

April 3, 2013

Public Statement from Migratory Birds Division of U.S. Fish and Wildlife Service, Region 8 regarding the proposed Hidden Hills Solar Energy Generating System.

The U.S. Fish and Wildlife Service (Service) participated in the California Energy Commission staff assessment process as a member of the Renewable Energy Agency Team (REAT) to evaluate the proposed Hidden Hills Solar Energy Generating System (Hidden Hills). The project, which will be located in Inyo County, CA near the Nevada border, will use power tower technology. After reviewing the Final Staff Assessment, the Service offers the following comments in addition to the verbal statement provided during the Final Staff Assessment hearing held on March 14, 2013.

Flux

The Service remains concerned about the effects of exposure to elevated levels of solar flux on birds at an individual, local, and population level. Based on the evidence presented to date, elevated levels of solar flux generated by the focused energy from the heliostats may burn and damage exposed skin and feathers (McCrary et al. 1986). In addition, solar flux may injure birds directly via blinding. Degradation of eyesight could result in additional injury and mortality through collisions with objects in the environment (including the tower and heliostats), or preventing them from being able to perform normal life functions, including feeding, territorial maintenance, migration, or evading predators. In addition, mirrored heliostats and other infrastructure may cause injury and mortality by collisions. Based on Service's review of the applicant's docketed information and their expert testimony, we believe that none of the studies, including the applicant's contracted work on flux exposure of dead domestic fowl in Israel in the docketed report by G. Santalo, provide substantial insight as to what to expect at Hidden Hills or other proposed power tower facilities.

At this time, the Service notes that limited information is available and/or has been proffered by the applicant to fully evaluate direct, indirect, and cumulative impacts (blinding and burning) of flux to avian species. We recommend that third party scientific studies be conducted to correct the insufficient baseline information by testing hypotheses regarding the direct and indirect effects of avian exposure to elevated solar flux (above 4 Kw/m²). In this way, the California Energy Commission, Bureau of Land Management, California Department of Fish and Wildlife, Nevada Department of Wildlife, and U.S. Fish and Wildlife Service may then make more fully informed decisions and better provide guidance on project siting, operation, and post-construction monitoring.

Golden Eagles

Golden Eagles are protected by the Bald and Golden Eagle Protection Act (Eagle Act). The mountainous topography surrounding the Hidden Hills project site supports territorial adults, as well as subadults and non-breeding adult floaters. BrightSource has contracted surveys to assess use of the project site by Golden Eagles. BrightSource has characterized the use of the site by

Golden Eagles as “low,” despite documenting nesting territories in CA and NV and numerous incidental observations of Golden Eagles within and adjacent to the project footprint. The Service is cognizant of the large size of the project footprint (almost 5 miles²), the vast distances Golden Eagles travel in xeric habitat during daily forage and defense activities, and the potential for seasonal and annual variation in the number of breeders, floaters, subadults, and migrants which may use the project footprint and surrounding habitat during breeding and non-breeding movements. Upon review of the limited data provided by the applicant, the Service concludes the data the project proponent has presented are insufficient to document eagle use of the area through the annual cycle, and present a robust risk characterization of direct, indirect and cumulative effects to Golden Eagles. As noted, Golden Eagles do not nest on the project footprint, however, the habitat immediately adjacent was sufficiently favorable to attract the three simultaneous perching Golden Eagles observed on the eastern portion of the project location in the docketed report dated March 5, 2012. Consequently, the applicant’s characterization of eagle use of the site as “low” may be overstating limited data, and are not supported by the available information.

Based on an overview of the project proponents reported information, and our knowledge of the site, we conclude that the proposed project has the potential to affect Golden Eagles through a) the loss of foraging habitat, and b) the risk of direct take of eagles through injury or mortality caused by exposure to elevated levels of solar flux. For these reasons, we strongly encourage the project proponent to prepare an Eagle Conservation Plan to evaluate and address potential threats to eagles, describe the measures that BrightSource would undertake to avoid, minimize, rectify, reduce or eliminate, and mitigate those threats over the life of the proposed project. If, following robust analysis of available data, take is deemed to be likely, we recommend that the project proponent seek a programmatic take permit and use the Eagle Conservation Plan as of the basis for their permit application. Without an eagle take permit, take of eagles would be a violation of the Bald and Golden Eagle Protection Act.

Migratory Birds

BrightSource has conducted surveys of the project site to assess use by migratory birds. However, the use of the site by migratory birds is difficult to quantify with the data that the project proponent has collected. We are aware that at the nearby Ash Meadows National Wildlife Refuge, biologists have documented over 275 bird species that are residents and/or migrants. For example, numerous bird species, such as Yellow-billed Cuckoo and Swainson’s hawks, migrate in pulses. This suggests a large number of birds could move through the area in a relatively short time and be completely missed by the sampling regime which the project proponent employed. Additionally, desert songbirds can congregate in large flocks to forage and avoid predators during the winter months. These flocks are likely using the site, and nearby habitat intermittently and could also easily be undersampled during the limited surveys conducted for the project. During a Service visit to the project site in January 2012, a large flock of wintering birds was ‘pushed’ ahead of the Service vehicle through the halophytic plant community in the western portion of the project site.

Despite the apparent low structural and biological diversity of plants found on the site, these habitats support unique breeding and wintering populations of birds and provide important

migratory stopover habitat. Recent research by Ruth et al. (2012) suggests that open arid habitats in the southwest may be more important than previously thought for migratory birds. The Service strongly suggests that site characterizations should fully consider the specific location and the temporal aspects of habitat use. The surveys put forth by the project proponent appear inadequate to characterize migratory bird use of the habitat, and the non-breeding occurrence of Golden Eagles and other raptors.

Mitigation for Impacts to Migratory Birds

Migratory birds are an important component of our national heritage and a trust resource for the Service. Birds are also important economic resources, given that they prey on numerous species that we consider pests (e.g., some insects and rodents) and generate income to communities through birdwatching. We are pleased that both the California Energy Commission and BrightSource are considering the implementation of measures to offset the adverse effects of the proposed action to migratory birds and their habitat. However, the proposed mitigation does not alleviate the responsibility of BrightSource to avoid and minimize impacts to migratory birds under the Migratory Bird Treaty Act.

Nonetheless, we fully support the development of a Bird and Bat Conservation Strategy (BBCS) and will cooperate with BrightSource and fellow REAT agencies on developing a robust approach to conserve avifauna. We consider BrightSource's proposal to implement or fund measures that would conserve birds and bats on a regional basis as an important first step to offset the potential adverse effects of the proposed project and to improve the conservation status of migratory birds on a regional basis. The USFWS Sonoran Joint Venture is already implementing their desert bird conservation plan in the arid Southwest, including the project area, whereas the Migratory Bird Conservation Commission, which BrightSource proposed as a recipient, is focused on land acquisition for refuges, primarily for waterfowl management. Consequently, we encourage BrightSource and California Energy Commission to consider working with the Sonoran Joint Venture program to ensure that any conservation measures supported from the proposed action can be integrated into priority conservation projects underway in the region.

References

McCrary, M.D., R.L. McKernan, R.W. Schreiber, W.D. Wagner, and T.C. Sciarrotta. 1986. Avian Mortality at a Solar Energy Power Plant. *Journal of Field Ornithology*, 57(2): 135-141.

Ruth, J.M., R.H. Diehl, and R.K. Felix, Jr. 2012. Migrating birds' use of stopover habitat in the Southwestern United States. *Condor* 114(4): 698-710.

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