

1.0 INTRODUCTION

Shear Wind Inc. has developed the Glen Dhu Power – Wind Project to provide electrical power in response to a Request for Proposals issued by NSP in March 2007. The need for renewable energy has been identified by the province in Bill C146: Environmental Goals and Sustainable Prosperity Act, September 18, 2007. This Act identifies provincial targets for the reduction of greenhouse gas emissions and establishes the goal for renewable energy of 18.5% of the total electrical needs of the Province by 2013 [C.146, 4 (2)(g)]. The Province of Nova Scotia has identified wind power as a source of renewable energy which meets the intent of this Act and has initiated regulations to meet these objectives. The Glen Dhu Project is one of many projects which are needed to meet these environmental and renewable energy objectives.

The Glen Dhu Project is located in an area which the province has identified as having significant wind energy. The majority of the locations are on land which is used as private timber lots. The lease of land for the Project offers economic opportunities to the landowners without changing the current land use. Pictou and Antigonish counties will benefit from added tax revenue. The power generated will enter the provincial power grid through a 138kva transmission line (L-6511) which runs through to the Project site. This feature offers an advantage to the location because infrastructure costs are low and no new transmission lines are required. Many areas of the province with good wind resources do not have this advantage.

The Glen Dhu Wind Project, along with other renewable energy projects provides a means for the Province of Nova Scotia to meet its stated goals and emissions reductions targets.

References Cited:

Government of Nova Scotia (2007). Bill C146: Environmental Goals and Sustainable Prosperity Act. October 19, 2007

1.1 Minister's Findings

On October 8, 2008, the Hon. Mark Parent, Minister of Environment responded to the Environmental Assessment (EA) submitted by Shear wind Inc. (SWI) for its Glen Dhu Power - Wind Project. The findings of the Minister's ruling indicated that further information was required before a decision could be made. The Minister's ruling specified the information requirements to be submitted in order that a decision could be rendered. This Addendum to the Glen Dhu Environmental Assessment provides the information as identified in the Minister's ruling.

The Minister's letter is attached as Appendix A.

1.2 Identification of Issues

The Minister identified requirements for the following information;

Regarding noise related concerns:

“Shear Wind Inc. must; therefore, provide a description of the proximity of the proposed project to affected communities including the number of residences and sensitive receptors such as day cares, hospitals or seniors’ residences within intervals of 640m, 1 km, 1.5 km, and 2.0 km.”

“Shear Wind Inc. must provide a discussion of the noise simulation model used and provide mitigation measures that will be taken to reduce public exposure to noise in accordance with the requirements of the Proponents Guide to Wind Power Projects.”

Regarding human health issues:

“Shear Wind Inc. must also demonstrate the consideration has been given to project related sources of electric and magnetic fields and potential health effects.”

Regarding issues and concerns of residents:

“Shear Wind Inc. must provide the details of all issues and concerns raised by local residents and how the company proposes to address them.”

Regarding Mainland Moose:

“Shear Wind Inc. must address potential impacts of the proposed development on the local population of mainland moose. Specific attention should be directed at clarifying what, if any, changes in moose distribution, habitat use and/or behavior have been documented at wind farms after they have become operational.”

Regarding Additional Information:

“Provide any other studies or information pertinent to the assessment.”

“.....Fisheries and Oceans Canada requested that Shear Wind Inc. contact Mr. Charles McInnis, Habitat Protection Chief, Antigonish Office, as soon as possible to plan a site visit to different proposed water crossings.”

These requirements are addressed in this Addendum to the EA Registration Document.

1.3 Approach to Issues

SWI has reviewed the Ministers' ruling and has taken actions which directly address these issues. These actions include:

- Relocating and in some cases deleting, those turbines in closest proximity to residences to address noise concerns;
- Compiling data on the proximity of turbines to local residences;
- Commissioning studies of existing literature regarding potential human health related concerns;
- Conducting a detailed review of public comments and concerns of the local and non-local residents;
- Establishing a permanent community liaison committee to provide a means to exchange information with the community;
- Consulting with NSDNR and Moose Recovery Team regarding Mainland Moose;
- Compiling additional information regarding impacts on the Mainland Moose population;
- Providing financial support for research on the Mainland Moose population;
- Contacting Mr. McInnis of DFO regarding a site visit to view potential water crossing locations.

The following sections of this addendum provide the details of the findings and the additional information compiled in response to the Minister's ruling.

1.4 Addendum Format

The Addendum is divided into sections, each of which addresses a specific issue identified by the Minister. Section 2 addresses the issues pertaining to noise and proximity to residences and includes the updated turbine layout and details of the noise model. Section 3 discusses the human health impacts regarding EMF, low frequency sound and other potential health risks and an assessment of potential project related health risks. Section 4 identifies the issues raised by the public from written comments, and compiles these concerns into categories or themes as seen in Table 4.1 and responses to these comments made by the public during the EA review. Section 5 discusses the issues related to Mainland Moose. A summary of the Project and related issues and a closure statement is provided in Section 6. Appendix A provides a copy of the Ministers letter of October 8, 2008. Appendix B is a detailed list of public comments raised by each respondent. Mi'kmaq Ecological Knowledge Study (MEKS) is attached as Appendix C. Appendix D is the Protocol for Mainland Moose Tracking Survey. The noise study is found in Appendix E.

Glen Dhu Power – Wind Project

Addendum to Glen Dhu Environmental Assessment and Registration Document

1.5 Authors of the Addendum

Table 1.1 identifies the individuals and their roles in the preparation of this Addendum.

Table 1.1: Personnel and Assigned Responsibilities For Addendum

| Name | Position/Affiliation | Responsibility |
|------------------------------|---|--|
| Mike Magnus | President and CEO, SWI | Economic Benefits and Community Relations |
| Ian Tillard, P.Eng | Chief Operating Officer, SWI | Wind Farm Design and Siting, Engineering, Land Agreements, Community Relations, Environmental Impact Mitigation, Environmental Monitoring Programs |
| Carsten Albrecht, Dipl.-Inf. | AL PRO Consultants, Germany, Principal | Wind Farm Siting Optimization, Noise Modeling, View Plane Analysis, Shadow Flicker Analysis |
| Kirk Schmidt, M.Sc. F. | AL PRO Consultants, Canadian Representative | Wind Farm Siting Optimization, Noise Modeling, View Plane Analysis, Shadow Flicker Analysis, Site Mapping and Documentation |
| Torgny Vigerstad, Ph.D. | Director, Scientific Investigations, Environmental Solutions Remediation Services | Toxicology, Human Health Risk Assessment |
| Robert Bancroft, M.Sc. | Wildlife Biologist, Independent | Terrestrial and Aquatic Wildlife, Mainland Moose Program |
| John Kearney, Ph. D. | Biologist, John Kearney and Associates | Avian Species Monitoring Program |
| Lisa Fulton | Principal, Fulton Energy Research | Environmental Assessment, Land Agreements, Environmental Impact Mitigation, Community Relations |
| Tom Windeyer, B.A | Senior Environmental Scientist, Stantec Consulting | Environmental Assessment Coordinator, Community Relations, Environmental Impact Mitigation, Environmental Monitoring Programs |
| Nadia Hinds | Consultant, MT&L | Community Relations Programs |
| Sarah Moses | Consultant, MT&L | Community Relations Programs |