

**In the matter of the
ENVIRONMENTAL ASSESSMENT ACT
S.B.C. 2002, c. 43
(Act)**

and

**in the matter of an
Application
for an
Environmental Assessment Certificate
(Application)**

by

**Meikle Wind Energy Limited Partnership
(Proponent)**

for the

**Meikle Wind Energy Project
(Proposed Project)**

May 15, 2014

Recommendations of the Executive Director

In accordance with the provisions of section 17(2)(b) of the *Environmental Assessment Act*, the Executive Director of the Environmental Assessment Office makes the recommendations contained in this submission, for the reasons indicated, in connection with the application by Meikle Wind Energy Limited Partnership for an Environmental Assessment Certificate for the proposed Meikle Wind Energy Project.

A. ISSUE

Decision by the Minister of Environment and the Minister of Energy and Mines (Ministers) on the Proponent's Application for the proposed Project.

B. BACKGROUND

Proponent

The Proponent is a wholly-owned subsidiary of Pattern Renewable Holdings Canada ULC (Pattern). Pattern is a publically traded wind power company with wind projects in Canada, United States and Chile.

Proposed Project

The proposed Project would be located approximately 33 km northwest of Tumbler Ridge, BC (Figure 1) with a rated nameplate capacity of 187 megawatts of electricity. The proposed Project footprint or maximum physical area of disturbance is 216 hectares during construction and 136 hectares during operations.

The proposed Project includes up to 68 wind turbine generators and 2 meteorological towers; new and upgraded roads; electrical collector network and communications system; interconnection line and related substation; and operations and maintenance centre. The 4 km interconnection line would interconnect with the BC Hydro transmission system near Highway 29 between Tumbler Ridge and Chetwynd, BC.

The Proponent has a 25 year contract with BC Hydro to supply electricity, a timeframe consistent with the expected lifespan of wind project equipment. If at the end of that contract the Proponent is able to extend or renew the contract, the proposed Project would likely be refurbished.

The capital cost of the proposed Project is estimated to be \$400 million. Construction of the proposed Project is expected to last between 14 and 20 months in duration and result in an estimated 175 person years of total direct employment. During operations, the proposed Project would generate approximately 19 full time equivalent jobs.

C. ENVIRONMENTAL ASSESSMENT PROCESS

The proposed Project constitutes a reviewable project pursuant to Part 4 of the Reviewable Project Regulation (BC Reg. 370/02) as the proposed Project is a new energy facility with a nameplate capacity of greater than 50 megawatts.

The Application review stage of the proposed Project commenced on November 20, 2013.

One public comment was received during the Application review stage, in support of the proposed Project.

D. KEY FINDINGS OF THE ENVIRONMENTAL ASSESSMENT

Mitigation through Project Design

The proposed Project underwent a number of design changes since entering the Environmental Assessment (EA) process including locating proposed Project components on a reduced land area. In 2013 the Proponent made further design changes reflected in the Application. These changes resulted in a decrease in disturbed areas for construction and operation by 40 percent and 55 percent respectively; avoidance of generally high value wildlife habitat including low-elevation ungulate winter range used by caribou; elimination of 19 stream crossings; and a decrease in visual effects. Design changes made during Application review resulted in additional reductions in habitat disturbance and visual effects. Where possible, the Proponent commits to locate proposed Project components on areas already disturbed by previous industrial development.

EAO's Assessment Report identifies that proposed Project design changes, together with the application of best management practices and mitigation measures proposed in the Application, reduced potential residual adverse effects to negligible for many of the valued components (VCs) required for assessment. EAO's Assessment Report focuses on the four VCs (ungulates, birds, bats and visual resources) where there is the potential for a significant adverse effect, and VCs that relate to the potential for the proposed Project to impact Treaty 8 rights.

Potential Effects to Ungulates (Moose, Elk and Deer)

EAO concludes there would not be a significant adverse effect to ungulates including adverse effects resulting from habitat loss and fragmentation. In making this conclusion, EAO considered the lack of high or moderately-high quality winter ungulate habitat in the proposed Project area, existing disturbance within the regional study area, the health of ungulate populations within the wildlife management unit and throughout the Peace Region, Proponent proposed Project design changes and restrictions identified in the Certified Project Description to avoid sensitive wildlife habitat.

Potential Effects to Birds (Migrating Birds, Migrating Raptors and Breeding Birds) and Bats

Bird and bat effects were the subject of agency and First Nation comments and a topic of several Working Group meetings. The proposed Project could be the fourth constructed wind project in the Peace Region and proposes use of turbines and blades that are higher and longer than those used at existing wind projects in the area. Selection of these turbines reflects new technology and allows for a reduction in the overall number of turbines required for the proposed Project. Studies suggest that adverse bird and bat effects can increase with an increased size in the height of turbines and length of blades. Concerns were raised by First Nations that potential adverse effects to birds and bats

could be significant given information related to overall population levels of birds and bats in the Peace Region is unknown.

EAO concludes there would not be a significant adverse effect on birds and bats including effects resulting from attractant and collision risk with operating turbines. EAO acknowledges the uncertainty with respect to unknown population information but maintains predicted proposed Project effects are consistent with monitoring results from operating wind projects in the Peace Region and that monitoring data from these operating wind projects indicate adverse bird and bat effects tend to be at a lower range when compared to other wind projects in North America. Predicted proposed Project effects are also below thresholds established in Alberta and Ontario that if reached, require a Proponent to consult with government regulators regarding additional monitoring requirements.

A Monitoring and Adaptive Management Plan for Birds and Bats (MAMP) was revised during Application review and included as a legally binding requirement in the Table of Conditions should actual proposed Project effects be higher than predicted. The MAMP includes creation of a technical advisory committee with First Nation participation; pre and post operational monitoring requirements; real-time mitigation measures with triggers for Proponent action and reporting; creation of a predictive model for bats; and a suite of adaptive management strategies ranging from adjusting turbine start-up speeds to temporarily shutting down problem turbines. The MAMP also includes Proponent requirements to scientific research related to bats including preserving bat hair or tissue samples to be made available should a genetic study be undertaken to understand regional populations and their movement patterns.

Potential Effects to Visual Resources

EAO concludes there would not be a significant adverse effect to visual resources. In making this conclusion, EAO considered Visual Quality Objectives for the area; that no public concerns were raised regarding visual effects; and that Proponent's proposed Project design changes reduced visual effects. EAO acknowledges viewer's perceptions of visual effects of wind turbines are subjective.

Consultation with Tenure Holders

The proposed Project overlaps with two tenure holders: trapline tenure holder #721T016 (trapper); and guide outfitter certificate holder #701246 (guide outfitter). No comments were received by EAO from the trapper or guide outfitter during the public comment periods. EAO included a condition requiring the Proponent to continue consultations with the trapper and guide outfitter regarding timing of proposed Project construction activities, safety and access. EAO concludes that the proposed Project would not result in adverse residual effects to the tenure holders' ability to trap or guide as there are no adverse residual effects predicted on the wildlife species of importance to the trapper and the proposed Project footprint represents a small proportion of the overall guiding

area (i.e. 0.03 percent of the lands held under tenure by the Guide Outfitter). Proposed Project footprint overlap with the Trapper tenure is less than one percent.

E. FIRST NATIONS CONSULTATION

The proposed Project is located within Treaty 8 and the EA examined potential impacts on the exercise of Treaty 8 rights. EAO and the Proponent as directed in the section 11 Order, consulted with the following First Nations: Doig River First Nation, Halfway River First Nation, McLeod Lake Indian Band, Saulteau First Nations and West Moberly First Nations.

Key issues raised by First Nations and potential impacts to the Treaty right to fish, hunt and trap are documented on pages 86 to 101 of EAO's Assessment Report and include concerns regarding adequacy of baseline studies and effects predictions, potential impacts to ungulates, grizzly bear, birds and bats, the adequacy of the assessment of traditional activities and the exercise of treaty rights. EAO concludes the potential for impacts on Treaty 8 rights to fish, hunt, and trap have been mitigated or otherwise accommodated. EAO communicated its findings in draft form to First Nations for review and comment and made changes to the draft Assessment Report to reflect comments received. EAO provided an opportunity for First Nations to provide a separate submission for Ministers consideration in their decision to issue an EA Certificate, in the event the First Nations did not agree with EAO's conclusions. No separate submissions were received.

F. CONCLUSIONS AND RECOMMENDATION

EAO is satisfied that:

- The proposed Project would not result in any significant residual adverse effects and the EA has identified and developed recommended conditions and restrictions to address any potential adverse environmental, economic, social, heritage and health effects of the proposed Project;
- Public consultation has been adequately carried out by the Proponent and by EAO; and
- The Crown has fulfilled its obligations for consultation and accommodation to First Nations.

RECOMMENDATION:

The Executive Director recommends that an Environmental Assessment Certificate be issued to Meikle Wind Energy Limited Partnership in connection with its application for the Meikle Wind Energy Project on terms and conditions that require Meikle Wind Energy Limited Partnership to comply with the Schedules to the proposed Certificate.

Submitted by:



Doug Caul
Associate Deputy Minister and Executive Director
Environmental Assessment Office

Figure 1. Proposed Project Location

