

# Summary of Public Scoping Comments for the Upper Great Plains Wind Energy Programmatic Environmental Impact Statement

U.S. Department of Energy  
Western Area Power Administration

and

U.S. Department of the Interior  
U.S. Fish and Wildlife Service



Final Report

August 29, 2011



**SUMMARY OF PUBLIC SCOPING COMMENTS  
FOR THE UPPER GREAT PLAINS WIND ENERGY  
PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT**

**Prepared by**

**Environmental Science Division  
Argonne National Laboratory**

**for**

**U.S. Department of Energy  
Western Area Power Administration**

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## NOTATION

AWEA	American Wind Energy Association
BIA	Bureau of Indian Affairs
BMPs	best management practices
EIS	environmental impact statement
ESA	Endangered Species Act
GIS	Geographic Information System
LGI	Large Generator Interconnection
MISO	Midwest Independent Transmission System Operator
NEPA	National Environmental Policy Act
NOI	Notice of Intent
PEIS	programmatic environmental impact statement
SGI	Small Generator Interconnection
UGP	Upper Great Plains
USEPA	U.S. Environmental Protection Agency
Service	U.S. Fish and Wildlife Service
Western	Western Area Power Administration

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## 1 INTRODUCTION

In Executive Order 13212 (*Actions to Expedite Energy-Related Projects*, 2001), the President ordered that executive departments and agencies take appropriate actions “to expedite projects that will increase the production, transmission, or conservation of energy.” The U.S. Department of Energy’s Western Area Power Administration (Western) and the U.S. Department of the Interior, Fish and Wildlife Service (the Service), have identified wind energy development as a potentially critical component in meeting this mandate. To help accomplish this national goal, Western and the Service are considering the implementation of agency-specific programs that would establish environmental policies and mitigation strategies for wind energy development within Western’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 Service’s landscape-level grassland and wetland easements in North Dakota, South Dakota, and eastern Montana. The upper Great Plains of the United States has been identified as having a high potential for wind energy development due to the availability of a suitable wind resource regime.

The National Environmental Policy Act (NEPA) requires federal agencies to evaluate, and disclose to the public, the environmental impacts of any major action they are planning. Western and the Service have decided that establishing agency-specific programs for wind energy development in the aforementioned areas would constitute a major federal action, and they have elected to prepare an environmental impact statement (EIS) that will describe alternative ways the proposed programs could be structured and implemented and the environmental impacts associated with those alternatives.

Western and the Service both have interests in establishing programs that would guide and streamline their processes for evaluating wind energy applications and for developing guidelines and mitigation measures to minimize the environmental impacts associated with wind energy projects in the upper Great Plains area. There is also a potential that the decision of one agency regarding wind energy projects could affect interests of the other agency due to the general overlap in the areas where such developments could occur and the potential for wind energy facilities that affect Service easements to connect to Western’s transmission system. Consequently, Western and the Service have agreed to co-lead the development of a programmatic EIS (PEIS) to evaluate the environmental impacts associated with their proposed programs.

Public involvement is an important requirement of NEPA, especially for determining the appropriate scope of the analyses to be conducted. The scope includes the range of alternatives that will be considered and potentially significant impacts that should be evaluated. This public involvement process (which also includes other state and federal agencies and Indian tribes) is referred to as scoping. As part of the public involvement process, a Notice of Intent (NOI) to prepare the Upper Great Plains Wind Energy Programmatic Environmental Impact Statement (PEIS) was published in the *Federal Register* on September 11, 2008 (73 FR 52855-52858). This NOI invited interested members of the public to provide comments on the scope and objectives of the PEIS, including identification of issues and alternatives that should be considered in the PEIS analyses. Western and the Service conducted scoping for the PEIS from September 11, 2008, through November 10, 2008. This report presents a summary of the comments that were received during the scoping period.

## **2 SCOPING PROCESS**

### **2.1 APPROACH**

The public was provided with three methods for submitting scoping comments for the UGP Wind Energy PEIS: (1) via the online comment form on the project Web site, (2) by mail, and (3) in person at public scoping meetings. Public scoping meetings were held at three locations in September and October 2008:

- Sioux Falls, South Dakota (September 30, 2008);
- Bismarck, North Dakota (October 1, 2008); and
- Billings, Montana (October 2, 2008).

At each meeting, Western and the Service presented background information about the UGP Wind Energy PEIS, and a representative from the U.S. Department of Energy's National Renewable Energy Laboratory presented information about wind energy resources and technologies. The presentation materials from these meetings, including electronic versions of slides and posters, are available on the project Web site (<http://plainswindeis.anl.gov>). Following the presentations, attendees were invited to ask questions and to provide scoping comments for the PEIS. The verbal proceedings at each of the public scoping meetings, including presentations, questions, and comments, were recorded. Transcripts prepared from those recordings are available on the project Web site (<http://plainswindeis.anl.gov>).

### **2.2 SCOPING PARTICIPATION**

Ninety-four people registered at the public scoping meetings held during October and November 2008. The Sioux Falls, South Dakota, meeting drew the most people (42), followed by the Bismarck, North Dakota (39), and Billings, Montana (13), meetings. Approximately

17 individuals provided verbal comments at one or more of the public meetings, and seven people submitted written comments at the public scoping meetings that were not read into the public record.

Twenty-five sets of comments were submitted via the comment form on the project Web site or by e-mail, and two additional comment letters (that had not also been submitted via the comment form on the Web site) were received by postal mail. Written comments are available for viewing on the public Web site (<http://plainswindeis.anl.gov>). Nearly all of the comments submitted originated from states within the study area.

Federal agencies that provided comments included:

- U.S. Environmental Protection Agency (USEPA)

State agencies that provided comments included:

- Minnesota Department of Natural Resources
- North Dakota Department of Agriculture
- South Dakota Energy Policy Office

Local government agencies and organizations that provided comments included:

- City of Minot, North Dakota
- City of Velva, North Dakota
- McHenry County Jobs Development Authority
- Minot Area Chamber of Commerce
- Minot Area Development Corporation
- South Prairie School District #70, Minot, North Dakota
- Velva Community Development Corporation

Industry organizations and businesses that provided comments included:

- American Wind Energy Association
- Basin Electric Power Cooperative
- Central Electric Cooperative
- East River Electric Power Cooperative
- Farm Credit Services of North Dakota
- Irrigation and Electrical Districts Association of Arizona
- Mid-West Electric Consumers Association
- National Wind, LLC
- South Dakota Public Utilities Commission
- Verendrye Electric Cooperative

Native American organizations that submitted comments included:

- Intertribal Council on Utility Policy

Environmental organizations that provided comments are:

- Defenders of Wildlife
- Montana Audubon
- National Wildlife Federation
- The Nature Conservancy

In addition, some elected officials (including South Dakota State Representative Mike Vehle, and the mayors of Velva, South Dakota, and Minot, South Dakota) provided verbal or written comments at the public scoping meetings.

### 3 SUMMARY OF SCOPING COMMENTS

The comments received during the public scoping period for the UGP Wind Energy PEIS are summarized in this section. Specific comments and their context are not fully presented in this report, only the relevant issues raised in those comments as they apply to the preparation of the PEIS. Copies of all written scoping comments submitted by mail, via an online comment form, or in person at public meetings are available for viewing on the PEIS project Web site (<http://plainswindeis.anl.gov>). Transcripts of verbal comments received at the public meetings are also available on the Web site.

Issues raised in comments were categorized as those pertaining to the (1) policies of the agencies relative to wind energy; (2) alternatives that should be considered in the PEIS; (3) interagency cooperation and government-to-government consultation; (4) siting and technology concerns; (5) environmental and socioeconomic concerns; (6) cumulative impacts; and (7) mitigation of impacts.

#### 3.1 AGENCY POLICIES

Commenters identified a number of policy issues related to wind energy, including:

**Need for the PEIS and Overall Project Scope.** A number of commenters specifically indicated support for the proposed action by the agencies to develop a regionwide management program for evaluating wind energy projects. They recognized the excellent wind resource potential of the project area, which, if developed, could reduce some of the adverse environmental impacts associated with the use of conventional sources of energy. For example, commenters pointed out that wind energy projects do not emit carbon dioxide during their operation and that use of this power source could potentially alleviate global climate change. Further, some commenters stated that utilizing wind in place of conventional fossil fuels could also reduce water consumption by the electrical generation sector. Some commenters stated that wind energy should be seen as a necessary component of the energy mix from a national energy policy perspective, including one means of reducing dependence on foreign sources of energy. In

a number of cases, commenters identified support for specific wind energy projects that are proposed or under development rather than providing comments on the programmatic-level action being proposed by Western and the Service.

Most commenters agreed with the programmatic approach identified in the NOI. However, a few commenters questioned the need for the PEIS. One commenter suggested that a PEIS may not provide sufficient detail to be meaningful and that the PEIS is trying to cover too much ground. It was also suggested in one comment that some of the work envisioned by the PEIS appears to already have been done, although specific examples were not provided.

One comment suggested that calling for the development of a “guide for wind energy development in the Upper Great Plains” goes far beyond an assessment of the impacts of wind energy and beyond the scope and jurisdiction of the Endangered Species Act (ESA). While one comment stated that the PEIS should concern itself with environmental stewardship alone and the issues of environmental impacts and development of wind energy should be kept separate, this appears to be contrary to the designated purpose of an EIS.

**Best Management Practices (BMPs) or Environmental Guidelines.** Many comments related to the establishment and use of BMPs, mitigation measures, or specific environmental guidelines. Several commenters representing the wind and power industry supported the identification and establishment of BMPs to facilitate future development but stated a preference for flexible BMPs applied on a project- and site-specific basis. One comment from an industry representative offered assistance to the agencies with development of BMPs for the PEIS if desired. Concerns were also expressed regarding imposing mitigation measures that would be considered severely restrictive or that would greatly affect the economic viability of individual wind energy projects. Most of the specific BMPs/mitigation measures/guidelines mentioned by the commenters were related to the protection of natural resources (see Section 3.5). One commenter recommended that full consideration be given to recommendations from the Department of the Interior’s Wind Turbine Guidelines Advisory Committee when they become available.

**Receipt and Processing of Applications during the PEIS.** A number of comments, especially from industry, stated that processing of applications and ongoing wind energy developments should be allowed to proceed while the PEIS is being prepared. At the public scoping meetings, representatives for Western and the Service stated that the agencies would continue to accept and process wind energy development applications and interconnection requests on a case-by-case basis, following existing procedures, while the PEIS is being prepared. In one comment, a request was made that the agencies not make the application process similar to the process used by the Midwest Independent Transmission System Operator (MISO) but did not elaborate further. There were some comments, mostly from industry organizations, that expressed a desire for clarity, transparency, and flexibility in the agencies’ programs with regard to the approval process and decision-making on wind energy development applications.

**Relationship of the PEIS to Individual Projects.** There were several comments that identified the need for NEPA evaluations (including EISs in some cases) to still be conducted for individual projects regardless of whether the PEIS was in place or not. Some commenters stated that they would like the PEIS to result in a simpler, more streamlined NEPA evaluation process for specific projects. Defenders of Wildlife urged the agencies to recognize the importance of early coordination on wildlife and habitat issues in the PEIS, and Montana Audubon stated that the PEIS should set standards that would be followed for individual projects regarding consultation with various local agencies and science-based conservation organizations. One commenter stated that the PEIS should not provide for establishment of categorical exclusions for individual or grouped wind energy development projects regardless of whether they are sited on federally owned lands. It was also stated that the PEIS should not diminish the rigor or commitment of interagency consultation and that each proposed wind energy project should be examined for ESA Section 7 and Migratory Bird Treaty Act compliance. Comments from the American Wind Energy Association (AWEA) stated that they did not believe that the net generation capacity for a project should automatically be used to determine whether NEPA compliance could be accomplished using an environmental assessment or EIS; rather, they stated that a simpler environmental assessment tiered off the PEIS would likely be sufficient for most wind energy projects.

**Monitoring and Data Collection.** A few of the commenters requested that the PEIS identify additional research needs in the area of natural resources impacts of wind energy development, including surveys to obtain baseline information, and that monitoring during the construction and operation phases of the projects should occur to ensure that the impacts are within the anticipated ranges. Some commenters also requested that the baseline survey data be used in the design of the facilities and that projects be implemented in a phased approach, so that additional appropriate mitigation measures can be adopted in subsequent phases of the project based on the monitoring results. The types of monitoring information requested to be collected included various ecological indicators (e.g., bird strikes). Several commenters requested that such surveys and monitoring be mandatory. Some commenters suggested developing an adaptive management framework that would allow identification of impacts associated with specific actions under the program and would allow the flexibility to adjust the program as needed to minimize and mitigate impacts.

**Land Use Planning.** There were some requests to identify areas where wind energy development could occur and where development would not be permitted. However, the AWEA expressed concerns about the agencies attempting to map areas within the study area boundaries that may or may not be appropriate for wind energy development based on wildlife and habitat criteria. They mentioned that the Western Governors Association is undertaking a similar analysis with the use of geographic information system (GIS) datasets and suggested that Western and the Service not duplicate those efforts but focus instead on identifying BMPs and mitigation measures. The AWEA also identified concerns about the quality of the habitat information that would be available to complete such determinations.

### 3.2 ALTERNATIVES

The NOI for this project stated that at least three alternatives would be considered in the PEIS:

- The proposed action;
- A no action alternative (the existing situation wherein new proposals undergo fully separate NEPA analyses); and
- An alternative that consists of Western's proposed action for approving wind projects but that would not allow further wind development on any of the Service's easements.

The NOI also identified that additional alternatives might be identified through the public scoping process.

Scoping comments received from the USEPA stated that the PEIS should include a range of reasonable alternatives that meet the stated purpose and need for the project and that are responsive to input received through the scoping process. They encouraged the selection of feasible alternatives that will minimize environmental impacts.

One commenter suggested including an alternative that avoids placing wind energy facilities on federal public lands where possible. Another commenter encouraged the Service to develop policies that would continue to allow wind energy development on Service easements, stating that restricting this potential use could cause land owners to be less willing to enter into easement agreements. The Nature Conservancy stated that any wind energy development on wetland or grassland easements managed by the Service as part of the National Wildlife Refuge System should be considered separately and with sufficient detail to identify the implications under NEPA and that release of those lands should not be considered as part of the PEIS. One comment encouraged the Service to adopt a multiple-use adaptive management approach that would continue to allow reasonable and environmentally responsible development of wind energy on easements.

### 3.3 INTERAGENCY COOPERATION AND GOVERNMENT-TO-GOVERNMENT CONSULTATION

There were requests by Tribal representatives and others commenters to coordinate with Tribal governments. At the public scoping meeting in Bismarck, North Dakota, a representative from the Bureau of Indian Affairs (BIA) indicated on the registration form that the BIA would be interested in being a cooperating agency on the PEIS. The AWEA stated that it had heard that Tribal consultations for individual wind energy projects are complex and time-consuming. For this reason, they recommended that the agencies consult with the BIA on a programmatic level so that future consultations within the region could be more streamlined. The AWEA also recommended proactive outreach to individual tribes in order to determine their concerns.

There were also requests to get the local county, city, or township governments involved when projects are within their jurisdictional boundaries. In addition, some environmental and industry groups asked to be consulted in various phases of project development. One commenter suggested that the agencies form a technical advisory committee to review postconstruction wildlife impact surveys and make recommendations if project-level or program-level changes are needed to address impacts.

### 3.4 SITING AND TECHNOLOGY CONCERNS

**Siting.** There were many comments and suggestions on where or how to site wind energy facilities and associated transmission lines within the six-state study area. The National Wildlife Federation included a copy of one of their resolutions entitled, “Support for Sound Siting Guidelines for Wind Generators,” as part of their comments. Defenders of Wildlife recommended that a tiered, risk assessment approach that considers wildlife concerns be used when siting wind energy projects; specifically mentioned were risk assessment approaches being developed by the National Wind Coordinating Committee (“Studying Wind Energy/Bird Interactions”) and the Wind-Wildlife Federal Advisory Committee. In general, many of these comments suggested that improperly sited and constructed wind energy facilities (including associated transmission lines) have the potential to cause significant damage to the environment and wildlife habitat. Suggestions for siting preferences included:

- Use of lands that are already degraded, disturbed, or impaired;
- Use of lands that are close to existing transmission infrastructure to reduce the amount of land affected by construction of new transmission lines; and
- Use of lands that are located away from water bodies such as wetlands and streams.

Some commenters identified areas where wind energy projects should not be built. Suggested areas to avoid included:

- National Parks;
- National Wildlife Refuges;
- National Monuments;
- National Forests;
- 
- National Grasslands;
- National Conservation Areas;

- National Historic and National Scenic Trails;
- National Wild, Scenic, and Recreational Rivers, as well as rivers and river segments under study or considered eligible for such designations;
- State Wildlife Management Areas;
- Roadless areas or other large tracts of intact habitat where roads and transmission lines are generally absent;
- Areas with extensive hardwood draws;
- Designated Wilderness Areas and Wilderness Study Areas;
- Audubon-designated Important Bird Areas;
- Threatened, endangered, and sensitive species habitats, as well as other important wildlife habitats and migration linkages on both public and private lands;
- Riparian areas, including prairie pothole habitats;
- Known migration flyways for the whooping crane;
- Significant migration corridors for birds and bats;
- Important flyways and raptor concentration areas;
- Breeding, nesting, or winter concentration areas for sage grouse and other prairie nesting species;
- Prairie dog towns;
- Lands owned by private conservation organizations and managed for conservation purposes; and
- Montana's Rocky Mountain front from the Canadian border south to Helena.

The AWEA expressed concerns about the agencies attempting to map areas within the study area boundaries that may or may not be appropriate for wind energy development based on wildlife and habitat criteria. They stated that the Western Governors Association is undertaking a similar analysis with the use of GIS-based information and suggested that Western and the Service not duplicate those efforts but focus instead on identifying BMPs and mitigation measures. The AWEA also identified concerns about the quality of the habitat information that would be available to complete such determinations.

**Technology.** A few comments called for research into technologies that could reduce barotrauma<sup>1</sup> impacts on bats. One commenter stated that newer technology less likely to cause wildlife mortality, such as vertical spiral vane generators, must be considered an acceptable alternative to more traditional turbines in locations where mortality to birds or impacts on habitat are expected to be significant.

**Transmission and Integration.** A number of comments concerned the relationship between the development of wind energy projects and electrical transmission. For example, several commenters suggested that transmission system capacity and enhancements be considered as part of the proposed action and that impacts of transmission facilities be considered along with the impacts of wind power generation. Some commenters stated that siting decisions for wind energy facilities should not be made without considering how the electricity generated would be transmitted to the users. As identified previously in this section, there were also a number of comments regarding the siting of transmission lines. There were requests to use existing transmission lines and corridors as much as possible and requests that any new transmission lines be planned and constructed through coordination among the various federal, state, and local government agencies. One comment called for new transmission line planning to follow a landscape-level habitat analysis in order to avoid fragmenting and disturbing sensitive and important habitats.

One comment requested that the PEIS address how the integration of wind energy would affect the possibility of integration of power from existing or new solar and hydropower facilities. Another comment requested that the PEIS address how the costs of additions to Western's transmission system to accommodate electricity generated by wind energy projects might affect the rates charged to all transmission users.

### 3.5 ENVIRONMENTAL AND SOCIOECONOMIC CONCERNS

This section summarizes the predominant environmental and socioeconomic concerns identified by commenters, organized by major technical areas. There were some comments that suggested that the PEIS and Record of Decision prepared in 2005 by the U.S. Bureau of Land Management could serve as a model for evaluating impacts of wind energy programs being considered by Western and the Service.

**Air Quality and Climate Change.** The positive impacts of wind energy development in regards to decreased emissions of criteria air pollutants and greenhouse gases and the positive effect on climate change, as compared with the emissions from fossil fuel-based power plants, were mentioned in many of the comments received. The USEPA commented that the PEIS should evaluate the potential for the project to affect criteria pollutants under the National

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<sup>1</sup> Barotrauma refers to injuries sustained due to the pressure wave associated with moving turbine blades rather than direct strikes from the blades.

Ambient Air Quality Standards, airborne dust particulates, and visibility associated with emissions from construction equipment or from increased traffic during operations.

The USEPA recommended that the PEIS estimate annual greenhouse gas emissions that would result from the proposed action and describe those in terms of the carbon dioxide equivalent per megawatt-hour produced. The PEIS should then compare these values to estimated greenhouse emissions at regional, national, and global scales for different inventory categories.

**Noise.** One commenter identified the noise produced by wind turbines as an issue of concern.

**Water Resources.** There were relatively few comments regarding potential impacts on water resources. The USEPA stated that the PEIS should clearly describe water bodies and groundwater resources within the area that could be affected by project alternatives, with special attention to work that would occur in identified sole-source aquifer areas. Comments from the USEPA also stated that appropriate BMPs for reducing non-point sources of pollution from projects, and how the agencies would coordinate program activities with existing protection efforts for impaired waters (under Section 303(d) of the Clean Water Act), should be identified in the PEIS. The USEPA also commented that the potential for spills of hazardous or toxic materials and stormwater management associated with construction of projects should be considered.

**Ecology.** Many comments touched on the potential effects of wind energy projects on ecological resources. Not surprisingly, most of these comments mentioned the potential mortality of birds and bats due to collisions with wind turbines or transmission lines; barotrauma injuries to bats during wind turbine operation; or impacts of construction, operation, and maintenance activities on threatened, endangered, or rare species. There were some comments that indicated that bird and bat mortality from existing wind projects in the region may be small, including one comment from an electric cooperative that stated that they were unaware of any bird problems with existing wind turbines or transmission lines in their service area. The USEPA recommended that the locations of important migration corridors for birds and potential collision areas be identified on maps and that these areas be avoided. The National Wildlife Federation commented that the PEIS should provide for a thorough evaluation of impacts on avian species, especially migratory birds, raptors, and bats.

Another ecological concern identified was the potential for the loss of wetland or grassland habitat that is used by waterfowl and other birds in the region. One commenter stated that he was more concerned with the general survival of ducks and geese affected by drainage of wetlands in the prairie pothole region than with the “rare” incidence of whooping cranes colliding with a tower or transmission line. The USEPA commented that Section 404 of the Clean Water Act regarding protection of wetlands should be considered when developing the

PEIS and when considering alternatives, and suggested that the resulting programs should include a commitment to avoid indirect draining or direct disturbance of wetland areas.

Commenters requested that the PEIS consider the impacts to federal and state-listed threatened and endangered species. One commenter requested that the PEIS define the process or procedures that will be used for Section 7 consultations within the UGP region. Some commenters recommended that surveys for listed species be conducted as part of the Section 7 consultation for projects. Comments from the USEPA stated that the PEIS should describe critical habitat for listed species in the region, identify the potential impacts of the proposed project on critical habitat, and describe how the proposed project will meet the requirements of the ESA. It was also commented that the PEIS should be cognizant of other wildlife laws, such as the Migratory Bird Treaty Act, the Bald and Golden Eagle Protection Act, and other state, local, and tribal wildlife laws and regulations.

The USEPA provided comments about issues related to wildlife habitat and vegetation that should be considered and evaluated in the PEIS, including loss of habitat due to clearing for construction. In addition, it was requested that the PEIS consider the fragmentation impacts on individual prairie species related to the placement of turbines, support structures, rights-of-way, and new roads that would result from wind energy projects. The USEPA also commented that toxic hazards that could be associated with the use of pesticides and herbicides used for vegetation treatment during project operations should be addressed in the PEIS, and that appropriate mitigation measures to control those hazards should be identified.

Several commenters pointed out the potential harm that wind energy projects could inflict on ecosystems. Many comments cautioned against adversely affecting sensitive biological resources. Habitat fragmentation and destruction were most often mentioned as likely causes of ecological damage. Some commenters wanted the PEIS to address these issues in a holistic manner, with consideration of both the direct and indirect effects, and the potential connected actions that occur not only in the immediate vicinity of the proposed wind energy facilities and associated transmission corridors, but beyond such projects. One commenter specifically stated that the PEIS needs to address how impacts from habitat fragmentation would be identified and minimized. The Nature Conservancy suggested that the analyses of impacts on habitats and ecosystems should examine all areas within the project area that feature wind resources of Class 3 or higher since developing technology is making electricity generation within such areas economically feasible. The issues that were specifically mentioned by the Nature Conservancy included destruction of wildlife habitat; habitat fragmentation; potential interruption of wildlife migration corridors; increased edge effects such as the proliferation of non-native or invasive species; and changes in water flow patterns.

Biota that were specifically identified in comments as needing to be considered in the PEIS because they were rare, migratory, or potentially sensitive to impacts from wind energy development included the whooping crane, greater sage-grouse, greater prairie-chicken, piping plover, least tern, ducks and other waterfowl, raptors, migratory birds, grizzly bear, Canada lynx, black-footed ferret, Indiana bat, massasauga rattlesnake, Dakota skipper, Karner blue butterfly, Salt Creek tiger beetle, blowout penstemon, Ute ladies'-tresses, and eastern prairie fringed orchid. There were also mentions of some specific areas that belonged to the categories of lands

that commenters urged the agencies to avoid (see Section 3.4). The AWEA commented that the agencies should take advantage of efficiencies that may be afforded by considering efforts underway to develop a region-wide habitat conservation plan for the whooping crane and, potentially, other protected species in the migration corridor of the Wood Buffalo-Aransas whooping crane flock.

**Visual Impacts.** One commenter expressed concerns that wind energy development facilities may result in adverse visual impacts. “Strobe-like lighting” was specifically mentioned as one problem with wind towers. Another commenter suggested that visual impacts not be considered because there was no objective, quantitative way to measure them.

**Waste Generation and Disposal.** The USEPA identified concerns about potential hazardous chemical spills during construction or operations of wind energy production and transmission facilities. Identified substances of concern included engine fluids from construction and maintenance vehicles and herbicides used for vegetation control.

**Cultural Resources.** Some commenters recommended that the requirements of the National Historic Preservation Act be achieved through the PEIS process, potentially through programmatic consultation.

**Socioeconomics.** A number of specific comments addressed the potential socioeconomic impacts of wind energy development in the project area. Many of these comments stated that the job opportunities, tax revenue, and income generated from the development of wind energy projects were important to area schools, businesses, communities, and farmers. A number of commenters stated that wind energy leases with area farmers may reduce the incentive for conversion of grasslands to cropland. One commenter stated that wind energy projects negatively affect property values.

**Environmental Justice.** The USEPA commented that the PEIS must consider environmental justice issues in a manner consistent with Executive Order 12898, *Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations*. Another commenter suggested that environmental justice impacts not be considered because there was no objective, quantitative way to measure such impacts.

### 3.6 CUMULATIVE IMPACTS

A number of commenters requested that the PEIS consider the cumulative impacts on the environment resulting from the incremental impacts of future wind energy development projects, including their associated transmission lines and infrastructure improvements (such as roads), when added to impacts from other past, present, and reasonably foreseeable future actions. The

USEPA commented that the analyses of cumulative impacts should be based on airsheds or watersheds rather than political boundaries. The Nature Conservancy commented that the known and suspected impacts of wind energy development could not be fully considered, avoided, or mitigated without an inclusive assessment of cumulative impacts across the PEIS area and across the range of species with large-landscape habitat requirements. The Nature Conservancy suggested that the PEIS address only cumulative impacts of wind energy development and leave the project-specific, detailed evaluation of impacts from large commercial wind facilities for separate NEPA evaluations.

There was one question regarding how thresholds for significant direct, indirect, and cumulative environmental impacts from wind energy development and associated transmission systems would be defined.

### 3.7 MITIGATION

Many commenters requested that the PEIS address mitigation measures for minimizing the impacts on environmental resources. There were also requests for the agencies to identify BMPs that could be applied to wind energy developments and associated transmission lines. A number of commenters requested that such measures and practices be reasonable and consistent with changing laws and regulations, incorporate monitoring, and utilize adaptive management. Avoidance of impacts was sometimes mentioned as the preferred method of mitigation, followed by efforts to minimize effects, and the repair or restoration of affected areas when efforts to avoid and minimize impacts are not successful.

For example, some commenters expressed a desire for wind energy projects to avoid certain areas and periods during development. They requested that developers avoid areas of high ecological sensitivity and societal value (see Section 3.4), avoid disturbance and harassment of wildlife, minimize the ecological footprint of the facilities, and avoid vegetation removal during the nesting/breeding season for migratory birds. They suggested that the developers instead use areas that are already disturbed (such as existing roads and rights of way) as much as possible (see Section 3.4). Some commenters wanted the agencies to develop a set of mandatory BMPs that apply to all future projects, while others requested that BMPs be standard, flexible, and not too prescriptive. One commenter expressed a willingness to provide additional input on the development of BMPs for the PEIS. Specific measures suggested by commenters included:

- Implement dust-control measures (such as the application of a nonchlorine-based dust-abatement chemical) during construction.
- Use native plants in postconstruction restoration work.
- Incorporate buffers or setback distances along surface waters and riparian zones.
- Base mitigation of wetlands and streams on quantified impacts on federal and state species of concern.

- Follow guidelines for the construction and operation of proposed transmission lines to reduce the potential for avian electrocution hazards (e.g., Avian Power Line Protection Plan standards).
- Incorporate project siting and design features that avoid creating perching opportunities for birds, including putting all electrical lines between turbines underground.
- Use appropriate lighting that will not attract night migrants (bird and bats) to the substation.
- Experiment with ways to deter bats from approaching wind turbines in order to avoid barotrauma.
- Avoid placement of turbines on escarpment edges.
- Ensure that the sweep point of the turbine blades is higher than the apex of nuptial flights for birds in project areas.
- Adopt limits on the amount of disturbed acreage permitted within certain habitat types.

One comment stated that it was not appropriate for Western to become a “police force” on mitigation practices of another entity’s construction practices and that identification of specific mitigation measures was appropriate only when Western is the constructing agency or when activities on Western’s side of a substation are being considered.

Some comments requested that costs associated with mitigation and other environmental requirements be addressed in the PEIS.

## 4 CONCLUSIONS

Western and the Service will use this report and the individual comments as part of a process to determine the scope of analyses in the PEIS. All comments, regardless of how they were submitted, will receive equal consideration in the development of the PEIS. As stated previously, copies of all scoping comments, whether submitted by mail, via an online comment form, or in person at public meetings are available for viewing on the UGP Wind Energy PEIS project Web site (<http://plainswindeis.anl.gov>).

Scoping is the first phase of public involvement under the NEPA process. The public will have additional opportunities to be involved in the preparation of the UGP Wind Energy PEIS. The next phase of public involvement will be public review and comment on the Draft PEIS. Western and the Service anticipate releasing the Draft PEIS in Fall 2011.

Information about all opportunities for public involvement in the UGP Wind Energy PEIS, including announcements of public meetings and releases of documents for review, will be maintained on the project Web site (<http://plainswindeis.anl.gov>). Individuals seeking e-mail notification of such opportunities can sign up for e-mail announcements via the Web site.