
Final Planning Document Posted | Northern Ontario Bulk Study

From IESO Community Engagement <communityengagement@ieso.ca>

Date Tue 9/23/2025 3:02 PM

The long-term bulk electricity plan for the Northern Ontario Bulk Study: North-South Transmission Reinforcement Plan ("the Plan"), is now available [online](#).

Ontario's bulk transmission system connecting the North and South is being upgraded to meet rising electricity demand in Northern Ontario, driven by economic development, electrification initiatives and mining developments. The current system includes two 500kV circuits and one 230kV circuit, however, technical analysis shows it lacks the capacity to reliably support future demand. To address this, the North-South Transmission Reinforcement Plan includes the following recommendations:

- Implementing a new single circuit 500 kV series-compensated transmission line between Hanmer TS (Sudbury) and Essa TS (Barrie) with an estimated length of ~270 km, cost of \$1.4 billion to \$1.6 billion, and in-service date of 2032.
- Preserving future transmission options by beginning early development work on a possible second new 500 kV transmission line between Essa TS and Hanmer TS.
- Exploring strategic siting of cost-effective system generation in Northern Ontario, including baseload generation, where existing bulk transmission system capacity exists, to help defer the need for the second new 500 kV transmission line.

The recommendations from the North-South Transmission Reinforcement Plan will:

- Increase transfer capacity Northwards by 1,500 MW to meet rising electricity demand in across Northern Ontario;
- Increase transfer capacity Southwards by 1,000 MW to enable diverse energy resources in the North (e.g., storage, baseload, intermittent); and,
- Lay the groundwork for future transmission expansions to support long-term reliability and growth.

The North-South Transmission Reinforcement Plan builds on several recent and ongoing transmission reinforcement projects in Northern Ontario including Wataynikaneyap Transmission Project, East-West Tie Reinforcement and more. To ensure the Plan reflects the needs of Indigenous communities and rightsholders, municipalities, market participants, stakeholders, customers and other interested parties, the IESO engaged extensively through a [dedicated webpage](#), targeted discussions, engagement webinars and other communication channels. Input from these outreach initiatives informed the development of the Plan and shaped its final recommendations.

For more details, [download the full report](#) and visit the [Bulk Planning webpage](#) for information on future Bulk Planning initiatives, including the [North of Sudbury Bulk Planning Study](#), which will examine the bulk transmission system's ability to supply increasing levels of demand in the areas surrounding Timmins, Kirkland Lake and Pinard. To stay informed, kindly [subscribe to receive](#) bulk planning updates.

This concludes the Northern Ontario Bulk Study engagement initiative. The IESO appreciates your participation and input received throughout the Plan development. Please contact engagement@ieso.ca if you have any questions on the North-South Transmission Reinforcement Plan.

IESO Regional & Community Engagement