

Summary: Taltson Hydroelectricity Expansion Project¹

Proposed Project: Planned in 3 phases by the Government of the Northwest Territories (GNWT)'s Department of Infrastructure. They are currently in Phase I:

- Phase I: add energy generation capacity with a new 60 MW generation facility next to the existing Taltson Hydro System and a new transmission line to serve 10 communities in North and South Slave regions of the NWT.
- Phase II (not expected until 2040): extend the line north along the Slave Geological Province (SGP) access corridor to provide clean energy for mineral development in the SGP.
- Phase III: connect the electrical grid to southern Canada.

The project needs to be done with Indigenous partners as owners and key participants. It will cost over \$1 billion if it gets to the construction stage. The federal government has provided \$18 million for Phase 1 feasibility assessment.

Proposed Taltson Hydroelectricity Expansion showing the 3 planned project phases.



¹ Based on information provided by GNWT Department of Infrastructure, January 2021



Background: The project goes back to the early 2000s. It is an attractive opportunity because there is an 18 MW existing facility and 60MW of potential at Twin Gorges, and they can upgrade an existing reservoir with no new flooding. They also have 10 years of baseline technical information available and 50 years of water records that will help with project design, management and monitoring. There was a previous environmental assessment conducted over 3 years that rejected a transmission line routing around the east side of Great Slave Lake.

Current status: Project work is underway in several areas, including technical, Indigenous engagement and economic evaluation. They are looking at four options to identify a preferred route for the transmission line from cost, risk and environmental assessment perspectives. Three options each include both overhead and submarine cables through Great Slave Lake, for a total length of 265-338 km. The longest route (830 km) is overhead only and would run next to an existing road for much of its length, to the south and west of the lake.

There is much traditional knowledge about Great Slave Lake, but little scientific understanding. A survey has been conducted over the past two summers to measure water depths and study topography of the lake floor. The GNWT has hired local guides and boat operators along with Northern and Indigenous youth to study fish habitat, ice formation, water currents and environmental changes.

Consultation: The GNWT will begin discussions and work toward a Memorandum of Understanding with partners (such as NWT Metis Nation, Salt River First Nation, Akaitcho Government) to develop a business case.

Next steps: If everything goes as planned they will receive environmental and regulatory approvals and funding by 2024 and construction will occur from 2025 to 2029.

For more information from the GNWT: <https://www.inf.gov.nt.ca/en/Taltson>
