

U.S. Fish & Wildlife Service
WIND TURBINE GUIDELINES ADVISORY COMMITTEE

Federal Advisory Committee Meeting

Department of Interior South
1951 Constitution Ave. NW
Washington, DC

July 23-24, 2008

-Draft Meeting Summary-

On July 23-24, 2008, the Wind Turbine Guidelines Advisory Committee (FAC) convened its fourth meeting at the Department of the Interior in Washington, DC. See Attachment A for meeting agenda and Attachment B for participant list.

For copies of the slides presented at the meeting, and referred to herein, please visit the U.S. Fish & Wildlife Service Web site at www.fws.gov/habitatconservation/windpower/wind_turbine_advisory_committee.html.

Meeting Objectives:

- Review Outcome from June 18 FAC Workshop, next steps
- Review Subcommittee progress and discuss next steps
 - Guiding Principles subcommittee
 - Legal subcommittee
 - Uncertainty/Other Models subcommittee
 - Landscape/Habitat subcommittee
 - Scientific Tools & Procedures subcommittee
- Hear presentation from Presenter: Rafael Villegas-Patraca, *Mexico's Institute of Ecology Post Construction Bird and Bat Monitoring in La Venta II Wind Park Oaxaca Mexico*
- Discuss milestones, timelines, and process steps to address additional items

I. WELCOME AND OVERVIEW OF THE AGENDA

On the morning of July 23, 2008, David Stout, Chief of the Division of Habitat and Resource Conservation at the U.S. Fish & Wildlife Service (USFWS) and Designated Federal Officer and Chairman of the FAC, welcomed Members (Members) and the public to the fourth meeting of the Wind FAC. Mr. Stout welcomed Dr. Rafael Villegas-Patraca from Mexico and noted that he will speaking to the group this afternoon. Mr. Stout introduced Gary Frazer, Assistant Director for Fisheries and Habitat Conservation, who thanked the Wind FAC for their work and stated he hopes the group can identify issues that will remain a priority in the next administration.

Mr. Stout announced that he intends to convene a land owner panel at the October meeting and asked Members to provide Rachel London, USFWS Biologist, with contact information for private landowners to invite in the panel discussion. Members who volunteered to identify private landowners for their feedback include: Andrew Linehan; Rich Rayhill, Jeri Lawrence, Rob Manes, Steve Quarles, Greg Hueckel, and Kathy Boydston.

Mr. Stout explained that the proposed alternate members of the FAC are under review by the Secretary of the Interior and the White House. For a complete list of Members and their nominated alternates, please see Attachment C. Mr. Stout introduced Jim Moser, Deputy Assistant Secretary for Fish, Wildlife and Parks at the Department of the Interior, who thanked the FAC for their work and encouraged Members to speed their recommendations, so that they are set by the time there is a change in administration.

After a round of introductions, Abby Arnold, FAC facilitator and Vice President/Senior Mediator at Kearns & West reviewed the agenda. Materials from the meeting may be accessed at the USFWS Web site at:

www.fws.gov/habitatconservation/windpower/wind_turbine_advisory_committee.html.

II. REVIEW OUTCOME FROM JUNE 18 WORKSHOP AND NEXT STEPS

On June 18, 2008, the FAC participated in a technical workshop that defined guiding principles and clarified priorities. Mr. Stout noted the list of items the FAC felt were important and could be most effectively addressed by the FAC were reproduced for the FAC and could be used as a checklist of concerns. (Consensus on the list of topics was not sought). To view the charts, please see Attachment D.

Mr. Stout noted that the Members have been provided with the definition of wildlife. It is the legal definition that the USFWS operates under and should be used as a working definition for the FAC. To view the definition of wildlife, please see Attachment E.

Ms. Arnold presented a process diagram that outlines the milestones the FAC will need to achieve in order to develop a set of recommendations by Fall 2009. To view the process diagram, please see Attachment F. Members agreed that the milestones proposed 4-5 additional meetings. Members asked that the diagram be modified to illustrate the interaction between subcommittees.

In order to meet deadlines, Members agreed to be more vigilant in reviewing documents and sticking to deadlines. Mr. Stout noted that when the FAC is ready to produce the final recommendations, he will look into providing technical editing. Ms. Arnold noted that Kearns & West will remind Members about deadlines and can be available to brief Members on subcommittee activities and documents.

III. Report on Meeting to Discuss Development of a Habitat Conservation Plan for Whooping Crane.

Mr. Stout introduced Jim Lindsay, FPL, who attended a FWS convened meeting in Denver where a habitat conservation plan for a whooping crane corridor was discussed. Mr. Lindsay summarized that the meeting brought together the wind industry, USFWS, and electric utility industry to discuss wind and infrastructure development and its impacts on whooping cranes. The whooping crane migratory corridor and high wind resource potential overlap. Meeting participants discussed the opportunity for the wind and electric industry to work with the USFWS to develop a general habitat conservation plan for this migratory corridor. Companies could apply for certificate of inclusion or an incidental take permit under the plan. The process is in a conceptual stage, and attendees agreed to reconvene in September. Mr. Lindsay concluded that the industry needs some way to deal with incidental take and the

USFWS is charged with the protection of the whooping crane. Mr. Lindsay noted that there are prairie chickens and grouse in the corridor, and the group discussed the inclusion of other species in the plan. Mr. Stout noted those species only found within a portion of the corridor will not be considered. Mr. Stout also stated that the industry is forming a group that will be tasked with defining the scope of the habitat conservation plan, and the USFWS is responsible for responding. He added that development of a habitat conservation plan could take several years, and this is a high priority issue for the USFWS.

IV. OVERVIEW OF SUBCOMMITTEE PROGRESS, QUESTIONS TO FAC

The FAC turned to Subcommittee Reports. First, the FAC heard a brief summary of all subcommittees' products and then delved into details of Subcommittee interim work products.

As an introduction to the Subcommittee reports Ms. Arnold noted that the material provided by subcommittees will be used to draft a table of contents for the final recommendations. Subcommittees need to consider whether to include appendices in the final document. A rough sketch beginning table of contents for the Subcommittee reports is provided in Attachment G.

Each Subcommittee summarized their Subcommittee's progress and provided a list of questions that they had for the Wind FAC. To view the list of questions identified by each Subcommittee for FAC review, please see Attachment H.

In response to a Member's question, Mr. Stout suggested that a key audience for the Recommendations would be more than 280 USFWS staff members who will be responsible for implementing any guidelines developed by the USFWS. He also noted his vision that state, local, and tribal governments as well the industry and NGOs will adopt the guidelines. The recommendations from the Wind FAC will be given to the Secretary of the Interior and the Secretary will implement the recommendations. To ensure the FAC guidelines are used, the FAC could request the Secretary use the recommendations in development of any modification to the existing interim guidelines.

IVA. Guiding Principles Subcommittee: In April, the Guiding Principles subcommittee presented a draft set of principles that was discussed by the FAC. After the June 18 FAC workshop, the Subcommittee incorporated issues and comments into a document for the Wind FAC. To view the Guiding Principles subcommittee's July report, see Attachment I. See Attachment J for draft guiding principles discussed by the FAC. A Member added that the guiding principles document could be a preamble in the *Federal Register* because it clarifies the assumptions/intent of the Wind FAC.

The Members reviewed and edited the suggested principles for developing recommendations drafted by the Guiding Principles subcommittee. The Wind FAC agreed to the changes below:

- Premise 1-3: Table until further discussion.
- Principle 2: Inserted "local" and "tribal" before "state and federal."

- Principle 3: Deleted the last clause “while recognizing the primary role of the lead agency in coordinating specific project assessments.”
- Principle 5: Inserted “process certainty” after “increases predictability and.” Inserted “and regulations” after “federal wildlife laws.”
- Principle 7: Replaced “determining” with “recommending.” Changed “in the event of unforeseen impacts” to read “in the event of predicted and/or unforeseen events.”
- Principle 8: Reworded “The Guidelines should define scientifically rigorous and cost-effective study designs that improve the ability to predict direct and indirect wildlife impacts locally and regionally” to read “The Guidelines should recommend and assess use of scientifically rigorous and cost-effective tools that improve the ability to predict direct and indirect wildlife impacts locally and regionally.”

Members agreed to table the topics below:

- Table Premises.
- Revising Principle 4 to include language about facilitating coordination with appropriate agencies such as state fish and wildlife agencies and USFWS.

These modifications will be shared with the FAC for approval at a later date. To view a track-changed version of Guiding Principles as a result of the July 23 meeting, see Attachment K.

IVB. Legal Subcommittee: Based on the June 18 Workshop, the Legal subcommittee focused on relevant statutes and defined compliance. The Subcommittee provided an outline of a white paper, that includes the scope of authority to regulate wildlife under federal law, the consequences of noncompliance, and methods by which noncompliance can be avoided or liability for noncompliance can be mitigated or avoided. The Subcommittee is drafting definitions, but provided the FAC with a comprehensive list of statutes for review. To view the Legal subcommittee’s report, see Attachment L.

The Members discussed changes to the outline’s content and language. In the white paper, the Subcommittee plans to research additional statutes, including tribal laws, that discuss wildlife and omit “The Lacey Act,” “Tariff Classification Act,” and “Marine Mammal Protection Act.” Members agreed these Acts reiterate the definition of wildlife and are not as applicable to the wind industry as other Acts identified.

A Member stated that this white paper should be included in the final recommendations in order to clearly identify and justify applicable statutes to wind development. The audience of the white paper will be identified in the scope section of the paper. The first header of the outline will be changed to read “define the scope of authority to protect wildlife under federal law and consequences of noncompliance as they pertain to wind power projects.” Members agreed that the National Environmental Protection Act, public lands acts, the Alternative Motor Fuels Act, and the Alaskan Pipeline Act should be included in the list of statutes under the second section of the outline because they are applicable to wind development. Members of the Subcommittee will research examples of when the USFWS has worked with industries to reduce liability so that successful practices can be included in

the recommendations. The Wind FAC agreed the Legal subcommittee is headed in the right direction.

IVc. Uncertainty/Other Models Subcommittee: The Subcommittee compiled a list of laws that included provisions that might be applicable to guidance for wind development. To view the Uncertainty/Other Models subcommittee's report, see Attachment M.

The Wind FAC made decisions about the models listed below:

- Clean Air Act/Clean Water Act Technology Standards- Members of the Wind FAC agreed that the Committee should make recommendations for technology but not technological standards, because standards are too prescriptive for this technology.
- NEPA- Members agreed stakeholder involvement should be looked at by the subcommittee further, and a Member suggested looking into the cumulative impacts addressed by NEPA.
- Clean Air Act- Members were interested in looking into the best management practices catalogued in the Clean Air Act, which would allow wind developers to reduce uncertainty. Clean Water Act Section 316(b)- Members were interested in how this model applies to the Landscape/Habitat subcommittee and the siting of wind farms. The Uncertainty/Other Models subcommittee will further research Clean Water Act Section 316(b) and turn the information over to the Landscape/Habitat subcommittee for inclusion in the final recommendations.
- Avian Protection Plan (APP)- The APP is a complementary tool to a traditional guideline tool, because it provides a way for wind power developers to commit to using traditional guidelines. The APP model was developed by the Avian Powerline Interaction Committee. The APLIC is a successful partnership between the utility industry and USFWS. The FAC was presented an overview of the APLIC APP model at the February 2008 Technical Workshop, available at: www.fws.gov/habitatconservation/windpower/wind_turbine_advisory_committee.html.

An APP is usually conducted at the company or project-specific level. The developer identifies a series of elements that should be incorporated in an APP to make it acceptable. These elements demonstrate a good-faith effort to minimize wildlife impacts. The APP could be expanded to include other species and does include a habitat component. An incentive is needed for developers to create an APP. A Member suggested using the APP as a way to incorporate incentives for applying good practices.

The Wind FAC recommended that the Uncertainty/Other Models subcommittee research APPs further and determine which elements are most applicable to the wind industry. They will then share those elements with the Existing Guidelines subcommittee for a joint discussion at a later date.

IVd. Existing Guidelines Subcommittee: The Subcommittee reviewed most state and federal wind/wildlife guidelines and compiled the common elements into an outline. In the outline, the Subcommittee proposed a set of categories or main headings that the

Subcommittee believed would be appropriate for the FAC to use. The Subcommittee noted that the next step for the subcommittee is to vet the headings and proposed language/guidelines with other state agencies. Additionally, the Subcommittee will propose details of the project development steps including when a developer determines if a site is suitable. Members agreed the process documented in the recommendations should not be prescriptive, because it will make the guidelines harder to adopt at a state or local level. The Wind FAC agreed the categories listed in the Existing Guidelines' report should be included in the final recommendations, and the Subcommittee's report should be used as the FAC framework. To view the Existing Guidelines subcommittee's report, see Attachment N.

VIE. Landscape/Habitat Subcommittee: The subcommittee has developed a matrix listing geographic tools and maps that document sensitive habitat or species. The matrix provides an overview of tools that included availability, if they have GIS layers, geographic areas covered, habitat types, species that are addressed, and accessibility. To view the Landscape/Habitat tools matrix, please see Attachment O. The Subcommittee is also developing a dichotomous key or decision tree that will provide guidance for tool use. To view the Landscape/Habitat subcommittee's report, see Attachment P. The subcommittee is considering developing process diagrams and provided examples to the Wind FAC from Environment Canada. To view the process diagrams, see Attachment Q. The Subcommittee recommended that the Wind FAC charge them with developing a list of maps and protocol for applying them.

The Subcommittee wants to establish minimum standards for layers, so that confining factors, such as sensitive species layers, ecologically intact landscape layers, wind resources, transmission, and other limitations for wind development are shown. A Member noted that looking at state heritage data and wildlife data is encouraged. The Wind FAC agreed that USFWS should not develop the maps, but should collect map information in an electronic resource. Mr. Stout explained that the USFWS could develop a viewer accessible via the Internet that shows wind and wildlife interaction and relevant databases.

The Landscape/Habitat tool matrix will allow developers to identify potential problems with a site. A Member suggested adding database consultation in the preconstruction survey, so that the tool is utilized. The Wind FAC agreed that they liked the tool developed by the Landscape/Habitat subcommittee, and asked that the Landscape/Habitat subcommittee work with the Science Tools & Procedures subcommittee in review of the tools.

VIF. Science Tools & Procedures Subcommittee: In the past few months, the Subcommittee has held conference calls to address what tools are needed to conduct site assessment, selection, construction, operation, and decommissioning. The Subcommittee work will identify approaches and tools needed to:

- Assess pre-development risk or benefits provided to wildlife,
- Measure post-development mortality of wildlife,
- Assess behavioral modifications of wildlife to development, and
- Provide compensatory mitigation for unavoidable impacts on wildlife.

To view the Science Tools & Procedures subcommittee's report, see Attachment R.

The Subcommittee is also compiling a glossary for the final recommendations to define terms that may be misinterpreted. A Member noted that the material in the final recommendations will need to be prescriptive enough to be validated by the scientific community. However, Members agreed that there will be no solution that will fit all projects.

Direct effects on sensitive bird species are being analyzed, and the Subcommittee discussed analyzing indirect effects of habitat loss, such as prairie chickens, which will not nest within a certain area of human activity. The Subcommittee was tasked with providing information on predicting mortality at development sites.

A Member questioned whether the benefits of renewable energy opposed to conventional power can be considered when analyzing whether mitigation is sufficient to offset loss of habitat and impacts to wildlife. Members agreed to draft language for addressing the issue in the preamble to the final recommendations.

V. PUBLIC COMMENT

Ms. London read a public comment on behalf of the Hawk Migration Association of North America. The letter urged the final design and siting standards for wind projects to avoid known bird migration pathways, Important Bird Areas, and documented locations of species protected under the federal Endangered Species Act. To read the entire comment, please see Attachment S.

VI. REPORTS/PRESENTATIONS

Presenter: Rafael Villegas-Patracá, *Mexico's Institute of Ecology*

Post Construction Bird and Bat Monitoring in La Venta II Wind Park Oaxaca [To view the PowerPoint slides presented, please see Attachment T]

Dr. Villegas stated that he was going to present on what is happening in Mexico in regards to wind development and wildlife impacts.

Conflicts between wildlife conservationists and the wind industry can arise quickly without proper research and technology. Technological advancements and progress may interfere with maintaining bird migration paths. In Mexico, wind development is relatively new. Several foreign companies are working to develop the largest wind-farms corridor in Latin-American around the Isthmus of Tehuantepec in Oaxaca, Mexico. We have estimated the relative impact of wind farms on the populations of soaring birds during the migration season in Mexico. We have applied mitigation tools to minimize the high-risk impacts of bird collisions with the wind turbines based on results from an emergency plan of the only operating wind farm in Tehuantepec. Our research objective is to analyze the importance of the mitigation measurement in La Venta II Wind Park. We used three different methods for this study: radar monitoring for temporary shutdowns; focal interactions, and bird and bat death transects. During the first fall season, the preliminary test showed 84 hours of potential shutdown from the first method of radar monitoring. The second method showed 36 percent wildlife interactions with windmills were in risk areas during the survey, and there were 89 bird and 67 bat deaths in the transects. These mitigation tools were developed as part of a contingency plan in the environmental manual for the operation life of the wind park, La Venta II. All of these tools are very important because the Isthmus is one of the most important bird migration routes in the world. A variety of mitigating measures has

been employed, but main protocol being utilized is the marine radar to help with temporary wind power shut downs. In practical circumstances, mitigation will likely consist of a collection of techniques; these may vary on a site-to-site basis.

VII. REVIEW NEXT STEPS

Ms. Arnold reviewed the next steps for the Wind FAC and its subcommittees.

A subcommittee was created to discuss incorporating incentives into the recommendations to the Secretary. The Wind FAC Members listed below volunteered to be on that subcommittee:

- Kathy Boydston
- Dave Stout
- Mark Sinclair
- Rob Manes
- Aimee Delach
- Patrick Traylor
- Rich Rayhill
- Steve Quarles
- Sam Enfield
- Mike Azeka
- Winifred Perkins

To view the entire list of next steps, please see attachment U.