



December 19, 2008

Janet Lynn
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RE: Comments on *Draft Guidelines for Assessing the Potential Impacts to Birds and Bats from Wind Energy Development in Northern Arizona and the Southern Colorado Plateau*

Dear Ms. Lynn,

Thank you for the opportunity to review the Guidelines and provide feedback from the wind industry on the document. We appreciate that NAU has been proactive to develop the proposed document. As I am sure you are aware, the wind industry has been active in the development of policy to protect all species while producing energy that is clean and homegrown. As an organization that represents wind developers and manufacturers and many non-governmental organizations, we have reservations about the document and how it will be used. Attached are specific comments on the document by section.

Generally, we believe the document to be more of a comprehensive literature search than a guidance document, as each of the sections provides all possible study methods. From an industry perspective, unless further clarification is added, an all-encompassing voluntary guideline such as this will create confusion and uncertainty on what studies needs to be completed to assess and protect birds and bats at individual wind project sites. We are concerned that local communities and jurisdictional agencies may interpret the document to recommend that all studies be done in all cases. Conducting all studies at all sites would be impractical and imprudent and result in unnecessary cost and project delays. It is accepted practice that studies necessary are determined from the characteristics of a particular site.

We are also concerned about the region covered by the document. The Northern Arizona and the Southern Colorado Plateau region covers several states and suggesting guidelines that do not follow state boundaries may cause conflicts with existing state guidelines.

We hope you find the attached detail comments helpful. We look forward to seeing the next draft of the document. Please feel free to contact me if you have questions.

Best Regards,

Amanda Ormond

Amanda Ormond
Southwest Representative
Interwest Energy Alliance

**Comments to Northern Arizona University on
Draft Guidelines for Assessing the Potential Impacts to Birds and Bats
from Wind Energy Development in Northern Arizona and the Southern
Colorado Plateau**

Submitted by Interwest Energy Alliance
December 19, 2008

Preliminary Site Evaluation

- This section is appropriate however, the ability of a site screening and visit to identify species of concern and/or survey effort may be overstated. Many resources within the region are poorly understood and/or knowledge of species richness, migration patterns, etc. by biologists may be lacking. **We recommend this section be clarified to note that the site screening report generally indicates if there is potential for these species to occur, rather than confirming species present with a single site visit (unless existing data indicate the species or resource is present).**

Pre-Construction Surveys

- Lines 511 – 518. The authors do a good job of outlining the goals of pre-construction surveys. **However, the guidelines need to clearly state that the survey methods presented are not meant to be viewed as a “cookbook”, i.e. every survey listed in these guidelines do not need to be implemented on every project.** Rather, the methods described should be implemented where a need is identified during the preliminary site evaluation. This is not clearly outlined in this document.
- Line 646 – 655. The authors discuss the importance of measuring wildlife use of reference areas, and the BACI design. **The authors need to be clear that the BACI design is useful when trying to answer specific questions regarding how wind projects may affect wildlife populations.** For example, BACI designs are commonly used when trying to determine if breeding songbirds are displaced by wind development. However, BACI designs are not needed when pre-construction data is used to determine the potential raptor fatality rates at a wind project. Rather, data collected from a site of interest is compared to wind sites across the western US, to determine if raptor use levels are comparable to sites where raptor fatality rates are considered high.
- Line 679. Bird Use Counts. Many of the methods described here are similar to data collected at wind-energy facilities across the nation, which will allow data

- collected in the Colorado Plateau to be compared to information gathered at wind-energy facilities across the U.S.
- Line 687. Bird use survey count duration has varied between studies. However, 20 minute point counts have become the standard for comparing raptor and other bird use between wind-energy facilities across the west. The authors suggest utilizing 30 minute point counts. **We recommend that the document support 20 minute-point counts to ensure comparability between studies.**
 - Line 716 – 710. Breeding Bird Surveys. The authors recommend that breeding songbird surveys be conducted at all wind projects to determine if displacement impacts are occurring. Displacement impacts may not be considered to be of concern at all wind-energy facilities. **The authors should consider revising this section, to state that displacement impacts may not be a concern at every wind-energy facility. .**
 - Line 743. Point Count data analysis – The authors fail to mention the large amount of existing data collected at several projects across the nation. The real advantage of conducting the bird use surveys is to obtain a raptor or other bird use estimate, and compare the use estimate to data collected at other wind-energy facilities where raptor fatality rates are considered high. Thus far, raptor fatality rates have been correlated with raptor use rates at wind-energy facilities in the western U.S. (WEST, unpublished data). Fatality rates for other groups of birds (non-raptors) has been relatively low at other wind-energy facilities, compared to other sources of fatality, and have generally not been correlated with bird use estimates. **We recommend that this section be revised with reference to existing data on current projects.**
 - Line 771. Area Searches. The authors describe these as being useful for measuring bird use in areas not covered by point count locations. This section is written as if area searches should be conducted at every wind-energy facility. This type of survey may be useful where a specific concern has been raised (i.e. will the project impact rare species such as desert tortoise?). **However, the author should include a statement that this type of survey should not be conducted unless specific concerns are raised during the preliminary site evaluation.** Additional information regarding wildlife and sensitive species use outside of survey plots can also be collected as “incidental observations” while surveyors are traveling between survey plots.
 - Line 793. Raptor Nest surveys. The authors suggest that one of the purposes of raptor nest surveys is to collect data on nest location and productivity for use in post-construction surveys. Collecting nest productivity data in a BACI design may be appropriate if the impacts of a project on nesting raptors has been raised as a concern. This may be appropriate if a project is being proposed within an area containing high raptor nest densities. **However, this type of BACI design has**

- limited value in an area with low raptor densities or low raptor use. The authors should consider revising this section to state this.**
- Line 807 – 811. The authors suggest that surveys should be conducted up to ½ mile from turbines for small raptor species, and up to 3 miles for larger species such as golden eagles. **The authors should consider revising, to state that the area surveyed should vary with the goals of the study.** If the goal of the survey is to micro-site turbines away from raptor nest locations then the survey distance should be similar to the distance at which turbines will be moved from raptor nest locations.
 - Line 820. Crepuscular and Nocturnal Breeding Bird Surveys - This section appears to recommend that these surveys should be conducted at all wind-energy projects. **The authors should consider revising, to state that these surveys may be conducted where nocturnal breeding species has been identified as a concern or in areas known to concentrate migrants.**

Post-Construction Surveys

- Lines 1086-1094. The authors suggest that multiple years of post-construction monitoring should be conducted at all wind-energy facilities. **The authors should consider revising, to state that the need to multiple years of monitoring should be based on the results of pre-construction surveys** (i.e. is the area within a high use area for wildlife)? The need for multiple years of post-construction monitoring should also be based on the initial year of monitoring. **We recommend that the section be revised to state that if multiple years of post-construction monitoring are conducted, that the monitoring should not necessarily be conducted during consecutive years.** For example, monitoring during year 1 and year 4 after construction will allow vegetation to grow, which may affect the levels of wildlife use near a constructed wind-energy facility.
- Lines 1096 – 1114. The authors seem to suggest that wildlife use should be measured at all projects post-construction. **We recommend that the authors revise the section, to state that wildlife use may be monitored post-construction, if a concern is identified.**
- Line 1154 – 1160. The authors suggest that search intervals should be between 1 – 7 days. **The authors should consider revising, to state that search intervals should be determined based on the goals of the study, and the removal rates observed within the project area.** Areas where carcasses are removed less frequently can be searched at longer intervals.
- **As an addition to the report we recommend the authors consider suggesting long term operational monitoring by wind facility personnel. These are not standard searches, rather, wind plant personnel report any fatalities found during the normal course of operations.** While this type of monitoring does not

allow for the estimation of fatality rates, it does allow for the detection of unexpected large levels of fatality during the life of the wind-energy facility. This is consistent with the objectives of post-construction monitoring, as described in lines 1058- 1061. Long term operational monitoring, when combined with an initial year or two of a standard fatality study, may decrease the need for long term standard fatality studies, which can be expensive.

- Line 1284 – 1286. **We suggest also citing Erickson, W.P., J. Jeffrey, K. Kronner, and K. Bay. 2004. Stateline Wind Project Wildlife Monitoring Final Report, July 2001 – December 2003. Technical report peer-reviewed by and submitted to FPL Energy, the Oregon Energy Facility Siting Council, and the Stateline Technical Advisory Committee.** This report provides a good example of a fatality study at a wind-energy project, and is available at www.west-inc.com.

Bats

Overall, we believe this section could be more focused, and the authors could provide more support for when (under what circumstances) and why (supporting references) surveys should be conducted. Below is a list of specific comments.

- Lines 917-923. This paragraph supports use of mist-net surveys in addition to acoustic surveys. The main reason cited is to better grasp species richness. Determining species richness should not necessarily be a goal of pre-construction surveys at all wind-energy facilities. If there is reason to suspect that a particular species of interest is present, mist-netting can be used to confirm species presence, but mist-netting is rarely worth the time and money in the context of impact assessment. **We recommend that the authors revise this section to clarify when these studies should be conducted.** Studies in other parts of the US have shown that the species and abundance of bats captured at wind-energy facilities do not reflect the numbers or species of bats found as fatalities at wind-energy projects.
- Lines 940-942. The authors state that detection systems are designed to identify bats. They might mean that they are used to identify bats from, say, insects, but the wording is ambiguous and could easily be misinterpreted to mean that bats, like birds, can be identified to species by their calls. This is not always true, even with good quality calls, which are themselves the minority of the data that are collected. **Revisions should be made to clarify the purpose of detection systems.**
- Lines 928-929. Suggested period for monitoring seems reasonable.

- Lines 948-970. The authors recommend utilizing portable towers when met towers are not available. This is very costly, very labor intensive, and the towers are subject to falling down during high winds, etc. **We suggest deleting this recommendation**
- Lines 972-981. This whole section needs to be expanded and made clearer. The authors have melded the idea of active sampling while netting with active driving transect sampling - two very different approaches yielding very different data. **The driving transect idea is reasonable, but the authors need to more fully describe the methods and make it clear how much might be necessary, for how long, and how the data might be used.**
- Line 988. The authors state the difficulty in species ID and suggest grouping based in frequency. We agree with this statement.
- Lines 992. The authors suggest categorizing calls into feeding buzzes. We don't feel that's necessary or enlightening. Feeding buzzes are notoriously hard to capture with acoustic monitoring, so the metric is likely to be misleading. **We recommend that the authors delete this suggestion.**
- Lines 997-998. Mention of 2 bats that "echolocate at frequencies not often detected by acoustic equipment." That's false. They echolocate *quietly*, and are therefore difficult to detect acoustically, but their frequencies are well within the range of the Anabat.

Risk Assessment and Avoidance

- Line 1292 – 1295. The authors suggest that the relationship between pre-construction risk assessment and post-construction fatality is unclear. This is true for bats, however, several studies examining this relationship for birds have been conducted across the U.S., including several studies in the western U.S. Thus far, projects with the highest raptor use rates have also shown the highest raptor fatality rates. **While additional research will better define this relationship, the authors should acknowledge the existing research that has been conducted in the western U.S., much of which is available in public reports.**