Nation ("**BFN**") projects, connects new generators, supplies additional load customers that are currently being planned for the area and meets the expected demand by Algoma Steel for the new electric arc furnace ("**EAF**") facilities.[1] PUC Transmission has received letters of support for the PUC Project from Algoma Steel, PUC Distribution Inc. and the Sault Ste. Marie Region Conservation Authority.[2]

In the near term, the PUC Project provides the increased transmission capacity required to serve Algoma Steel's new EAFs. There will be a substantial increase in electrical load at Algoma Steel as the existing blast furnaces will be replaced by the new EAFs. This new load of approximately 280 MW can only be served by new transmission facilities connected to the HOSSM Third Line TS.

The development of Algoma Steel's EAF facilities contemplates three distinct energy use stages:

1) Stage 1: Only one EAF operating at full power and being supplied via the HOSSM Patrick Street Station, Clergue Station and Algoma's Lake Superior Power ("**LSP**").

2) Stage 2: The EAFs would be supplied by the PUC Project and

    a. Stage 2A: only one EAF will be operating at full power at any time with LSP not generating electricity; or

    b. Stage 2B: both EAFs would operate simultaneous with LSP generating electricity.

3) Stage 3: The EAFs would be supplied by the PUC Project and both EAFs would be operating in parallel without any generation from LSP.

The Application is based on satisfying the findings from the IESO's System Impact Assessment under the Stage 2A operating scenario to facilitate Algoma Steel's increased electrical load. Stages 2A and 2B, dependent upon which mode Algoma Steel chooses to operate in, are intended to be in place for an interim period until additional necessary bulk system reinforcements are completed

[1] Exhibit B, Tab 3, Schedule 1; IR Response to Staff-1.
[2] Exhibit E, Tab 2, Schedule 1, Attachments 2 & 3.

by HOSSM and Hydro One Networks Inc. ("**HONI**"). Once the necessary bulk system reinforcements are complete, Algoma Steel can commence operating under the Stage 3 mode.[3]

The PUC Project also has the potential to decommission and avoid a system renewal of PUC Distribution's Tarentorus TS and replace it with a new supply point from Tagona West TS. Tarentorus TS is near end of useful life and will need to be reconstructed. The Tarentorus TS peak loading represents 80-85 MW of the city's overall peak load of 125-140 MW. The system renewal project is anticipated to start within the next five years, subject to regulatory approvals.[4] Furthermore, transferring the Tarentorus TS load to the proposed Tagona West TS has the potential to avoid the need for the addition of a third autotransformer at the Third Line TS.[5]

Finally, the BFN has indicated that future BFN projects have the potential to make use of the PUC Project and the HOSSM Station Project.[6] This potential is further illustrated in the BFN energy documents which were filed confidentially on the record in this proceeding.[7]

Consistent with section 4.3.2.4 of the OEB's leave to construct filing guidelines, the PUC Project is a non-discretionary project.[8] The PUC Project is needed to connect new loads (including a large new user) and anticipated generation and distributed energy resources within the westerly area of Sault Ste. Marie within the next five to ten years.[9]

2.1.2 HOSSM ARGUMENT IN CHIEF

The need for the HOSSM Station Project Component #1 Line Connection Component is driven by the need to connect the PUC Project.[10]

2.2 Is the project consistent with any relevant power system plan (e.g., regional plan)?

2.2.1 PUC TRANSMISSION ARGUMENT IN CHIEF

The PUC Project is consistent with the IESO's October 2022 "Need for Northeast Bulk System Reinforcement" report which was developed to reliably supply the substantial load growth expected in the areas west of Sudbury to Wawa and north of Sudbury to Timmins, while maintaining the power transfer required to supply the forecasted load in the Northwest and the rest

[3] Exhibit B, Tab 3, Schedule 1, pages 3-4.
[4] Exhibit E, Tab 2, Schedule 1, Attachment 2; Exhibit H, Tab 1, Schedule 1, page 2.
[5] Exhibit H, Tab 1.
[6] BFN response to OEB Staff IR#1 filed May 9, 2024.
[7] BFN confidential response to PUC Transmission IR#5&6 dated May 23, 2023.
[8] OEB, Filing Requirements for Electricity Transmission Applications, Chapter 4 - Leave to Construct and Related Matters, March 16, 2023, online: <https://www.oeb.ca/sites/default/files/OEB-Ltr-Electricity-Leave-to-Construct-Filing-Requirements-20230316.pdf>
[9] Exhibit B, Tab 3, Schedule 1, page 1; IR Response to Staff-1.
[10] Exhibit C, Tab 4, Schedule 1, page 1.

of the Northeast (the "**Northeast Bulk System Plan**").[11] Indeed, the Bulk System Plan states that:

> "*Electricity demand from the industrial sector in the Northeast is forecast to grow at a rapid pace over next 10 years, primarily driven by electrification initiatives and anticipated policies to reduce carbon emissions. This growth is expected to be concentrated in the Sault Ste. Marie (SSM) and Timmins areas*."

On October 23, 2023, the Ontario government issued an Order-in-Council declaring three transmission line projects as priorities in northeast and eastern Ontario.[12] The government also directed the OEB to amend HONI's transmission licence to designate it as the transmitter responsible for the development of the three lines.[13] The Ministry of Energy's media release explains that:

> "*Ontario is accelerating the timely and cost-effective development of three transmission projects that will support the production of clean steel at Algoma Steel in Sault Ste. Marie, as well as economic growth, critical mineral development and new housing in northeast and eastern Ontario.*"[14]

In this context, the PUC Project is consistent with the Northeast Bulk System Plan as it provides the "final mile" in transmission system upgrades necessary to facilitate connection of the significant load growth coming within Sault Ste. Marie, as identified in the Northeast Bulk System Plan noted above. The Northeast Bulk System Reinforcements will facilitate Algoma Steel to ramp to full production via the utilization of the proposed PUC Project.

2.2.2 HOSSM ARGUMENT IN CHIEF

HOSSM agrees with PUC Transmission's position on this issue.

[11] https://www.ieso.ca/-/media/Files/IESO/Document-Library/regional-planning/Northeast-Ontario/ne-bulk-planning-initiatives-20221027-final-report-need-for-northeast-bulk-system-reinforcement.pdf
[12] https://www.oeb.ca/sites/default/files/Priority-Order-20231019.pdf
[13] https://www.oeb.ca/sites/default/files/Order-in-Council-Directive-hydro-one-amendment-20231019.pdf
[14] https://news.ontario.ca/en/release/1003690/province-powering-growth-in-northeast-and-eastern-ontario

3. Prices: Project Alternatives

3.1 Has the application demonstrated that the proposed project is the preferred option to address the need, as opposed to implementing a different transmission solution, a distribution solution, a non-wires solution, or some other solution?

3.1.1 PUC TRANSMISSION ARGUMENT IN CHIEF

PUC Transmission considered a number of alternatives to the PUC Project that included non-wires solutions.[15] However, none of the alternatives are viable from either a technical, operational, reliability and/or financial perspective. The PUC Project is the best (and only feasible) alternative to meet the identified need in section 2.1 above.

The PUC Project represents the most economic option to provide increased transmission capacity to serve the new Algoma Steel electricity needs at this time and will provide cost-effective service for additional industrial and generator connections in the future.[16]

A number of alternate routes for the 230 kV Line and sites for the Tagona West TS were considered as part of the Environmental Assessment ("EA") in a fair and holistic manner. From routing and siting assessment criteria and public feedback, PUC Transmission demonstrated that the preferred route and station location is the best alternative to meet the identified need in section 2.1 above. Furthermore the cost per kilometer of transmission line and cost per kVA of transmission station capacity of the PUC Project are well within the range of the comparable projects (as discussed in section 4.1 below). Commitments are in place that address the land rights requirements for 90% of the overall length of the 230 kV Line route, further evidencing local acceptance of the proposed route.[17]

Finally, PUC Transmission considered two alternative conductor sizes for the 230 kV Line: 795 MCM ACSR and 954 MCM ACSR. The overall circuit loading capacity is 250 MVA for the 759 MCM conductor versus 400 MVA for the 954 MCM conductor. The higher capacity is required to satisfy the total expected load of 280 MVA while providing the redundancy required to ensure reliable service. Thus, the 954 MCM conductor was selected for this project.[18]

3.1.2 HOSSM ARGUMENT IN CHIEF

Based on the scope of work requested by the customer, PUC Transmission, and which is required at Third Line TS, there are no other alternatives to connect this line in the area.

[15] Response to IR 2.EPC-3 and 2.EPC-4; Exhibit B, Tab 5, Schedule 1.
[16] Exhibit B, Tab 5, Schedule 1.
[17] Exhibit B, Tab 1, Schedule 1, page 8; Exhibit B, Tab 2, Schedule 1, pages 1-2, 4; Exhibit B, Tab 5, Schedule 1;
[18] IR Response to Staff-2.

In terms of the scope of work at Third Line TS, as identified in Exhibit C, Tab 4, Schedule 1 of the pre-filed evidence, there are three[19] scopes of work, and a common cost element, which for the purposes of cost allocation, has been identified separately. Exhibit C, Tab 4, Schedule 1 provides detailed information including cost, scope, and economic impacts, to deliver the HOSSM Station Project, demonstrating that the planning, developing, and coordination of the three project components at Third Line TS at the same time, "will result in a more efficient and cost-effective process that also maintains work crew safety."[20] The HOSSM Station Project scope of work, as contemplated in this Application, includes performing all three project components in parallel, the rationale for doing so is as follows:

> "*it will eliminate wasting future resources, rework and premature impairment (i.e. write off) of assets that would be required if Component #3 is not executed in parallel with this Hydro One Station Project. This approach demonstrates appropriate foresight and stewardship of utility assets and the transmission system, given the OEB's acknowledgment of the priority New Transmission Line Project that will terminate one end of the circuit at Third Line TS.*"[21]

HOSSM did not estimate project costs for any other combination, or separation, of the HOSSM Station Project sub-components given the cost and resources required to compile project estimates. In addition, executing the HOSSM Station Project in any other manner than the one proposed in the Application, would result in a less effective and efficient manner of completing the work.

4. Prices: Project Cost

4.1 Has the application provided sufficient information to demonstrate that the estimates of the project cost are reasonable? Are comparable projects selected by the applicant (as required by the filing requirements) sufficient and appropriate proxies for the proposed project?

4.1.1 PUC TRANSMISSION ARGUMENT IN CHIEF

PUC Transmission's pre-filed evidence and interrogatory responses include sufficient information to demonstrate that its current project cost estimates are reasonable. PUC Transmission has selected comparable projects that are appropriate proxies for the proposed PUC Project.[22]

Exhibit B, Tab 6 provides a quantification of the estimated project costs. Tables 1 and 2 summarize the 230 kV Line and Tagona West TS costs, inclusive of contingency amounts. These estimates were based upon a Class 3 cost estimate (as per the Advancement of Cost Engineering ("**AACE**")

[19] #1 Line Connection Component (Section 4.0), #2 Refurbishment Component (Section 5.0) and #3 New Transmission Line Project (Section 6.0).
[20] Exhibit C, Tab 1, Schedule 1, Pg.2.
[21] Exhibit C, Tab 4, Schedule 1, pg. 7.
[22] Exhibit B, Tab 6; Exhibit B, Tab 7; Exhibit B, Tab 8.

International Estimate Classification System) which means the accuracy of the estimate is in the range of -20%/+30%. The project costs are formulated by combining actual costs incurred to date, and an estimate of remaining development and construction costs to the projected in-service date. Forecasts are based on vendor quotes and estimated construction costs for similar work derived from past experience of the consultants.[23]

Three comparable transmission line projects recently completed by HONI in Ontario were considered: the Barrie Area Transmission Upgrades Project ("**BATU**"), the Guelph Area Transmission Reinforcement Project ("**GATR**"), and the Woodstock Area Transmission Reinforcement Project ("**WATR**"). Table 3 of Exhibit B, Tab 8 provides comparisons of costs, in-service year, voltage levels, number of circuits, types of towers, types of terrain, and other parameters as may be appropriate. Non-comparable cost items were added or subtracted, as appropriate, to provide as accurate a comparison as possible. This comparison illustrates that the cost per kilometer of the 230 kV Line is within the mid-range of the comparable line projects, even though projects with comparably longer distances are able to distribute the project fixed costs over more kilometers versus those that are shorter in length (like the 230 kV Line).

Four comparable station projects recently completed by HONI in Ontario were considered: Barrie TS, St. Isidore TS, Palmerston TS refurbishment and Enfield TS New DESN. Table 4 of Exhibit B, Tab 8 provides comparisons of costs, key technical parameters, location, project surroundings, in-service dates and other parameters as may be appropriate. Non-comparable cost items were added or subtracted, as appropriate, to provide as accurate a comparison as possible.

The proposed Tagona West TS is similar to the cited comparable stations, with respect to number of transformers. However, the Tagona West TS will have a higher maximum transformation capacity than any of the comparable station projects. Therefore, PUC Transmission has used the cost per MVA of station capacity, rather than the total station cost, to inform its benchmarking. In the interest of simplifying the presentation, the cost per kVA is provided in Table 4. This comparison illustrates that the cost per kVA of Tagona West TS is within the mid-range of the comparable station projects.

In the response to interrogatory Staff-11, PUC Transmission also considered another comparable station project with similar transformation capacity as the Tagona West TS. That station was part of the GATR application filed on March 8, 2013, wherein the existing Cedar TS was upgraded with the addition of 2 – 250 MVA autotransformers and associated breakers. Based on the information available to PUC Transmission, the cost per kVA of Tagona West TS is nearly identical to Cedar TS.[24]

PUC escalated the historical costs for comparable line and station projects in accordance with the OEB's prescribed inflation factors, also known as Input Price Index ("**IPI**"), and accounted for the two-year lag in IPI rates. PUC submits that this approach provides for the most accurate

[23] Exhibit B, Tab 6, pages 1-2; IR Response to Staff-6.
[24] IR Response to Staff-11.

comparison of historical costs for comparable projects with estimated PUC Project costs. This approach will align the escalation of costs with the year in which the inflation occurred.

PUC Transmission is aware that HONI has historically assumed an escalation adjustment of 2% per year when generating the costs of comparable projects. This may have been acceptable in the past when inflation was stable, however inflation has been rising rapidly in the wake of COVID-19 peaking most recently at 5.4% in 2022.[25] The price of essential commodities for transmission facilities have significantly increased, with aluminum prices increasing by 46%, copper prices increasing by 69%, and steel plate prices increasing by 51% between April 2020 to end of Q2 2023.[26] More recently, HONI has used a similar IPI-based escalation methodology in OEB-approved leave to construct application EB-2023-0198 and EB-2023-0061.[27]

4.1.2 HOSSM ARGUMENT IN CHIEF

The cost of the HOSSM Station Project is $73.4M, of which $43.1M is allocated to the new PUC Project, with the balance being allocated to the refurbishment work ($5.8M) and the New Transmission Line Project ($24.5M). HOSSM provided three cost comparison projects[28], Martindale TS, and two East-West Tie Station Projects, Marathon TS and Lakehead TS, which once adjusted for scope differences and escalation adjustment[29], using the OEB approved inflation factor, range between $81.7M and $58.9M. HOSSM's Station Project is approximately at mid-range of project cost comparatives.

HOSSM's cost was generated by completing an Association for the AACE Class 3 cost estimate[30], and was compiled by task based on preliminary design quantities and schedule, each of the tasks were then mapped to the four listed cost elements; Common Station elements, East Yard, West Yard and Non-common station elements in order to calculate the individual cost elements provided in Exhibit C, Tab 4, Schedule 1, Table 4.

4.2 Has the application adequately identified and described any risks associated with the proposed project? Is the proposed contingency budget appropriate and consistent with these identified risks?

4.2.1 PUC TRANSMISSION ARGUMENT IN CHIEF

Exhibit 7, Tab 7 discusses four key risks: cost estimating accuracy, approvals and permits, material and equipment delivery timelines, and pricing variations. These key PUC Project risks are not unique to PUC Transmission and are encountered by nearly every transmission project

[25] IR Response to Staff-10; Exhibit B, Tab 8 pages 2-4.
[26] Exhibit B, Tab 8 page 2.
[27] IR Response to Staff-10(e); See EB-2023-0198 at OEB Staff IRs 09, 12 and 13 filed on December 19, 2023 and EB-2023-0061 at OEB Staff IR 04 filed on October 2, 2023.
[28] IR Response to Staff-18(a), Table 2.
[29] IR Response to Staff-18(a), Table 2.
[30] IR Response to Staff-20(a).

proponent.[31] As discussed by PUC Transmission in its IR response to Staff-9, PUC Transmission has included an appropriate contingency allowance in its total project cost estimate that is consistent with, and that will mitigate potential impacts of, the identified risks. A more detailed discussion of these risks and PUC Transmission's mitigation steps is included in the IR response to Staff-9.

Unforeseen risks attributable to labour disputes, safety or environmental incidents, and any other unlikely but potentially significant event were also identified as potential risks but are considered to have a low likelihood of occurrence.

The estimated PUC Project cost includes a contingency allowance, as noted in Table 1 of Exhibit B, Tab 6.[32] The contingency amount included in the overall cost estimate is expected to mitigate for variances in project costs, including but not limited to the following items, which could reasonably be expected to occur:

1) Tender/contract variances;

2) Subsurface conditions differing from design assumptions;

3) Delays in interconnection and/or commissioning work due to outage scheduling constraints;

4) Delays in material delivery resulting from vendor issues or deviations; and

5) Downtime and delays due to weather, routine equipment failure, or delay in availability.

There are no allowances in the contingency amount, nor elsewhere in the estimated project costs, for the following items:

1) Force majeure events such as labour disputes, natural disasters and protests;

2) Changes in material or equipment costs exceeding historical variability in exchange rates and commodity prices; and

3) Critical safety or environmental incidents resulting in prolonged work stoppages.

4.2.2 HOSSM ARGUMENT IN CHIEF

As with most projects, there are risks associated with estimating costs. HOSSM's Station Project cost estimate includes an allowance for contingencies in recognition of these risks. These risks were discussed in detail in Exhibit C, Tab 4, Schedule 1, Section 12.0, page 12. A discussion of

[31] IR Response to Staff-9.
[32] Exhibit B, Tab 6, Schedule 1, page 4.

actions HOSSM has, or will employ, to mitigate the four identified key risks[33] for the HOSSM Station Project related to approvals and permits, outage constraints, material delivery timelines and pricing variations, are contained in IR Response to Staff-19.[34]

4.3 Has HOSSM adequately demonstrated that the eligibility criteria of Causation, Materiality, and Prudence have been met for the establishment of a new deferral account?

4.3.1 HOSSM ARGUMENT IN CHIEF

HOSSM is seeking OEB approval under s.78 of the Act for new Regulatory sub-accounts for the HOSSM Station Project scope of work – specifically the work that will facilitate Project Component #3 (see section 1.2), the New Transmission Line Project. Direction for the new line was provided via a government issued Order-in-Council[35]. The new regulatory sub-accounts will consist of the following:

1) The first sub-account will track capital costs associated with the scope of work at Third Line TS that will benefit and facilitate the connection of the future New Transmission Line Project (i.e. Component #3) at Third Line TS[36] ; and,

2) After the New Transmission Line Project is in-serviced, the second sub-account will record the revenue requirement[37] of the in-serviced capital associated with that component until such time that it can be included in a future OEB-approved transmission revenue requirement application.

At Exhibit C, Tab 4, Schedule 1, Section 18.1, HOSSM included evidence to support the need for the regulatory account, consistent with the Board's *Filing Requirements for Electricity Transmission Applications, Chapter 2* ("Boards Filing Requirements"), dated February 11, 2016, which outlines that the eligibility criteria of causation, materiality and prudence must be met.

HOSSM has established the threshold for these three criteria as follows:

1) The Board's Filing Requirements define causation as "the forecasted expense must be clearly outside of the base upon which revenue requirement(s) were derived"[38]. For this project, the costs and/or associated revenue requirement impacts resulting from the capital costs allocated to the New Transmission Line Project have not been included in any current HOSSM OEB-approved revenue requirement, and therefore the forecast

[33] Exhibit C, Tab 4, Schedule 1, pgs 12-13.
[34] Page 44.
[35] Exhibit C, Tab 4, Schedule 1, Appendix B
[36] Cost allocation of this work is outlined in Exhibit C, Tab 4, Schedule 1, Section 16.0 Table 4, pg. 18.
[37] Exhibit C, Tab 4, Schedule 1, Pgs. 21-22.
[38] Filing Requirements for Electricity Transmission Applications - Chapter 2 (oeb.ca) Pg. 35.

impacts (costs and incomes) are outside of the base upon which HOSSM's revenue requirement is derived.

2) In terms of materiality, pursuant to section 2.1.1 of the Board's Filing Requirements, HOSSM's materiality threshold is 0.5% of transmission revenue requirement for a transmitter with a transmission revenue requirement greater than $10 million and less than or equal to $200 million. Therefore, based on the requirements and the calculation of HOSSM's materiality threshold, i.e. $219,555[39], HOSSM expects the HOSSM Station Project costs allocated to the connection of HONI's New Transmission Line Project to be significantly greater than this threshold.

3) The OEB's test for Prudency is also established in the Board's Filing Requirement. HOSSSM is undertaking the Line Connection Project component of the HOSSM Station Project at the request of PUC Transmission (the customer) to meet its obligations under the TSC. The benefits of undertaking the Refurbishment Component and the New Transmission Line Project in parallel with the Line Connection Component demonstrates appropriate transmitter foresight and prudent asset investment and stewardship. HOSSM is not seeking any disposition or recovery of any balances, at this time. Disposition of balances will occur in a future rates hearing.

The approval and use of these sub-accounts and their functionality is supported by OEB precedent, notably;

1) Waasigan Transmission Tracking Deferral Account in EB-2019-0151, which the OEB approved on September 12, 2019 for HONI Transmission, and

2) The OEB subsequently approved[40] the transfer of the Waasigan Account by Hydro One Transmission to a new Affiliate Transmission Partnership ("ATP") account in EB-2021-0169, whereby the ATP Account established these same sub-accounts for use by the Waasigan Project and other projects that are not expected to form part of the rate base of HONI in the future, including transmission facilitates of other subsequent-declared priority projects[41] provided by Ministerial OIC's.

HOSSM has provided a Draft Accounting Order[42] consistent with the Board's Filing Requirements. HOSSM is seeking approval of the sub-accounts with an effective date as at the Application filing date (i.e. January 2, 2023). Consistent with other OEB-approved accounts, HOSSM will accrue and record interest on the balance of the amounts in the sub-accounts using

[39] Exhibit C, Tab 4, Schedule 1, pg. 23.
[40] On October 7, 2021
[41] Such as Chatham x Lakeshore, two Longwood by Lakeshore projects, GTA East, two North West transmission line projects (Mississagi by Third line project and the Hamner by Mississagi project), per EB-2021-0169.
[42] IR Response to Staff-23, Appendix A.

the OEB's prescribed interest rates. Simple interest will be calculated on the opening monthly balance of the sub-accounts until the balance is fully disposed.

5. Prices: Customer Impacts

5.1 Has the application correctly determined the need for and the amount of any capital contributions that are required for the project?

5.1.1 PUC TRANSMISSION ARGUMENT IN CHIEF

PUC Transmission will be installing two 230/115 kV autotransformers at the Tagona West TS. Consequently, the Tagona West TS is a network station within the meaning of section 3.0.14(b)(ii) of the TSC and the "Renewed Regional Planning Framework for Electricity Distributors: Performance-Based Approach" ("**RRFE**") report, released on October 18, 2012.[43] Given that both the Third Line TS and the Tagona West TS are network stations, the 230 kV Line is a network facility within the meaning of section 3.0.14(a)(i) of the TSC.[44]

OEB Staff confirmed that both the 230 kV Line and the Tagona West TS are part of the provincial network pool consistent with the following requirements:

1) the RRFE report which states that "all 115/230 kV autotransformers and the associated switchgear should consistently be defined as network assets";

2) section 3.0.14 (b)(ii) of the TSC defines a network station as including any station with "an autotransformer that steps down voltage from a higher transmission level to a lower transmission level"; and

3) section 3.0.14(a)(i) of the TSC defines a network facility as any line that forms part of the path between two network stations.

To the best of PUC Transmission's knowledge, and as explained in the need section above, Algoma Steel will not be the sole beneficiary of the PUC Project.[45]

Pursuant to the OEB Bulletin regarding the *Allocation of Network Upgrade Costs related to Customer Connections to the Transmission System* issued on September 29, 2022 (the "**Bulletin**") certain components of the PUC Project form all or part of the minimum connection requirements for Algoma Steel. The Bulletin was not intended to redefine an entire facility from a network to

[43] Report of the Board - Renewed Regulatory Framework for Electricity Distributors: A Performance-Based Approach, issued October 18, 2012, page 45.
[44] Exhibit B, Tab 1, Schedule 1, pages 5-6; Exhibit B, Tab 6, Schedule 1, pages 6-10.
[45] IR Response to Staff-7(c); BFN response to OEB Staff IR#1 filed May 9, 2024; BFN confidential response to PUC Transmission IR#5&6 dated May 23, 2023; Exhibit E, Tab 2, Schedule 1, Attachment 2.

connection asset, instead it was meant to identify only some of the assets in a network facility that perform a connection function.

PUC Transmission has identified the components of the PUC Project that form the minimum connection requirements in Table 3 located at Exhibit B, Tab 6, Schedule 1, (the "**Minimum Connection Facilities**") in accordance with the examples noted on page 3 of the Bulletin. The Minimum Connection Facilities include automatic interrupting devices at the connection interface with Algoma and a substantial reactive power compensating device on the 230 kV bus, as prescribed by the IESO System Impact Assessment findings, all of which protect other customers on the IESO controlled grid from being negatively impacted by Algoma Steel's connection.[46]

PUC Transmission conducted a discounted cash flow calculation for the Minimum Connection Facilities as set out in Appendix 5 of the TSC as the basis for an economic evaluation. As further described in Exhibit B, Tab 9, Schedule 1, PUC Transmission assessed Algoma Steel's risk classification in accordance with Appendix 4 of the TSC as "medium-high risk", which stipulates an economic evaluation period of 10 years (see Exhibit B, Tab 9, Schedule 1).[47]

Since PUC Transmission is a newly formed transmitter without an established financial profile, PUC Transmission used a 5% after-tax discount rate as a proxy for the discount rate that could result, taking into account its deemed debt-to-equity ratio, debt and preference share costs and Board-approved rate of return on equity, once such parameters are established. Using an after-tax discount rate of 5.65% from HONI's Waasigan Leave to Construct Application did not make a material difference to the net present value of the Minimum Connection Facilities.[48]

PUC Transmission's economic analysis of the Minimum Connection Facilities under Appendix 5 of the TSC concluded that no capital contribution will be required from Algoma Steel.[49]

5.2 Are the projected transmission rate impacts that will result from the project reasonable given the need(s) it satisfies and the benefit(s) it provides?

5.2.1 PUC TRANSMISSION ARGUMENT IN CHIEF

PUC Transmission's analysis of network pool rate impacts took into account the OEB approved preliminary 2024 Ontario Uniform Transmission Rate Schedules, which were subsequently confirmed with the OEB's approval of the final 2024 rates on January 18, 2024.[50] Based on a total project initial estimated cost of $232 million and the associated network pool incremental cash flows, adding the costs of the PUC Project to the Network Pool revenue requirement will lead to a negligible average increase in the Network Pool UTR over 25 years of approximately 0.04% relative to the OEB approved 2024 Network Pool UTR. The Network Pool rate is essentially

[46] Exhibit B, Tab 1, Schedule 1, page 6; Exhibit B, Tab 6, Schedule 1, pages 9-10; Exhibit B, Tab 9, Schedule 1.
[47] IR Response to Staff-13(a).
[48] IR Response to Staff-14.
[49] Exhibit B, Tab 9, Schedule 1, page 2.
[50] IR Response to Staff-13(b).

unchanged from the approved 2024 rate of $5.76 per kilowatt ("kW") per month, averaged over the 25-year evaluation period.[51]

Furthermore, adding the costs of the PUC Project to the network pool will not result in any material change to a typical PUC Distribution residential customer's monthly bill under the Regulated Price Plan.[52]

Based on the foregoing, PUC Transmission submits that customer price impacts associated with the PUC Project are expected to be neutral. The PUC Project is appropriately designed to meet the identified need.

5.2.2 HOSSM ARGUMENT IN CHIEF

The analysis of the network pool rate impact of the PUC Project, and the impact on the typical residential customer is outlined in section 5.2.1 above, and within Exhibit B, Tab 9, Schedule 1.

The cost of the HOSSM Station Project's common elements[53] will be included in rate pools consistent with the evidence of PUC Transmission in this regard found in Exhibit B, Tab 9, Schedule 1.

6. Reliability and Quality of Electricity Service

6.1 Has the application established that the project will maintain or improve reliability?

6.1.1 PUC TRANSMISSION ARGUMENT IN CHIEF

The PUC Project and HOSSM Station Project are required to provide adequate transmission supply capacity and improve system reliability, as noted in the HOSSM Argument in Chief below, to accommodate new loads in the city of Sault Ste. Marie and the surrounding area, including the new load from the construction of Algoma Steel's EAF.[54]

While reliability of the transmission system in the Sault Ste. Marie area meets applicable standards, the lack of additional transmission capacity precludes economic growth from large industrials within the city of Sault Ste. Marie. PUC Transmission's project will provide the increased capacity required to allow Algoma and other industrial loads and generators proposed for development

[51] Exhibit B, Tab 9, Schedule 1, page 5.
[52] Exhibit B, Tab 9, Schedule 1, page 7.
[53] Exhibit C, Tab 4, Schedule 1, Section 3.0 Common Elements Pg.3.
[54] Exhibit B, Tab 1, Schedule 1, page 4.

within Sault Ste. Marie to connect to the provincial grid with the associated reliability required under the TSC.[55]

6.1.2 HOSSM ARGUMENT IN CHIEF

HOSSM expects that the HOSSM Station Project at Third Line TS will result in increases to the reliability and quality of service in the area, via the benefits each component of the HOSSM Station Project will provide, i.e. connection of a new customer load (i.e. Algoma), the refurbishment of end of life station facilities (i.e. current transmission ratepayers), and the development of station facilities in preparation for projects that will enable the connection of further load requirements (i.e. new transmission line facility identified by a government Order-in-Council ("OIC")[56]).

6.2 Has a final System Impact Assessment (SIA) been provided? Does the final SIA conclude that the project will not have a material adverse impact on the reliability of the integrated power system?

6.2.1 PUC TRANSMISSION ARGUMENT IN CHIEF

PUC Transmission's evidence regarding reliability incorporates by reference the IESO's System Impact Assessment ("**SIA**") conducted for the PUC Project. The final SIA report and Notification of Conditional Approval was issued on September 28, 2023.[57] Subsequently, Algoma Steel changed the ramping rate specification of the EAF, reducing it to a maximum of 10 MW/s in both the ramp up and ramp down directions. The IESO issued an addendum to the SIA report and Notification of Conditional Approval on March 21, 2024.[58]

The SIA final report, including the Addendum, concluded 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 of the final report and addendum are implemented. The SIA assessments supports the release of the Notification of Conditional Approval for connection of the PUC Project.

6.2.2 HOSSM ARGUMENT IN CHIEF

The IESO-issued SIA (CAA ID: 2021-704)[59] report associated with the connection of the PUC Transmission line also covers the HOSSM Station Project work (described in evidence as component #1).

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[55] IR Response to 5.EPC-5.
[56] Exhibit C, Tab 4, Schedule 1, Appendix B
[57] Exhibit F, Tab 1, Schedule 1, Attachment 1
[58] IESO, SIA Final Addendum Report, Filed April 6, 2024, online: <https://www.rds.oeb.ca/CMWebDrawer/Record/848126/File/document>; IESO, Notification of Addendum of Conditional Approval to Connection Proposal CAA ID Number: 2021-704, Filed April 6, 2024, online: <https://www.rds.oeb.ca/CMWebDrawer/Record/848125/File/document>
[59] Exhibit F, Tab 1, Schedule 1, Attachment 1

6.3 Has a final Customer Impact Assessment (CIA) been provided? Does the final CIA conclude that the project will not have an adverse impact on customers, with respect to reliability and quality of electricity service?

6.3.1 PUC TRANSMISSION ARGUMENT IN CHIEF

HONI issued a final Customer Impact Assessment ("**CIA**") on November 3, 2023, that was filed as part of this application.[60] The CIA confirms that "…Hydro One systems and area customers will not be adversely impacted by the connection of the PUC 230 kV transmission lines."[61]

7. Route Map and Form of Landowner Agreements

7.1 Are any proposed forms of landowner agreements under section 97 of the OEB Act appropriate and consistent with OEB requirements?

7.1.1 PUC TRANSMISSION ARGUMENT IN CHIEF

Pursuant to section 97 of the Act, PUC Transmission is seeking approval of the forms of the agreements offered or to be offered to affected landowners.[62] PUC Transmission submits that the proposed forms are appropriate and consistent with OEB requirements and were prepared based on precedents that have been previously approved by the OEB.

The forms of agreement, specifically the Easement Option Agreement and Option Agreement – Fee Simple Parcel are consistent with the forms of agreement in OEB file EB-2022-0140 (Exhibit E, Tab 1, Schedule 1 of the Application) and approved by the Order issued November 24, 2022 in this file.

PUC Transmission confirmed that all impacted landowners will have the option to receive independent legal advice and will reimburse legal fees in relation to same.[63] PUC Transmission has been responsive to 230 kV Line routing feedback from a prospective purchaser of subject lands proposed for residential subdivision development. PUC Transmission adjusted the 230 kV alignment in order to mitigate any material impact on the proposed development on those lands.[64]

Land rights required for the project were described in Exhibit E, Tab 1, Schedule 1. The project will utilize a combination of municipal rights-of-way, acquiring existing powerline rights-of-way and acquiring new easements upon the OEB granting leave to construct. PUC Transmission intends to acquire land rights from 46 property parcels, one railway crossing, and eight municipal

[60] Exhibit G, Tab 1, Schedule 1, Attachment 1.
[61] Exhibit G, Tab 1, Schedule 1, Attachment 1, page 7.
[62] Exhibit E.
[63] IR Response to Staff-16.
[64] Exhibit E, Tab 2, Schedule 1, page 3.

roadway crossings that are directly impacted by the proposed location of Tagona West TS and routing of the 230 kV Line.[65] PUC Transmission set out the details of its "Lands and Rights Acquisition Process" in Exhibit E of the Application.

Two parcels of land are to be purchased for the Tagona West TS and no temporary workspace is required as all work will be conducted within the property, which PUC Transmission will own in fee simple. Temporary land rights to facilitate construction or to provide staging areas for the 230 kV Line are not required since all the work will fall within the existing and new rights-of-way.

As detailed in the response to interrogatory Staff-16(b), PUC Transmission achieved 7 voluntary property settlements as of May 16, 2024. Commitments are in place that address the land rights requirements for 90% of the overall length of the 230 kV Line route.[66]

7.1.2 HOSSM ARGUMENT IN CHIEF

All HOSSM Station Project work, including work required to facilitate the connection of the new PUC Transmission circuits at Third Line TS will be within the existing Third Line TS property boundaries. The footprint (i.e., station fence) of the existing Third Line TS will be expanded to accommodate the expansion of the 230 kV switchyard but will remain within the existing Third Line TS property boundaries of which HOSSM has ownership.

HOSSM does not require new lands rights, permanent or temporary, to complete the HOSSM Station Project. HOSSM's planned modifications to existing station facilities (as described above) will be completed within HOSSM's existing property which it owns in fee simple.

7.2 Does the route map provided pursuant to section 94 of the OEB Act show the general location of the proposed project and the municipalities, highways, railways, utility lines and navigable waters through, under, over, upon or across which the proposed project is to pass.

7.2.1 PUC TRANSMISSION ARGUMENT IN CHIEF

PUC Transmission submits that its pre-filed evidence provided adequate route maps satisfying the requirements set out in section 94 of the Act. Exhibit B, Tab 2, Schedule 1, Attachment 1 provides a "Project Overview Map" which depicts the proposed route relative to existing transmission highway and railway infrastructure. More detailed maps depicting navigable waters and other environmental constraints and features are found in PUC Transmission's Environmental Study Report, electronic links to which were provided in Exhibit B, Tab 5, Schedule 1, page 3.

[65] Exhibit E, Tab 1, Schedule 1, page 1.
[66] Exhibit B, Tab 1, Schedule 1, page 8.

Taken as a whole, all of these maps adequately meet the Board's requirements of ensuring mapping information regarding the PUC Project has been adequately presented and available to the public for its review and consideration.

7.2.2 HOSSM ARGUMENT IN CHIEF

A site map of HOSSM's Third Line TS was provided in Figure 1 of Exhibit C, Tab 9, Schedule 1, page 8, illustrating the proposed location of the above-described HOSSM Station Project components.

8. Conditions of Approval

8.1 The OEB's standard conditions of approval are attached as Schedule 1. If the OEB approves the proposed project, what additional or revised conditions, if any, are appropriate?

8.1.1 PUC TRANSMISSION ARGUMENT IN CHIEF

As stated in response to Staff-25, PUC Transmission is in agreement with the standard conditions set out in that interrogatory.

8.1.2 HOSSM ARGUMENT IN CHIEF

Consistent with its response to Staff-25, HOSSM has no concerns with the standard conditions of approval for this project related to the HOSSM scope of work, as contained, and described within the record of this Application.

9. Other

9.1 Is HOSSM's request for an exemption from section 11.2.1 of the Transmission System Code (TSC) which would require Algoma Steel Inc. to pay bypass compensation to HOSSM, appropriate?

9.1.1 HOSSM ARGUMENT IN CHIEF

HOSSM is seeking an exemption to Section 11.2.1 of the TSC, due to the Customer's request for, and HOSSM's intention to, provide Algoma Steel an interim transmission connection to its facility, until a point where the new transmission line will come into service.

Algoma Steel, the end-use customer, has requested an interim electricity supply connection to its EAF prior to the connection of their Customer Transformer Station ("**CTS**") to the proposed PUC

Transmission 230 kV Line (i.e., the line which is the subject matter of this s.92 Application). To facilitate Algoma Steel's earlier[67] electricity system supply needs (i.e. approximately 140 MW), HOSSM will be required to perform work in alignment with the IESO's SIA, titled, '*Algoma Steel New Load Facility and Lake Superior Power CGS – Generation Reconfiguration*' (ID: 2021-694 and 2021-695)[68]. The SIA outlines that the new load supplied to Algoma Steel's EAF shall not exceed 140 MW and is conditional on Lake Superior Power CGS ("**CGS**")[69], being operational while Algoma Steel's EAF is drawing the new load, such that the net load drawn from the system does not exceed 30 MW. Algoma Steel's EAF and Lake Superior Power CGS are connected via HOSSM's Clergue TS. To enable the electrical arrangement outlined by the IESO in the above-mentioned SIA, HOSSM will need to perform work on two Remedial Action Scheme ("RAS") and work at Clergue TS[70]. Prior to the PUC Transmission line connection, HOSSM's interim connection arrangement (also described in this Application as Phase 1) will facilitate the supply of the 30 MW of new load to Algoma Steel. HOSSM's Clergue TS will be the point of interconnection between the Lake Superior Power CGS and Algoma Steel's EAF via two existing 115 kV circuits[71].

Once the PUC Transmission 230 kV Line at HOSSM's Third Line TS is in-service, the EAF Station will draw load directly from Third Line TS via PUC Transmission's circuits without the dependency on the connection to HOSSM's 115 kV system via Clergue TS. Phase 1 entails connection of 30 MW of net new Algoma Steel load via Clergue TS and 12 MW of new Algoma Steel load via Patrick Street TS.

Interrogatory response Staff-21, provides additional details regarding the scopes of work, and temporary connection pertaining to HOSSM's requested TSC exemption, including the configuration of the system and role and allocation of Remedial Action Scheme work. HOSSM's responses in Interrogatory response Staff-21confirm that the total new load added to the HOSSM system is 42 MW, being broken down as 30 MW at Clergue TS and 12 MW at Patrick Street TS. The 12 MW load connected to Patrick Street TS will remain connected to that station after the completion of Tagona West TS.

However, the costs initially incurred for Phase 1, and allocated to Algoma Steel, will continue to be recuperated via the CCRA between HOSSM and Algoma Steel for the new Patrick St TS load that will remain on those 115 kV circuits. This will keep the ratepayer whole in terms of the recovery of the Phase 1 facilities. During the interim period, estimated to be approximately three years, Algoma's EAF facilities will not be able to draw more than 30 MW from the connection at HOSSM's Clergue TS. Thereafter Algoma Steel will change the connection point for the 30 MW

[67] i.e. earlier than when the new 230 kV PUC Transmission circuit can be energized.
[68] IESO's SIA is included at Appendix E to this Exhibit.
[69] The Lake Superior Power CGS is owned and operated by Algoma Steel.
[70] This Phase 1 HOSSM connection does not trigger the need for a s.92 leave to construct approval, as connection is being facilitated via existing 115 kV circuits.
[71] (refer to the items "COGEN#1" and "COGEN#2" as labeled in the Single Line Diagram provided below in Figure 5)

of EAF facility load from HOSSM's Clergue TS to its final connection point, PUC Transmission's Tagona West TS.

HOSSM's Phase 1 interim connection solution is the most timely, efficient, and effective way of providing Algoma Steel with some of the capacity it requires for its operations, enabling it to power its EAFs, and begin its decarbonization journey, prior to the date on which the PUC Transmission line can be in-serviced to provide the full load Algoma requires. And, in this particular circumstance, HOSSM submits that it should not be required to collect bypass compensation from Algoma Steel as Section 11.2.1 of the TSC would require it to do when Algoma Steel changes its connection point for the 30 MW of EAF facility load from HOSSM's Clergue TS to its final connection point, PUC Transmission's Tagona West TS, as that change in connection point falls within the language in Subsection 11.2.1(b).