

# Northwest Regional Electricity Planning Public webinar – November 3, 2022

## Response to Feedback

The IESO hosted a public webinar on November 3, 2022 to provide an overview of the options examined to meet the electricity needs in the Northwest region and invite feedback on the resulting recommendations for the final Integrated Regional Resource Plan (IRRP). In addition, an update on the Waasigan Transmission Project was provided to those in attendance.

The meeting materials and [recorded webinar](#) are available on the [engagement webpage](#) along with the feedback received.

Feedback was received from the following parties and posted on the Northwest Regional Electricity Planning [engagement webpage](#):

- [Hydro One](#)
- [Kinross Gold](#)
- [Métis Nation of Ontario](#)
- [Peter Drury](#)
- [SCI Stantec](#)

This response document summarizes the themes that emerged from the feedback along with the IESO's response and how it was considered in this phase of regional planning. The themes resulting from feedback include:

1. Future Demand for Northwest Ontario
2. Meeting Future Needs
3. Ring of Fire Studies
4. Waasigan Transmission Project
5. Other

## Theme #1: Future Demand for the Northwest

### 1. Feedback provider: Kinross Gold

To what extent do the load forecasts incorporate the push for electrification? As organizations are still evolving their climate change strategies in line with government policy, the current forecasts may not fully reflect likely future scenarios. What is the range for the “High Growth” forecast? Can this growth forecast be updated and included in the IRRP report?

**IESO response:** The mining sector forecast is project-based; it is built from the bottom up from what each developer has forecast for their project. Therefore, mining electrification is only captured to the extent that individual developers have included it in their forecast.

Information about future mining projects changes frequently. The IESO solicited public feedback on the mining demand forecast and associated list of known mining projects in May 2021. For this IRRP, the mining forecast was finalized at the end of 2021 to allow sufficient time for technical assessments that depended on forecast inputs.

The IESO is currently in the process of updating the mining demand forecast to reflect additional information received over the past year since the last forecast iteration and to better capture future growth driven by electrification trends and government policy. The forecast update is expected to be completed in Q1 2023.

### 2. Feedback provider: Kinross Gold

Given the lead-time to study, engineer, procure and construct transmission projects, an IESO work strategy to advance these projects (without necessarily committing to their construction) is needed. Otherwise, the mine developments will need to be downsized to fit within the available power capacity or be forced to generate on-site using natural gas with much higher costs and much higher GHG emissions. Recently, there have been some mining projects that have had to select natural gas generation due to insufficient transmission capacity.

Given that load growth can happen quickly, consideration should be given to project delivery models which accelerate the time to in-service date. For example, a staged approach to engineering/permitting prior to a “definitive” decision to construct.

**IESO response:** This is the approach for the Waasigan Transmission Line Project. In 2018, the IESO recommended that Hydro One commence development work (i.e., complete the Environmental Assessment) for Phase 1 and Phase 2 based on the timing of projected supply capacity needs and the risk of them materializing earlier. The IESO committed to ongoing monitoring to determine when construction of Phase 1 and Phase 2 should begin and to confirm that they are the best course of action to meet the needs. In 2022, the IESO recommended a staged approach for construction where Hydro One should construct the Project to meet near-term system capacity needs with Phase 1 being placed in service as close to the end of 2025 as possible. The IESO will continue to monitor developments in the Region and provide an update in Q2 2023 on the expected need date for Phase 2. This is a balanced approach to accommodate growth in a timely manner while managing ratepayer risks.

For localized areas of the Northwest (e.g., north of Dryden) no capacity needs are anticipated based on the current demand forecast (finalized by the end of 2021). However, the Working Group is aware of additional potential mining projects that are not captured in the current

forecast. The timing and amount of load associated with these mines are not yet certain but, considering the typical size of new mining projects, remaining capacity in the Red Lake area can become limiting. Therefore, the Working Group studied a high growth sensitivity for the Red Lake area in order to quantify the load meeting capability. This information will be used to monitor growth in the Red Lake area to determine when future planning activities should be triggered. The IESO will also continue to update the mining demand forecast to inform ongoing planning activities.

3. Feedback provider: Kinross Gold

Consideration should be given to how quickly the growth cases may materialize. What would be the approximate cost and time frame for a new line from Dryden to Ear Falls to Red Lake to support a “High Growth” case? Investing in refurbishments to meet immediate needs and then having to build a new line shortly afterwards to serve growth would not be an efficient deployment of capital

**IESO response:** The cost of refurbishing the existing 115 kV lines with higher rated conductors is explored in the IRRP report. A new line from Dryden to Ear Falls to Red Lake was not contemplated in the IRRP.

The IRRP focused on identifying the load meeting capability of potential high-growth areas to determine the “trigger point” at which planning to facilitate new load development would be required. The IRRP recommends continued monitoring of load growth in these areas to determine when additional planning is needed. A decision on what specific reinforcements would be needed would depend on how much demand growth eventually materializes and in which location(s).

## Theme #2: Meeting Future Needs

4. Feedback providers: Kinross Gold

Is Waasigan Phase 2 needed to support the “High Growth Forecasts” for Red Lake area?

**IESO response:** The purpose of the Waasigan Transmission Line Project is to improve the bulk system transfer capability into the region west of Thunder Bay, not just Red Lake. The need and timing for Phase 2 depends on growth in the overall region west of Thunder Bay.

5. Feedback provider: SCI Stantec

IESO’s analysis of the Steep Rock energy storage project identified significant capacity, energy arbitrage and operating reserve value to Ontario ratepayers. The project offers considerable capacity for expansion, which will be positive in supporting the anticipated load and associated economic growth in the region. So, it would be good to understand the benefits of a large storage facility located in the Northwest region to local communities, businesses and ratepayers. Would it benefit local generators and allow them to produce more MWh’s during off-peak hours? Would it facilitate development of additional renewable power projects regionally, and facilitate export opportunities (to Eastern Ontario, Manitoba and the US)? Would it increase the capacity of the local grid and allow it to respond to growth in the area?

**IESO response:** The IRRP has not identified any local reliability needs in the Atikokan area where the proposed Steep Rock energy storage project is located. Energy storage facilities can

provide bulk system benefits (subject to deliverability constraints); please see the IESO's [Resource Acquisition and Contracts website](#) for more information on the IESO's ongoing procurement projects.

6. Feedback providers: Kinross Gold

Are the \$35M and \$23M refurbishment costs just for the circuits? Do the costs include provisions for alternative power arrangements and reactive power support systems? If the thermal limits of E4D/E2R are raised to 130 MW, is an LMC of 130 MW reachable without voltage instability? If required, what is the estimated cost of the reactive power support? It appears that the load on E2R cannot be raised to 130 MW without upgrades to Dryden (either transformers and/or voltage regulation). Does IESO foresee potential needs for new lines parallel to E2R and E4D (instead of just upgrades) to achieve the higher loads.

**IESO response:** Yes, the cost estimates are only for the refurbishment of the circuit conductors and do not include voltage regulation devices. The sizing and cost of the voltage devices would depend on the amount of demand that materializes and will be explored in future studies if demand trends higher than forecasted levels.

The Dryden/Ear Falls/Red Lake subsystems' load meeting capability is function of three "nested" constraints as described in Section 6.3.1 of the IRRP report. An implication of this "nesting" is that, depending on where new loads connect, they could contribute to one or more subsystem needs. Increasing demand on E4D/E2R to 130 MW would require additional reinforcements to Dryden TS to address post-contingency voltage decline. A key recommendation of the IRRP is to continue monitoring growth in this area and initiate further planning if demand growth exceeds the load meeting capability.

### Theme #3: Ring of Fire Studies

7. Feedback provider: Hydro One Remotes

The Ring of Fire portion should be presented separately to the impacted Indigenous communities. The idea is to plant the seed of cooperation and future grid connection.

**IESO response:** While five communities are located in the vicinity of the Ring of Fire, the IESO contacted all nine Matawa communities in December 2022 to provide information about the Ring of Fire study and to invite the communities to meet with the IESO to ask questions and provide input. The IESO received some responses and moved to make meeting arrangements. The IESO will continue to provide updates to all nine communities regarding the Northwest IRRP and will let the communities know that the IESO will continue to be available to discuss electricity system planning with them.

8. Feedback provider: Kinross Gold

Since there is a load forecast update currently underway, consideration should be given to delaying the finalization of the IRRP report until this update is completed.

The next formal assessment of this Region should happen well before another 5 years

**IESO response:** The timing for publishing the IRRP is dictated by regulatory timelines. The publication date has already been extended from July 2022 to Jan 2023 to allow for greater

engagement and expanded study scope. This is the maximum extension permitted by the IESO's licence.

Planning is a continuous process. Regional planning cycles are carried out at minimum every 5 years but can be advanced if required.

9. Feedback provider: Peter Drury

Suggest that consideration should be given to originating any new line to the Ring of Fire, via LongLac, from Marathon TS rather than from a new SS. This would avoid introducing imbalanced loading of the EW Tie circuits while providing the opportunity for the new 230kV line to the Ring of Fire to follow the route of the existing 115kV line from Marathon TS to Manitouwadge DS, thereby avoiding the need to establish a new right-of-way over that portion of the route.

**IESO response:** Thank you for the suggestion; the benefits of connecting to a station rather than a subset of the East-West Tie has been noted in the IRRP report. The Supply to the Ring of Fire is still in its conceptual phases. Various connection arrangements and their bulk system impacts will be further assessed and refined as the study progresses.

## Theme #4: Waasigan Transmission Project

10. Feedback provider: Métis Nation of Ontario

This project needs to make sure that there is no pause between phase 1 and phase 2 parts of the project; consider the training of the Indigenous workers; workers from out of province had to be brought in for the East West Tie project.

**IESO response:** The IESO has been made aware of the concerns of Indigenous communities regarding the timing of the recommendation to proceed with phase 2. A key factor for phase 2 is to ensure that the need for new infrastructure is clearly identified. The IESO will continue to study developments in the region and will provide an update on the anticipated need date for Phase 2 in Q2 2023. In the meantime, the IESO continues to support Hydro One's ongoing development work on Phase 2 which helps reduce lead time to construct the line and ensures that Phase 2 remains a viable option to meet emerging needs.

11. Feedback provider: Métis Nation of Ontario

Human rights issues need to be considered and prepared for with the development of work camps.

**IESO response:** The IESO will share this feedback with Hydro One, the transmitter that is developing the Waasigan project. The IESO's role is confined to identifying new electricity system needs and to recommend the most suitable solution to meet that new need. Where transmission is recommended, the local transmitter is responsible for developing and constructing the project.

## Theme #5: Other

12. Feedback provider: Kinross Gold

Given the rapidly changing nature, consideration should be given to broadening the membership of this group and providing a forum for more frequent two-way dialogue.

**IESO response:** The Technical Working Group is comprised on the IESO, transmitters, and distributors. However, other groups may be formed to better understand or seek feedback on specific topics. For future planning activities, the IESO will continue to explore avenues to help ensure that all interested parties are aware of and can contribute to the development of the plan.