STATE OF CALIFORNIA
ENERGY RESOURCES CONSERVATION
AND DEVELOPMENT COMMISSION

Development of Statewide Guidelines for Reducing Wildlife Impacts from Wind Energy Development	)))	Docket No. 06-OII-1 Developing Statewide Avian Guidelines

COMMENTS OF THE
CALIFORNIA WIND ENERGY ASSOCIATION
ON WORKSHOP #2 TOPICS

The California Wind Energy Association ("CalWEA") appreciates this opportunity to provide written comments on the issues and questions posed for the August 28-29, 2006, workshop on wind siting guidelines. We appreciate the two-day extension of time granted to us by Rick York.

These comments elaborate on the comments made by CalWEA representatives at the workshop and reflect the perspective of our consultant Dr. James Newman of Pandion Systems. Dr. Newman is Vice President and Principal Scientist at Pandion Systems. He holds a PhD in Zoology from the University of California at Davis, and has over 30 years of experience in environmental assessment studies, ecological research, wildlife management, and natural area evaluations.

Before addressing each of the specific questions posed at the workshop, we provide general comments, some of which are in response to the discussion at the workshop.

I. GENERAL COMMENTS

A. Guidelines should be developed that reflect the various and evolving characteristics of wind turbine projects in California.

These characteristics include:

1. Wind projects in California have different engineering characteristics including size of the turbines, number of turbines, alignments, construction and operational conditions. These engineering characteristics have and will change over time.
2. Some project areas in California have similar avian and bat resources and can be compared, while others do not.

3. There are various existing ecological descriptions (literature, unpublished reports, data bases, completed studies, etc.) that may be useful in providing baseline information that can be used in pre-construction studies for a given WRA, and this base of information is growing. Moreover, the guidelines should not discount the use of previously collected data, e.g., on migration patterns or species occurrence. Such data (even if collected a decade or more in the past) can be as useful and valid in assessing significance as newly collected data. This older information can often be validated by field reconnaissance studies that confirm conditions reported in earlier studies

B. Guidelines should be set in the context of CEQA and the steps a "lead agency" makes in determining the proper level of CEQA review

The guidelines should recognize that CEQA provides several vehicles for compliance that do not involve significant pre-project surveys or analysis where it can be shown that the project will not have a significant impact on the environment (discussed further below). The CEQA Guidelines set forth classes of projects that are generally deemed to qualify for a categorical exemption or which may be approved on the basis of a negative declaration. See, for example, CEQA Guidelines 15300 et seq. (categorical exemptions) and Guidelines section 15070 (negative declarations). The CEC Wind Siting Guidelines could establish certain size and other criteria for wind projects that would encourage local lead agencies to use categorical exemptions and negative declarations for certain categories of projects, described below, where impacts can be expected to be less than significant. Categorical exemptions and negative declarations use a check-list approach to determine whether a project may have a significant impact on the environment. If it can be shown that no significant impact would occur, site-specific pre-construction surveys would not be required.

C. "Significant impact" should be defined as a biologically significant impact on a species, not on individuals of a species

The guidelines should recognize that CEQA already defines "significance" with respect to impacts to biological resources. (See Mandatory Findings of Significance under CEQA Guidelines section 15065, and CEQA Guidelines Appendix G criteria.) These criteria define significance with respect to an activities' impact on *special status species*--and not on individual members of a special status species. Further, the species-based impact must be "substantial" in order to rise to the level of CEQA significance. "Substantial numbers" of an endangered species must be affected, not just a single individual. (CEQA Guidelines section 15065.) A project could also create a significant impact if it were to substantially interfere with a migratory wildlife corridor. (CEQA Guidelines, Appendix G.)

It is important to keep in mind that an impact is not automatically "significant" on the grounds that it is prohibited to "take" a certain species protected by law. The CEQA analysis of significance is not a legal analysis but a biological analysis. For example, it may be prohibited to kill any bird protected by the Migratory Bird Treaty Protection Act,

but this does not mean that the incidental kill of such a protected bird is necessarily biologically significant under CEQA. One must look at the incidental kill in terms of overall abundance of the species.

In some instances, it is possible to make a scientifically defensible determination of less than significant impact without detailed site-specific field studies, such as where the data for the WRA as a whole shows low or no mortality rates associated with special status species such that population-based impacts can be ruled out, or where the project's impact will be self-limited by its size. It is also possible to make decisions when there is uncertainty regarding population size where the magnitude of the impact is orders of magnitude lower than recognized population estimates. For some rare species, population sizes are relatively well known.

In our August 11 comments on Workshop #1 topics, we provided examples of projects that should be encouraged to be developed without detailed pre-construction surveys. These projects, which we will refer to as "covered projects," should be eligible for categorical exemptions or negative declarations. Covered projects should include:

1. A small new wind project of less than a certain size that is not located in a sensitive area, such as a designated wildlife area as determined by the local agency, or state or federal law;

2. Projects of any size in developed and defined WRAs where impacts have been determined to be less than significant (e.g., Riverside Co.);

3. Sites where sufficient existing information is available to make a determination of non-significant impact. For example, there may be sufficient existing information on species occurrence and abundance and exposure conditions, or post-construction monitoring may have taken place in nearby sites where habitats and avian populations are similar and impacts to the species as a whole have been shown to be less than significant.

4. New wind projects between X and Y in size, located in an established wind resource area that has been the subject of an Environmental Impact Report prepared within the last five years.

5. Replacement or reconstruction of existing wind turbines that do not increase nameplate capacity by more than 25% or which either decrease, or do not increase the footprint of the existing wind project, and where studies have shown no indication of significant impact or where mortality is expected to be reduced.

D. Wind should not be held to a higher standard than other structures and energy industries

In drafting the guidelines, care should be taken to consider whether actions are being required or suggested for proposed wind projects, especially those not considered

to have significant impacts, that are not imposed on other structures, particularly energy-related structures, such as stacks and cooling towers, that contribute to bird and bat mortality. Although the wind industry strives to minimize avian/bat impacts, holding wind projects to a higher standard than other energy facilities are held to with regard to their various environmental impacts could inadvertently constrain an energy source with far lower environmental impacts overall.

In addition, when little is known about a particular species in general (such as bats), wind project developers should not be expected to fill the research void in the absence of any indication of a significant problem. While individual wind project owners may well be willing to participate in research projects, this should complement publicly funded research, not substitute for it.

E. The Guidelines should not subscribe to undocumented theories

The notion that songbirds virtually disappear upon impact with a wind turbine has received considerable play in these discussions. We do not agree that evidence of songbird mortality can completely disappear, especially since the carcasses of very small birds are in fact found. Even if one did ascribe some mortality to "poofing," mortality of *individual birds* is not itself evidence of a biologically significant impact under CEQA. The analysis should be on a *species basis* rather an individual bird basis. Wind turbines do create some incidental bird and bat mortality. There is no evidence to date that any of this mortality rises to the level of a significant adverse impact on any *species.* In any case, the guidelines should accord no import to theories unaccompanied by any substantiation or support in the academic community.

II. RESPONSES TO WORKSHOP QUESTIONS

A. Pre-permitting Diurnal Bird Monitoring

General Comments:

The term "pre-permitting" might suggest to some that studies have to be completed prior to starting (or completing) the permitting process; however, it could be that certain studies should be allowed to proceed up to the point of construction. A better term would be "pre-construction."

This topic seemed to focus on resident birds. Raptors are diurnal migrants.

1. Should the guidelines recommend a "model" (or multiple models depending on site conditions) or "standard" (default) pre-permitting study effort? What should the duration, intensity, and frequency be?

Because of the varied characteristics of wind projects in California, no single "model" or "standard" can be appropriately recommended. One size does not fit

all. The studies that are necessary will depend on what information is already available, what the conditions are at the site, and what is required to make a CEQA determination. Adopting a "default" course of study could be misinterpreted such that more or less study than is appropriate is required.

However, if the guidelines were to include a set of "covered projects" (discussed in section I.C above) for which categorical exemptions or negative declarations would be recommended, it becomes easier to develop a default course of study for projects that are not covered, within a stepwise process or decision-tree approach to developing pre-construction information for a particular project site. The default course of study should still, however, recognize the need for different approaches depending on data needs and data gaps at a particular site. The framework for such a decision-tree approach would then be:

i. Is the project a "covered project"? If so, the project would not require pre-construction surveys and could be eligible for either an exemption or a negative declaration.
ii. Identify what avian, bat and other ecological information is needed to make a decision of CEQA significance: what types of special status species are present? What are the habitat relationships? And what are the species abundances within these habitats? Abundance information does not necessarily need to be presented as absolute abundance but can be presented as relative abundance information.
iii. Collect existing ecological information that may be available and applicable to the site.
iv. Conduct site reconnaissance to validate the existing conditions as characterized by the existing information.
v. Based on ii-iv, identify what kinds of more detailed pre-construction studies, if any, need to be conducted to determine whether mortality is expected to be biologically significant. (It is at this point that specific approaches could be recommended based on the engineering and ecological conditions at a site, and the specific information needs for a given project site.)

2. **When and why is a study beyond the "model" or "standard" study effort needed?** Not applicable because a "one-size fits all approach is not recommended. See #1.

3. **When and why is less study beyond the "model" or "standard" study effort needed?** See #1.

4. **Which permitting methods provide the best value in terms of effort expended and birds saved? Should studies focus mostly on these kinds of cost-effective methods?** Studies can be related to costs but we do not believe such costs can be directly related to birds saved. Moreover, studies should be designed and performed as necessary to provide the information

needed to make a decision of CEQA significance. If sufficient information has been gathered to make a determination of less than significant impact (or to support the mitigation plan for a significance determination), further studies are not cost-effective because they do not inform the CEQA decision-making process.

5. **What techniques can be most readily compared to other pre-construction studies in other states and elsewhere around the world?** Comparisons are difficult because some studies are more appropriate in one situation than another. Point counts have been discussed as a common method for determining bird abundance in various ecological studies. If point counts at different sites utilize the same methodology, they can be used as a relative measure of abundance, enabling the development of a risk relationship between exposure (abundance) and effects (mortality) which could be used to compare a developed site to an undeveloped one. But point counts are not always necessary; there are other ways of determining abundance. It was pointed out during the meeting (by Dick Anderson) that the more mortality information we obtain, the better we will be able to correlate mortality with abundance.

6. **Which species in California are known to be at greatest risk from wind development? What are the best ways to minimize risk to those species?** We generally agree with the presentation that Dick Anderson made on this topic. There will always be some avian mortality associated with wind farms. Mortality should be considered less than significant unless it can be shown to have substantial adverse impact on a special status species as a whole. Comparisons of greater or lesser risk for particular bird groups and species can be derived from mortality data from different projects assuming the mortality monitoring protocols are the same.

   There are four categories of measures to reduce the risk to birds from collisions: avoidance of extremely sensitive sites; minimization of impacts to a less-than-significant level at sensitive sites (e.g., modifying turbine location); mitigation of any unavoidable significant impacts; and best practices that can be employed to minimize mortality at all sites (e.g., avoid using sodium lights). A combination of these measures is generally considered for each wind project.

7. **What pre-permitting study methods are most useful in aiding modern siting techniques?** Study methods themselves are not what are useful. The information gleaned from pre-construction studies on avian and bat characteristics can aid siting. As Kenny Stein noted at the workshop: there are two levels of siting: macro siting and micro siting. In macro siting, the goal is to find a potentially suitable WRA using general screening criteria to determine any "fatal flaws." For a developer, "fatal flaws" include the likelihood that an application will be denied, an extremely long permit

approval schedule, and/or costly pre-construction and/or post-construction monitoring. These siting criteria include not only wildlife issues but also wind resource potential, proximity to transmission lines, land owner acceptance, etc. For micro siting of turbines within a project area, more detailed information is required if it is determined that the level of risk will vary within the project area. These methods are likely to include overlaying the wind resource maps and habitat maps used to identify areas of higher and lower bird use and abundance. Other factors must also be considered, including visual impacts, construction constraints, etc.

Pre-permitting Migratory Bird Monitoring

Note: At the workshop, the discussion focused mainly on nocturnal monitoring, especially for waterfowl, passerines, etc. Raptors are diurnal migrants and there was limited discussion on methods to characterize diurnal migrating raptors.

1. **What circumstances might require a detailed assessment of migratory bird passage?** As we have discussed above and in our previous comments, whether a detailed assessment is needed depends upon what is already known about the site from direct and indirect information about the site, and the remaining information gaps that need to be filled, if any.

2. **What techniques are appropriate to quantify numbers and altitude of migratory birds?** Dick Anderson gave a good overview of this issue in his presentation.

3. **Would a map of bird migration corridors in California be useful in assessing risk?** Because of the problems of scale and lack of precise location of "corridors" for a given species, such maps will not be useful for many site-specific assessments. Scientifically developed maps may be useful for broad screening for birds, e.g., a spatial depiction of potentially higher and lower migratory areas, but not for determining the impact of a potential project. For example, it is possible to have a project in a "broad front" migration corridor without significant population impacts. On the other hand, corridor maps could be useful for projects that are clearly outside of known migratory corridors.

Operational Monitoring

1. **What study techniques have been most effective predictors of avian activity and mortality?** There are numerous organizations which have devoted time to study techniques. These include the National Wind Coordinating Committee. In particular, the Wildlife Workgroup has focused on this issue for several years. See the following NWCC wildlife website: http://www.nationalwind.org/workgroups/wildlife/.

   In particular look at the following NWCC publications entitled:

Wind Turbine Interactions with Birds and Bats: A Summary of Research Results and Remaining Questions, November 2004.

Proceedings of Wildlife Research Meetings: Proceedings of Wildlife Research Meeting V, November 3-4, 2004 - Lansdowne, VA.

Risk Assessment Methods: Draft Ecological Risk Assessment White Paper, April 3, 2006.

The CEC has referenced the Canadian documents on this issue as well.

2. **Are there circumstances in which no operational monitoring would be required for a proposed wind energy site?** Yes. Operational monitoring should be necessary only where there is uncertainty surrounding the initial determination of less-than-significant impact, i.e., to confirm the determination or, if significant impacts are found during operational monitoring, to develop mitigation measures. No operational monitoring should be required where there is confidence in the determination of less than significant impact or with turbine replacements, repowering, etc., where the impacts of the original project were determined to be less than significant. In addition, operational monitoring may not be needed when a determination of significance was made, but acceptable mitigation measures were adopted.

   As we noted in our August 11 comments, however, it may be appropriate in some cases (e.g., in WRAs with large undeveloped areas that will be subject to substantial development, such as Kern County) for initial projects to conduct one-year post-construction mortality surveys to confirm (or not) that predictions are correct. If one-year data shows potentially significant effects, an additional year (or two) of monitoring should be conducted. This one-year recommendation assumes that extremely different environmental conditions, e.g. fire, weather, etc. significantly affecting bird exposure conditions on a site have not occurred. If extremely different environmental conditions have occurred and are suspected of affecting bird exposure conditions during the monitoring year, then an additional year of monitoring may be appropriate if there is concern about significant adverse impacts. It should be recognized that there are statistically valid techniques to develop confidence limits for the monitoring data for purposes of comparing one year to the next, and that these comparisons can support decision-making without necessarily conducting additional monitoring.

3. **Under what circumstances might operational monitoring need to be continued indefinitely? At what point is there a diminishing return and limited wildlife benefit in continued studies?** We cannot envision any circumstances for indefinite monitoring. There may circumstances where operational monitoring is continued because of some unpredicted mortality event which is considered significant.

4. **Is there a point at which the responsibility for post-construction monitoring should shift to a public rather than private responsibility?** Yes--when the monitoring is for research use, not compliance.

5. **Are there circumstances in which monitoring reports should not be available to the public?** Any monitoring that is required as a condition of the permit (presumably because the lead agency wants to confirm non-significance) will presumably be part of the public record under CEQA.

6. **Should monitoring reports include raw data (i.e., field data entered into a database such as Access)?** Yes, the raw data should be provided in any reports required by the lead agency.

7. **Should wind energy sites offer some level of open access to outside parties for follow-up studies? Should the guidelines provide recommendations on how to develop agreements with project owners for such access?** Providing public access presents liability concerns and potential conflicts with operation and maintenance activities. It may be appropriate to provide access to sites for researchers performing publicly funded studies carefully designed to produce scientifically valid results.

8. **Would a clearinghouse or centralized database of California wind/wildlife monitoring reports be useful? How should it be organized (by county, region), and what agency would maintain it?** Yes, such a database could be useful in concept, but its purpose and proper use would need to be determined.

Bat/Wind Turbine Interactions

1. **How applicable are bat/wind studies from other regions for California?** There are no unique circumstances with bats compared to birds that would dictate any unique applicability of studies from other regions. Applicability of studies with bats will have the same general constraints as with birds. See responses for pre-permitting monitoring.

2. **What features of a site indicate that detailed bat studies would be required (e.g., proximity to known maternal colonies)?** The answer to this question is ultimately related to the determination of CEQA significance. If it is determined that the effects to bats would be significant, then detailed studies might be required if the information for determining significance cannot be obtained from existing information.

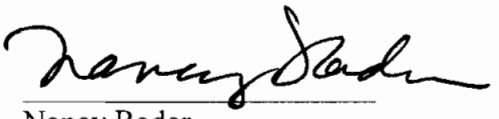
   There are a number of site features that are important to bat abundance including such conditions as presence of water, distance to hibernacula, etc. Information on the nature of these and other features would be used to evaluate significance.

Also see our comment D in section I, above.

3. **Would year-round pre-construction acoustic be warranted at such sites, or only during peak migratory periods (August – October)?** No. In California, there are seasons, e.g. winter, when bat migration does not take place. Any monitoring, acoustic or otherwise, should occur during periods of highest activity in the spring and fall and/or during the reproductive period.

Thank you for considering these comments. We look forward to participating in the next workshop to further discuss these issues.

Respectfully submitted,



Nancy Rader
Executive Director
California Wind Energy Association
2560 Ninth Street, Suite 213-A
Berkeley, CA 94710
(510) 845-5077
nrader@calwea.org

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