

SUMMARY OF COMMENTS/RECOMMENDATIONS

PROPONENT: Greenwing Energy Development L.P.
PROPOSAL NAME: Yellowhead Wind Energy Project
CLASS OF DEVELOPMENT: 2
TYPE OF DEVELOPMENT: Energy Production
CLIENT FILE NO.: 5238.00

OVERVIEW:

The Proposal was dated December 5, 2006 and was received on December 8, 2006. The advertisement of the Proposal read as follows:

“A Proposal for the Yellowhead Wind Energy Project has been filed by Greenwing Energy Development L.P. for the construction and operation of a 99 megawatt (MW) net electrical generation capacity commercial wind energy facility located within the Rural Municipality of Minto. Between 50 and 70 wind turbine generators are proposed within the project area, approximately 12 km (west to east) by 10 km (north to south) in size, situated north of Bethany and south of Crocus. An Environmental Impact Assessment (EIA) Report has been filed in support of the Environment Act Proposal. Construction is tentatively targeted to begin in 2008 subject to regulatory approvals and a Power Purchase Agreement with Manitoba Hydro.”

The Proposal was advertised in the Neepawa Banner on Monday, December 18, 2006, and was made available for public review at the following locations:

Main Registry/Winnipeg Public Library/Manitoba Eco-Network (Wpg);
Western MB Regional Library (Brandon) & R.M. of Minto (as a registry).

It was also distributed to the "Energy Production" TAC members for comment. All comments were requested by January 19, 2007.

PUBLIC RESPONSE

The following e-mail was sent January 19, 2007 in response to the advertisement:

Nelson Almey
Vice President
MB Aerial Applicators Association
eagleagro@inetlink.ca

- Request that the Manitoba Aerial Applicators Association have input as to the layout of wind towers on agricultural land
- Note that the Department of Transport is considering developing new regulations regarding aerial work near towers which may influence what options a grower may have for crop protection near a wind farm development.

- The Canadian Aerial Applicators Association is consulting with other stakeholders regarding towers and would like to develop guidelines for the safety of all parties concerned.

Disposition: On January 22, 2007, Bryan Blunt requested information and clarification from Larry Hogan, Director of Project Development of Greenwing Energy Ltd. regarding the comments provided by Mr. Almey. On January 25, 2007 Mr. Hogan provided a response to Bryan Blunt. Based on Mr. Hogan's comments Bryan Blunt forwarded the following information to Mr. Almey on January 25, 2007:

- Mr. Hogan met with Reg Friesen, President of the Manitoba Aerial Applicators during October 2006 to discuss the matter of aerial applications near wind farms.
- Greenwing's agreements with landowners on the Yellowhead and Reston projects specify that they will consult with them on the location of turbines and met towers and reach agreement with each before finalizing the locations on their properties.
- Greenwing is willing to work with the Manitoba Aerial Applicators Association towards a solution that works for both interests and the landowners.
- Greenwing has committed to advise the Manitoba Aerial Applicators on the location of all temporary and permanent met towers and turbines. They also have advised that, without making commitments on the exact locations at this point, it would not be inappropriate to review their pre-final layouts with aerial applicators in an attempt to minimize possible conflicts.
- Greenwing is supportive of the Canadian Aerial Applicators Association proposal to develop safety guidelines and have requested that this process involve consultation with wind energy developers including Greenwing.

COMMENTS FROM THE TECHNICAL ADVISORY COMMITTEE:

Historic Resources The cultural resource management strategy identified in the proposal satisfies the concerns of the Historic Resources Branch.

Intergovernmental Affairs (Community Planning Services Offices - Deloraine)

Community Planning Services has no concerns or objections to the proposal at this point. Note that the project would be considered as a conditional use under the provisions of the R.M. of Minto By-Law. An application for conditional use will have to be submitted for the review of the municipal council, in accordance with The Planning Act, prior to commencement of construction. The application should be accompanied by a detailed plan showing locations of towers, access roads and underground electrical connections. The provisions of the municipality's zoning by-law include a required separation distance of ¼ mile between towers and residences and communities (Clanwilliam and Bethany).

Disposition: Greenway has informed the EA&L Branch that they will be applying for conditional use and are aware of required setbacks.

Agriculture Comment as follows:

- The EA has addressed agricultural concerns, particularly those regarding the conflict between cropdusters and wind turbines.
- Note that landowners have been made aware of crop dusting restrictions in proximity to turbines prior to signing agreements. This has allowed landowners to make an informed decision as to whether it would be in their economic interest to enter into agreements for WTGs on lands where aerial crop spraying was an important feature of their crop management.
- No outstanding concerns have been identified from an agricultural perspective.

Disposition: No follow-up by EA&LB required.

Infrastructure and Transportation (MIT) Comments are as follows:

- Permits are required from MIT under The Highways and Transportation Act to construct or modify access driveways onto Provincial roadways (e.g. PRs 262, 265, 471) and for the placement of any structures (including signs) within adjacent control areas (125' from the edge of Provincial road rights-of-way).
- Agreements will be required for overhead and buried power lines within PR right-of-way.
- existing drainage patterns along Provincial highway right-of-way should be maintained.
- detailed design drawings should be forwarded to Departmental staff for review and approval.
- Permits would be required for oversized and overloaded trucks on Provincial Roadways(during the construction phase). Spring load restrictions may apply.
- provide MIT staff to be contacted with regard to requirements.

Disposition: This information will be forwarded to the proponent for direct follow up with MIT.

Health Note that the Environmental Monitoring Plan described in the Proposal should prevent or mitigate potential impacts.

Disposition: No follow-up by EA&LB required.

Conservation (Sustainable Resource and Policy Management Branch) Comment as follows:

- Lands Branch approves the proposal subject to necessary Crown Lands Act allocation where applicable. Applicants must apply for applicable Crown Lands Act Permit/Lease which will be subject to standard Crown Land & Property Agency review process.

- Prior to construction the Wildlife & Ecosystems Protection Branch would like to review and provide comment on a land use and vegetation cover map which shows the final site selection for the turbines, the location of prairie remnants, woodlands, riparian habitat and specific avoidance areas.
- Recommend that a 400 setback, measured from the outermost point of uncultivated vegetation, be applied to Type 4 and 5 wetlands where concentrations of staging or migrating waterfowl may roost due to the presence of water most autumns.
- The Wildlife & Ecosystems Protection Branch requests that turbines be selected for bird and bat mortality monitoring on the basis of important habitat using a low, medium or high impact criteria.
- Recommend that mortality surveys be conducted weekly during the spring and fall migration and cover periods pertinent to various species that are known to traverse the project area. Surveys should be staggered and randomized with additional surveys conducted after weather events. Mortality searches should be conducted within a minimum 80 meter radius of turbines. The survey results should be submitted annually to the Director of Environmental Assessment & Licensing Branch.
- Table 4, Results of the Breeding Bird Survey is missing from Appendix D and should be provided.
- Sharp-tailed grouse are in the area and pre-construction surveys should be conducted in the vicinity of the turbine sites to determine the presence of leks. If leks are present, turbines must be located a minimum of 500 meters away. Lek sites should be monitored to determine if the operation affects the number of males attending. Manitoba Conservation must be notified of the location of leks so that long term monitoring can be arranged. Recommend that a minimum of two annual pre-construction counts occur before a turbine is placed nearby.
- Recommend that the proponent inspect the site for the presence of any rare and endangered species of concern prior to and during construction in accordance with the Manitoba *Endangered Species Act* and the federal *Species at Risk Act*. If species of concern are present, the proponent is required to contact the Biodiversity Conservation Section of the Wildlife and Ecosystem Protection Branch to discuss possible mitigation options.

Disposition: On February 2, 2007, the proponent provided the following additional information to clarify questions and issues on the proposal filed by the Sustainable Resource and Policy Management Branch:

- [Greenwing confirmed that only private lands will be occupied for the project.](#)
- A confidential preliminary plan indicating the proposed (subject to review with landowners and certain stakeholders) location of the turbines with the coordinates of the turbines has been made available to the EA&LB.
- Greenwing intends to have a biologist conduct a field investigation once location data for the infrastructure is confirmed to determine whether any valued vegetation complexes may be impacted. More detailed vegetation and land use mapping will be provided at that time to the Wildlife Ecosystems and Protection Branch. Similarly, field inspections will also occur to identify potential impact on

other high valued resources including heritage resources and leks. Native habitats will be avoided to the extent reasonably possible. The Wildlife Ecosystems and Protection Branch will be consulted on how to proceed for any native habitat that must be disturbed.

- Greenwing will adhere to the minimum 200 m setback from the riparian or functional edge of the wetland for Class 3 -5 wetlands. Requirements for setbacks in excess of 200 m for specific wetlands will be discussed with the Wildlife Ecosystems and Protection Branch to determine the utility from a scientific perspective.
- The selection of monitoring sites for birds and bats will be based on sound research design according to accepted protocols and will be overseen by an experienced environmental scientist. Greenwing will consult with MB Conservation in the design of the monitoring programs.
- The requested 80 meter search area represents a significant expansion to the monitoring program in terms of land rental fees, maintenance costs, and search times (labor/hours). Greenwing will discuss the search area size and other elements of the monitoring program with CWS and MB Conservation in more detail to confirm the correct application of monitoring criteria to the project.
- Table 4, results of the Breeding Bird Survey has been provided.
- Further discussions between Greenwing and MB Conservation are required to ensure that requested setbacks between turbines and sharp-tailed grouse leks identified during further field studies are necessary and purposeful from a scientific perspective and consistent with the mitigation requirements imposed on other wind energy development projects in Manitoba.
- Limitations of the CDC database are recognized by Greenwing. Field studies will be conducted once the location of infrastructure has been close to finalized. All sightings of species of concern relative to the Endangered Species Act and Species at Risk Act will be reported to the Biodiversity Conservation Section.
- Greenwing recognizes that there is a high variability in the windfarm related bird mortalities that have been reported to date. The source of this variability is manifold, including but not limited to: regional location of the project, topographical location of the project, the type of wind turbine technology used, bird species being potentially affected, and the extent of the monitoring program and implementation. Greenwing reports that its mortality estimates are based on best reasoned judgment with the information available at the time. It is derived, in part, from:
 - use of modern technology: slower and constant rotor speeds;
 - avoidance of the potential raptor corridor along Stony Creek and high density wetland complexes in the southwest portion of the Study Area;
 - use of wetland setbacks for all classes of wetlands (100 and 200m);
 - the mortality estimate range provided by Kinsley and Whittam in the 2003 publication: Wind Turbines and Birds; A Guide Document for Environmental Assessment: Phase 3 draft; prepared for the Canadian Wildlife Service by Bird Studies Canada.

The additional information and clarification by Greenwing in their February 2, 2007 response demonstrates that they are amenable to discussing the specific details of follow-

up monitoring surveys with MB Conservation with a view to accommodation wherever feasible and practical. The Proposal EIA states that the proponent intends to work with MB Conservation in the development and implementation an Environmental Protection Plan (EPP) for the project. The requirement to provide an EPP will be included as a condition of the Licence. A copy of the detailed comments have been provided to the consultant for consideration in developing appropriate survey methodology and mitigation in the EPP.

With respect to sound the Licence will require that siting of WTG's be carried out in accordance with the Provincial Guidelines for Sound Pollution. It is also recommended that the Licence contain a separate clause to address noise nuisance issues during operation of the Development.

Water Stewardship Recommend the following:

- Any construction dewatering will require authorization under The Water Rights Act.
- The proposed activities should not degrade the surface and groundwater quality on adjacent properties.
- The regional fisheries manager should be consulted in the final determination of crossing locations, timing and types of crossings for temporary vehicle access and for any trenched crossings required for the electrical collector system as indicated in the EAP. Note that the preferred method of crossing waterbodies is by boring. Recommend that crossings with a defined channel and water throughout the year or sufficient spring runoff to provide spawning and nursery habitat be directional drilled and, in particular, Stony Creek. Crossing first and second order drains by trenching should be delayed until mid summer. Recommend that the Manitoba Stream Crossing Guidelines be followed including no instream occur between April 1 and June 15th with the exception of Stony Creek where no stream work is allowed between April 1st and June 15 and between September 15 and May 15th on account of the resident brook trout population. Any work required outside this timeframe should be done, if possible, when the stream is dry to prevent erosion.
- Recommend that the Whitemud Conservation District Managers be consulted prior to any work proposed near Stony Creek and tributaries and/or the Little Saskatchewan River.
- Permanent and temporary vehicular stream/drain crossings and culvert placements should be constructed after spring spawning is complete. Where possible temporary crossings should be removed prior to spring melt to prevent erosion.
- Metal transmission towers are preferred in or near wetlands.
- Provincial fisheries management interests will be met through application of DFO's no net loss policy.

Disposition:

The Environmental Protection Plan (EPP) should describe the proposed environmental practices to be employed to mitigate adverse effects on groundwater and local wells in the event of accidental contamination during construction.

Other comments can be accommodated as conditions of licencing.

Canadian Environmental Assessment Agency (CEAA)

Fisheries and Oceans Canada and Transport Canada have determined that they require additional information in order to determine whether an environmental assessment is required under the CEA Act.

Health Canada disagrees with the proponent's assertion that the operation of the project will not produce pollution. Health Canada asserts that the operation will be emitting or disposing of pollutants including paints, resins, solvents, lubricants, coolants, batteries, packaging materials, domestic/office waste, sewage, electronic/electrical/mechanical components, noise, light, road/off road/ aerial/other vehicle and equipment fuel/consumables, pesticides etc. Additionally, off site energy will be used to power some operations.

Disposition: Federal comments have been forwarded to the project proponent for follow-up, as appropriate, and in accordance with the requirements of the Canada – Manitoba Agreement on Environmental Assessment Cooperation.

PUBLIC HEARING

A public hearing is not recommended for this project on the basis that the majority of responses received in response to the Environment Act advertisement of the Proposal were supportive. Only one request for a public hearing was received.

CONCLUSION AND RECOMMENDATION:

The comments received from the technical review of the Proposal can be accommodated as conditions of licencing. It is recommended that the project be licenced pursuant to the Environment Act in accordance with the terms and conditions described in the attached draft Environment Act Licence.

Prepared by:

Bryan Blunt

Environmental Assessment & Licensing

February 7, 2007

Telephone: (204) 945-7085

Fax: (204) 945-5229

bryan.blunt@gov.mb.ca