



BACKGROUND: Inuvik Wind Project

Why is the Inuvik Wind Project important for the NWT's energy future?

One of the priorities of the Government of the Northwest Territories (GNWT) is to increase the use of alternative and renewable energy. One of the six strategic objectives of the 2030 Energy Strategy – the GNWT's approach to supporting secure, affordable and sustainable energy – is to reduce greenhouse gas emissions (GHGs) from electricity generation in diesel communities by 25%, or 18 kilotonnes, below historical levels by 2030.

By offsetting approximately three million litres of diesel per year in Inuvik – the NWT's largest off-grid community–reducing diesel consumption by 30% and GHGs by 6,000 tonnes annually, this project will make a significant contribution to helping the NWT meet its 25% reduction target for GHGs from electricity. The NWT has also committed to reducing GHG emissions by 30% below 2005 levels by 2030 under the Climate Change Strategic Framework. The emissions reductions that will result from the Inuvik Wind Project coming online will help the NWT meet this target.

What regulatory process did the project go through to get approved?

The Gwich'in Land and Water Board (GLWB) issued a Land Use Permit and Type B water licence for the project on November 27, 2020, allowing the project to proceed. The GLWB is a regulatory authority established under the Gwich'in Comprehensive Land Claim Agreement to provide for an integrated and coordinated system of land management in the NWT's Mackenzie Valley.

Where is the Inuvik Wind Project located?

The project is located within the Gwich'in Settlement Area in an area named High Point that is 12 kilometres east of Inuvik. Wind monitoring research confirmed the resource quality at this site was suitable for a wind power project with average wind speeds of approximately six metres per second. The site is five kilometres from the Dempster Highway and 10 kilometres from a tie-in with existing transmission lines, which eases access to the site and makes it economically feasible to build.

How much diesel will the Inuvik Wind Project displace when it is in operation?

Inuvik currently produces its electricity with a mix of diesel and natural gas. Approximately five million litres of diesel each year is used to generate electricity. The Inuvik Wind Project will offset about three million litres of diesel annually.



How much funding has the GNWT and Government of Canada committed to the project?

The GNWT has secured funding of up to \$40 million for the Inuvik Wind Project, based on a split of 75% federal funding and 25% territorial government funding. The Government of Canada has committed to providing up to \$30 million with the GNWT committing \$10 million. The Project was the first in the NWT approved for funding under the Investing in Canada Infrastructure Program.

Could more turbines be built on this site in the future?

There is room to install more turbines at the High Point site. The Inuvik Wind Project's 3.5-megawatt turbine is enough to cover most of the town's peak electricity demand.

Why is a battery storage system being built for the project?

Wind energy is intermittent, which means that electricity from wind generation fluctuates as the wind varies. The project's battery storage system will capture any excess power generated by turbine and release it back into the grid when the turbine is not generating enough power to meet the community demand. The battery storage system balances the community's power needs with that of the various generation sources to ensure reliable power delivery within the community. Diesel and LNG generation will continue to be a necessary part of the generation mix in Inuvik.

How long will it take to build the Inuvik Wind Project and when will it be complete?

The project is expected to take one year to build and should be completed by the winter of 2023.

Who will operate and maintain the infrastructure once it is operating?

NT Energy, a sister company of the Northwest Territories Power Corporation (NTPC), is delivering the project during the construction phase. Once it is fully operational, the assets and operations will be transferred to the NTPC.

Will this project generate employment and business opportunities?

The contract work flowing from the construction phase of the project could be of significant benefit to Gwich'in businesses, beneficiaries and the Beaufort-Delta region. The contract to build the six-kilometre access road has been awarded by NT Energy through an invitational tender to Northland Builders – a Gwich'in business. The road is expected to be completed by the spring of 2022.



Tender packages have been issued for other aspects of the project, such as general contract work, construction of the electrical distribution line and turbine foundation installation.

Will the GNWT consider building wind projects in other Northwest Territories' communities?

The GNWT continues to support and move forward with both wind monitoring campaigns and wind projects in the NWT in partnership with community governments, Indigenous governments and organizations, and the Government of Canada. To date, wind monitoring programs have been carried out in 15 NWT communities.

Since 2005, the GNWT has provided the Aurora Research Institute in Inuvik with more than \$1 million to support studies of wind in the NWT. This includes recent funding for Aurora Research Institute to purchase a Light Detection and Ranging wind monitoring unit. This unit uses lasers to test wind speed from the ground, so that we can better study the feasibility of wind power in various communities. Wind and other renewables are better deployed in thermal communities that rely on fossil fuel generation for electricity.