



**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 8**

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Ref: 8EPR-N

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Mr. Lloyd Jones
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U.S. Fish and Wildlife Service
134 Union Boulevard
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RE: EPA Scoping Comments for Upper Great
Plains Wind Energy Programmatic Environmental
Impact Statement

Dear Sirs:

The Environmental Protection Agency (EPA) Regions 5, 7, and 8 have received the Western Area Power Administration (WAPA) and the U.S. Fish and Wildlife Service (USFWS) Notice of Intent, submitted as joint lead agencies, to prepare the Upper Great Plains Wind Energy Programmatic Environmental Impact Statement (EIS). Region 8, in consultation with Regions 5 and 7 will serve as EPA's lead region for this project. In accordance with EPA's responsibility and authority under the National Environmental Policy Act (NEPA) and Section 309 of the Clean Air Act, EPA is enclosing scoping comments for your consideration in preparation of the EIS.

The Upper Great Plains EIS will evaluate issues associated with wind energy development within WAPA's Upper Great Plains Customer Service Region (UGP Region), which encompasses all or parts of the States of Iowa, Minnesota, Montana, Nebraska, North Dakota, and South Dakota; and upon the USFWS landscape-level grassland and wetland easements in North Dakota, South Dakota, and eastern Montana. The Notice of Intent states the EIS and program would achieve the following objectives:

1. Define areas with a high potential for wind-energy development near UGP Region's transmission system in anticipation of future wind-generation interconnection requests.
2. Define natural and human environment resources in areas with high wind-energy development potential, including Native American lands, to support analyses of the environmental impacts and development of wind-energy resources.

3. Develop and present mitigation measures for reducing wind-energy development impacts on the natural and human environment for use by interconnection applicants in addressing the environmental impacts of their projects.
4. Complete a programmatic Endangered Species Act (ESA) section 7 consultation for listed and proposed threatened and endangered species within the study area boundaries established for the Programmatic EIS.
5. Implement an adaptive management approach that requires mitigation implementation monitoring and reporting to ensure that the best mitigation measures are identified and employed to reduce environmental impacts. The monitoring reports would be used by Western and the Service to periodically update mitigation practices.
6. Define thresholds for significant direct, indirect, and cumulative environmental impacts from wind energy developments and associated transmission system enhancements to support the impact analysis in the Programmatic EIS.
7. Define circumstances tied to laws, regulations, and policies that have potential to affect wind-energy resource development.
8. Define possible transmission system enhancements to support wind development and the general level of impacts expected from these transmission enhancements.
9. Provide a guide for interconnection applicants that includes information about natural resources within areas with a high potential for wind development, requirements for subsequent site-specific environmental reviews, transmission capacity needs and availability, and appropriate mitigation measures to minimize adverse environmental impacts related to wind projects and associated transmission system enhancements.

EPA appreciates the opportunity to provide comments at this early stage of the EIS process. Please contact me at (303) 312-6004 or Larry Kimmel of my staff at (303) 312-6659 with any questions you may have concerning these comments.

Sincerely,

/s/ Deborah Lebow-Aal
for Larry Svoboda
Director, NEPA Program
Office of Ecosystems Protection and Remediation

Enclosure

EPA's Detailed Scoping Comments on Upper Great Plains Wind Energy Programmatic Environmental Impact Statement

Range of Alternatives

The EIS should include a range of reasonable alternatives that meet the stated purpose and need for the project and that are responsive to the issues identified during the scoping process. This will ensure that the EIS provides the public and the decision-maker with information that sharply defines the issues and identifies a clear basis for choice as required by NEPA. The Council on Environmental Quality recommends that all reasonable alternatives should be considered, even if some of them could be outside the capability of the applicant or the jurisdiction of the agency preparing the EIS for the proposed project. In addition, the document should address evaluation and selection of potential wind energy development sites and criteria used to eliminate alternatives. EPA encourages selection of feasible alternatives that will minimize environmental impacts.

Environmental Impacts

The EIS should analyze environmental effects and mitigate for significant impacts. This would involve delineation and description of the affected environment, indication of resources that would be impacted, the nature of the impacts, and a listing of mitigation measures for the impacts. Anticipated construction and other operational activities are likely to disturb soils and vegetation, which could result in significant impacts on water quality, wildlife, and other resources. Listed below are environmental issues commonly applicable to the proposed wind energy development.

1. Protecting water quality

The EIS should clearly describe water bodies and ground water resources within the analysis area which may be impacted by project activities. Special attention should occur for work that would occur in an identified sole source aquifer. An analysis of the area's geology, topography, soils and stream stability in terms of erosion and mass failure potential may be necessary to adequately evaluate for the potential risks to surface and subsurface water quality and quantity, aquatic habitat, and other resources from specific project activities. Appropriate State-identified Best Management Practices (BMPs) to reduce potential non-point sources of pollution from this project's proposed activities should be designed into the project.

The EIS should provide information on CWA Section 303(d) impaired waters in the project area, if any, and efforts to develop and revise Total Maximum Daily Loads. It should describe existing restoration and enhancement efforts for those waters, how the proposed project will coordinate with on-going protection efforts, and any mitigation measures that will be implemented to avoid further degradation of impaired waters.

Events such as vehicular spills of hazardous or toxic materials could result in significantly more adverse habitat and water quality impacts. The EIS should discuss the frequency or likelihood of such events, and describe spill and release response capabilities. Storm water management should also be evaluated. A concern exists if any corrosion preventatives are applied to the inside of the pipe. Potential contamination of waters due to runoff of these chemicals is of specific concern. To protect water quality from storm water runoff, including contaminated runoff from construction, operation, and maintenance activities, specific practices should be implemented. These practices include the following:

- Preserve existing vegetation during clearing and grading;
- Divert upland runoff around exposed soils;
- Use sediment barriers to trap soil in runoff where sheet flows occur;
- Protect slopes and channels from gullyng;
- Install sediment traps and settling basins to reduce the velocity of channeled runoff;
- Store chemicals for project activities in covered containers in a specific location;
- Identify areas and procedures for fueling, and provide a protected vehicle washout;
- Preserve vegetation near all waterways;
- Ensure materials and education for cleaning up spills and leaks; and,
- Inspect the effectiveness of best management practices.

2. *Protecting wetlands and riparian areas and associated ecosystems*

Under Section 404 of the Clean Water Act (CWA), a permit is required from the U.S. Army Corps of Engineers (Corps) for the discharge of dredge or fills material into waters of the U.S. In a majority of Corps' permit actions, mitigation sequencing is required for direct and indirect impacts to waters of the U.S. Sequencing is a three-step process. The first step is to avoid impacting waters of the U.S. if feasible; the second is to reduce impacts if avoidance is not possible; and the third is to mitigate for those impacts that cannot be avoided. Under the Section 404(b)(1) guidelines, it is presumed that for non-water dependent activities there is an alternative available that will not impact waters of the U.S. It is the responsibility of the applicant to demonstrate that their action(s) cannot occur without impacting waters of the U.S. If during the analysis, it is shown that the work can occur without impacting waters of the U.S. that would be the alternative selected for any activity impacting waters of the U.S.

Executive Order 11990, "Protection of Wetlands," signed in 1978 and amended in 1988, addresses potential long and short-term adverse impacts associated with the destruction or modification of wetlands. In addition, the national wetlands policy has established an interim goal of "No Overall Net Loss of the Nation's Remaining Wetlands" and a long-term goal of increasing quantity/quality of the Nation's wetlands resource base. ("Presidential Wetland Policy of 1993" website:

<http://www.usace.army.mil/inet/functions/cw/cecwo/reg/aug93wet.htm>). In accordance with the intent of the order and national policy, EPA suggests a mitigation commitment that indirect draining of, or direct disturbance of, wetland areas will be avoided if at all possible, and requiring complete avoidance of disturbance to any fen wetland (a Category I resource).

3. *Protecting air quality*

Protection of air quality should be addressed in the EIS. The types of fuels to be used during construction activities, increased traffic during operations, and related VOC and NO_x emissions, should be disclosed and the relative effects on air quality and human health evaluated. Dust particulates from construction activities and ongoing operation of the roadways are important concerns, as discussed previously. The EIS should evaluate air quality impacts, and detail mitigation steps that will be taken to minimize associated impacts. This analysis should also address and disclose the project's potential affect on: all criteria pollutants under the National Ambient Air Quality Standards (NAAQS), including ozone; visibility impairment, and air quality related values (AQRV) in the protection of any affected Class I Areas, any significant concentrations of hazardous air pollutants, and protection of public health.

4. *Effects on wildlife habitat and vegetation*

Wind energy generation projects potentially may disrupt important wildlife species habitat. During construction of the proposed project, vegetation would be cleared and soils moved during construction of roads, establishment of wind turbine foundations, and building of substation and other facilities. The effects of project activities on area ecology, including vegetation, wildlife and their habitats should be disclosed and evaluated in the EIS. The EIS should describe the current quality and capacity of habitat and its use by wildlife in the proposed project area. The EIS should describe critical habitat for the species; identify any impacts the proposed project will have on the species and their critical habitats; and how the proposed project will meet all requirements under the Endangered Species Act (ESA). Continuous, uninterrupted habitat is particularly important to prairie ecosystems. The EIS should evaluate for fragmentation impacts on individual prairie species related to placement of a large number of turbines, support structures, right of ways, and new roads. A proposed mitigation plan with detailed mitigation steps that will be taken to minimize or eliminate adverse impacts should be presented.

The EIS should include maps that identify locations of important migration corridors of birds in the project area, and identify potential avian collision hazard areas. Avian flyways and migration corridors should be avoided. Sources of avian mortality at wind farm facilities include guy wires, transmission lines and electrocution from power lines. The EIS should evaluate potential effects on birds, including bird mortality and changed migratory patterns, and identify mitigation to avoid adverse effects to birds. The relatively high rate of bat fatalities related to wind energy projects is an increasing concern. Barotrauma has been identified in numerous studies as a cause for high bat mortality rates. The potential impacts to bats and mitigation plans for offsetting these should be addressed in the EIS.

If any pesticides and herbicides will be used for vegetation treatment during the proposed project operations, the EIS should address any potential toxic hazards related to the application of the chemicals, and describe what actions will be taken to assure that impacts by toxic

substances released to the environment will be minimized. If vegetation would be burnt, then the EIS should include a smoke management program that would be followed to reduce public health impacts and potential ambient air quality exceedances.

5. *Road and construction issues*

The EIS should evaluate effects of any proposed road improvements, new road construction, and general right of way construction and operation activities on the area. The evaluation should include increased access, travel management and enforcement aspects, as well as impact to the flora and fauna of the area. Dust particulates from construction, and ongoing operations on roadways are important concerns. Airborne dust may not only be a visual nuisance, but can be potentially dangerous to asthma sufferers. Sedimentation run-off can severely impact the aquatic environment. Construction techniques such as 95% base compaction prior to placement of gravel, culverts for water drainage, steep slope construction measures to prevent erosion, and appropriate dust control methods (such as placement of a non-chlorine based dust abatement chemical treatment), are important dust suppression and sediment reduction techniques. Detailed plans for addressing dust control for the project should be included. The plans should include, though are not limited to: dust suppression methods, inspection schedules, and documentation and accountability processes.

6. *Cumulative impacts*

The EIS should examine the cumulative impacts of development. In determining whether a project may have a significant effect on the human environment, it should analyze direct and indirect effects, including past, present and reasonably foreseeable future activities. The impacts should be analyzed according to airsheds and watersheds, rather than political boundaries. The assessment should include the cumulative impact of energy-related activities and other reasonably foreseeable energy development and other activities within the project area that may affect air and water quality.

EPA has issued guidance on how we are to provide comments on the assessment of cumulative impacts, *Consideration of Cumulative Impacts in EPA Review of NEPA Documents*, which can be found on EPA web site at: <http://www.epa.gov/compliance/resources/nepa.html>. This guidance includes five key areas to focus on when assessing cumulative effects.

1. Identify resources if any, that are being cumulatively impacted;
2. Determine the appropriate geographic (within natural ecological boundaries) area and the time period over which the effects have occurred and will occur;
3. Look at all past, present, and reasonably foreseeable future actions that have affected, are affecting, or would affect resources of concern;
4. Describes a benchmark or baseline;
5. Includes scientifically defensible threshold levels.

7. *Environmental Justice*

The proposed wind power integration project should include potential impacts on low income or people of color communities. The project evaluation should consider how to meet environmental justice requirements consistent with Executive Order 12898, "Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations," applicable to federal agencies that conduct activities that substantially affect human health or the environment. In accordance with this order, the EIS should disclose and evaluate environmental justice issues associated with impacts on rural low-income communities by the proposed actions for the reasonably foreseeable development analysis.

8. *Greenhouse gases and climate change*

Global climate change has become an increasingly important issue of concern to address in NEPA documentation. The Supreme Court Opinion in *Massachusetts, et. al. v. EPA*, issued April 2, 2007, indicated that the Court considers it "reasonably foreseeable" that greenhouse gases (GHGs) produced by man's activities are contributing to climate change. EPA recently published an Advanced Notice of Proposed Rulemaking (July 11, 2008) to solicit public comment on climate change and the regulation of greenhouse gases under the Clean Air Act, (please refer to <http://www.epa.gov/climatechange/anpr.html>).

In the interim period as regulations are being developed, EPA recommends that for NEPA disclosure purposes the EIS estimate annual greenhouse gas emissions that would result from the proposed action and describe that in terms of CO₂ equivalent per megawatt hour produced. The EIS should compare these values to estimated greenhouse gas emissions at a regional, national, and global scale for different inventory categories. Comparing the magnitude of annual emissions from other sources will enable the decision makers to better understand the magnitude of the greenhouse gases associated with the proposed project and the extent to which their decision making may affect regional greenhouse gas emissions. The EIS should also discuss voluntary measures available to reduce and offset greenhouse gas emissions.

9. *Monitoring and Adaptive Management*

EPA supports project strategies that include a monitoring and adaptive management program that can identify and understanding the consequences of actions and allow flexibility to adjust the program, as needed, to minimize and mitigate impacts. The proposed project could be designed to include an effective feedback element, including implementation and effectiveness monitoring. The project should develop an adaptive management framework, which includes monitoring of terrestrial and aquatic habitats prior to disruption, to establish a valid baseline database from which to measure and detect future impacts. The adaptive management plan should also utilize available information from state environmental and conservation agencies and nonprofit conservation organizations (e.g., TNC, Izaak Walton League) regarding identified "reference sites" within each ecoregion to help establish baseline conditions prior to project development.