



PPM Energy
A ScottishPower Company

DOCKET

06-OII-1

DATE JAN 23 2007

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January 23, 2007

California Energy Commission
Dockets Office, MS-4
Re: Docket No. 06-OII-1
1516 Ninth Street
Sacramento, CA 95814-5512

Subject: Docket No. 06-OII-1: Developing Statewide Avian Guidelines—Comments on Draft Guidelines

Dear Commissioners and Staff:

PPM Energy commends the CEC and CDFG for the open process leading up to this stage in the Guidelines process, and for the evident thinking and balancing that staff have put into the draft. The Guidelines have the potential to both support the State in meeting its renewable energy goals and assure that wildlife resources are protected. However, to be able to achieve these two goals, we believe that a number of areas in the draft Guidelines should be clarified or revised. PM Energy offers the following comments suggesting ways to improve the Guidelines.

General Comment:

Many of the recommendations in the Guidelines propose approaches to pre-project studies that are new in California. There are several wind projects in the state that are currently working their way through the permitting process and that are conducting the studies that were scoped based on consultation with state and local agencies that preceded the issuance of these draft Guidelines. These projects should not be halted or slowed down because they developed the scope of their studies before the Guidelines were available. The Guidelines document should explicitly state that the Guidelines reflect current thinking, that they apply to new projects going forward, and that projects that are currently going through permitting cannot be expected to be in complete compliance with them.

There are a number of places where sections of the Guidelines, as currently organized, are duplicative and could be simplified or shortened:

- Chapter 4: “Impact Analysis and Conformance with Law” includes a useful discussion of the relationship of the Guidelines to local, state, and federal laws, but the latter part of the chapter (“Evaluating and Determining Impacts” is largely duplicative of materials in the following Chapter 5, “Impact Avoidance, Minimization, and Mitigation Measures.”
- Chapter 6, “Permitting,” largely repeats material that is in Chapters 3 and 4. This chapter could probably be dropped or the material moved to Chapter 4.

Chapter 1: Preliminary Site Screening

- P. 3 “Data from Adjacent Wind Farms.” This section lists many reasons why data from adjacent wind farms may NOT be applicable or useable, but very little discussion of why and when such data MAY be useful and appropriate. In certain cases, using data from adjacent wind farms may be entirely appropriate, more useful than new study data, and can accelerate the development of wind energy in locations that have been proved to have low wildlife impacts. This section should provide a more balanced discussion that lays out the positive aspects of using data from existing sites.
- Pp 3-4 “Site-Screening and Assessment.” This section portrays the early site screening assessment in too “black-white/yes-no” terms. Early site screening rarely identifies sites that clearly indicate “that substantial bird or bat mortality might occur” or that such impacts would not occur. The instructions related to Table 1, which is proposed as a “Checklist to Evaluate Sensitivity of a Proposed Wind Resource Area,” suggest that any “yes” or “unknown” answers to the Checklist would classify a site as sensitive. In reality, no wind resource area in the state, including areas such as San Geronio where there seems to be general agreement about low avian impacts, would be able to check off “no” for all questions in the Checklist. For example, there is probably no location in the state where birds and bats are not likely to “migrate through the site at any time of year during day or night” (Question 7). The Checklist’s questions are so all-encompassing and general that the Checklist is not a useful tool for distinguishing sensitive and non-sensitive sites.

Chapter 2: Science Advisory Committee

- P. 6. Overall, this chapter as written suggests too rigid a reliance on Science Advisory Committees (SACs). Early on in project development, creating an SAC if one doesn’t exist would be too time-consuming, and may occur at the time a developer is not ready to be very public about a site that the developer may or may not ultimately develop. The Guidelines should instead recommend that early in project development the developer contact relevant state and federal wildlife agencies, as well as local environmental organizations such as Audubon and Sierra Club that would have knowledge of local environmental conditions. A formal SAC may be more useful as it is used in Solano County, where the SAC primarily reviews the scope and results of the post-construction monitoring that is a permit condition for new projects in the Montezuma Hills Wind Resource Area.
- P. 9. The discussion of membership in SACs suggests that membership include “The lead agency (or its consultant).” For the same reasons of continuity and consistency discussed earlier in the

section, it is important that lead agencies be represented by agency staff, not consultants who cannot speak authoritatively for the agency. More generally, it would be useful to emphasize more clearly the importance of membership stability on the SAC. It is always a challenge when agency representation changes, and agency staff must “come up to speed” on wind technology, the state of the science of wind/wildlife impacts, and project specifics. The Guidelines should recommend that agencies commit to long-term participation by staff on the SAC so that they can in fact provide informed scientific advice about specific wind project proposals.

Chapter 3: Pre-Permitting Assessment

- P. 10 “Determining the Level of Pre-Permitting Surveys:” This section lists many reasons why a single season of data or a single year of data may be inadequate. For balance, the section should also list the circumstances where limited data-gathering may be adequate. These should include situations where a proposed project is in or adjacent to a homogenous wind resource area where there is good documentation of avian mortality levels and/or where there is comprehensive pre-project survey data.
- P. 10: The criteria for small and large projects are arbitrarily conservative and restrictive. If California is to attain its renewable energy goals, most projects will be far larger than 41 turbines, and there will be very few projects of 10 turbines or less. This definition of large and small projects has very little usefulness in distinguishing potential impact and appropriate study protocols. What’s the source of this distinction, and what science is it based on?
- P. 12: “BACI Study Design:” BACI has rarely been used in wind pre-project risk assessment, for practical reasons that are not even touched upon in this paragraph: the challenge and cost in finding and acquiring access to control sites. This paragraph should identify these challenges, and discuss the circumstances in which the challenges of BACI are outweighed by benefits of such a study design (for example, for basic research, such as the prairie chicken research being jointly funded by wind developers, state agencies, and non-governmental organizations in Kansas). During Guidelines workshops, an alternative method for assessing displacement was discussed—impact gradient studies. It is not clear why this method is not discussed at all in the Guidelines.
- Pp 12-13 “Selecting Sampling Points:” Much of the discussion here focuses on selecting sample sites that correspond with turbine locations. In the majority of cases, pre-project avian survey work is conducted well before turbine locations have been identified—turbine site location usually follows a range of studies, including geotechnical, noise, visual, and cultural surveys.
- P. 16 “Raptor Nest Searches:” The cost of raptor nest surveys increases greatly as the size of the survey area outer boundary increases. The suggestion for a minimum distance of 3 miles from turbines is too large and inconsistent with what is typically required in other states. In Oregon, for example, raptor nest surveys are typically performed within a 2-mile buffer of project facilities. Washington’s windpower wildlife Guidelines require surveys within a 1-mile buffer, except if federal or state endangered or threatened species are present, in which case a 2-mile buffer is used.
- Pp 17-18 “Nocturnal Bird Survey Methods:” Nocturnal bird survey techniques tend to be expensive, time-consuming, and often inconclusive, for reasons that are barely touched on in this section. Despite the challenges of nocturnal surveys, this section doesn’t clearly distinguish when

such surveys would really be helpful and should be required. The section's suggestions about the indicators of "potential risks to nocturnal migrants" are too broad and all-encompassing. For example, "ridgelines within a migratory corridor or near a favored migratory stopover" could arguably include most wind project sites in California, since most will show some evidence of migratory traffic and may be "near" migratory stopovers (this should at least be clarified to distinguish between "migratory routes," which may be intended to mean fairly narrowly defined paths and "flyways," which are broader areas). At the same time, it should be recognized that there are few sites within the United States that have shown elevated levels of mortality to nocturnal migrants. I recollect that during one of the Guidelines workshops, Mike Green of the USFWS stated that impacts to nocturnal migrants had not yet appeared to be a significant issue at most sites for which there are data. Given that substantial impacts to nocturnal migrants appear to occur in few or no cases, this section should provide clearer guidance about the indicators of significant risk that would suggest the need for nocturnal bird surveys.

- Pp 18-20: "Nocturnal Bird Survey Methods:" This section describes multiple potential tools, but doesn't adequately describe their limitations, or explain why most of these tools are rarely used in current wind project pre-construction surveys. For example, acoustic monitoring for birds, ceilometers, moon-watching, and thermal animal detection are techniques that are useful in very limited circumstances, if at all, and are rarely used in modern pre-project avian assessment.
- Pp. 28: "Lighting Impacts:" This section should summarize the accumulating evidence that the current FAA-recommended lighting (flashing red strobes at night) are not associated with elevated avian mortality.

Chapter 5: Impact Avoidance, Minimization, and Mitigation Measures

- Pp 34-36: "Compensation:" This section does not include a clear statement about the policy basis for compensation. Is compensation suggested for impacts that are found to be significant under CEQA? In that case, the goal of compensation would presumably be to reduce impacts to a level less than significant, and would not be required if impacts are expected to be less than significant. If the compensation is for impacts that are not CEQA-related, but are related to other California or Federal wildlife laws, that should be explained.

Chapter 7: Operations Monitoring and Reporting

- P. 39: This section lacks an adequate discussion of the purposes of post-construction bird and bat mortality monitoring. I would refer staff to the comments specifically on this topic that PPM Energy submitted on October 3, 2006. Those comments noted that post-construction monitoring can be very expensive, depending on the frequency, duration, and sample size of the monitoring. Post-construction monitoring scope should be tailored to address specific questions. Most projects should initially be required to conduct only a modest, screening level of post-construction monitoring to identify if bird or bat mortality are substantially lower or higher than pre-project estimates. Only if this initial monitoring identifies elevated mortality or other indicators of unexpected outcomes should more intense monitoring be required.
- P. 40: "Bird and Bat Use:" Bird use surveys are recommended as a standard part of post-construction monitoring. In other parts of the country, the bird use surveys are typically used only in



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locations where displacement of grassland and other resident birds is a concern. Bird use surveys would be an expensive monitoring component with limited usefulness at sites dominated by agricultural crops or with limited resident bird use.

- P. 41: Two years of post-construction acoustic monitoring are recommended for both bats and birds. This recommendation is not supported by any scientific evidence here or elsewhere in the guidance documents. Earlier (p. 18) acoustic monitoring is described, and its limitations for avian surveys are hinted at but not explicitly described. Avian acoustic monitoring can only be used to detect a small portion of overall night migration, given limitations of the acoustic detectors' range and the fact that many night avian migrants do not vocalize during flight. For these reasons, acoustic monitoring is rarely used anywhere in the country for pre-project avian assessment. For the same reasons, it is not a tool that is worth the considerable expense it entails for post-construction monitoring.

If this section was actually intended to focus on bats, it is still problematic. The discussion of acoustic monitoring for bats in Chapter 8 (page 59) suggests that this monitoring should be done daily for two years. This requirement is excessive, for several reasons: (1) The technique of using anabat detectors raised on met towers or temporary towers is new and untested (PPM Energy is hosting the first such tests at three of our sites in the Northeastern U.S.). (2) In most other regions, bat monitoring focuses on the period of greatest bat activity—typically late spring or summer through the fall—rather than being conducted year round. Mortality data from the Montezuma Hills WRA suggests that in that WRA, at least, bat activity is similarly concentrated in summer and fall. (3) Daily monitoring would generate masses of data, which is time-consuming and expensive to analyze. For all these reasons, we recommend that post-construction bat acoustic monitoring be focused only on cases where bat mortality monitoring has identified elevated bat mortality, and that the acoustic monitoring should then be used to help investigate the causes of the mortality.

- P. 41: "Carcass Searches:" This section recommends that "a good starting point" is a "carcass search plot size with a radius of 1.5 times the rotor diameter." This formulation of plot size is different, larger, and therefore more expensive than the formulation more typically used in other states; i.e., search plot radius equal to the tip of blade height. As noted in PPM Energy's earlier (October 3, 2006) letter on the Guidelines indicated, post-construction monitoring can be very expensive, and costs vary widely, depending in part on plot size. It is not clear why the formulation recommended in the Guidelines was selected, particularly since the next page points out that 80% of bat fatalities, for example, are found within a distance of ½ half of the blade tip height.

Thank you for the opportunity to comment on the draft Guidelines.

Sincerely,

PPM Energy, Inc.

Andy Linehan

PPM Energy Wind Permitting Director