



PEACE RIVER REGIONAL DISTRICT

PRRD Regional Board Wind Energy Generation Project Application Guidelines

DEPARTMENT: Development Services

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PRRD Regional Board Wind Energy Generation Project Application Guidelines

Purpose

The purpose of these Application Guidelines is to assist the Regional Board in assessing Wind Energy Generation Project proposals within Electoral Areas.

Application

These Guidelines will be provided to proponents in order to communicate the Regional Board's minimum information requirements for consideration of proposals related to wind energy generation projects.

Requirements

Development Plan

The Regional Board requires applicants to submit a Development Plan for consideration of any Wind Energy Generation Project. The Development Plan should contain the following:

- Project Overview;
- Public Consultation Plan;
- Environmental Assessment;
- Construction, Operation, and Decommissioning Plan; and,
- Site Plan.

The general description of each of these items is described below. Detailed descriptions will be determined through discussions with the PRRD.

Project Overview

The Project Overview should identify the applicant, describe the project, and identify and related provincial and federal authorizations or approvals.

Public Consultation Plan

The Public Consultation Plan should identify a robust public input process throughout all stages of the proposed project including proposal, construction, operation, and decommission. It should also identify any First Nation Information Requirements.

Environmental Assessment

The Environmental Management Plan should identify all issues and proposed mitigations related to the following:

1. Environmental impacts
2. Environmental monitoring
3. Socio-economic impacts – including sound, visual, and economic impacts

Construction, Operation, and Decommissioning Plan

The Construction, Operation, and Decommissioning Plan should identify issues and mitigation strategies related to:

1. Construction noise – including hours of operation and construction timelines
2. Construction traffic – including volumes, frequencies, and haul routes
3. Ongoing project maintenance
4. Decommissioning – including methods and timelines associated with dismantling the project at the end of its life
5. Site remediation – upon project decommission

Site Plan

The Site Plan, including maps, should identify details related to the following:

1. Existing and proposed access roads
2. Site Layout – including all infrastructure associated with project
3. Compliance with PRRD regulations – including these guidelines as well as all other PRRD Bylaws and Policies
4. Safety – including issues relating to aviation safety, blade throw, ice throw, structural failure, and telecommunications and electromagnetic interference (EMI)
5. Surrounding Land Use – including nearby Wind Energy Generation Projects and potential cumulative effects

PRRD Guidelines

The Regional Board requires all Wind Energy Generation Projects to meet guidelines regarding:

- Wind Turbine Siting;
- Sound Modelling; and,
- Colour and Finish.

These guidelines are described in detail below.

Wind Turbine Siting

1. Wind turbines shall be sited to the greater of:
 - a. The wind turbine shall be at a distance not to exceed a maximum of 40 decibels of turbine-generated sound being received on the outside of an existing dwelling unit or at the boundary of any parcel lines with residential zoning, and;
 - b. A wind turbine shall be located not less than 4 times the height of the wind turbine measured from ground level to the highest point of the wind turbines rotor blade arc, from any structure that is not owned by the Land owner upon which the wind turbine is located.
 - c. A wind turbine shall be located not less than 10 times the height of the wind turbine measured from ground level to the highest point of the wind turbines rotor blade arc, from any public recreation facility, commercial recreation facility or public use.

- d. A wind turbine shall be located so that the horizontal distance of the wind turbines rotor blade arc to any parcel line shall not be less than 7.5m (23 ft.).

Sound Modeling

2. The following sound modeling will apply:
 - a. The wind turbine locations will be determined through modeling, using a methodology which satisfies the ISO 9613-2 standard.
 - b. The sound power level, or acoustic power radiated by the wind turbines, is to be supplied by the turbine manufacturer.
 - c. Modeling will utilize the wind speed at which the sound power level has become constant, typically 8 – 10 meters/sec at a height of 10 meters; otherwise 11 meters/sec is to be used.
 - d. Application of the sound level requirement is limited to those residences and undeveloped residential parcels in existence at the time of application to construct a wind farm.
 - e. Worst case scenarios are to be modeled, in which each property line or existing residence is portrayed as being directly downwind from each turbine.
 - f. Site specific characteristics, such as topography, are to be incorporated into the model.
 - g. Modeling is based on assumptions which may not accurately portray the characteristics of specific sites or meteorological conditions. Questionable turbines are those for which modeling predicts a sound level that is only marginally quieter than the acceptable level.
 - h. A risk assessment should be conducted to determine the potential impact on project viability of unacceptable sound levels from questionable turbines.

Colour and Finish

1. Paint colours should minimize visual impacts
2. Finish should be a non-reflective matte
3. No lettering or advertising shall appear on the wind turbines or blades other than the manufacturer's and/or owner's identification.