

# Land Use Permit Application Form

## (Subsection 19(2) and Schedule 2 of the Mackenzie Valley Land Use Regulations)

1	Applicant's name and mailing address: NWT Energy Corporation (03) Ltd. #4 Capital Drive, Hay River, NT XOE 1G2		Fax no.: 867-874-5251
			Telephone no.: 867-874-4480
2	Head office address: Same as above		Fax no.: Same as above
	Field supervisor: TBD	Email address:	Telephone no.: Same as above
3	Other personnel (subcontractor, contractors, company staff etc.): NTEC Energy Corporation (03) Director: Gary Gazankas. Email: ggazankas@ntpc.com. Contract(s) to undertake the work have yet to be awarded.  Total number of persons on site: See Section 9.0 of Supporting Information document. Total number of persons onsite will be dependent on the activity.		
4	Eligibility (Refer to section 18 of the Mackenzie Valley Land Use Regulations): <input type="checkbox"/> (a)(i) <input type="checkbox"/> (a)(ii) <input type="checkbox"/> (a)(iii) <input checked="" type="checkbox"/> (b)		
5	Other rights, licences or permits related to this permit application (mineral rights, timber permits, water licences, etc.): <i>Other rights, licences or permits related to this permit application are listed in Section 7.0 of the Supporting Information document.</i>		
6	a) Summary of operation (describe purpose, nature and location of all activities) (Provide details on a separate page, if necessary) (Refer to paragraph 19(3)(b) of the Mackenzie Valley Land Use Regulations): <i>The proposed project, known as the Inuvik Wind Project (the "Project"), will involve installing one 2 to 4 MW wind turbine<sup>1</sup> with a 75 to 100 m hub height, plus the construction of the associated road and electricity infrastructure, including an energy storage system.</i> <i>The components associated with the Project are: an all-season access road, installation of an electrical line from the turbine to the substation at the Inuvik Airport, upgrades to the existing airport substation, upgrades to the existing cables connecting the substation to Inuvik, and installation of new components for electricity regulation and storage at the power plant in Inuvik. Each of these components are described in detail in Section 2.3 of the Supporting Information document.</i>		
	b) Indicate if a camp is to be set up. If yes, indicate size of camp or describe camp. (Provide details on a separate page, if necessary): <i>A camp will not be set up. Workers will stay in Inuvik or nearby.</i>		
7	Summary of potential environmental and resource impacts and mitigation measures (describe the effects of the proposed land-use operation on land, water, flora and fauna and related socio-economic impacts). (Use separate page if necessary): <i>A summary of the potential environmental and resource impacts is provided in Section 3.0 and 6.0 of the Supporting Information document. The following components were considered: vegetation and wetlands, birds and bats, land mammals, archaeological resources, navigation, communication systems, visuals, noise, fish, and permafrost. With mitigation measures, minimal/no adverse effects are expected to these components. Mitigation measures are summarized in Section 13.0 of the Supporting Information document.</i>		
8	Proposed restoration plans (Use a separate page if necessary):		

<sup>1</sup> Project design is ongoing; turbine manufacturer and model have not been selected.

The Project will be operational for as long as the turbine remains productive, with the typical lifespan of a turbine being 20-25 years. At the end of the Project's operational life, it will either be decommissioned or refurbished. If decommissioned, available best practices will be followed at the time of decommissioning. A decommissioning plan will be submitted to the GLWB prior to the start of decommissioning activities. If the turbine can be upgraded or replaced with new technologies at the end of its lifespan, this will also be considered as an option. The Proponent will engage with GLWB and relevant stakeholders at that time to understand permitting requirements and to collect community feedback.

Roads:

Is this to be a pioneered road?

Has the route been laid out or ground truthed?

(Provide details on a separate page.)

The proposed access road has been ground truthed, undergone a geotechnical study, and had preliminary design specifications developed. Details are provided in Section 2.3.2 of the Supporting Information document

9 Proposed disposal methods:

To complete this section of the Application Form, a waste management plan for the proposed activities is to be developed in accordance with the Board's [Guidelines for Developing a Waste Management Plan](#) and submitted as an attachment to the Application Form. A template for this Plan is provided in the Guidelines.

- a) Garbage
- b) Sewage (Sanitary and grey water)
- c) Brush & trees
- d) Overburden (Organic soils, waste material, etc.)

A Waste Management Plan has been developed for the Project and is provide in Appendix F of the Supporting Information document.

10 Equipment (includes drills, pumps, etc.) (Use separate page if necessary):

Number	Type and Size	Proposed use
1-2 Trailing crane	61 000 kg	Support crane for turbine installation, crane for loading and offloading materials and equipment
1 Main erection crane	approximately 350 000 kg with counterweights, 96 000 kg without	Turbine erection
5-10 Concrete trucks	12,500 kg empty, up to 30 000 kg filled	Concrete delivery for all foundations
1-2 Excavators	30 000 kg (medium)	Substation and turbine foundation excavation
1-3 Bulldozers	13 500 kg	Grading for the road to the turbine, the laydown area, the crane pad, and the substation.
1-5 Dump trucks	15 000 kg	Materials hauling for all construction areas, imported and exported materials
1 Horizontal directional drilling equipment	40 000 kg	Not anticipated to be needed, but if required to bore a beneath-road cable crossing
1-2 Telehandler	12 000 kg	Materials handling at all construction sites
1-3 Skid steer loaders	6 200 kg	Bulldozer support, grading materials handling and manipulation
Semi truck-trailer	Will depend on load weight and road capacity. Truck estimated at 5 000 kg without trailer	Transportation of equipment and turbine to site
2 Bucket trucks	40 000 kg	Transmission line installation
1 Water truck	11000 kg to 30 000 kg	Delivery of water to site. Will depend on truck size available. Capacities vary. Assuming available, smaller truck (11000kg) would suffice. Weight is unloaded.
Fuel truck	5,000 kg unloaded, 8,800 kg loaded.	Delivery of diesel to site and fueling of equipment. Assumption dependent on construction methodology and sequencing, but a 3,800 liter refueling truck is assumed
Various specialized heavy haul tractor trailer combinations.	10	25,000 – 85,000 kg

<b>11</b>	Fuels:	Number of containers:	Capacity of containers:	Location:
	Diesel	1-2	Up to 100,000 L	The container will be stored offsite at an industrial facility (e.g. the airport). Depending on availability of diesel in the community, the container may be filled further south and brought to Inuvik.
	Gasoline	0		
	Aviation Fuel	0		
	Propane	1-4	1,000L – 5,000 L	Near the turbine site. Propane heaters may be required equipment or materials heating.
	Other	0		
<b>12</b>	Containment fuel spill contingency plans (attach separate contingency plan if necessary): <i>A Spill Contingency Plan has been developed for the Project and is included in Appendix G of the Supporting Information document.</i>			
<b>13</b>	Methods of fuel transfer (to other tanks, vehicles, etc.): For a fuel service, diesel tankers will drive (when called) to the site and fill up equipment. Tank trucks can fuel equipment directly from their tanks. Fuel transfers would work analogously to pumping fuel at a gas station, including a powered pump nozzle that feeds directly into the equipment's fuel tank. Propane tanks will be connected directly to propane heaters. No onsite fuel transfer will be needed. Gasoline-fueled light-duty trucks will refuel offsite at a local gas station.			
<b>14</b>	Period of operation (includes time to cover all phases of project work applied for, including restoration): A preliminary Project schedule is included in Appendix I of the Supplementary Information document. This Project involves specialized technical equipment produced by a limited number of suppliers and currently in high demand for projects in North America and globally. The Proponent will advance the Project as expeditiously as possible but may encounter challenges of supply and logistical constraints. The availability of labourers with the specialized skillset required for construction of the Project is also a schedule consideration. The Proponent is committed to providing opportunities for local participation and training. The time required for training and questions of capacity will be factored into the Project construction schedule.  The construction stage is anticipated to last a total of approximately 18 months. This estimate is strongly dependent on the initiation of construction activities and seasonal impacts. The majority of the construction stage for the Project is related to civil and electrical activities, some of which can be completed in parallel.  The Proponent hopes to begin construction of the access road in early 2019, assuming all permits are in place and as ground conditions allow. Site preparation work will be undertaken, and the crane pad will be constructed during this time.			
<b>15</b>	Period of permit (up to five years, with maximum of two years of extension): Five years	Start Date: Jan. 14 <sup>th</sup> , 2018	Completion Date: Jan. 14 <sup>th</sup> , 2023	
<b>16</b>	Location of activities by map coordinates (attach maps and sketches): <i>Wind turbine generator: 68°21'23.60N and 133°24'29.60W</i> <i>Access road: 68°21'23.60N and 133°24'29.60W to 68°18'55.11"N and 133°23'54.83"W</i> <i>Electrical line from turbine to substation: 68°21'23.60N and 133°24'29.60W to 68°21'19.19N and 133°43'37.34W</i> <i>Upgrades to existing substation: 68°18'21.19N, 133°30'06.94W</i> <i>Upgrades to existing cables between airport substation and power plant in Inuvik: 68°18'21.19N, 133°30'06.94W to 68°21'19.19N, 133°43'37.34W</i> <i>Upgrades to power plant in Inuvik: 68°21'19.19N, 133°43'37.34W</i>			
Minimum latitude (degree, minute):		Maximum latitude (degree, minute):		

<i>68°18'21.19N</i>	<i>68°21'23.60N</i>
Minimum longitude (degree, minute): <i>133°24'29.60W</i>	Maximum longitude (degree, minute): <i>133°43'37.34W</i>
Map Sheet no.: <a href="#">See Figure 1 in Supporting Information document for locations of all components.</a>	
<b>17 Applicant:</b> Print name in full, in upper case: <a href="#">Jay K. Grewal, NTPC President &amp; CEO</a>  Signature: _____ Date: <a href="#">Oct 29, 2018</a>	
<b>18 Application fees for Type A or Type B permit (for federal and non federal lands)<sup>i</sup></b>  a) Application fees for Type A or Type B permit (include the first two hectares) - \$150.00: \$ 0  AND b) Land-use fees for <b>federal public lands only</b> :  If more than two hectares of federal public lands are being used, enter the number of hectares in excess of the two hectares included in the Application fee, rounded up to the next whole hectare ____ hectares at \$50.00/hectare \$ 0  Total fees <sup>ii</sup> : \$ 0	

<sup>i</sup> To help identify whether your activity is on federal lands, please see [this map](#).

<sup>ii</sup> Please make all cheques payable to the Receiver General for Canada.