



PERMIT TO USE COMMISSIONER'S LAND

THIS PERMIT GRANTS:

NORTHERN ENERGY CAPITAL INC.

PERMITTEE

Address of PERMITTEE: 7209 7 Ave, Whitehorse, YT, Y1A 1R8

Permission to proceed with the **MET TOWER INSTALLATION** within all that parcel of land numbered **603-SK-072** outlined blue in the sketch annexed here to and forming part of the permit. The Land use permit application dated January 25, 2019 and submitted by Malek Tawashy on behalf The PERMITTEE shall be annexed hereto and shall be included in this permit.

1. THIS PERMIT IS SUBJECT TO THE COMMISSIONER'S LAND ACT AND REGULATIONS AND THE OPERATING TERMS AND CONDITIONS AS SPECIFIED IN THE ATTACHED ANNEX NUMBERED A-1.
2. THIS PERMIT MAY ONLY BE ASSIGNED, EXTENDED, DISCONTINUED, SUSPENDED, OR CANCELLED PURSUANT TO THE COMMISSIONER'S LAND ACT AND REGULATIONS.
3. THE GRANTING OF THIS PERMIT DOES NOT RELIEVE THE PERMITTEE FROM OBSERVING AND COMPLYING WITH ANY OTHER APPLICABLE ACTS, REGULATIONS, BY-LAWS OR ORDERS.

This permit was signed at the Hamlet of Rankin Inlet in Nunavut, this 7th day of March, 2019.

THE COMMISSIONER OF NUNAVUT

Per:

J. Wakeham
The Director of Community Development of the
Department of Community and Government
Services, Government of Nunavut

12:00 AM on April 1, 2019
PERMIT COMMENCEMENT DATE

11:59PM on March 31, 2021
~~PERMIT EXPIRY DATE~~

Permit
SP

Annex A-1

LAND USE PERMIT CONDITIONS

CONDITIONS ANNEXED TO AND FORMING PART OF LAND USE PERMIT NO. 06-603-018

TERM:

- a. The term of this permit shall be for a period commencing at 12:00 AM the 1st day of April, 2019 and ending at 11:59PM the 31st day of March, 2021.

FEES AND PAYMENT:

- a. The Permittee shall pay a permit fee of **Five hundred dollars (\$500.00)** per annum commencing on April 1, 2020 to the Municipal Corporation of the Hamlet of Baker Lake (Hereafter called the "Hamlet") until such time this permit becomes inactive.

INTERPRETATION:

- a. For the purposes of this permit, "shall not operate" is defined as a complete cessation of activities and removal of all personnel from the project area.

CGS TERMS AND CONDITIONS

1. The Permittee shall not conduct this land use operation on any lands not designated in the accepted application, unless otherwise approved in writing by an authorized Departmental representative.
2. The Permittee shall not conduct any part of the land use operation within 100 meters of any privately owned land or structure unless otherwise approved in writing by an authorized Departmental representative.
3. The Permittee shall during the said term, pay the said rental and all taxes, rates, and assessments charged upon the land or upon the Permittee in respect thereof.
4. The Government of Nunavut (Hereafter called the "Government") nor the Hamlet not responsible for the establishment on the ground of the boundaries of the land.
5. The Government or the Hamlet may re-enter and occupy any portion of the land for construction of roads or other public works but such construction shall not unreasonably interfere with the rights granted to the Permittee in this permit.
6. It shall be lawful for the Government or the Hamlet or any person duly authorized at all reasonable times to enter upon the land for the purpose of examining the condition thereof.
7. The Permittee shall not conduct any part of the land use operation on any private or leased land without first having received permission from the owner or lessee.
8. The Permittee shall not construct earth approaches abutted to the roadbed on any public highway or road without prior written approval of an authorized Departmental representative.
9. The Permittee shall display a copy of this permit in a conspicuous place in each campsite established to carry out this land use operation.
10. The Permittee shall have a copy of this permit on the site of operation at all times.
11. The Permittee shall provide to the authorized Departmental representative at least forty-eight (48) hours prior to commencement of this land use operation the following information:
 - a. Person, or persons, in charge of the field operation to whom notices, order and reports may be served;
 - b. Alternative;
 - c. All the indirect methods of contacting the above person(s).

NIRB TERMS AND CONDITIONS

12. If the Nunavut impact review board (Hereafter called “NIRB”) imposes any terms or conditions onto this Project than the Permittee shall follow all terms and conditions imposed by NIRB.

ENVIRONMENT

13. The Permittee shall ensure that the land use area is kept clean and tidy at all times
14. The Permittee shall not discharge or deposit any refuse substance or other waste materials in any body of water or on the banks thereof, which will impair the quality of the waters of the natural environment
15. The Permittee shall ensure that any chemical fuels or wastes associated with the project do not spread to the surrounding lands or enter into any water body. Spills shall be cleaned up immediately
16. The Permittee shall immediately report all spills of petroleum or hazardous chemicals to the 24 hour spill report line at 1-867-920-8130.

WILDLIFE

17. If any caribou or similar wild animals are observed using key access corridors within 1 kilometre during the construction of the project than all operations shall be suspended until such time that caribou are no longer in the area.



APPLICATION FOR LAND USE PERMIT

Department of Community & Government Services

Government of Nunavut

1. APPLICANT

Northern Energy Capital Inc.

2. ADDRESS

Narrow Gauge Station
7209 7th Ave
Whitehorse, YT
Y1A 1R8

3. ADDRESS OF HEAD OFFICE

Suite 803
168 West 1st Ave
Vancouver, BC
V5Y 1A4

4. LOCATION AND DESCRIPTION OF OPERATION

a.) Attach a description and proposed techniques

The scope of this project is to collect environmental data to assess the wind resource and solar resource in Baker Lake for the purpose of developing a utility-scale clean energy project in the Community. The data will be collected by erecting a met tower equipped with instruments designed to measure wind speed, solar irradiation, wind direction, and temperature.

b.) Attach map and sketch of area



Latitude: N64° 20' 17.68"

Longitude: W96° 0' 16.31"

5. EQUIPMENT – Type, size and purpose

Site preparation will include minor amounts of clearing and leveling for the installation of the met tower foundations. Disturbances will be kept to a minimum while a flat pad is prepared to accommodate the met tower base.

Equipment used in these activities will include:

- Pickup truck for transportation and equipment delivery
- Mini-excavator for site and foundation preparation
- Rock drill for anchors

6. FUEL

a.) Type, volume, method of storage containment

The met tower instruments will be energized by solar power with a small diesel generator as backup. The fuel is diesel with about 50 gallons stored on site in a Transport Canada approved Tidy Tank.

b.) Method of emptying and filling containers

Emptying and filling containers will be as per Transport Canada approved methods and industry best practices for spill mitigation.

7. METHOD OF WASTE DISPOSAL – Arrangements planned for disposal of garbage, sanitary waste and debris.

No waste will be generated on the site during the wind resource assessment.

8. CONTRACTORS & FUNCTIONS

A third party contractor (such as Sentrex Wind Services Inc.) will be retained for construction, supply and coordinated installation of the met tower.

A third party monitoring company (such as Sgurr Energy) will be retained for design of the instrumentation package, siting of the met tower, and monitoring and receiving the data.

9. TIME SCHEDULE

Start: August 2019

Completion: September 2019

See attached appendix (dated January 2019) and prepared by Northern Energy Capital Inc for further information regarding the timeline.

10. NAME AND ADDRESS OF FIELD SUPERVISOR

A local field supervisor will be determined upon successful completion of the land use and permitting phase.

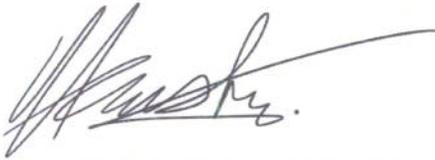
Until that time, Malek Tawashy will be the primary contact for this applicant.
(Address: 209 7th Ave, Whitehorse Yukon, Y1A 1R8)

11. NO. OF EMPLOYEES

The number of anticipated employees for design and construction of the met tower is twelve (12).

12. AREA USED (Hectare)

The area being applied for is generally sized for the met tower given some flexibility for exact location determined once on site. The area being applied for under this land use application (or lease) is therefore approximately 2.8 hectares. An extension to this land use permit may be required should a wind or solar project be feasible.



Signature

Director
Title

25/01/2019
Date



N O R T H E R N
E N E R G Y
C A P I T A L

Application for Land Use Permit

Wind Resource Assessment Study

Baker Lake, Nunavut

January 2019

Prepared by

Northern Energy Capital Inc.



Prepared for

Government of Nunavut

Department of Community and

Government Services



N O R T H E R N
E N E R G Y
C A P I T A L

WHITEHORSE: NARROW GAUGE STATION, 7209 7 AVE., WHITEHORSE, YT Y1A 1R8
VANCOUVER: INNOVATION BOULEVARD SUITE 1500, 13737-96TH AVE. SURREY, BC V3V 0C6
+1 250 213 8185 CONTACT@NORTHERNENERGYCAPITAL.COM
NORTHERNENERGYCAPITAL.COM

1-3. Applicant Information

Legal Name of Applicant: Northern Energy Capital Inc.
Project Title: Wind Resource Assessment Project, Baker Lake, Nunavut
Contact Information: Malek Tawashy, M.Sc., B.Sc., LEED® AP
7209 7 Ave, Whitehorse, YT Y1A 1R8
Tel: (250) 213-8185
Email: mtawashy@northernenergycapital.com

Organization's Background, Mandate and Objectives: Northern Energy Capital Inc. is a renewable energy development, construction and operating company registered in the Yukon Territory. Our objective is to advance opportunities for clean energy projects in the Territories to reduce dependence on fossil fuels while creating exciting new economic opportunities for communities and indigenous corporations alike.

Industry Brief - The Wind Energy Landscape in Canada

Wind energy is one of the fastest growing sources of clean electricity generated around the world. As of May 2015, Canada surpassed the 10,000 MW threshold of installed wind capacity, one of only seven countries in the world to do so. However, with a world-class wind resource Canada has yet to scratch the surface of its wind potential. Wind energy can play an increasing role in delivering clean, safe and affordable power, and represents a significant opportunity for Canada's northern communities to reduce the long-standing dependence on fossil fuels.

The Proposed Resource Assessment

Northern Energy Capital is proposing to complete a highly accurate wind and solar resource assessment in Baker Lake. The outcome of the study will provide insight into the potential for developing clean energy projects in Baker Lake using the wind and/or the solar resource.

Benefits of the Proposed Resource Assessment

Economic Growth and Diversification: The study will produce valuable site-specific data evidencing the economic viability to develop renewable energy in Baker Lake. Design, construction and ongoing data collection will produce economic activity in Baker Lake in the renewable energy sector which until now has not existed in a substantial way.

Capacity Development: A community project such as this brings with it the opportunity to deliver education aimed at creating awareness around the growing renewable energy industry. Wind turbine technician for example is now the fastest-growing profession in the United States where the demand for trained professionals far exceeds the supply.



4. Location and Description of Operation

The location of the proposed lands to be used for the land use application are shown below as excerpts from Google Earth as well as the GPS coordinates of the corner markers. The lands identified are proposed for both the resource assessment as well as the potential future development of a utility-scale wind energy project.



<u>Corner Marker</u>	<u>Latitude</u>	<u>Longitude</u>
NW Corner	64.337950°	-96.007955°
NE Corner	64.339379°	-96.002665°
SE Corner	64.338765°	-96.001539°
SW Corner	64.337381°	-96.006089°

Description of the Operation (the Scope): The scope of the project is to collect environmental data that will be used to assess the wind resource and solar resource in Baker Lake for the purpose of assessing the viability for a utility-scale clean energy project in the Community. The data will be collected by erecting a met tower equipped with instruments designed to measure wind speed, solar irradiation, wind direction, and temperature.

The project has approval from Transport Canada and NAVCanada (supporting approval documents attached).



5. Equipment Type, Size, and Purpose

An image of the proposed met tower to be erected is shown below, and is the same as that designed for the Applicant's Rankin Inlet resource assessment installed in August 2019. The tower is engineered to withstand the harsh climactic conditions of Canada's Territories.



Site preparation will include minor amounts of clearing and leveling for the installation of the met tower foundations. Disturbances will be kept to a minimum while a flat pad is prepared to accommodate the met tower base.

Equipment used in these activities will include:

- Pickup truck for transportation and equipment delivery
- Mini-excavator for site and foundation preparation
- Rock drill for anchors

6. Fuel

The met tower instruments will be energized by solar power with a small wind turbine generator as backup. There will be a small propane heater keeping the battery bank warm inside the small equipment shed at the base of the met tower. The method of emptying and filling containers will be as per Transport Canada approved methods and industry best practices for spill mitigation.



7. Waste Disposal

No waste will be generated on the site during the wind resource assessment.

8. Contractors and Functions

A third party contractor such as Sentrex Wind Services Inc. www.sentrexwind.com will be retained for the construction, supply and coordinated installation of the met tower.

A third party monitoring company such as Wood Group www.woodgroup.com will be retained for the design of the instrumentation package and the siting of the met tower on the lands. The monitoring company will also receive the data from the met tower on hourly intervals via cellular or satellite transmission for record keeping and analysis.

9. Time Schedule

The below table identifies the key activities and anticipated duration associated with the resource assessment. A timeline item has been added at the bottom of the table for the development and operation of a wind energy project, should the resource assessment be positive and commercially viable terms be identified for the future wind energy project.

Activity	Start	End	Deliverables
Land Use Application and Permitting	November 2018	February 2019	NavCanada & Transport Canada Permits. Land Management Land Use Permit or Lease for the proposed project Site
Met tower design, procurement and fabrication	May 2019	June 2019	Met tower fabricated, instruments ordered and received. Ready for shipment to project Site.
Erection of met tower, instruments and commissioning	July 2019	August 2019	Equipment installed and communication link to established to begin recording wind and environmental data
Monitoring Period	September 2019	September 2020	Environmental Data Collection Period
Reporting and Recommendations	Fall 2020	Fall 2020	Deliverables include release of finalized environmental assessment, energy yield assessment, and comprehensive project plan
<i>Clean Energy Project (if approved)</i>	<i>Summer 2021</i>	<i>Year 2046</i>	<i>Construction and operation period for the production of clean, renewable energy for the use in the Community of Rankin Inlet.</i>



10. Name and Address of Field Supervisor

A local field supervisor will be determined upon successful completion of the land use and permitting phase. For communication purposes until that time, Malek Tawashy will be the Applicant's primary contact

11. Number of Employees

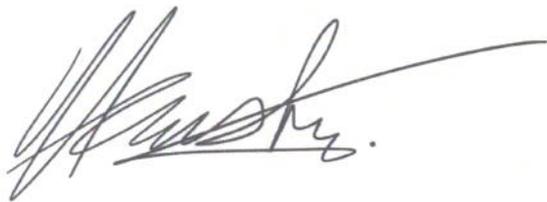
The number of employees anticipated to be involved in the design and construction of the met tower is twelve (12).

12. Area Used (hectares)

The area being applied for is generally sized for the met tower given some flexibility for exact location determined once on site. The area being applied for under this land use application (or lease) is therefore approximately 2.8 hectares. An extension to this land use permit may be required should a wind or solar project be feasible.

Conclusion

Thank you for the opportunity to submit this land use application. We are very excited about the future of clean energy in Canada's northern communities, and more specifically the economic, social and environmental benefits that will become directly available to Baker Lake through the success of this feasibility study.



Malek Tawashy • Director

250 213 8185 • mtawashy@northernenergycapital.com



7209 7th Ave, Whitehorse, YT Y1A 1R8

250 213 8185 • northernenergycapital.com

End of Document





Serving a world in motion
navcanada.ca

January 6, 2019

Your file
Baker Lake
Our file
18-4607

Mr. Malek Tawashy
Northern Energy Capital Inc.
7209-7th Avenue
Whitehorse, YT
Y1A 1R8

**RE: Wind Structures: Meteorological Tower - Long Term (2+ years) - Baker Lake, NU
(N64° 20' 17.68" W96° 0' 16.31" / 164.0420' AGL / 469.1601' AMSL)**

Mr. Tawashy,

NAV CANADA has evaluated the captioned proposal and has no objection to the project as submitted. Be advised that the location and height of this obstacle will require the following publication changes to Baker Lake Airport (CYBK):

- visual climb over the airport (VCOA) Departure Procedure – raise min alt 100' to 800'

While this proposed wind structure is acceptable, it does not constitute NAV CANADA's approval for any other structure at this location such as a wind turbine. The nature and magnitude of electronic interference to NAV CANADA ground-based navigation aids, including RADAR, due to wind turbines depends on the location, configuration, number, and size of turbines; all turbines must be considered together for analysis. The interference of wind turbines to certain navigation aids is cumulative and while initial turbines may be approved, continued development may not always be possible.

In the interest of aviation safety, it is incumbent on NAV CANADA to maintain up-to-date aeronautical publications and issue NOTAM as required. To assist us in that end, we ask that you notify us at least 10 business days prior to the start of construction and upon removal. These notification requirements can be satisfactorily met by returning completed, signed copies of the attached forms by e-mail at landuse@navcanada.ca or fax at 613-248-4094. In the event that you should decide not to proceed with this project or if the structure is dismantled, please advise us accordingly so that we may formally close the file.

If you have any questions, contact the Land Use Department by telephone at 1-866-577-0247 or e-mail at landuse@navcanada.ca.

NAV CANADA's land use evaluation is valid for a period of 12 months. Our assessment is limited to the impact of the proposed physical structure on the air navigation system and installations; it neither constitutes nor replaces any approvals or permits required by Transport Canada, other Federal Government departments, Provincial or Municipal land use authorities or any other agency from which approval is required. Innovation, Science and Economic Development Canada addresses any spectrum management issues that may arise from your proposal and consults with NAV CANADA engineering as deemed necessary.

This document contains information proprietary to NAV CANADA. Any disclosure or use of this information or any reproduction of this document for other than the specific purpose for which it is intended is expressly prohibited except as NAV CANADA may otherwise agree in writing.

Olivier Meier | NAV CANADA
Manager - Land Use and NOTAM Office

cc NOPR - Northern and Prairie Region, Transport Canada (2018-642)
CYBK - BAKER LAKE

2018-6112

AERONAUTICAL ASSESSMENT FORM FOR OBSTACLE EVALUATION

SECTION 1
 Owner's Name: Northern Energy Capital
 Address: 13737 96th Ave., Surrey, BC
 Telephone number: (969-999-9999) | Fax number: (969-999-9999)
 Email Address: mtawashy@northernenergycapital.com

SECTION 2
 Applicant's Name: Northern Energy Capital
 Address: 13737 96th Ave., Surrey, BC
 Telephone number: (969-999-9999) | Fax number: (969-999-9999)
 Email Address: mtawashy@northernenergycapital.com

SECTION 3
 Description of Proposal (or as attached):
 Site plan as per attached.
 Application is for a meteorological tower (set tower) 50m tall required to conduct a wind resource assessment.

Should the wind resource assessment provide a positive result, the applicant intends to resply for approval to erect wind turbines (x2) of equal height.

Thank you,

SECTION 4
 Nearest Community: Baker Lake
SECTION 5
 Nearest Aerodrome: Baker Lake Airport
SECTION 6
 Have you contacted the aerodrome?
 Yes No
SECTION 7
 Notice of:
 New Construction Change to existing structure
SECTION 8
 Proposed Construction Date Beginning (YYYY-mm-dd): 2019-03-15
SECTION 9
 Duration:
 Permanent Temporary
SECTION 10
 Temporary Structure
 From date (YYYY-mm-dd): _____ To date (YYYY-mm-dd): _____
 26-0427E (1704-07)

Transport Canada number
2018-64

SECTION 11
 Geographic Coordinates NAD83 NAD27 WGS84 N Latitude deg **64** min **20** sec **17.68**
 For multiple structures in a grouping, submit geographical coordinates on a separate spreadsheet (e.g. windfarms, transmission lines) W Longitude deg **95** min **0** sec **16.31**

SECTION 12
 Marking and Lighting Proposed (refer to Standard 621)
 Red lights and paint Red and M.I. white lights
 Red and H.I. white lights White H.I. lights
 No lighting No painting
 Other (provide description): Paint marking only White M.I. lights

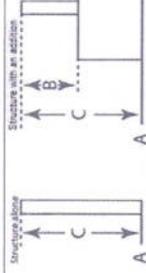
SECTION 13
 Monitoring to Standard 621, article 4.7
 Visual inspection - 24 hrs Remote indicator - failure alarm Remote indicator - with self-diagnostic
 Other

SECTION 14
 Mitigation to be detailed in Section 3 * Justification to be given in Section 3

SECTION 14
 Catenary/Cable Crossing
 Paint supporting structures Cable marker spheres Shore markers
 Support structure lighting Cable marker lights

SECTION 15

	Feet	Metres
A Ground Elevation (AMSL)	305	93
B Height of an addition to a structure		
C Total structure height including B (AGL)	164	50
Overall height (A plus C) (AMSL)	469	143



SECTION 16
 Does the proposal comply with Airport Zoning Regulations?
 Yes No N/A
 Where the location of the object is on lands affected by Airport Zoning Regulations, a legal survey is required with the submittal.

I hereby certify that all the above statements made by me are true, complete and correct to the best of my knowledge. Also, I agree to mark and/or light and maintain the structure with established marking and lighting standards as necessary.

Ma. Leik Tawahy, Director - Northern Energy Capital

Name of person filing notice

Signature

2018-10-26

Date (yyyy-mm-dd)

TRANSPORT CANADA ASSESSMENT (Transport Canada use only)
 Marking and lighting required (as per Standard 621)
 Night protection required Day protection required Temporary lighting required No protection required

Marking and lighting as proposed

Completion of this form does not constitute authorization for construction nor replace other approvals or permits. See instruction E and F.
 Civil Aviation Inspector Signature Date (yyyy-mm-dd)
 McFee Signature Date (yyyy-mm-dd)
 2018-11-21
 Note 1: This assessment expires 18 months from the date of assessment unless extended, renewed, or terminated by the issuing office.
 Note 2: If there is a change to the intended installation, a new submittal is required.
 28-042/E (1704-07)
 Page 2 of 4

Canada

Northern Energy Capital

Number	LAT dd mm ss.ss	LONG -ddd mm ss.ss	Ground Elevation (Feet)	Structure Height (Feet)	Total Height (Feet)	Lighted Y/N	Painted Y/N	Construction Date
Example 1	60 39 16.59	-110 36 14.01	2162.50	463.00	2626	Y	N	15-Jun-07
NW Corner of Site	64.337950°	-96.007955°	305.0000	164.0000	469.0000			
NE Corner of Site	64.339379°	-96.002665°	305.0000	164.0000	469.0000			
SE Corner of Site	64.338765°	-96.001539°	305.0000	164.0000	469.0000			
SW Corner of Site	64.337381°	-96.006089°	305.0000	164.0000	469.0000			

