

Wind Energy Development in Alberta

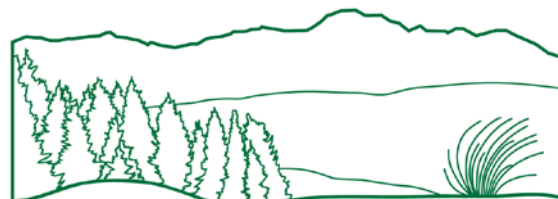
**Issues and Gaps Regarding the
Environmental Regulatory Framework**

**INPUT BY PARTICIPANTS IN A PROCESS TO RECOMMEND
GUIDELINES FOR MINIMIZING DISTURBANCE OF NATIVE
PRAIRIE**

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1.0 Introduction

A process was facilitated by the Foothills Restoration Forum during May 2010 to April 2011 to develop recommended principles and guidelines for minimizing surface disturbance of wind energy projects on native prairie in Alberta.

A background document *Minimizing Surface Disturbance of Alberta's Native Prairie: Background to Development of Guidelines for the Wind Energy Industry* (December 2010) summarizes information compiled on existing information letters, principles and guidelines for minimizing native prairie disturbance as well as the regulatory framework for addressing the environmental effects of wind energy development. The background document, available on the website of the Foothills Restoration Forum, served as a common base of information for moving forward with a multi-stakeholder process to develop guidelines regarding wind energy and native prairie.

A field tour and workshop were held on October 27th and 28th, 2010 in Cowley, Alberta. The 35 participants came from a broad range of backgrounds and interests and included wind energy developers, landowners, range specialists, environmental consultants, mitigation/reclamation specialists, and representatives of non-government environmental organizations as well as representatives from Blood Tribe Lands and municipal and provincial government agencies. Participants considered the appropriateness of applying current principles and guidelines to wind energy development and any modifications needed. Barriers or challenges and opportunities with respect to applying existing principles and guidelines to the wind energy industry were identified and discussed. Implementation processes and tools were also identified.

A report of the results of the workshop, *Principles/Guidelines for Minimizing Disturbance of Native Prairie from Wind Energy Development: Results of a Workshop and Field Tour held October 27 and 28, 2010 in Cowley AB*, was provided to all participants and invitees for their consideration and for broader circulation among others who may be interested in reviewing it, including members of the Foothills Restoration Forum Technical Advisory Committee and of the Prairie Conservation Forum Board. In particular, comments were sought on suggested principles and guidelines and implementation considerations. Fifteen responses were received. Responses were integrated into the revisions of the draft principles and guidelines.

Following further discussion among key stakeholders, a report titled *Recommended Principles and Guidelines for Minimizing Disturbance of Native Prairie from Wind Energy Development* (May 2011) was finalized and provided to staff in Alberta Sustainable Resource Development (ASRD) – Fish and Wildlife for their consideration in updating the *Alberta Wildlife Guidelines for Alberta Wind Energy Projects* and for broader considerations relevant to the Department's role in reviewing applications for wind energy projects.

Questions and comments arose during the year-long process about issues and gaps regarding the regulatory framework for wind energy development in Alberta. Addressing these issues and gaps was beyond the scope of the guidelines development process. Facilitators for the Foothills Restoration Forum compiled the comments received under summary statements of key issues. These are provided in this report for consideration by regulators and other interests.

2.0 Issues and Gaps Regarding the Regulatory Framework

The following is a compilation of comments on the current regulatory framework for wind energy development in Alberta. Comments were provided by participants at a workshop and in written response to the report of workshop results on developing recommended guidelines to minimize disturbance of native prairie from wind energy development. Participants came from a broad range of backgrounds and interests. The comments have been organized under summary statements that define key issues or gaps with respect to the current regulatory framework. Note that the points and views may differ; the facilitators did not attempt to resolve differences.

A. *Differences in Government Regulation and Policy Across Industry Sectors*

Summary: Government regulation and policy regarding approval of wind energy projects in Alberta is rapidly evolving, not yet clearly defined, not well understood by stakeholders and inconsistent with that applied to other industry sectors with respect to native prairie.

The following points and views were expressed:

- A1.** Coordination and alignment of wind energy projects with other forms of energy development (i.e. upstream oil and gas) regarding expectations for minimizing disturbance of native prairie is required. More in depth analysis of the regulatory regime to achieve consistency is needed.
- Through *IL 2002-1*, Energy Resources Conservation Board (ERCB) advises the petroleum industry of principles and guidelines for minimizing disturbance of native prairie. Alberta Utilities Commission (AUC) does not provide such advice to the wind energy industry.
- A2.** There is lack of consistency in environmental assessment of wind energy projects compared to other industrial activities in native prairie and between provincial and federal jurisdiction.
- Environmental assessment of wind energy projects is the responsibility of Alberta Utilities Commission and Sustainable Resource Development (Fish and Wildlife). Unlike other power plants, gas plants, oil production sites, pipelines and transmission lines, power production from wind turbines is not defined as an activity under *AEPEA*. There are no approvals, registrations or notifications required for wind energy projects under the *Alberta Environmental Protection and Enhancement Act (AEPEA)*.
 - If application for funding is made to the federal government or a project is proposed on federal land, a wind energy project is subject to federal environmental assessment pursuant to the *Canadian Environmental Assessment Act (CEAA)*.
- A3.** AUC requires applicants for wind power plants 1 MW or greater to refer the application to Alberta Sustainable Resource Development (ASRD) – Fish and Wildlife Division for sign-off. Consideration includes protecting habitat for species with legal designation as threatened or endangered under the *Alberta Wildlife Act* and/or the federal *Species At Risk Act*. There is lack of clarity about the scope and regulatory authority regarding the “sign-off” by ASRD - Fish and Wildlife Division, particularly with respect to private land. Currently there are no wind energy projects on public land.

- A4.** AUC has a rule requirement for a public consultation program, however AUC, like ERCB, only needs to listen to parties that are included in a narrow definition of ‘directly affected’. Organizations and individuals with a conservation or environmental interest are often excluded.
- A5.** There is no requirement to reclaim surface disturbances caused by wind energy projects. Sites for wind turbines are not included in the definition of ‘specified land’ in Alberta Environment’s (AENV) *Conservation and Reclamation Regulation* unlike other industrial sites on native prairie including oil and gas wells, pipelines, transmission lines and roadways.
- A6.** The need for a wind energy project and alternatives to a project are not assessed in the provincial regulatory approval process. This is consistent with the provincial approach to other forms of power generation established through deregulation in 2008. Participants held differing views, including:
- It is important to ensure the need for a wind energy project is assessed by government to address public interest and sustainable development concerns.
 - Assessment of need is, or should be, the jurisdiction of AUC.
 - *AUC Rule 007 Applications for Power Plants, Substations, Transmission Lines and Industrial System Designations* does not require consideration of need.
 - Assessment of need for a wind energy project is outside the scope of regulatory review; it is solely up to the proponent to identify the need for the project, based on market conditions and other considerations.
 - If a wind energy project is subject to assessment under the *Canadian Environmental Assessment Act* (i.e. the project is on federal land or federal funds are involved), one of the factors considered is the need for the project and alternatives to the project. Assessment under the *Alberta Environmental Protection and Enhancement Act* also requires analysis of the need for a proposed activity however a wind energy project is not defined as an activity under *AEPEA* and hence is not subject to assessment.

B. Regulatory Framework for Freehold vs. Public Land

Summary: There are differences in the regulatory framework for development of wind energy projects on private/freehold land versus public/crown land and these differences have implications for native prairie.

The following points and views were expressed:

- B1.** Currently there are no approved wind energy projects on public lands. Some participants stressed they did not support development of wind turbines on public land. Reasons include:
- Biodiversity values are high on remaining tracts of native prairie on public land and wind energy development would pose a risk to maintenance of biodiversity.
 - There are regulatory and land management issues regarding overlap with existing Crown dispositions, (e.g. grazing leases/permits, oil and gas surface leases) on public lands.

- The framework for managing risks to the public interest related to decommissioning and failure to reclaim is inadequate.
- Wind energy projects are permanent industrial sites that may never be reclaimed.
- Currently there is no mechanism for compensation and royalties to the Crown from wind energy development. On private land, economic benefits of wind energy development flow to private landowners through land agreements (e.g. annual rental fees).

B2. As wind energy projects are on private lands, this leaves regulation of siting at the regional level to agencies and processes that provide land use zoning decisions, namely municipalities and regional plans through the land use framework.

B3. There is not a clear regulatory basis for applying principles/guidelines for minimizing disturbance of native prairie on private land. ASRD - Fish and Wildlife Division's *Wildlife Guidelines for Alberta Wind Energy Projects* (April 5, 2006) provides guidance on protecting bats, birds and other species including species at risk, when locating wind turbines on private land. Those aspects of the guidelines that relate to the federal *Species At Risk Act* and the *Alberta Wildlife Act* apply to on private land as well as public land. Private landowners may choose to ignore other aspects of the principles/guidelines, unless these are specified by the Alberta Utilities Commission in project approval.

B4. Private landowners may plow up native prairie to avoid application of the principle/guidelines by the project proponent or regulators. To alleviate this risk, consider implementing measures to deny approval for turbines on lands that are uncultivated at the point the proponent first indicates interest in developing a project in the area.

B5. The revenue provided to landowners for wind energy infrastructure can help farmers and ranchers maintain their land holdings and potentially avoid additional cultivation or subdivision.

C. *Provincial Wetland Policy*

Summary: Provincial policy regarding wetland avoidance is not clearly defined and consistently applied.

The following points and views were expressed:

C1. It is not clear in provincial policy if the definition of a wetland consistently includes the riparian area, the area next to a water body where vegetation and soil indicate abundant water. A precautionary approach to ensure protection of wetland function is to apply setback from the edge of the riparian area.

C2. Alberta Water Council (AWC) has developed *Recommendations for a new Alberta Wetland Policy* (2008) that will likely set the direction for managing wetlands in the province. The new policy is intended to replace Alberta Water Resource Commission's *Wetland Management in the Settled Area of Alberta: An Interim Policy* (1993) and *Beyond Prairie Potholes: A Draft Policy for Managing Alberta's Peatlands and Non-settled Area Wetlands* (1993). AWC's recommended policy covers all natural wetlands,

ephemeral waterbodies, and ponds and lakes that are temporary, seasonal, semi-permanent and permanent. It also covers restored and constructed wetlands. Strategic directions of the recommended policy include a Wetland Mitigation Decision Framework for use in regulating impacts to wetlands, establishing watershed and regional wetland objectives and encouraging voluntary stewardship. AWC's recommendations as well as two non-consensus letters have been transmitted to the Minister of Environment for review and decision on how to proceed.

- C3.** An application under the *Water Act* is required when loss of wetland area will occur. AENV's *Provincial Wetland Restoration/Compensation Guide* (2007) explains how these applications will be reviewed and the process for wetland compensation.
- C4.** In native prairie, wetlands generally are habitat for rare plant and animal species, including several Species At Risk listed under federal and provincial legislation. Avoidance is most likely to be the appropriate approach rather than mitigation or compensation.
- C5.** *ASRD Wildlife Guidelines for Alberta Wind Energy Projects* (2006) advise: "Wind turbines should not be constructed within 100 metres of any permanent or temporary (ephemeral) wetland. For major wetlands providing habitat for large numbers of migrating or breeding waterfowl, the setback may need to be greater (to be determined with the ASRD-Wildlife Biologist)."
- C6.** For wildlife conservation purposes, wetland setback is most appropriately measured from the blade tip not the centre of the turbine base.
- C7.** There is a question about whether the 100 m setback may be reduced where temporary (ephemeral) wetlands are surrounded by areas of repeated tillage (i.e. not native prairie), drainage is not affected, and species of conservation concern are not present (e.g. great plains toad, plains spadefoot, northern leopard frog, threatened and endangered plants, migratory birds).
- C8.** ERCB in collaboration with AENV, ASRD, and Special Areas Board has recently reviewed and revised its *Directive 056: Energy Development Applications and Schedules draft appendix, Appendix 14: Oil and Gas Development In or Within 100 m of Water Bodies*. The draft document provides clarification of the requirements that must be fulfilled before applying for a license under *Directive 056*, such as obtaining a *Water Act* approval or assessing a site for water body-related sensitivities and developing mitigative measures to address the sensitivities. A similar procedure could be included in AUC Rule 007 for approval of wind energy projects. Alternatively approval for loss, mitigation and compensation of wetlands could occur as a separate regulatory process outside the AUC project approval process (e.g. through SRD or AENV).

D. Government Capacity for Oversight

Summary: Agency capacity for oversight in project approval and to ensure compliance with conditions of project approval is lacking.

The following points and views were expressed:

- D1.** AUC does not have compliance assurance staff therefore inspection of wind turbine sites after approval is not currently conducted.
- D2.** ASRD staffing and procedural capacity is inadequate to oversee and regulate according to guidelines (i.e. consultation during project planning, review of applications and decision about sign-off, periodic inspection, enforcement of conditions of an approval). While ASRD inspection has merit in terms of environmental management, this is a process that requires development of inspection criteria with regulatory backing. Such criteria would need to be developed and be acceptable and applicable on private lands.
- D3.** Experience suggests SRD staff are under undue pressure to sign-off on wind energy projects.

E. Reclamation Certification

Summary: Legislative authority, regulations and a certification process for short-term and long-term reclamation of wind energy projects are not well defined. Currently the Government of Alberta may not have a regulatory basis to require reclamation of wind turbine sites.

The following points and views were expressed:

- E1.** A change in regulations may be needed to require reclamation of wind energy projects. Wind turbines **may** be considered a plant for industrial purposes and therefore subject to reclamation obligations under the *Alberta Environmental Protection and Enhancement Act (AEPEA)*. The Schedule of Activities in *AEPEA* (Schedule 2, section 2) should be modified to more explicitly communicate the duty to reclaim wind turbine sites.
- E2.** The oil and gas industry has a reclamation certification process, largely self-regulated with random audits by Alberta Environment, but there is no such process for the wind energy industry.
- E3.** Define and apply a reclamation certification process to wind energy development and begin applying it at the planning stage of the development. Refer to Government of Alberta's *2010 Reclamation Criteria for Wellsites and Associated Facilities for Native Grasslands*.

- E4.** A mandatory interim reclamation certification process needs to be developed and used to ensure that post-construction disturbance is promptly addressed.
- E5.** Interim reclamation criteria only addresses short term disturbances associated with wind energy projects. The longer term reclamation goal in native prairie contemplates a future in which wind farms are eventually restored to native plant community. Wind turbine sites on private lands, however, may never be returned to native prairie. Instead they may be operated as industrial sites in perpetuity.
- E6.** When using the term ‘restoration’ it is important to remember landowner input into the reclamation process on private lands. Land use changes may be the goal rather than restoring to adjacent control or reference plant community.
- E7.** In oil and gas, the incentive for the licensee to obtain a reclamation certificate is to reduce their liabilities and to end surface lease payments. An incentive for wind power proponents to obtain a reclamation certificate could be introduced by regulators.
- E8.** Posting of financial security/reclamation bond would help ensure that wind turbines are decommissioned and reclaimed at the end of their useful life. Concerns were raised that a financial security deposit may jeopardize the economic viability of marginally-profitable wind development projects. It was noted that economically-marginal wind development projects are the most likely to fail and therefore pose the greatest liability risk to the crown. An example given is one of the first electrical generating wind turbines used in Alberta that was damaged, and has not yet been decommissioned and reclaimed.