

**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 Clean Energy States Alliance
On Staff Workshop #3**

These comments are submitted on behalf of the Clean Energy State Alliance (CESA) and respond to the specific questions identified in the Agenda for the Staff Workshop #3.

CESA is a non-profit, multi-state coalition of state clean energy funds and programs working together to develop and promote clean energy technologies. CESA seeks to identify and address barriers to the development and growth of viable renewable energy resources in the United States.

September 27, 2006 Discussion Questions

1. When should the lead agency require compensatory mitigation? When should the lead agency require post-construction monitoring?

In this early stage of understanding the effects of wind projects on wildlife, there should be a presumption in the guidelines that some post-construction monitoring will be required for each new project. In general, the extent and duration of post-construction monitoring recommended by the CEQA lead agency should be based on the level of risk determined by the pre-construction studies. For example, where pre-construction studies are uncertain or indicate a high potential of mortality, one to three years of post-construction monitoring should be recommended to identify the potential need for both minimization mitigation measures.

Compensatory mitigation may be appropriate where there will be direct loss of significant, critical habitat by the physical footprint of the facilities. However, the lead agency generally should not require compensatory mitigation upfront for potential operational mortality effects. Until post-construction monitoring has occurred and there is documentation of unforeseen and/or larger than expected fatalities, the amount and the nexus between impacts and compensatory mitigation is difficult to reasonably establish or predict.

If post-construction monitoring and evaluation of the data by a technical advisory committee finds, however, that a project is causing significant impacts, as defined by CEQA, and feasible on-site mitigation measures prove unsuccessful, then compensatory mitigation may be warranted

in those circumstances where making further operational changes are not feasible or economically viable for the project (e.g., shutdowns or turbine removal). That is, compensatory mitigation should only be required after employing all feasible pre-construction avoidance/minimization measures and post-construction on-site mitigation measures to reduce impacts.

The type and amount of compensatory mitigation necessarily will be a site-specific determination, as justified to satisfy state wildlife laws and CDFG adaptive management objectives for the species affected. The guidelines should not attempt to identify a specific formula for compensatory mitigation. It may be useful, however, for the guidelines to identify recommended general approaches for compensatory mitigation (such as use of mitigation banks, mitigation funds, etc.) to be considered by a technical advisory committee and the CDFG.

2. What is the appropriate role for CDFG and USFWS to assist lead agencies in determining if data from other studies are applicable and adequate?

Due to the expertise and wildlife trust responsibilities of CDFG, the guidelines should recommend that lead agencies solicit input from CDFG in a timely fashion to determine if the proposed project's plan of development, pre-construction data, and proposed monitoring plan are consistent with the guidelines. To reduce staffing resources and inconsistency, however, CESA recommends that CEC and CDFG pursue a memorandum of understanding with the USFWS that confirms that the USFWS finds that the California guidelines reflect a rigorous approach to ensuring compliance with the MBTA, and that the USFWS will defer to California's primary role in addressing this issue, subject to unforeseen mortality effects and significant violations of the MBTA.

3. What criteria should be established for using pre-existing information for impact determinations, including deciding if a categorical exemption is appropriate?

The guidelines should establish that use of pre-existing information in lieu of pre-construction studies may be adequate if there are recent studies available from other projects (including studies of existing wind facilities) in comparable habitat types in locations close to the proposed project and the likelihood of impacts to species of concern is low.

4. How much discussion should the guidelines include about impacts due to habitat loss?

It is CESA's sense that the ability to assess and make regulatory decisions regarding the type and degree of direct impacts from habitat loss caused by proposed wind facility development is much better established and reliable than predicting mortality impacts from operations. Also, we believe that the ability to avoid and minimize these direct habitat impacts is more certain and readily achievable by use of well-established siting best practices. Therefore, this type of impact should receive much less focus in the guidelines.

5. How do the displacement and disturbance impacts due to wind energy development in California compare to other states and countries?

CESA has no information or perspective to offer.

6. What are the necessary steps to develop a cumulative impact analysis and what should the scope of analysis be?

A developer of a utility-scale wind project should be asked to examine the expected cumulative effects that the project will have on wildlife – the change that results from the incremental impact of the projects when added to other closely related past, present, and reasonably foreseeable probable future projects, per CEQA sec.15355. However, there is a great degree of uncertainty related to the significance of mortality effects of modern turbines on birds and bird populations and whether multiple turbines in an area will lead to an increase in bird mortality or loss of habitat function. Therefore, credible assessment of cumulative impacts from wind projects should be a priority area of PIER research.

That said, the guidance should recommend that project proponents and lead agencies consider what surrounds the proposed site and what reasonably foreseeable future projects can be expected in a defined geographic area that may have significant adverse effects on avian and bat species. Factors that should be assessed include:

- The cumulative amount of disturbed habitat relative to the amount of intact undisturbed habitat in the surrounding area;
- The estimated amount of current and additional mortality due to the presence of tall towers, buildings, power lines and wires and roads;
- Other major activities or development projects that may attract birds (reservoirs, landfills, etc.);
- The presence of lit structures nearby which could attract birds to the area.

7. How much detail should the guidelines provide on risk assessment protocol?

While CESA endorses the concepts inherent in a standard risk assessment framework, no such structured and verified model has been developed for risk assessment for wind and avian species. The National Wind Coordinating Committee’s Wildlife Workgroup has developed a paper on the potential value of using a general framework called “Ecological Risk Assessment” for development of a specific risk assessment guidance document for application in conducting wildlife risk assessments at wind facilities. However, apparently this work has not progressed beyond the initial description of how a general risk-based decision framework has been used in other environmental management areas.

Developing such a risk assessment tool in the avian/wind context will require significant resources and time to select specific stressors, assessment endpoints (explicit expressions of environmental values that are to be protected and are the subject of the risk assessment), measures of exposure, measures of effects, and the selection of individual animal risk measures versus population-level risk measures. Assessment endpoints typically are developed based on

policy goals, societal values, susceptibility of the species, and practical considerations. In addition, most risk-based decision frameworks are developed through the review and involvement of multiple stakeholders. Therefore, it does not appear practical for the initial guidance document to employ a sophisticated risk assessment tool at this time.

In light of this reality, CESA makes two recommendations. First, the guidelines should establish recommended pre-construction and post-construction monitoring protocols that would constitute a lower-tiered risk assessment strategy. The information generated from the use of these protocols by wind projects then can be used in a feedback loop to inform the development of a more refined risk framework. Second, a priority for PIER research should be to work with the NWCC to develop a higher-tiered assessment framework and risk assessment guidance document, based on long-term monitoring studies and extensive modeling.

8. What kind of data from other studies could be included in the guidelines to assist in evaluating potential impacts?

CESA has no particularly strong perspective on the merits of including study data in the guidelines. However, to facilitate use of the guidance by local agencies and wind developers, it may be useful to keep the actual guidance protocols concise and focused, and provide a link to a central website for review of all study information and avian impact reporting that is conducted pursuant to the guidance.

9. How much analysis should pre-permitting studies include on potential risk to populations due to wind energy development?

Pre-permitting studies should focus on potential risk to populations. CESA believes that, as a policy matter, the risk assessment goal for determining study needs and subsequent compensation (if necessary) should focus on the determination of effects on a population from an observed rate of mortality. A population is an appropriate measure of effect because of the potential cumulative effect of wind development with other development stressors on avian species. This, however, may require a population model for species of concern or at risk. It may be useful to direct some PIER research to the development of population models, if not currently available in California wind resource areas for local populations or for groups of species that are expected to respond to turbines in similar ways.

10. How should Ecological Risk Assessment be used to evaluate potential impacts to bird and bat populations?

See response to question #7 above.

11. What type of ongoing forum would be useful to receive comments to improve survey protocols and mitigation recommendations?

It may be useful to retain the science advisory committee, as currently constituted, to review and make recommendations for protocol revisions to CEC and CDFG once per year, at least during the early years of guidance application, with provision for a public workshop to consider

comments from all stakeholders and monitoring results. However, frequent revisions to the guidance should be discouraged, unless mortality results indicate that the protocols and recommended mitigation approaches are inadequate.

12. How should knowledge advances from PIER research be incorporated in revised guidelines?

Again, the science advisory committee may be a useful forum for reviewing the implications of PIER research and making recommendations to CEC and CDFG on how the guidelines should be revised based on PIER findings.

September 29, 2006 Discussion Questions

1. Evidence that new, larger turbines reduce collision impacts.

CESA has no information or evidence to offer.

2. What elements of turbine design/siting can be changed during the pre-permitting phase of development to reduce predicted impacts to birds and bats?

The following elements of turbine design can be changed during the pre-permitting phase:

- Minimize all lighting and avoid steady-burning or other bright lights
- Bury all power lines
- Configure turbines to avoid creation of barriers to bird movement to the extent feasible
- Minimize motion smear
- Avoid landscape features known to attract raptors, if pre-construction studies show significant risk to raptors
- Locate turbines in the least environmentally sensitive habitats
- No development in riparian zones and wetlands
- Avoid placing turbines near known bat hibernation, breeding, and maternity colonies, and in known migration corridors,

3. Are there examples where information about site characteristics influenced turbine siting?

CESA has no information to offer.

4. What kinds of Best Management Practices, general guidance on turbine design, and other generic avoidance measures have been useful on past projects and should be included in the guidelines?

CESA believes that the identification of best management practices to mitigate (avoid and minimize) wildlife impacts should be a primary objective and central approach of the guidelines. The guidelines should recommend that a wind facility plan of development incorporate the

standard BMPs – and additional mitigation measures as recommended by the Department as appropriate to address site-specific and species-specific issues. The guidelines could establish a presumption that incorporation of the BMPs in a project plan satisfies a lead agency’s duty to avoid or minimize environmental damage to wildlife under CEQA, unless pre-construction information indicates that a project will have a substantial adverse effect on a special status species or interfere substantially with the movement of any native or migratory wildlife species.

CESA’s BMP recommendation is based on the fact that BMPs are being employed successfully by several agencies, in this country and in Canada, in the wind/wildlife context. The Commission and Department should examine the best management practices recommended by the following agencies in the documents identified below, for suitability in California. **The Commission and Department also should ask for specific responses from the California wind industry representatives participating in this Docket regarding the feasibility of applying these BMPs to their projects in California.**

BMPs that should be considered for inclusion in the California guidance include:

- *The BLM Wind Energy Development Program Policies and Best Management Practices, for Wildlife and Ecological Resources in Plan of Development Preparation, Construction, and Operation phases. See BLM Record of Decision, Implementation of a Wind Energy Development Program and Associated Land Use Plan Amendments, December, 2005.*
- *Avian Protection Plan Principles, Avian Power Line Interaction Committee, Avian Protection Plan Guidelines, April 2005. See www.eei.org/industry_issues/*
- *Site Selection and Design Considerations, Environment Canada, Wind Turbines and Birds: A Guidance Document for Environmental Assessment (2005).*

5. How can lead agencies establish an effective mechanism for implementing post-construction mitigation?

A requirement that a developer post a modest bond may serve as an effective mechanism to ensure post-construction monitoring is undertaken.

6. Are there examples of successful implementation of seasonal shutdowns or other operation mitigation to reduce collision fatalities?

CESA has no information to offer.

7. How can mitigation options be structured to provide certainty for mitigation implementation and some certainty for financial risk for wind developers?

While it is reasonable to expect wind projects to make changes as practical to minimize bat and bird mortality, imposing significant operational changes and post-construction compensation requirements present a factor of uncertainty that could render many projects infeasible and

frustrate achievement of the California RPS goals. Wind projects are financed on the basis of future performance. Introducing the possibility of substantial alteration of the operational model and substantial mitigation costs after construction is a significant deterrent to investors, and would make any wind project a risky venture.

CESA has several recommendations to address this tension.

At a minimum, the guidelines should recommend that a developer prepare a mitigation plan as part of the plan of development. The plan would serve to provide some level of certainty for the lead agency and for the developer. The plan should include at least the following:

- Identified actions in each mitigation plan should be phased or graded in their implementation to be proportionate to the observed effects and probability of effectiveness in reducing unexpected effects.
- Measures that the applicant will take to monitor, minimize, and mitigate for impacts
- Funding that will be made available to implement such measures
- Procedures to deal with unforeseen or extraordinary circumstances
- The plan should define and bound the operational limitations or costs associated with the mitigation actions.
- The mitigation plan should favor on-site activities over offsite activities.

Beyond this concept of requiring a mitigation plan, CESA further recommends a more performance-based approach, based on the Avian Protection Plan guidelines used by the utility industry in the power line context. Under these recently published Guidelines, a utility is responsible for preparing and tailoring an avian protection plan (APP) that will best fit their needs while furthering the conservation of avian species, reducing avian risk, and risk of enforcement under the MBTA. An APP is a utility-specific document that specifies a program designed to reduce the operational and avian risks from electric utility facilities. Although each utility's APP is different, the overall goal of all APPs is to reduce avian mortality. Each APP must incorporate a series of principles, including corporate policy, training, permit compliance, construction design standards, an avian mortality reporting system, risk assessment methodologies, mortality reduction measures, avian enhancement options, quality control, and public awareness. Once an APP is established, it provides clarity on the utility's obligations for mitigation implementation, internalizes the utility's financial obligations to wildlife protection, and provides the utility with some certainty about the financial exposure to future mitigation commitments.

In the wind development context, the California guidelines could recommend that each project proponent develop an avian protection plan as a part of the development plan. The APP would include:

- a plan for how the company will comply with state wildlife laws and the MBTA,
- an avian mortality reporting system,
- a mortality reduction plan, including proposed operational changes to be considered if post-construction monitoring indicates unexpected mortality,

- an avian enhancement plan to enhance avian populations or habitat in the local area if unexpected mortality occurs and all feasible operational changes have been made per the mortality reduction plan,
- commitment to timely implementation of remedial measures,
- consultation with appropriate agencies to report, identify, and remedy causes of mortality.

8. How much detail should the guidelines include on mitigation options?

As discussed above, CESA believes that the guidelines should provide detailed recommendations for best management practices for avoiding and minimizing impacts to avian and bat populations. A plan of development that incorporates these BMPs should be provided a presumption that it will not have significant effects on these species and is consistent with state wildlife laws, subject to the results of monitoring indicating unexpected mortality. See recommendations for BMPs above under response to question #4.

However, the guidelines should not attempt to prescribe the amount and type of compensatory mitigation that may be required. Rather, the guidance should endorse a menu of compensation options that may be considered by lead and wildlife trustee agencies in the context of enforcement or ensuring compliance with permit conditions. Approaches that should be endorsed depending on the species and significance of mortality include: preservation via acquisition or conservation easements of existing like-kind habitat; enhancement or restoration of degraded or former like-kind habitat, contributions to wildlife banks, and contributions to regional and statewide mitigation funds.

9. How can the guidelines provide guidance on determining the nexus between impacts and compensatory mitigation, and the amount of mitigation?

Until post-construction monitoring has occurred and there is documentation of unforeseen and/or larger than expected fatalities, the amount and the nexus between impacts and compensatory mitigation are difficult to reasonably establish or predict. Therefore, CESA believes that compensatory mitigation decisions will need to be made on a case-specific basis, often in an enforcement context, when there has been unexpected and unacceptable mortality and feasible operational changes are exhausted. It is not possible to identify a one-size-fits-all formula for compensation.

However, see discussion below about possible merit of using a pre-construction Habitat Conservation Plan as employed by the federal Endangered Species Act to address compensatory mitigation.

10. Should compensatory mitigation programs be established on a county/regional/state level?

There should be a preference for directing compensation to benefit local wildlife populations affected by the facility.

11. When is it acceptable for compensatory mitigation to include an option for contributing to research fund?

CESA does not have a strong perspective on this question, but, in general, mitigation, as governed by various environmental laws and regulations, is required to have a direct nexus to offsetting the environmental loss, here wildlife or habitat loss, rather than to fund general research.

12. What compensatory mitigation models would be appropriate for wind energy mitigation?

The compensatory mitigation models and menus established under the federal Endangered Species Act may be applicable and appropriate for use in the wind development/wildlife context.

In particular, Habitat Conservation Plans (HCP) as used by Section 10 of the federal Endangered Species Act provide an interesting model for consideration in the context of the California guidance for addressing compensatory mitigation (see in particular, the Central Coastal Orange County HCP as an example of an overall plan to achieve long-term biological and regulatory goals for wildlife). Under the ESA, an HCP's purpose is to ensure that there is an adequate mitigation plan developed during the application process to reduce conflicts between listed species and development and land use proposals. The elements of an HCP can be made binding through the project approval.

An important feature of the HCP approach is the "no surprises assurance." Essentially, the project proponent is assured that if unforeseen circumstances arise, the USFWS will not require commitment of additional mitigation measures or compensation beyond the level otherwise agreed to in the HCP without the permission of the permittee.

CESA offers no opinion as to whether such an approach is consistent with the requirements of California wildlife laws or CEQA.

Thank you for considering these comments. CESA looks forward to further participation in this Docket.

Respectfully submitted,



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October 5, 2006