

NPC 151270: Hilamiut: Wind and Solar Resource Assessment Project - Kugaaruk

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Proposal Status: Conformity Determination Issued

[Overview Documents](#)

[Project Overview](#)

Type of application: New

Proponent name:

Sophie Pantin

Proponent company:

Aurora Energy Solutions

Project Description:

The Kitikmeot Wind and Solar Resource Assessment Project (Hilamiut) is a regional initiative designed to accelerate the development of community-scale renewable energy projects across four Kitikmeot communities: Kugluktuk, Cambridge Bay, Gjoa Haven, and Kugaaruk. The project will collect bankable-quality wind and solar resource data, assess suitable locations for renewable energy infrastructure, evaluate opportunities to integrate renewable energy into existing diesel-powered microgrids, and develop implementation roadmaps for future renewable energy projects. Through technical studies, community engagement, local employment and training opportunities, and education initiatives, the project aims to build the knowledge, capacity, and evidence required to support Inuit-led renewable energy development, reduce diesel dependence, lower greenhouse gas emissions, and strengthen long-term energy resilience across the Kitikmeot region. This application relates specifically to the first phase of the project in Kugaaruk, which consists of the installation and operation of temporary wind resource measurement equipment for approximately one year. The project is a scientific research and resource assessment initiative only; no renewable energy generation infrastructure is proposed as part of this application.

[Project Schedule](#)

Start Date:

2026-10-01

End Date:

2028-10-01

[Project Map](#)

List of project geometries:

Id

Geometry

Location Name

[22643](#)

polygon

Project Site

[22642](#)

point

Site is located within Kugaaruk municipal boundaries but doesn't have a legal description/parcel number

[22644](#)

point

Hilamiut Project - Site Location

NPC Planning regions:

No Approved Plan

[Project Land Use and Authorizations](#)

Project Land Use:

Scientific Research

Temporary Structures

Licensing Agencies:

Nunavut Impact Review Board

Nunavut Research Institute

[Material Use](#)

Equipment:

Type

Quantity

Type

Use

LiDAR Unit

1

0.9 m × 0.9 m

Light Detection and Ranging system to collect high-quality wind resource data for renewable energy planning. The system uses a Class 1 eye-safe laser to remotely measure wind speed and direction at multiple heights ranging from approximately 10 metres to 300 metres above ground level.

Solar Panels

6

2.4x1.1 m

Solar photovoltaic (PV) panels will form part of the power supply system for the monitoring station.

Micro Wind Turbine

4

2 m

The micro wind turbines will form part of the power supply system for the monitoring station.

Sea Containers

2

20 feet

Two temporary sea containers will be installed on site to house electrical and communications equipment and the power supply systems

Galvanized steel platform

1

1 m high

Support for LiDAR equipment

Fuel Use:

Type

Container

Capacity

Use

Other

10

60

Methanol fuel cells

Hazardous Material and Chemical Use:

Type

Container

Capacity

Use

No data found

Water Consumption:

Daily Amount (m²)

Retrieval Method

Retrieval Location

0

[Waste and Impacts](#)

Environmental Impacts:

The project will generate very little waste during operations. Construction waste will be removed from the site and disposed of at approved facilities. All temporary infrastructure will be removed at the end of the project. Empty fuel cartridges will be disposed of like regular plastic.

Waste Management:

Waste Type

Quantity Generated

Treatment Method

Disposal Method

Non-Combustible wastes

10

N/A

Municipal waste