

North & East of Sudbury Regional Electricity Planning Scoping Assessment Public webinar – July 19, 2021 Responses to feedback received

The IESO launched a new engagement initiative to seek early feedback on the electricity planning activities underway in the North & East of Sudbury Region. As part of this engagement, a public webinar was held on July 19, 2021 to provide an overview of the electricity planning process, the electricity needs that have been identified for the North & East of Sudbury region, and to seek input on the [draft Scoping Assessment report](#) to determine the most appropriate planning approach going forward to meet the region's needs. The presentation material and recorded webinar are available on the [engagement webpage](#).

This document summarizes the key themes that emerged from the feedback received along with the IESO responses. The IESO appreciates the input, which will be considered by the Technical Working Group¹ in the development of a long-term electricity plan – Integrated Regional Resource Plan (IRRP) and ongoing engagement initiatives.

Feedback was received from the following parties and posted on the engagement webpage:

- [Peter Drury](#)
- [Stantec Consulting](#)
- [Taykwa Tagamou Nation](#)
- [Temagami First Nation](#)
- [ZW Management](#)

¹ The North & East of Sudbury IRRP Technical Working Group consists of Greater Sudbury Hydro Inc., Hearst Power Distribution Company Limited, North Bay Hydro Distribution Ltd., Hydro One Networks Inc. (Transmission and Distribution) and Northern Ontario Wires Inc.

Reliability

1. Feedback provider: Taykwa Tagamou Nation

Feedback: The quality of electricity power in Northeast Ontario lags that of the rest of the province. With power being such a pivotal input of any development on Traditional Lands, any planning must aim to bring those service standards to the same level as the rest of Ontario or better.

2. Feedback provider: Stantec Consulting Ltd.

Feedback: Stable power has been a concern in the community for which this development is being planned for Moosonee/Moose Factory in the WAHA area.

IESO response: Thank you for highlighting this concern. Reliability concerns will be further considered in the North and East of Sudbury IRRP process. While these concerns may not be violations of load security and restoration planning criteria, the IESO recognizes that outages have high socio-economic costs for impacted communities. The IRRP will investigate cost-effective opportunities for incremental improvements where there is a potential for integration with other system needs. Section 4.3 of the Scoping Assessment was revised to capture this point.

Capacity

3. Feedback provider: Taykwa Tagamou Nation

Feedback: Capacity constraints are a barrier to economic and sustainable development on Traditional Lands and any planning must enable 200 MW + and at least 1,000 MW of new generation. Work is underway with generators and major industrial loads in the area to support such developments.

IESO response: The IRRP for the North & East of Sudbury region is an opportunity to reflect the outlook for new industrial loads when defining the region's needs, as well as generation supply when exploring and evaluating solutions to meet needs. As part of the IRRP process, the IESO will share preliminary demand forecasts and seek input from stakeholders and communities on these forecasts. Similarly, stakeholders and communities will be provided with an opportunity to provide feedback on the types of options that should be evaluated to address identified needs. The IESO encourages industrial loads and generators to also participate in planning activities and provide their plans as early as possible.

Engagement

4. Feedback provider: Taykwa Tagamou Nation

Feedback: Any work performed on the transmission grid should include provisions for equity participation for First Nations.

IESO response:

Stakeholder and community engagement is integral to the IESO's decision making process. As part of regional planning, stakeholders and communities will have an opportunity to provide input and feedback on the demand forecast for the region, the electricity system needs and solutions, and draft planning recommendations. The IESO provides funding support for Indigenous communities and organizations to explore opportunities for assessment and development of partnerships for transmissions projects. As the system operator, the IESO only identifies new needs for electricity and is not responsible for the construction, operation or ownership of transmission system assets.

5. Feedback provider: Temagami First Nation

Feedback: Clarification requested on when the IESO would need to be made aware of future electricity demand and supply needs? A potential 3.8 MW biomass facility to be located in the region is under consideration.

IESO response: Thank you for the information. It is possible that this facility could be considered in the IRRP phase when considering the needs and solutions to meet those needs. The IESO would appreciate additional details on location, operating profile, in-service date and likelihood that the facility will materialize as soon as possible so as to consider it at the beginning of the IRRP process, which will immediately follow the Scoping Assessment.

Other Considerations

6. Feedback provider: ZW Group Project Management

Feedback: The town of Moosonee will be receiving a new hospital complex opening 2026 which will impose a new load of approximately 3 MW

IESO response: This information will be included in the data gathering phase of the North & East of Sudbury IRRP and will help inform the development of the demand forecast for the region. Note that the IRRP relies on local distribution companies in the region to provide load forecasts for their service territories as part of their role in the Technical Working Group.

7. Feedback provider: Stantec Consulting Ltd.

Feedback: Information requested whether there are plans for a redundant feeder to communities to support hospital developments required by CSA Z32 (health care standard).

IESO response: The regional planning process focuses on the electricity system at the transmission system level. This question has been referred to the appropriate local distribution company in the Technical Working Group who is in communications with the proponent.

8. Feedback provider: Peter Drury

Feedback: The following considerations should be made regarding the needs on the 500/115kV auto-transformers at Porcupine TS:

- Due to the wide fluctuations in the 500kV voltage at Porcupine, an excessive number of tap-changer operations would be required to achieve a relatively stable voltage on the 115kV busbar

- With the 230kV-connected SVC at Porcupine TS maintaining the busbar voltage to around 243kV, the installation of two new 230/115kV auto-transformers at Porcupine TS, to replace the existing 500/115kV units, would then permit much greater control of the voltage on the 115kV busbar
- With the 500kV system no longer directly influencing the 115kV busbar voltage at Porcupine TS, the 500kV system voltage could then be allowed to 'float', requiring tap-changer action only when it threatens to exceed, either pre- or post-contingency, the ORTAC specified limits of 500kV or 550kV
- Installing more conventional 230/115kV auto-transformers, for which system spares are usually available, would allow a much more rapid replacement to be undertaken should either auto-transformer fail.

Table 4-4 from the North & East of Sudbury Scoping Assessment Outcome Report also makes reference to one of the 500/230kV auto-transformers at Porcupine reaching end-of-life in 2025.

If the two 500/115kV auto-transformers at Porcupine TS were to be replaced with 230/115kV units, then, depending on the load-generation balance on the 115kV system, there could be an increase in the transfers through the 500/230kV auto-transformers. With the potential for additional 230kV-connected load in the Timmins area, it would therefore appear prudent when replacing the end-of-life unit, to install one with a rating that is higher than the 250MVA of the current unit.

IESO response: In its regional planning activities, the IESO develops recommendations on how best to meet reliability needs, taking into consideration options such as conservation, generation, transmission, distribution and innovative resources when developing recommendations to meet future electricity needs. This feedback will be considered as part of the options analysis of the North and East of Sudbury IRRP process wherever appropriate for needs identified in the IRRP. Specific to the feedback provided, it should be noted that Hydro One is actively implementing sustainment plans at Porcupine TS, including the replacement of the 360 MVA 500 kV/230 kV autotransformer T8, and 2 – 225 MVA 500 kV/115 kV autotransformers (T3/T4) with units of similar size and voltage ratings. As noted in the Hydro One led Needs Assessment, these investments are underway, with equipment ordered to meet an in-service date of 2025.

9. Feedback provider: Peter Drury

Feedback:

- Installing 230/115kV transformation at Pinard TS would not only eliminate the need for at least one Abitibi Canyon (or an Otter Rapids) unit to maintain acceptable voltages on the 115kV system supplying Moosonee and the Five Nations Communities, but it would provide a superior synchronous connection to the 230kV-connected generating units than the existing one via Kapuskasing TS
 - The disadvantage of this reinforcement would be an increase in transfers from the 230kV system to the 115kV system, aggravating the flows on the 115kV circuits between Hunta SS and Timmins TS.
- Maximising the thermal capacity of 115kV circuits D2H & D3H circuits is to be encouraged, particularly if new 230/115kV transformation were to be installed at Pinard TS as this would, subject to addressing the bottleneck between Hunta SS and Timmins TS, allow more of the capacity of the Abitibi River & Mattagami River generating units to be accessed in the event of an extended outage of 500kV circuit D501P.

- Reinforcing the existing system north of Timmins with a new 230kV line between Porcupine TS and Hunta SS (along with new 230/115kV transformation at Hunta SS) would significantly enhance the performance of the 115kV system while addressing the thermal bottleneck presented by circuits H6T & H7T between Timmins TS and Hunta SS.
- It would also further enhance the synchronous connection between the 230kV busbars at Pinard TS and Porcupine TS, providing a strong alternative path during outages to the 500kV circuit D501P.
- Installing a new 230kV line between Porcupine TS and Hunta, together with new 230/115kV transformation at Hunta, would directly benefit the Kapuskasing/Hearst area, particularly under outage conditions involving the 230kV circuit L21S between Little Long & Spruce Falls TS.
- It could also provide the basis for longer-term 230kV transmission reinforcement into the Kapuskasing area should new loads materialise in the future.

IESO response: In its regional planning activities, the IESO develops recommendations on how best to meet reliability needs, taking into consideration options such as conservation, generation, transmission, distribution and innovative resources when developing recommendations to meet future electricity needs. This feedback will be considered as part of the options analysis of the North and East of Sudbury IRRP process wherever appropriate for needs identified in the IRRP.