NPC 150320: Whale Cove Mobile Wind Resource Assessment Project

Close

Proposal Status: Conformity Determination Issued

Overview Documents Questionnaire

Project Overview

Type of application: New

Proponent name:

Kailey Wright

Proponent company:

Northern Energy Capital

Project Description:

Northern Energy Capital on behalf of Kivalliq Alternative Energy will conduct a preliminary renewable energy study for the community of Whale Cove, Nunavut. The community of Whale Cove currently relies on aging diesel generators to meet the local electricity demand. The project's scope is to collect wind data using a sonic detection and ranging (SODAR) device to assess the feasibility of a utility-scale wind energy project. The SODAR unit will measure wind speed, direction, and frequency over a 12-month period. The project will not require extensive land displacement or alteration; the SODAR device will be placed on the ground surface with a 3.0m x 3.0m tent enclosure to protect both wildlife and equipment, including a 5.7m x 6.1m photovoltaic power supply. The SODAR itself measures 0.5m x 0.5m x 3.0m tall. The study will consider the use of wind and battery energy storage systems, and the demand in order to effectively offset the diesel generation in the community.

Project Schedule

Start Date:

2024-09-01

End Date:

2025-10-31

Project Map

List of project geometries:

Id	Geometry	Location Name
11488		

polygon
Site A

NPC Planning regions:

Keewatin

Project Land Use and Authorizations

Project Land Use:

Scientific Research
Temporary Structures

Licensing Agencies:

Nunavut Research Institute
Nunavut Impact Review Board
Community Government & Services

Material Use

Equipment:

Type	Quantity	Type Use
Sonic Detection and Ranging (SODAR)	1	0.5m x 0.5m x 3.0m Using sound waves, this equipment will monitor wind activity including wind speed, wind direction, and wind frequency.
White Tent	1	3.0m x 3.0m Tent enclosure to protect both wildlife and equipment that will house the more delicate SoDAR power supply.
White Tent	1	5.7m x 6.1m Photovoltaic power supply that will serve as the primary power supply for the SoDAR equipment.

Fuel Use:

Type	Container	Capacity

Use
Propane
6
100
The propane is used to regulate the SODAR's temperature for the prevention of ice formation. Additionally, the propane is also used to power a generator to supplement the SODAR's 15W power requirement. Necessary steps are being made to reduce the quantity of fuel containers stored on site.

Hazardous Material and Chemical Use:

Type	Container	Capacity	Use
No data found			

Water Consumption:

Daily Amount (m^2)	Retrieval Method	Retrieval Location
0		

Waste and Impacts

Environmental Impacts:

Waste, impact mitigation, and environmental impacts from SODAR feasibility projects are typically very low and limited to land use displacement and construction if necessary. Nevertheless, the project team has endeavoured to identify and prevent any unacceptable environmental impacts or impacts on traditional land use. Potential risks identified that could be caused by the project are listed below, along with planned mitigation measures: 1. Risk: Disturbance of land resulting in habitat destruction. Mitigation Measure: Prior to construction, a review of the site for sensitive plant and animal species will be undertaken. First, this review will be undertaken via desktop by consulting available databases to identify species of concern within the vicinity of the project (eg. Species at Risk Registry, NPC Interactive Maps). At the time of writing, no important biological or ecological protection areas for wildlife were noted to overlap with the project site (i.e. polar bear denning areas, bird nesting, marine mammal calving, or caribou calving or migration corridors). The desktop review will be followed up with a site visit to identify if any species of

concern are present in the site area. If threatened species are identified within the site area, a plan will be prepared to preserve them. This could look like a slight adjustment to the site location or layout, a plant relocation plan, or a protection plan to ensure disturbance does not occur during SODAR deployment, as appropriate. Care will be taken during equipment assembly to disturb only the land required of 3.0m by 3.0m. Once installation is complete, the site will be cleaned up and areas of disturbed vegetation will be re-vegetated during operations. Whale Cove is one of three communities we will be conducting our feasibility study, therefore the proponent will ensure the land is returned to its previously undisturbed state following project completion. However, in the event that the SODAR does not continue to operate before the proposed project end date at this location and removal is required, a decommissioning plan will be prepared for the demobilization of the SODAR unit, and rehabilitation of the site area to return it to its previously undisturbed state. 2.Risk: Leak or spillage of fuel, leading to ground contamination. Mitigation Measure: Minimal fuel will be kept on site during the operation phase, one (1) 100lb propane tank is connected to the SODAR unit at all times. Arrangements will be made to store unused propane with a General Contractor in Chesterfield Inlet. A total of six (6) 100lb propane tanks are estimated to be consumed between Summer 2024 to Summer 2025. The site safety plan will include detailed spill mitigation procedures, including protocol for the safe storage of fuel on and off site, and prevention and containment measures in the event of a spill or leak. All personnel will be briefed on safety and fuel handling. 3. Risk: Interference with the local, traditional use of the land. Mitigation Measure: The project team has initiated consultation with both the Hamlet, and the Kivalliq Inuit Association to share the proposed project location and understand if there are any potential impacts to traditional land use. At this early stage, no impacts to traditional land use have been identified at the site location. The project team will continue to work with the Hamlet and KIA as project planning progresses, to ensure there are no anticipated impacts to traditional use of the land. 4.Risk: Presence of archaeological sites or artifacts within the project area. Mitigation Measure: Prior to construction, the project team will undertake any required heritage assessments of the site area in cooperation with the Government of Nunavut Department of Culture and Heritage, to screen for possible archaeological

sites or artifacts. The project team has completed a desktop review of known heritage site locations near the project area, and did not find any overlapping areas of note. During installation, the project will put in place procedures to cease activities in the event that an archaeological site is discovered, and will notify the appropriate entities for direction before any activities are resumed. 5. Risk: Generation of construction waste during construction. Mitigation Measures: The project team will take all appropriate measures to ensure that waste generated during assembly is contained and disposed of properly. The project will not generate any hazardous waste, and no waste is expected to result after equipment assembly and installation. Should there be waste material, all will be properly stored during construction and will be disposed of at the local landfill following the completion of installation.

Waste Management:

Waste Type	Quantity Generated	Treatement Method	Disposal Method

No data found