

NPC 150770: Investigative Studies for the Iqaluit Nukkiksautiit Project

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Proposal Status: Conformity Determination Issued

[Overview Documents](#)

[Project Overview](#)

Type of application: Amendment

Proponent name:

Heather Shilton

Proponent company:

Nunavut Nukkiksautiit Corporation

Project Description:

Nunavut Nukkiksautiit Corporation (NNC) is leading the clean energy transition in the Qikiqtani Region of Nunavut. In close partnership with communities in the Qikiqtani Region, NNC is establishing sustainable renewable energy developments that foster local economic, social, and environmental benefits. Nunavut Nukkiksautiit Corporation (NNC) strives to lead Nunavut's clean energy transition in partnership with communities, establishing sustainable clean energy developments that foster economic, social, and environmental benefits. As a technology agnostic, 100% Inuit-owned renewable energy developer based in Iqaluit, NU, NNC strives to ensure the benefits of renewable energy development remain with Nunavummiut. The goal of the Iqaluit Nukkiksautiit Project is to provide an innovative, Inuit-led solution to deliver safe, reliable, affordable, and clean energy for Iqalungmiut. With the potential to entirely replace the existing diesel system with clean energy as the prime power source for years to come, the Iqaluit Nukkiksautiit Project has the potential to significantly reduce greenhouse gas emissions in the Territory, while enabling Inuit participation in the electricity sector in Nunavut. This summer is pivotal for project development to collect the necessary data to make important decisions. Below is a description of each activity that is planned for the 2025 season.

1. Hydrometric Assessment
 - Purpose: to study how fast the water flows at Kuugaluk, and how much water is passing through
 - Started in September, 2024, with NIRB approval, and needs to continue for 2 more seasons.
2. Archaeological Assessment
 - Purpose: to study, map, and photograph the area all around the main Kuugaluk reservoir, and the upper reservoir, both of which are about 10,000 hectares of land. The area includes the space between the current shoreline, out to the new shoreline (after the dam is built), and a 100-metre buffer beyond that.

•Looking for culturally-significant archaeological features and Inuit artefacts that must be protected. •The team will camp at Kuugaluk for several weeks. •The Inuit crew will be able to provide their own interpretation of any features and artefacts, and can supply names to each site. •Daily progress reports are proposed, in Inuktitut over shortwave radio, for elders and hunters. •The study will close with a “show and tell” at the site, where elders and interested Inuit can be brought to Kuugaluk, feast, and given a tour of any significant sites.

3.Environmental Assessment: Year 1 (of 3, at least) •Purpose: to collect baseline data sets for flora and fauna, on land and in water, including caribou, char, and birds. •Scientists will study the habitats, and get a sense of population numbers and behaviour, including the entire foodchain. •We just completed an RFP process for this, and the successful group will be chosen by the end of the month. •Fish samples will be taken, and analyzed for baseline mercury amounts.

4.LiDAR Data Collection •This work will use aircraft, flying over the span between Iqaluit and Kuugaluk, in the area where the road will be built, and all around the reservoir and upper reservoir. •Uses lasers to make high resolution 3D maps of the land and water surfaces.

5.Geophysical Investigation •Purpose: to get a better understanding of the permafrost depth, and the depth to bedrock. •We need this information to know how much water the reservoir and dam can hold. •Preliminary, non-invasive work that happens before drilling test shafts. This work will show us where it makes sense to drill, and minimize disruption. •We’ll be using two technologies: electrical resistance, and radar. •This, and the LiDAR, are commonly used, non-destructive, and not harmful to flora or fauna. Important to note: •All research plans will be presented to Rightsholders first, for review and comment. •We want to make sure that our studies take into account Inuit Qaujimagatuqangit, and make sure Rightsholders are fully aware of what’s going on. •Inuit field assistants, crew members, wildlife monitors, and student mentees will be hired to support all field programs, wherever possible. •We will post regular updates from the field on our social media channels. •Looking forward to sharing the results and analysis in the fall!

[Project Schedule](#)

Start Date:

2024-10-11

End Date:

2025-10-11

[Project Map](#)

List of project geometries:

Id

Geometry

Location Name

[16872](#)

point

Mckeand River South

NPC Planning regions:

No Approved Plan

[Project Land Use and Authorizations](#)

Project Land Use:

Hydro Development

Marine-Based Activities

Scientific Research

Temporary Structures

Licensing Agencies:

Nunavut Research Institute

Government of Nunavut - Department of Environment

Government of Canada - Fisheries and Oceans Canada

Government of Nunavut - Department of Culture and Heritage

Government of Canada - Crown-Indigenous Relations and Northern Affairs Canada

Nunavut Water Board

[Material Use](#)

Equipment:

Type

Quantity

Type

Use

AutoSalt water flow monitoring systems

2

24.5 x 23 x 48 tall

The two AutoSalt monitoring systems will be commissioned in the Mckeand River to monitor water flow for a one-year period.

Fuel Use:

Type

Container

Capacity

Use

No data found

Hazardous Material and Chemical Use:

Type

Container

Capacity

Use

No data found

Water Consumption:

Daily Amount (m²)

Retrieval Method

Retrieval Location

11

Near camp

tbd

[Waste and Impacts](#)

Environmental Impacts:

N/A

Waste Management:

Waste Type

Quantity Generated

Treatment Method

Disposal Method

Overburden (organic soil, waste material, tailings)

Unknown at this time

N/A

All methods of disposal for all Project waste will align with current community practices while ensuring it is safe and practicable.

Sewage (human waste)

Unknown at this time

N/A

All methods of disposal for all Project waste will align with current community practices while ensuring it is safe and practicable.