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

BY EMAIL

June 24, 2024

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

Dear Ms. Marconi:

Re: Ontario Energy Board (OEB) Staff Submission
PUC (Transmission) LP (PUC Transmission) and Hydro One Sault Ste. Marie (HOSSM)
Leave to Construct Application – PUC Tx Project and HOSSM Station Project
OEB File Number: EB-2023-0360

Please find attached OEB staff's submission in the above referenced proceeding, pursuant to Procedural Order No. 3. The original version of this submission was filed on June 21, 2024. OEB staff noted that one word was missing in the first sentence of the second paragraph on page 10.

The correction can be found on page 10 of the attached OEB staff submission. The above noted sentence now reads:

> The estimated capital cost of the PUC Transmission Project is $188.87 million, including $59.31 million for line work and $129.56 million for station work for Tagona West TS.

The original version of the submission stated:

> The estimated capital cost of the PUC Transmission Project is $188.87 million, including $59.31 million for line work and $129.56 for station work for Tagona West TS.

Yours truly,

Katherine Wang

Digitally signed by Katherine Wang
Date: 2024.06.24 11:41:02 -04'00'

Katherine Wang
Senior Advisor, Generation & Transmission

Encl.

cc: All parties in EB-2023-0360

ONTARIO ENERGY BOARD

OEB Staff Submission

PUC (Transmission) LP and Hydro One Sault Ste. Marie

Leave to Construct Application – PUC Tx Project and HOSSM Station Project

EB-2023-0360

June 21, 2024
(Corrected June 24, 2024)

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1. Background and Overview

1.1 Overview of the Application

On January 2, 2024, PUC (Transmission) LP (PUC Transmission) and Hydro One Sault Ste. Marie (HOSSM) applied to the Ontario Energy Board (OEB) under sections 74, 78, 92 and 97 of the *Ontario Energy Board Act,1998* (OEB Act), seeking approvals to build high-voltage electricity transmission facilities in Sault Ste. Marie.[1]

In its application, PUC Transmission requests approvals to construct a new 230 kilovolt (kV) transformer station (Tagona West TS) and approximately 10 kilometres (km) of 230 kV transmission lines from the Third Line Transformer Station (Third Line TS) to the proposed Tagona West TS (PUC Transmission Project).

PUC Transmission has also applied to the OEB pursuant to section 97 of the OEB Act for approval of the forms of land use agreements offered, or to be offered, to landowners affected by the PUC Transmission Project.

HOSSM's application requests permission to construct station facilities at Third Line TS to enable connection of the PUC Transmission Project but also proposes a broader scope of work consisting of three project components: Component #1 (Line Connection), Component #2 (Refurbishment) and Component #3 (New Transmission Line Project) (collectively, "HOSSM Station Project").

Only Component #1 (Line Connection) is driven by the need to connect the PUC Transmission Project. HOSSM's application states that Component #2 (Refurbishment) is the work needed to replace end-of-life autotransformer and related facilities; Component #3 (New Transmission Line Project) is preliminary work required to accommodate a future priority 230 kV transmission line in the region as required by Minister of Energy's Directive letter dated October 23, 2023 with an Order in Council.[2] HOSSM's application states that planning, developing, and coordinating the three project components included in the HOSSM Station Project concurrently, including a "common cost scope", will result in a more efficient and cost-effective process.[3]

HOSSM's application also seeks:

- approval of two new regulatory sub-accounts, under section 78 of the OEB Act, for use by HOSSM to capture costs related to station work that will facilitate the connection of a future priority transmission line (Component #3 related work)

[1] A revised version of the application was filed on January 26, 2024.
[2] Exhibit C Tab 4 Schedule 1 Appendix B
[3] Exhibit B Tab 1 Schedule 1, page 2; Exhibit C Tab 4 Schedule 1, pages 1-2

- approval, pursuant to section 74 of the OEB Act, for an exemption from the Transmission System Code (TSC) which would require Algoma Steel Inc. (Algoma Steel) to pay bypass compensation

The application notes that because of the strong factual nexus between the PUC Transmission Project and the HOSSM Station Project, PUC Transmission and HOSSM have filed their respective requests for relief as a joint application.[4]

PUC Transmission is a newly formed Ontario limited partnership and currently does not own or operate a transmission system in Ontario. On October 21, 2021, the OEB issued a Decision and Order on a new transmission licence application approving PUC Transmission's application and noted the following:

> [T]he OEB is approving the application but will not issue the licence until PUC Transmission has received leave to construct the proposed transmission facilities from the OEB, at which time PUC Transmission will be able to file with the OEB a complete description of the facilities to be included in schedule 1 of the licence.[5]

1.2 Overview of OEB Staff Submission

PUC Application

OEB staff supports PUC Transmission's section 92 request for leave to construct, subject to the standard conditions of approval set out in section 2.9 of this submission.

OEB staff supports PUC Transmission's section 97 request for approval of the forms of agreements it will offer to affected landowners.

HOSSM Application

OEB staff supports HOSSM's section 92 request for leave to construct the HOSSM Station Project, subject to the standard conditions of approval set out in section 2.9 of this submission.

OEB staff submits that HOSSM's request for an exemption from the bypass compensation requirements in the TSC is appropriate. OEB staff is also of the view that the TSC exemption should be tailored to meet the intent and expectations of HOSSM as discussed in section 2.8 of this submission.

OEB staff supports HOSSM's request to establish a regulatory sub-account to track capital costs associated with a future priority transmission line (Component #3 related

[5] EB-2021-0088, Decision and Order, October 21, 2021, pages 2-3

work). However, OEB staff does not support HOSSM's related request to establish a regulatory sub-account to track the associated revenue requirement. OEB staff believes it is premature to establish such an account.

OEB staff's submission is provided in detail in the following sections.

1.3 OEB's Jurisdiction in Section 92 and Section 97 Applications

The criteria for the OEB's considering of an application under section 92 is found in section 96 of the OEB Act which states:

> **96** (1) If, after considering an application under section 90, 91 or 92 the Board is of the opinion that the construction, expansion or reinforcement of the proposed work is in the public interest, it shall make an order granting leave to carry out the work.
>
> (2) In an application under section 92, the Board shall only consider the following when, under subsection (1), it considers whether the construction, expansion or reinforcement of the electricity transmission line or electricity distribution line, or the making of the interconnection, is in the public interest:
>
> 1. The interests of consumers with respect to prices and the reliability and quality of electricity service.

Section 97 of the OEB Act states that leave shall not be granted under section 92 until the applicant satisfies the OEB that it has offered or will offer to each owner of land affected by the approved route or location an agreement in a form approved by the OEB.

2. OEB Staff Submission

2.1 Project Need & Project Alternatives

2.1.1 Project Need

As part of its application, PUC Transmission filed evidence demonstrating need for the PUC Transmission Project.[6] The project will provide the increased transmission supply capacity and improved system reliability required to meet the significant load growth forecasted for development within Sault Ste. Marie, including the increased load associated with Algoma Steel. The PUC Transmission Project will also support PUC Distribution Inc.'s (PUC Distribution) infrastructure renewal, connect new generators, and supply additional load customers that are currently being planned for the area.[7]

The application states that the PUC Transmission Project is a non-discretionary project as it will serve new loads and generators within the Sault Ste. Marie area, with Algoma Steel having the most immediate need for service.[8] Algoma Steel is constructing two new electric arc furnace (EAF) facilities to replace its existing blast furnaces. Algoma Steel currently maintains sufficient power for its EAF steelmaking operations through the use of its natural gas Lake Superior Power combined cycle power plant (LSP Plant) in conjunction with the existing 115 kV grid.

The application states that the new EAF loads, of approximately 280 MW total, cannot be accommodated from the existing 115 kV supply at Third Line TS due to inadequate capacity of the existing 115 kV facilities; this new load can only be served by new transmission facilities connected to the Third Line TS.[9]

In its interrogatory responses, PUC Transmission provided the following three-year historical demand information for Sault Ste. Marie and a five-year demand forecast for the PUC Transmission Project.[10] As can be seen from Table 1 and Table 2, the Sault Ste. Marie region is expected to see significant load growth in the coming years.

Table 1: Peak Demand by Year - Sault Ste. Marie (MW)[11]

Year	2021	2022	2023
Peak Demand (MW)	259	252	264

[6] Exhibit B Tab 3 Schedule 1
[7] Exhibit B Tab 3 Schedule 1, page 1; Exhibit B Tab 1 Schedule 1, page 4
[8] Exhibit B Tab 4 Schedule 1, page 1
[9] Exhibit B Tab 3 Schedule 1, page 1
[10] PUC Transmission's response to OEB staff interrogatory Staff-4
[11] PUC Transmission's response to OEB staff interrogatory Staff-4 a)

Table 2: Load Forecast: Tagona West TS (MW)[12]

	07/2027	07/2028	07/2029	07/2030	07/2031
Algoma Steel EAFs	140	140	140	280	280
PUC Distribution		85	85	85	85
Load Customer A	100	100	100	100	100
Load Customer B	300	300	300	300	300
Load Customer C	100	100	100	100	100
Station Total – Load Customers (MW withdrawn)	640	725	725	865	865

The application indicates that the PUC Transmission 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. PUC Distribution's 115 kV Tarentours TS and St. Mary's TS are near end of useful life and must be reconstructed or retired, starting within the next five years. Connection to the new Tagona TS at 230 kV will allow for PUC Distribution to eliminate one of the two 115 kV stations and to reconstruct the other. Moving the Tarentorus TS load to the Tagona West TS would avoid the need to add a third autotransformer at the Third Line TS.[13]

One of the intervenors to this proceeding, Batchewana First Nation (BFN), stated that it is prepared to provide conditional support to the PUC Transmission Project and the HOSSM Station Project on the basis of a number of items. BFN also noted that its future projects have the potential to make use of new assets that have been proposed by PUC Transmission and HOSSM.[14]

With respect to the relevant power system plan, PUC Transmission referred to the Independent Electricity System Operator's (IESO's) October 2022 "Need for Northeast Bulk System Reinforcement" report (Northeast Bulk System Plan),[15] which states:

> 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.

[12] PUC Transmission's response to OEB staff interrogatory Staff-4 b)
[13] Exhibit H Tab 1 Schedule 1; Exhibit B Tab 2 Schedule 1
[14] BFN's response to OEB Staff Interrogatory-1
[15] https://www.ieso.ca/-/media/Files/IESO/Document-Library/regional-planning/Northeast-Ontario/ne-bulkplanning-initiatives-20221027-final-report-need-for-northeast-bulk-system-reinforcement.pdf

PUC Transmission stated that the PUC Transmission Project facilitates and is integral to regional plans and/or IESO bulk plans[16] and submitted that the project is consistent with the Northeast Bulk System Plan.[17]

HOSSM stated that the Line Connection Component of the HOSSM Station Project is driven by the need to connect the proposed PUC Transmission Project at Third Line TS and associated facilities.[18]

2.1.2 Project Alternatives

PUC Transmission Project

The application states that the nature of the significant additional load (280 MW) of Algoma Steel's new EAFs is such that there are no viable alternatives and the only way to supply the additional load is to construct the proposed PUC Transmission Project. In response to interrogatories, PUC Transmission stated that it considered the following four alternatives to the proposed project:

1) Use the existing 115 kV supply to the Patrick Street station
2) Upgrade the existing 115 kV supply at 115 kV[19]
3) Upgrade the existing 115 kV supply to 230 kV
4) Connect to the PUC Distribution system

Alternatives 1) and 4) were ruled out as they do not satisfy the required additional capacity to supply the new EAF load of 280 MW. Alternatives 2) and 3) would involve replacement of poles within the existing right-of-way and require unacceptable outages to existing customers. Alternative 2) would also require significant costly upgrades to the 115 kV system at Third Line TS. Due to the physical restrictions and unacceptable outages to existing customers, PUC Transmission ruled out alternatives 2) and 3).[20]

PUC Transmission stated that it also considered the following four non-wires options as alternatives to the proposed project:

1) Expand the existing LSP generating facility or construct a new gas-fired generating facility
2) Construct hybrid generation, i.e. photovoltaic and/or wind generation with battery energy storage

[16] PUC Transmission's response to OEB staff interrogatory Staff-5(a)
[17] Argument in Chief, page 9
[18] Exhibit C Tab 4 Schedule 1, page 1
[19] As PUC Transmission noted, this option would require additional circuits to be added to the existing poles, and existing conductors would be changed to lager and/or bundled conductors. Also, additional transformers would be required at Third Line TS.
[20] PUC Transmission's interrogatory response EPC-3 a)

3) Construct additional hydro generation facilities
4) Construct a modular nuclear generation facility within the region

The four non-wires options were ruled out by PUC Transmission due to various considerations including insufficient supply capacity, substantial need of vacant lands and hybrid generation equipment, the timing, and consideration of the Federal and Provincial objectives of reducing green-house-gas emissions.[21]

PUC Transmission filed an overview map of the PUC Transmission Project which represents the final preferred route and station location that were selected through the Class Environmental Assessment (EA) process.[22] The EA compared and evaluated four route alternatives for the 230 kV line and three site alternatives for the Tagona West TS, based on bio-physical environment, technical environment, and socio-economic environment criteria. The EA established the preferred route and station site selection based on the overall performance against the aforementioned criteria.[23] PUC Transmission concluded that, based on the EA, the proposed 230 kV line routing and Tagona West TS location represent the best alternative to meet the need of the PUC Transmission Project.[24]

In response to interrogatories, PUC Transmission noted that it considered two alternative conductor sizes for the 230 kV line: 795 MCM ACSR and 954 MCM ACSR. The latter was chosen due to its higher overall circuit loading capacity which will ultimately ensure reliable service to customers.[25]

HOSSM Station Project

As described in the application, the Line Connection work (Component #1) at the Third Line TS is required and necessary for HOSSM to facilitate the PUC Transmission Project's line connection. HOSSM submitted that based on the scope of work requested by PUC Transmission, there are no other alternatives to connect this in the area.[26]

HOSSM proposes to perform two other components, Refurbishment (Component #2) and New Transmission Line Project (Component #3) together with the Line Connection (Component #1) in parallel. The detailed descriptions of each component are set out in the application.[27] HOSSM stated that planning, developing, and coordinating the three project components at Third Line TS concurrently, including a "common cost scope", will

[21] PUC Transmission's interrogatory response EPC-3 b)
[22] Exhibit B Tab 2 Schedule 1 Attachment 1
[23] Exhibit B Tab 5 Schedule 1; PUC Transmission's Class Environment Assessment report
[24] Exhibit B Tab 5 Schedule 1
[25] PUC Transmission's response to OEB staff interrogatory Staff-2 a)
[26] Argument in Chief, page 10
[27] Exhibit C Tab 4 Schedule 1, pages 1-7

result in a more efficient and cost-effective process that also maintains work crew safety.[28]

HOSSM stated that it did not estimate project costs for any other combination, of the HOSSM Station Project sub-components given the cost and resources required to compile project estimates.[29]

Submission

PUC Transmission Project

OEB staff submits that the evidence demonstrates the need for the PUC Transmission Project and the corresponding Line Connection Component of the HOSSM Station Project to increase transmission supply capacity to meet the increasing power demands in Sault Ste. Marie.

OEB staff agrees that the PUC Transmission Project has the potential benefit to avoid a system renewal of PUC Distribution's Tarentorus TS, and it is also consistent with the Northeast Bulk System Plan. OEB staff also recognizes that the future BFN projects have the potential to make use of new assets proposed in the PUC Transmission Project and HOSSM Station Project.

OEB staff takes no issue with PUC Transmission's conclusion that the alternatives and non-wire options considered are not viable solutions for the PUC Transmission Project.

OEB staff has no concerns with the proposed route for the 230 kV line and station location for Tagona West TS as established through the EA process. OEB staff notes that the assessment of the route and station site as part of the EA is comprehensive, evaluating various criteria of bio-physical environment, technical environment, and socio-economic environment.

OEB staff takes no issue with PUC Transmission's selection of the 954 MCM ACSR conductor as it satisfies the expected new load from Algoma Steel's EAFs while ensuring reliable service.

HOSSM Station Project

OEB staff notes that the multi-component nature of the HOSSM Station Project is unique and different from typical leave to construct applications which have single-component requests associated with transformer stations.

[29] Argument in Chief, page 11

As part of a previous leave to construct Decision,[30] the OEB noted the following:

> The Board finds that transformer stations require approval under section 92 if they are associated with the construction of a line which exceeds 2 km in length, and are exempt if they are not.

Based on the above finding, it is clear to OEB staff that the Line Connection (Component #1) and the New Transmission Line Project (Component #3) require leave to construct approval from the OEB.

However, the Refurbishment (Component #2) is not directly associated with the construction of a line and hence OEB staff submits that leave to construct approval is not needed from the OEB for that aspect. OEB staff does appreciate HOSSM's efforts to present the three components together in this application so that the OEB can have a holistic view of the proposed changes for the HOSSM Station Project.

OEB staff takes no issue with respect to HOSSM's proposal to carry out the station scope work for the Refurbishment Component and the New Transmission Line Project Component in parallel with the Line Connection Component. The proposed approach appears to be more cost-effective than doing each component separately.

OEB staff notes that the New Transmission Line Project work is being undertaken pursuant to a government-issued Order in Council directing Hydro One Networks Inc. (HONI) to develop and seek approval for three new transmission lines including a 230 kV transmission line project from Mississagi TS to Third Line TS (New Transmission Line Project).[31] In November 2023, the OEB amended HONI's transmission licence requiring it develop and seek approval for the New Transmission Line Project.[32]

OEB staff notes that in theory there is a risk that the need for the New Transmission Line Project may evolve, potentially making the related changes being made as part of the HOSSM Station Project (Component #3) either inadequate or unnecessary. HONI has not yet submitted the leave to construct application associated with the New Transmission Line Project. However, based on the evidence filed, OEB staff submits that the proposed parallel execution strategy is reasonable, optimizing resource utilization and minimizing redundancies, thereby likely resulting in overall project efficiencies.

[30] EB-2013-0421, Decision on Threshold Questions (SECTR Project), December 16, 2014
[31] Exhibit C Tab 4 Schedule 1 Appendix B
[32] Exhibit C Tab 4 Schedule 1 Appendix C

2.2 Project Cost

Overall Project Costs

The overall cost of the PUC Transmission Project and HOSSM Station Project – Line Connection Component is approximately $231.98 million, which includes total capital cost of approximated $188.87 million of the PUC Transmission Project and total capital cost of $43.11 million of the HOSSM Station Project – Line Connection Component (the component facilitates the connection of the PUC Transmission Project).[33]

PUC Transmission Project

The estimated capital cost of the PUC Transmission Project is $188.87 million, including $59.31 million for line work and $129.56 million for station work for Tagona West TS. The estimated project costs represent an Association for the Advancement of Cost Engineering (AACE) Class 3 cost estimate (-20%/+30% accuracy level). The project costs are formulated by combining actual costs incurred to date, and an estimate of the 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 PUC Transmission's consultants.[34]

PUC Transmission's project cost estimate includes an allowance for contingencies that may impact the final project costs upon completion. The contingency allowance is intended to cover the following key project risks:

- Cost estimating accuracy
- Approvals and permits
- Material and equipment delivery timelines
- Pricing variations[35]

PUC Transmission Project – Line Work

In relation to the line work, PUC Transmission cited three comparable 230 kV double-circuit line projects completed by HONI in Ontario: the Barrie Area Transmission Upgrades Project (BATU), the Guelph Area Transmission Reinforcement Project (GATR), and the Woodstock Area Transmission Reinforcement Project (WATR).[36] The pre-filed evidence shows that after applying adjustments for non-comparable items and

[33] Exhibit B Tab 1 Schedule 1, page 7
[34] Exhibit B Tab 6 Schedule 1, pages 1-2
[35] Exhibit B Tab 7 Schedule 1, page 1
[36] As noted in the application, PUC Transmission included information extracted from HONI's application for the BATU project (EB-2018-0117) which provides a summary of comparable projects completed by HONI.

inflation, the total project costs per km for the comparator projects ranged between $3.59 million and $6.52 million, while the PUC Transmission Project line component cost is estimated to be $5.45 million per km.[37] PUC Transmission submitted that the comparison illustrates that the cost per km of the line work is within the mid-range of the comparable projects.[38]

While PUC Transmission has deducted certain non-comparable costs in the comparable line project analysis, it noted that there are other factors placing upward pressure on the costs for the proposed line project, including:

- The costs for the proposed 230 kV line have been substantially impacted post-COVID-19 impacts, such as global supply chain issues, escalating inflation rates, significant increases in key commodities prices and labour/equipment costs, and rising interest rates.
- The proposed line project is being constructed in Sault Ste. Marie, a relatively isolated northern community. The comparable projects are all located in southern Ontario with access to larger markets to source local materials and labour.
- The cold weather in Sault Ste. Marie substantially impacts productivity.
- The proposed line project includes multiple large-angle changes in direction with significant additional costs beyond the cost of standard in-line poles.[39]

PUC Transmission Project – Station Work

In relation to the station work for Tagona West TS, PUC Transmission cited four comparable station projects completed by HONI in Ontario: Barrie TS, St. Isidore TS, Palmerston TS Refurbishment, and Enfield TS New DESN. PUC Transmission stated that the proposed Tagona West TS is similar to the cited comparable stations, with respect to the number of transformers. However, the Tagona West TS will have a substantially higher maximum transformation capacity than any of the comparable projects. Therefore, PUC Transmission has used the cost per kVA of station capacity, rather than total station cost, for the comparison.

PUC Transmission indicated that after applying adjustments for non-comparable items and inflation, the total project costs for the comparator projects ranged between $150 and $246 per kVA, while the Tagona West TS comparable cost is estimated to be $194 per kVA.[40] PUC Transmission submitted that the comparison illustrates that the cost per

[37] Table 3 at Exhibit B Tab 8 Schedule 1
[38] Argument in Chief, page 12
[39] Exhibit B Tab 8 Schedule 1, pages 2-5
[40] Exhibit B Tab 8 Schedule 1

kVA of the Tagona West TS is within the mid-range of the comparable projects.[41]

In response to an OEB staff interrogatory, PUC Transmission considered another comparable station project with similar transformation capacity as the Tagona West TS. That station was part of the GATR application,[42] where the existing Cedar TS was upgraded with the addition of two 250 MVA autotransformers and associated breakers. PUC Transmission calculated the inflation adjusted cost for Cedar TS work in the amount of $98.9 million, which results in a cost of $188 per kVA. PUC Transmission submitted that the cost per kVA of Tagona West TS is nearly identical to the Cedar TS cost.[43]

Inflation Factors

PUC Transmission noted that the OEB prescribed inflation factors, also known as the Input Price Index (IPI), are calculated based on data that is lagging by two years compared to the OEB prescribed year. Thus, when determining the inflation adjustments applied to the comparative projects, PUC Transmission applied the annual OEB IPI with adjustment for the two-year lag (e.g. applied the OEB's 2024 IPI of 5.4% to the year of 2022).

PUC Transmission submitted that this approach provides for the most accurate comparison of historical costs for comparable projects with the PUC Transmission Project costs, as it will align the escalation of costs with the year in which the inflation occurred. In the interrogatory process, OEB staff asked PUC Transmission to provide the comparable project cost results using OEB IPI without adjustment for two-year lag, for both the transmission line work and station work. Table 3 and Table 4 below summarize the results for both inflation adjustment scenarios.[44]

Table 3: Summary of Comparable Line Project Costs per km ($million/km)

	PUC 230 kV Line	BATU	WATR	GATR
OEB IPI adjusted for 2-year lag (method proposed in the application)	$5.45	$5.13	$3.59	$6.52
OEB IPI	$5.45	$4.99	$3.37	$6.06

[41] Argument in Chief, page 12
[42] EB-2013-0053
[43] PUC Transmission's response to OEB staff interrogatory Staff-11
[44] Exhibit B Tab 8 Schedule 1; PUC Transmission's response to OEB staff interrogatory Staff-10

Table 4: Summary of Comparable Station Project Costs per kVA ($/kVA)

	Tagona West TS	Barrie TS	St. Isidore TS	Palmerston TS	Enfield TS	Cedar TS
OEB IPI adjusted for 2-year lag (method proposed in the application)	$194	$150	$246	$240	$158	$188
OEB IPI	$194	$146	$231	$224	$147	n/a

HOSSM Station Project

The HOSSM Station Project is estimated to cost approximately $73.4 million, of which $43.1 million is allocated to the Line Connection Component, $5.8 million is allocated to the Refurbishment Component, and $24.5 million is allocated to the New Transmission Line Project Component. The HOSSM Station Project cost was generated by completing an AACE Class 3 cost estimate, consisting of an accuracy rate of +30%/-20%.

The HOSSM Station Project cost estimate includes an allowance for contingencies in recognition of the risks associated with estimating costs. The top four project schedule and budget risks are listed below. HOSSM noted that these risks are the major contributors to the total contingency suggested for the HOSSM Station Project.

- Approvals and permits
- Outage constraints
- Material delivery timelines
- Pricing variations[45]

In the pre-filed application evidence and HOSSM's response to an OEB staff interrogatory, HOSSM provided three comparable station projects constructed by HONI: Martindale TS, and two East-West Tie Station Projects – Marathon TS and Lakehead TS. The HOSSM Station Project cost of $72.9 million is approximately at the mid-range of the comparable projects.[46]

HOSSM noted that the inflation adjustment factors used for the comparable projects are consistent with the inflation parameters described by PUC Transmission in the application.

[45] Exhibit C Tab 4 Schedule 1, pages 12-13
[46] HOSSM's response to OEB staff interrogatory Staff-18; Exhibit C Tab 4 Schedule 1, pages13-15

Submission

Based on the information in the evidence, OEB staff calculated "Total Comparable Project Costs" values for the comparable projects using OEB IPI rates without timing adjustment, and the results of the comparison for both inflation calculation scenarios are summarized below.

Table 5: HOSSM - Summary of Comparable Station Project Costs ($million)

	Third Line TS	Martindale TS	Marathon TS	Lakehead TS
OEB IPI adjusted for 2-year lag (method proposed in the application)	$72.9	$58.9	$81.7	$69.6
OEB IPI	$72.9	$56.9	$80.0	$68.0

OEB staff does not oppose the estimated costs for the proposed PUC Transmission Project and HOSSM Station Project. OEB staff submits that the evidence provided by PUC Transmission and HOSSM demonstrates that the cost estimates are reasonable. OEB staff's submission is based on the information provided on comparable line and station projects and the process PUC Transmission and HOSSM undertook to estimate the costs.

OEB staff notes that in the comparable projects analysis, both applicants applied the specific approach to adjust the OEB IPI rate for the two-year time lag in calculating the escalation adjustment for comparable projects. As this is a specific approach which is not usually applied in a leave to construct application, the updated comparable projects analysis results based on non-adjusted OEB IPI were also provided by the applicants and OEB staff as summarized in Tables 3, 4 and 5 of this section of the submission.

It's noted that the overall status and ranking of each proposed line/station project's cost has not changed between the two inflation factor scenarios. PUC Transmission submitted that its proposed approach provides for the most accurate comparison of historical costs for comparable projects as it aligns the escalation of costs with the year in which the inflation occurred.[47] Considering the above as well as the significant increase in IPI in 2024, OEB staff takes no issue with the applicants' conclusion that the proposed line and station projects are within the mid-range of the comparable projects.

OEB staff also notes that in the station comparable projects analysis for Tagona West TS, PUC Transmission has used the cost per kVA of station capacity, rather than the total station cost, to inform its conclusions. PUC Transmission explained that the reason

[47] Argument in Chief, pages 12-13

for taking this approach is that the Tagona West TS has a substantially higher maximum capacity than the four comparable stations (400 MVA for Tagona West TS vs. 250 MVA or 166 MVA for the comparatives).

OEB staff recognizes that the cost per kVA of Tagona West TS lies within the mid-range of the four comparable projects, but the total station cost of Tagona West TS is higher than all comparatives. However, the fifth comparable project that PUC Transmission provided (Cedar TS) has both total station cost ($98.9 million) and per kVA cost ($188) in line with the Tagona West TS costs.[48] Considering the above and related evidence, OEB staff takes no issue with the proposed cost estimate for Tagona West TS.

2.3 Allocation of Network Investment Costs to Algoma Steel

Under the OEB's Transmission System Code (TSC), the costs associated with network assets are typically recovered from all Ontario ratepayers since they form part of a transmission system that is shared by all users. However, in September 2022, the OEB issued a Bulletin (September 2022 Bulletin) that clarifies the circumstances under which regulated electricity transmitters should allocate costs associated with network facility upgrades to a load customer (or a generator) connecting to the transmission system.[49] The September 2022 Bulletin specifically notes the following:

> Section 6.3.5 of the TSC contemplates that some assets in a **network facility** may serve a **connection function** and, in such cases, the TSC refers to it as **"exceptional circumstances"**. The cost responsibility principles of the TSC (i.e., beneficiary pay, cost causality) **require that a customer be allocated the full cost that is caused by their new or modified connection** to the transmission system. Connecting customers should therefore be responsible for costs that are directly related to the customer's new or modified connection to the transmission system; in OEB staff's view, that includes where the assets that are necessary to connect the customer are located within the transmitter's network facilities. OEB staff is of the view that those upgraded or added network assets **form the "minimum connection requirements"** associated with a new or modified customer connection, since those assets perform a connection function. (emphasis added)

The application identifies two types of network assets where PUC Transmission has allocated over $55 million of the costs to Algoma Steel:[50]

[48] PUC Transmission's response to OEB staff interrogatory Staff-12
[49] OEB Bulletin, Allocation of Network Upgrade Costs related to Customer Connections to the Transmission System, September 29, 2022
[50] Exhibit B Tab 6 Schedule 1, Table 3, page 10

(1) Two 115 kV breakers that connect the 115 kV circuits that will supply power to Algoma Steel's EAF facility ($10.3 million); and

(2) One reactive power device required to protect other customers connected to the IESO controlled grid from being negatively impacted by excessive voltage variations from the operations of Algoma Steel's new EAF facility ($45 million).

PUC Transmission expressed the view, in the application, that the treatment associated with those network assets is consistent with the guidance provided in the September 2022 Bulletin.

In an interrogatory,[51] OEB staff indicated that the September 2022 Bulletin provided a list of the common examples where network assets form the minimum connection requirements. OEB staff further noted that the September 2022 Bulletin states:

> For other potential scenarios that may arise as the transmission system evolves, …. transmitters should be guided by the following: the connecting customer should be required to pay for the investment in the network facility where they are the sole or primary beneficiary and/or the investment is required to mitigate other customers being negatively impacted (e.g., reduced reliability) as a result of the connecting customer's new or modified connection to the transmission system.

OEB staff therefore asked PUC Transmission to identify if any "other" network assets related to the project were considered as potential assets that form the minimum connection requirements discussed in the September 2022 Bulletin and PUC Transmission ultimately decided not to allocate the cost to Algoma Steel. And, if so, identify those assets and the related cost, as well as explain why PUC Transmission decided not to allocate any costs to Algoma Steel in relation to those assets.

PUC Transmission stated that no other network assets were identified as forming part of the minimum connection requirements to connect Algoma Steel's two 115 kV circuits and, to the best of PUC Transmission's knowledge, Algoma Steel will not be the sole beneficiary associated with the project.[52] In response to another interrogatory, PUC Transmission stated it is aware of two potential new generators that plan to connect (combined capacity of 425 MW) and three potential new load customers (100 MW, 300 MW, 100 MW).[53]

PUC Transmission also indicated that, based on the economic evaluation, no capital contribution would be required from Algoma Steel in relation to the total connection

[51] PUC Transmission's interrogatory response to OEB Staff-7
[52] PUC Transmission's interrogatory response to OEB Staff-7
[53] PUC Transmission's interrogatory response to OEB Staff-1

costs of $55.4 million.[54] PUC Transmission explained that the economic evaluation indicated a net present value (NPV) of $41.07 million based on Algoma Steel's credit rating of B- and a 10-year revenue horizon (i.e., "medium high risk" classification). OEB staff requested further information related to the NPV calculation to confirm it had been carried out correctly based on the discounted cash flow (DCF) in Appendix 5 of the TSC.[55]

Submission

OEB staff agrees with PUC Transmission that allocating the cost of $55.4 million associated with the two types of network assets, discussed above, to Algoma Steel is consistent with the OEB guidance provided in the September 2022 Bulletin.

Based on the explanation provided by PUC Transmission, OEB staff is of the view that neither of those network investments would be required in the absence of Algoma Steel's new EAF facility because the "115 kV breakers" are required to supply it, and the "reactive power device" is needed to protect other customers from being impacted from the operation of the new EAF facility.

OEB staff notes that one of the examples in the September 2022 Bulletin specifically refers to automatic interrupting devices, such as "breakers". The September 2022 Bulletin also noted, for other scenarios, the transmitter should assess if the investment is "required to mitigate other customers being negatively impacted (e.g., reduced reliability)". In this case, it is reduced power quality (PQ) – "excessive voltage variations" – rather than the reduced reliability example.

OEB staff also notes that the assumptions used by PUC Transmission in the economic evaluation that resulted in no capital contribution being required from Algoma Steel appear to be appropriate. For example, a capital contribution is required when the forecast rate revenues from the customer do not cover the full cost attributed to the load customer. The risk classification attributed to the load customer by the transmitter is therefore important in the calculation, and a "medium high risk" classification appears to be appropriate for Algoma Steel because it results in relatively short revenue horizon of 10 years. The risk related revenue horizon, under the TSC, ranges from 5 to 25 years.[56]

[54] Exhibit B Tab 9 Schedule 1, page 2
[55] PUC Transmission's interrogatory response to OEB Staff-13
[56] Section 6.5.2 of the TSC provides that the economic evaluation period will be 5 years for a high risk connection, 10 years for a medium-high risk connection, 15 years for a medium-low risk connection, and 25 years for a low risk connection.

2.4 New Regulatory Sub-accounts

HOSSM is seeking approval to establish two new regulatory sub-accounts under Account 1508 – Other Regulatory Assets: the "Priority Transmission Line Project – Station Costs" (PTLPDA-Costs) and the "Priority Transmission Line Project – Station Revenue Requirement" (PTLPDA-Revenue).[57]

PTLPDA-Costs Account

The proposed PTLPDA-Costs Account is designated to monitor the capital expenditures associated with the New Transmission Line Project within the scope of the HOSSM Station Project. It would initially be used as a tracking account before inclusion into rate base. The New Transmission Line Project is intended to connect new circuits between Third Line TS and Mississagi TS line. Expenditures will be tracked within this sub-account until the completion of the New Transmission Line Project. Once the New Transmission Line Project is in-service, as anticipated in 2029,[58] the capital expenditures will be transferred to HOSSM's and/or HONI's rate base.

HOSSM stated that if the government's direction changes and the asset is deemed unnecessary, or if the IESO identifies better alternatives, HONI may be asked to stop the project.[59] This action would be beyond the control of HOSSM. In such a case, the account would become a deferral account, and HOSSM would then seek recovery/disposition of those balances in a future HOSSM rates proceeding.[60]

PTLPDA-Revenue Account

The proposed PTLPDA-Revenue Account will record any post-in-service Revenue Requirement attributable to the New Transmission Line Project's facilities that have not been included in an OEB approved transmission rate filing.

If the New Transmission Line Project proceeds, this account will track the annual revenue requirement linked to the project's incurred costs. It will stay active until HOSSM secures OEB approval to incorporate these assets into the rate base, which will subsequently establish a future revenue requirement for HOSSM.

The proposed effective date for both sub-accounts is December 22, 2023, the date on which this application was filed with the OEB.

In response to an OEB staff interrogatory asking if there was any precedent for the

[57] Exhibit C Tab 4 Schedule 1, pages 20-21
[58] HOSSM's Interrogatory Responses, Staff-20 b)
[59] HOSSM's Interrogatory Responses, Staff-23 d)
[60] HOSSM's Interrogatory Responses, Staff-20 a)

requested account, HOSSM referred to the Waasigan Transmission Tracking Deferral Account and subsequent transfer of the Waasigan account to a new partnership.[61] HOSSM stated that the expenses associated with the New Transmission Line Project are currently considered developmental costs and recorded in Account 2205 – Construction Work in Progress. To proceed with significant project expenditures, HOSSM requires certainty regarding cost recovery, which it aims to achieve through the proposed PTLPDA-Costs Account, akin to the regulatory sub-accounts approved by the OEB in HONI's Affiliate Transmission Project (ATP) Regulatory Account.[62]

Furthermore, HOSSM stated that prompt approval of this account including the two sub-accounts is crucial for maintaining project momentum and optimizing cost efficiency by facilitating the concurrent completion of essential tasks. Failure to approve it in a timely manner could result in project delays and potential increases in future costs due to missed opportunities for synergy savings.

Submission

The OEB Chapter 2 Filing Requirements for Electricity Transmission Applications sets out a three-part test for the establishment of new deferral and variance accounts: Causation, Materiality, and Prudence.[63]

- Causation: the forecasted expense must lie outside of the base upon which rates were derived.
- Materiality: the forecasted amounts must exceed the OEB-defined materiality threshold to establish an account.
- Prudence: the nature of the amounts and forecast quantum to be recorded in the proposed account must be based on a plan that outlines how the amounts will be reasonably incurred. However, the final determination of prudence will be made at the time of disposition.

The analysis below outlines OEB staff's view on whether HOSSM's request for the establishment of these sub-accounts should be granted.

PTLPDA-Costs Account

OEB staff supports HOSSM's request to establish the PTLPDA-Costs Account to track capital costs associated with the New Transmission Line Project, as part of the HOSSM Station Project, prior to being placed in rate base. OEB staff is of the view that the

[61] HOSSM's Interrogatory Response to Staff-22 f) and referring to EB-2019-0151 and EB-2021-0169
[62] EB-2021-0169, Hydro One Networks, Inc., Application for an accounting order to establish a new regulatory account effective May 29, 2021
[63] OEB Chapter 2 Filing Requirements, page 35

account meets the criteria of causation, materiality, and prudence.

OEB staff agrees with HOSSM's assertion that the nature of the New Transmission Line Project is non-discretionary as it is stemming from a Ministerial Directive and an Order in Council. Furthermore, OEB staff agrees that the project, with an anticipated service date in 2029 and projected costs of $24.5 million, exceeds the HOSSM's materiality threshold of $220k. OEB staff notes that the prudence of incurred costs will be reviewed in future OEB assessments, with the final determination made at the time of disposition.

OEB staff notes that the approval of the account in a timely manner would avoid delays for the New Transmission Line Project and HOSSM would not incur additional future costs.

1. Causation

HOSSM stated that the New Transmission Line Project is targeted to be completed and in-service between 2027 and 2029. [64] HOSSM also stated that it plans to file its first rate application approximately 12 months prior to the projected in-service date of June 2027.[65] Consequently, the capital expenditures allocated to the project are clearly outside of any base rates that would be established in the revenue requirements approved by the OEB for HOSSM in its first rate application.

OEB staff submits that the requested account meets the requirement of causation.

2. Materiality

HOSSM noted that the total capital cost expected to be allocated to the New Transmission Line Project, are anticipated to be $24.5 million, which could be recorded in this account by the time the project is in service. [66] This amount exceeds HOSSM's materiality threshold of $219,555.

OEB staff submits that the forecasted costs meet the requirement of materiality.

3. Prudence

OEB staff notes that this account is a multidimensional account. It serves as a tracking account first and if the project is not completed and does not become part of HOSSM's future rate base due to reasons beyond HOSSM's control,[67] the account will then become a deferral account for which HOSSM would request cost recovery. HOSSM

[64] HOSSM's Interrogatory Responses, Staff-20 b)
[65] HOSSM's Interrogatory Responses, Staff-15
[66] Exhibit C Tab 4 Schedule 1, page 23
[67] HOSSM's Interrogatory Responses, Staff-23 d)

noted that they have already identified the types of assets and the relevant amounts that will be tracked in this account.[68]

OEB staff notes that there is no issue of the prudency when the account is a tracking account. When the account becomes a deferral account, the prudence of any recorded costs will need to be determined at the time of disposition of the account in HOSSM's first revenue requirement application.

OEB staff reviewed the draft accounting order[69] with respect to this account and makes the following observations:

- The use of the contra-account in the journal entries and the corresponding descriptions should be made clear in the draft accounting order. For example, the credit entry to record the specific CWIP costs should use the sub-account name "PLPDA-Station Costs – Contra Account". Additionally, the phrase "identical and offsetting entries, and as such no net debit or credit balances will exist" should be removed from the descriptions to enhance clarity.

- HOSSM noted that the CWIP account should have been described as Account 2055 - Construction Work in Progress.[70] However, OEB staff notes that the CWIP account is still described as Account 2205 in the Accounting Order.[71]

OEB staff submits that HOSSM should update the draft accounting order in its reply submission to address the above-noted observations.

PTLPDA-Revenue Account

OEB staff does not support HOSSM's request to establish the PTLPDA-Revenues subaccount to record any post-in-service revenue requirement attributable to the New Transmission Line Project's facilities.

OEB staff submits that approval of the PTLPDA-Costs Account should be adequate in terms of providing HOSSM the opportunity for future cost recovery.

HOSSM stated that the New Transmission Line Project is targeted to be completed and in-service between 2027 and 2029. [72] OEB staff believes it is premature to approve an account to record revenue requirement at this time given that there will be opportunities to incorporate the revenue requirement in HOSSM's first rate application (expected to

[68] Exhibit C Tab 4 Schedule 1, page 18
[69] HOSSM's Interrogatory Responses, Appendix A, Draft Accounting Order
[70] HOSSM's Interrogatory Responses, Staff-23 b)
[71] HOSSM's Interrogatory Responses, Appendix A, Draft Accounting Order
[72] HOSSM's Interrogatory Responses, Staff-20 b)

be filed in 2026) or in HOSSM's annual rate adjustment filings.

OEB staff also notes that the examples cited by HOSSM are mainly for accounts to record capital expenses as opposed to revenue requirement. In addition, the cited examples of such accounts were in the context of HONI's partnership projects with various Indigenous communities and to help facilitate the asset transfer to future partnership entities. In the cited examples, it was clear that the assets would not be added to HONI's rate base in the future but would be transferred to the partnerships.[73]

2.5 Consumer Impacts

The PUC Transmission Project, together with the Line Connection Component of the HOSSM Station Project, is required to provide adequate transmission supply capacity and improve system reliability in order to accommodate new loads in Sault Ste. Marie area, including the new load of Algoma Steel's EAFs.

The application states that PUC Transmission will be installing two 230/115 kV autotransformers at the Tagona West TS. The Tagona West TS is a network station within the meaning of section 3.0.14(b)(ii) of the TSC and the Renewed Regulatory Framework for Electricity Distributors: A Performance-Based Approach report.[74] Given that both the Third Line TS and the Tagona West TS are network stations, the proposed 230 kV line that is part of the PUC Transmission Project is a network facility within the meaning of section 3.0.14(a)(i) of the TSC.[75]

As discussed in the application and section 2.4 of this submission, PUC Transmission stated that certain components[76] of the PUC Transmission Project form the minimum connection requirements for Algoma Steel. PUC Transmission stated that Algoma Steel will not be the sole beneficiary of the PUC Transmission Project.[77] PUC Transmission also stated that its economic analysis of the minimum connection facilities concluded that no capital contribution will be required from Algoma Steel.[78]

PUC Transmission conducted an analysis of the network pool rate impacts for the PUC Transmission Project and the associated Line Connection Component of the HOSSM Station Project, based on a total project estimated cost of $232 million and the OEB-approved preliminary 2024 Uniform Transmission Rates (UTRs). PUC Transmission estimated that adding the costs to the network pool revenue requirement will lead to a

[73] EB-2021-0169, Decision and Order, pages 7- 8
[74] Report of the Board – Renewed Regulatory Framework for Electricity Distributors: A Performance-Based Approach, October 18, 2012
[75] Exhibit B Tab 1 Schedule 1, page 6
[76] As identified in Exhibit B Tab 6 Schedule 1, Table 3.
[77] PUC Transmission's interrogatory response to Staff-7 c)
[78] Exhibit B Tab 9 Schedule 1, page 2

negligible average increase in the network service rate over 25 years of approximately 0.04% relative to the preliminary 2024 rate of $5.76/kW. PUC Transmission noted that the network service rate is essentially unchanged from the preliminary 2024 rate, averaged over the 25-year evaluation period.[79]

PUC Transmission further noted that all costs related to the Connection Component of the HOSSM Station Project costs are to be included in HOSSM's rate base, and all costs for the PUC Transmission Project are to be included in PUC Transmission's rate base.[80]

Submission

OEB staff submits that PUC Transmission's proposed allocation of project costs to the network rate pool is appropriate. As discussed in section 2.4 of this submission, OEB staff takes no issue with PUC Transmission's conclusion that no capital contribution will be required from Algoma Steel.

OEB staff submits that the consumer impacts of the PUC Transmission Project with the Line Connection Component of the HOSSM Station Project are appropriate given the need for this project and the modest impact on consumers, as the evidence indicates.

OEB staff notes that the final 2024 UTRs that the OEB issued on January 18, 2024[81] reflect a two-cent higher network service rate of $5.78/kW/month compared to the preliminary rate of $5.76/kW/month, while the final line connection and transformation connection rates are consistent with the preliminary rates. OEB staff takes no issue with PUC Transmission's use of the preliminary 2024 UTRs in the consumer impacts analysis.

2.6 Reliability and Quality of Service

The IESO has completed a System Impact Assessment (SIA) for the PUC Transmission Project dated September 28, 2023. Subsequently, Algoma Steel provided further clarification to the IESO on the change of 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.[82] The SIA final report 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 SIA

[79] Exhibit B Tab 9 Schedule 1, page 5
[80] PUC Transmission's interrogatory response to OEB Staff-15
[81] EB-2023-0222, Decision and Rate Order, January 18, 2024
[82] Filed by PUC Transmission with the OEB on April 6, 2024.

report are implemented.

HOSSM submitted that the SIA report also covers the Line Connection Component of the HOSSM Station Project.[83] HOSSM noted that as part of PUC Transmission's SIA application, HOSSM submitted the proposed configuration modification to the 230 kV yard at Third Line TS.[84]

HOSSM also noted that the Third Line TS is planned to undergo further reconfiguration to accommodate the New Transmission Line Project, and a separate SIA will be required and furnished within a future section 92 application for the New Transmission Line Project. This is in addition to the preliminary work associated with the New Transmission Line Project as included (described in Component #3) in this leave to construct application.[85]

HONI issued a final Customer Impact Assessment (CIA) on November 3, 2023, which concluded that "Hydro One system and area customers will not be adversely impacted by the connection of the PUC 230 kV transmission lines".

Submission

OEB staff does not have any concerns about the reliability and quality of service associated with the PUC Transmission Project (with the associated Line Connection work at Third Line TS), considering the applicants' evidence and the conclusions of the IESO's SIA and HONI's CIA.

2.7 Landowner Agreements

PUC Transmission Project

The application states that the PUC Transmission 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 roadway crossings that are directly impacted by the proposed Tagona West TS and routing of the proposed 230 kV line.[86]

PUC Transmission noted that 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

[83] Argument in Chief, page 20
[84] HOSSM's interrogatory response to OEB Staff-24
[85] HOSSM's interrogatory response to OEB Staff-24
[86] Exhibit E Tab 1 Schedule 1, page 1

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. PUC Transmission also noted that it 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.[87] PUC Transmission further stated that commitments are in place that address the land rights requirements for 90% of the overall length of the 230 kV line route.[88]

PUC Transmission has requested OEB approval of the following two agreements that it will utilize in order to obtain new land rights for the PUC Transmission Project:

- Easement Option Agreement
- Option Agreement – Fee Simple Parcel

PUC Transmission submitted that the proposed forms are appropriate and consistent with the forms of agreements approved by the OEB in a previous leave to construct application.[89] PUC Transmission noted a number of "substantive differences" between the agreements in the current application and those approved by the OEB in the previous application.[90]

HOSSM Station Project

The application states that HOSSM does not require new lands rights, permanent or temporary, to complete the HOSSM Station Project and all of the planned modifications to existing station facilities will be completed within HOSSM's existing property which it owns in fee simple.[91]

Submission

OEB staff has reviewed the proposed forms of agreements and has no concerns. The agreements are generally consistent with the agreements approved by the OEB through previous proceedings.[92] The provisions that PUC Transmission noted as "substantive differences" from what the OEB has previously approved are not inconsistent with the standard elements of land use agreements set out in the Filing Requirements.[93]

[87] Argument in Chief, pages 21-22
[88] Exhibit B Tab 1 Schedule 1, page 8
[89] EB-2022-0140, Decision and Order issued on November 24, 2022
[90] Argument in Chief, page 21; PUC Transmission's interrogatory response to OEB Staff-17
[91] Exhibit C Tab 4 Schedule 1, page 10
[92] EB-2022-0140, Decision and Order, November 24, 2022 (Chatham by Lakeshore Project)
[93] Filing Requirements, Appendix B (Standard Elements of Land Use Agreements)

OEB staff also notes that the forms of agreement serve only as the initial offer to landowners and may not reflect the final agreement that is agreed to between the parties.

PUC Transmission confirmed that all impacted landowners have the option to receive independent legal advice regarding the land agreements, and that it would commit to reimbursing those landowners for reasonably incurred legal fees associated with the review and completion of the necessary land rights.[94]

2.8 Other Matters: Transmission System Code Exemption Request - Bypass Compensation

Under the OEB's TSC, a transmitter constructs a load customer's transmission connection facility based on the customer's long term load forecast. Where the load customer subsequently constructs its own connection facility (or connects to a facility owned by another entity) to supply its existing load before the transmitter-owned connection facility reaches its end-of-life, it is considered a "bypass" because the dedicated connection asset becomes stranded.

Unlike a shared network asset that benefits all ratepayers, a connection asset is typically dedicated to a customer. If the customer disconnects and does not compensate the transmitter for the bypass, the stranded cost will need to be borne by all other ratepayers (i.e., non-beneficiaries) in Ontario that remain connected to the system. Bypass compensation is therefore required from a load customer in certain circumstances, under the TSC, to ensure all ratepayers are not required to pay the stranded cost when a load customer bypasses a transmitter-owned connection facility.

The application states that Algoma Steel requested that its new load associated with its EAF facilities be supplied by HOSSM until the PUC Transmission Project is completed. The application also indicates that Algoma Steel's EAF (and LSP Generating Station) are connected to HOSSM's system at Clergue TS and discusses the need for HOSSM to perform work on two Remedial Action Schemes (RAS) and additional work at Clergue TS to connect Algoma Steel.[95] Algoma Steel's total new supply needs are about 140 MW; however, Algoma Steel's EAF facilities will not be permitted to draw more than 30 MW from existing circuits connecting to HOSSM's Clergue TS.

In this proceeding, HOSSM is seeking an exemption from section 11.2.1 of the TSC which would require Algoma Steel to pay bypass compensation, as discussed above, in relation to 30 MW of the new load associated with its new EAF facilities that will be

[94] PUC Transmission's interrogatory response to OEB Staff-16 c) and d)
[95] Exhibit C Tab 4 Schedule 1, page 18

served by HOSSM. HOSSM indicated it is an "interim" (i.e., temporary) solution until the PUC Transmission Project is completed. HOSSM further states that it currently expects to serve Algoma Steel's 30 MW for three years which is when Algoma Steel is expected to change the connection point from HOSSM's Clergue TS to PUC Transmission's Tagona West TS.[96]

HOSSM will continue to supply some of Algoma Steel's load (12 MW) at a different station – Patrick Street TS – after the PUC Transmission Project is in operation.

OEB staff notes that section 11.2.1 of the TSC includes two bypass scenarios and the second scenario, in section 11.2.1(b), would be applicable to this case because it states that a transmitter (HOSSM) shall require bypass compensation from a customer (Algoma Steel) where it connects to another facility (PUC Transmission) that is not owned by the transmitter such that the customer reduces its load served directly by the transmitter's (HOSSM) transmission system (via Clergue TS), and the line connection or transformation connection rate revenues in relation to that facility will be reduced. However, in that scenario, the customer continues to retain a connection to the same transmitter's (HOSSM) transmission system (via Patrick Street TS). In contrast, section 11.2.1(a) of the TSC involves a full disconnection scenario.

OEB staff requested that HOSSM provide a table that separately lists each RAS investment and the other work to be done at Clergue TS.[97] OEB staff also requested that the table include the estimated cost for each investment and the portion of the cost that would be allocated to Algoma Steel. In response to the interrogatory, HOSSM provided the table set out below.

Table 6: Reasons for RAS Investments and Cost Allocation

RAS/Station	Work	Approximate Cost ($M)	Allocation to Algoma Steel (%)	Reason
Third Line RAS (Third Line TS)	Changes to Contingency Detection and Control Actions	3.7	25%	Changes in RAS are also required for correcting existing system deficiencies
Northwest RAS (Lakehead TS)	Changes to Contingency Detection and Control Actions	1.9	16%	

[96] Exhibit C Tab 4 Schedule 1, page 20
[97] HOSSM's interrogatory response to OEB Staff-21

RAS/Station	Work	Approximate Cost ($M)	Allocation to Algoma Steel (%)	Reason
Clergue TS	Perform grounding study and install additional grounding as required by the study	0.1	100%	Work triggered by Algoma Steel only

In the same interrogatory, OEB staff also asked HOSSM if the investments are solely related to serving Algoma Steel's 30 MW of load and, if they serve another purpose, to explain what that purpose will be after Algoma Steel connects to PUC Transmission to supply that load. HOSSM explained that the investments are not solely related to serving the 30 MW of load; rather, after Algoma Steel shifts its load to the Tagona West TS (from Clergue TS), the RAS modifications will continue to be required under various system conditions including planned outages.

HOSSM added that the Northwest RAS and the Third Line RAS are used to trip load, generation and/or circuits during system contingencies, and the IESO's System Impact Assessment (SIA) identified modifications to each RAS will not only address the connection of the Algoma Steel EAF facility to the HOSSM system. Rather, they will also address "existing system deficiencies" in the region related to meeting North American Electric Reliability Corporation (NERC) planning standards. As such, HOSSM apportioned the cost between Algoma Steel and the network rate pool (i.e., all ratepayers) based on the relative costs to meet the NERC standards and the cost that is caused by Algoma Steel's connection to HOSSM's transmission system.

In relation to Third Line TS RAS, Algoma Steel was allocated 25% ($0.925M) of the total cost of the modification based on the "percentage of new selections in the RAS matrix" due to them, as well as the entire cost for tele-protection equipment dedicated to Algoma Steel. With respect to the Northwest RAS, Algoma Steel was allocated 16% ($0.3M) of the total cost on the same basis. In addition to the RAS modifications, a grounding study was required at Clergue TS to verify the adequacy of the ground grid for re-termination of Algoma Steel's generators from Patrick Street TS to LSP CGS and the cost was fully allocated (100%) to Algoma Steel.

OEB staff also asked HOSSM to clarify if the sole reason for the request for the exemption from the bypass compensation requirement in section 11.2.1 of the TSC is related to Clergue TS being a temporary solution to meet Algoma Steel's needs. HOSSM confirmed that is the sole reason (i.e., "not a permanent" solution).

OEB staff further asked, if completion of PUC Transmission's Tagona West TS is materially delayed beyond three years, whether HOSSM is requesting that the exemption remain in place regardless of how long it takes until Algoma Steel is able to connect its EAF to Tagona West TS (and shift the 30 MW of load from HOSSM's Clergue TS). HOSSM confirmed it is requesting that the exemption remain in place if completion of Tagona West TS is delayed beyond three years.

Submission

OEB staff is of the view that the request for the TSC exemption is appropriate for the following reasons.

(1) It is intended to be a *temporary* (i.e., interim) solution to meet Algoma Steel's supply needs and it is being done so Algoma Steel can expand and decarbonize its operations immediately; and

(2) According to HOSSM, the investments being made to connect Algoma Steel are also needed to address broader system needs related to meeting NERC standards. As such, once Algoma Steel shifts its load from HOSSM to PUC Transmission, the HOSSM investments made to accommodate Algoma Steel's supply needs will not become stranded assets.

OEB staff is of the view that bypass compensation should have been required if Algoma Steel had, instead, expressed an intent to connect to HOSSM's transmission system to supply its forecast new load requirements on a *permanent* basis and then changed its connection to have that load supplied by PUC Transmission. However, as discussed above, Clergue TS is not a permanent solution in this case.

OEB staff therefore submits that the request for an exemption from the bypass compensation requirements in the TSC is appropriate. That said, OEB staff is also of the view that the TSC exemption should be tailored to meet HOSMM's stated intent and expectations as follows:

(1) The exemption should be limited to subsection 11.2.1(b) of the TSC. For example, an exemption from subsection 11.2.1(a) would expand the exemption to include Patrick Street TS. Based on the application, that is not necessary (or requested).

(2) The exemption should not be provided for an unlimited time period. It was estimated that Algoma Steel would connect to the PUC Transmission Project in three years. OEB staff believes some flexibility related to timing would be appropriate due to unforeseen issues that can arise during construction. As such,

if more than three years is ultimately required for PUC Transmission to connect and supply Algoma Steel, a request from HOSSM for an extension of the exemption should be required if it exceeds five years. OEB staff is of the view that, at some point in time, it appears to become questionable whether it should continue to be considered an "interim" or "temporary" solution to serve "new" load. OEB staff also notes that Algoma Steel would be utilizing available capacity that could be allocated to other load customers. For example, another load customer could require 20 MW of capacity in five years and, if Algoma Steel still remains connected, HOSSM would likely need to make an additional investment in a new or modified connection facility (rather than allocate existing available capacity).

OEB staff notes that, if HOSSM's request for an exemption related to the bypass compensation requirement in the TSC is approved, HOSSM's transmitter licence will need to be amended.

2.9 Conditions of Approval

The OEB Act permits the OEB, when making an order, to impose such conditions as it considers proper. The OEB has established a set of standard conditions of approval for transmission Leave to Construct applications.

Submission

OEB staff proposes that the standard conditions of approval be placed on PUC Transmission and HOSSM. The proposed conditions have been approved by the OEB in prior leave to construct applications. PUC Transmission and HOSSM have confirmed that they agree with the standard conditions of approval.[98]

~All of which is respectfully submitted~

[98] PUC Transmission and HOSSM's interrogatory responses to OEB Staff-25