

12 February 2007

California Energy Commission
Dockets Office, MS-4
RE: Docket No. 06-OII-1
1516 9th Street
Sacramento, CA 95814-5512

DOCKET

06-OII-1

DATE FEB 12 2007

RECD. FEB 16 2007

Re: California guidelines for reducing bird and bat impacts from wind energy.

I commend the California Energy Commission on such a balanced and comprehensive document: Statewide Guidelines for Reducing Impacts to Birds and Bats from Wind Energy Development, Staff Draft Report. The document provides regulatory agencies and industry entities a guide detailing our current understanding of avian and bat impact with wind energy development, and the state of the art approaches for assessing these impacts. I am a professor of biology at Humboldt State University, have studied bats for more than two decades, and I am involved in studies to understand and reduce impacts of wind energy upon bats. As a detailed response, I defer to comments submitted by the California Bat Working Group. I will not repeat detailed recommendations submitted by this expert group, but do wish to state that I strongly support their recommendations. I wish to contribute the following summary comments:

We do not yet fully understand the nature and magnitude of wind energy development upon bats. Because of the difficulty in studying bats, we know less about them and their natural history and activities than perhaps any other group of vertebrates. While some may interpret these recommended guidelines for monitoring bats as unduly burdensome, they should be accepted as necessary measures toward understanding and assessing this unknown problem. We simply do not yet know or even have a sufficient understanding of bat biology, and in particular their large scale movements, to predict the impact of wind energy development upon bats. What we do know about bats does provide reason for concern.

To date, more studies of the impact of wind energy on bats have been performed in the eastern United States. There, the eastern red bat, *Lasiurus borealis*, has emerged as one of the species with the most documented mortalities from wind turbines. Although numerous in the east, its sister species, the western red bat, *L. blossevillii*, occurs in strikingly lower numbers in the west, including California. Historical accounts infer this species was once far more numerous. And as a foliage roosting bat, its association with cottonwood galleries, now at perhaps just a few percent of historic levels, likely accounts for this bat's decline. Many believe that if we had in the past the tools that we have today

to assess bat populations, that this species would undoubtedly have threatened or endangered status.

Because bats have such low reproductive rates (one offspring per year for most species), we cannot wait to see whether large impacts upon bats result from wind energy development and then hope to correct it. Instead, we must manage these species proactively to conserve them. Although there are similar concerns for other bats, given the example of the red bat, it should be clear that if we do not carefully monitor and manage the progression of potential impacts from wind energy development, then the wind industry may be in worse peril should any of these species become impacted to a degree that warrants state or federal listing.

None of the recommended guidelines for reducing bird and bat impacts from wind energy have as their intent the prevention or cessation of developing wind energy. We all hope that wind energy can contribute cleanly to California's energy demand. But we do hope that we can accomplish that without irreversible consequences upon our wildlife resources, and to do that we must gather the information to direct an intelligent implementation of this technology for the combined good of our citizens and wildlife.

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