PANOCHÉ VALLEY SOLAR FARM EIS BIOLOGICAL IMPACTS SUMMARY

KYLE DELWICHE

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Panoche Valley Solar Farm – Biological Impacts

Project Description
The County of San Benito is the lead agency on the proposed Panoche Valley Solar Farm project in California. The project, as proposed by Solargen Energy, Inc., would include construction and operation of a 420 MW photovoltaic solar power plant. This plant would cover approximately 4,885 acres of land currently designated as Agricultural Rangeland and would include 3-4 million solar arrays, a substation, access roads, and buried electrical collection conduit. Power generated at this facility would be fed into existing Pacific Gas and Electric Company (PG&E) transmission lines. The solar farm will be built on private land.

Project Timeline
The Draft EIS for this project was published on June 28, 2010 and was available for public review until August 31, 2010. On October 12, the San Benito County supervisors approved the final EIS and agreed to suspend Williamson Act contracts that would have prohibited the use of prime agricultural land for non-agricultural purposes (the California Land Conservation Act of 1965, known as the Williamson Act, protects agricultural land from development). Newspaper articles indicate that the project is currently waiting for permitting approval from the Fish and Wildlife Service before construction begins. This project faces significant opposition from local residents and from environmentalists concerned about the potential impacts of putting this large solar farm on lands currently home to multiple endangered species.

Impacts and Issues
The final EIS for this project studied multiple potential environmental impacts and determined that three impacts would be significant and unavoidable. These three impacts are aesthetics, biological resources, and noise. Other impacts that were deemed significant could be mitigated to insignificant levels with appropriate mitigation measures. The remaining impacts were deemed not significant. The full list of impacts considered in the EIS is as follows: aesthetics, agriculture, air quality, climate change, biological resources, cultural and paleontological resources, geology, hazardous materials, land use and recreation, noise, population and housing, public services, transportation, and water resources. This synopsis will focus on the biological impacts of the project.
Biological Impacts

Of the many species living in Panoche Valley that will be affected by this solar farm, the three species highlighted in the EIS are the San Joaquin kit fox, the giant kangaroo rat, and the blunt-nosed leopard lizard. Each of these species has recently been identified as having a unique genetic structure, thereby increasing the importance of preserving them. The San Joaquin kit fox is a highly endangered species of fox whose habitat used to cover much of the California central valley but has become marginalized to small portions of several counties (Endangered since 1967). The giant kangaroo rat was declared endangered in the 1980s and at 6 inches in length is the largest of the kangaroo rats. The kangaroo rat lives in dry, sandy grasslands and burrows in loose soil. The blunt-nosed leopard lizard has been affected by human encroachment and habitat loss and is also on the Endangered Species List.

The proposed solar farm will affect these species by impacting their habitat. The grassland habitat currently existing at the proposed project location will be impacted during construction by traffic, temporary access roads, and trenching. Long-term impacts will occur because solar panels will significantly alter rainfall and sunlight patterns, soil temperatures, and soil moisture conditions underneath the panels. These changes will impede the growth of existing grasses, thus impacting the animal species who use these grasses for habitat or food foraging sites. Proposed access roads and temporary construction roads will bisect animal habitat and potentially result in vehicle-related animal fatalities.
Project Alternatives

Feasible Alternatives

The final EIS considered multiple project alternatives to limit impact on biological resources. These alternatives are as follows:

Alternative A – Concentrating solar panels on western and northern sides of the project area to avoid the highest density of giant kangaroo rats and blunt-nosed leopard lizards. This alternative would create a conservation easement on 1,683 acres of the most sensitive species habitat within the project area.

Alternative B – This scenario goes a step further than Alternative A by further concentrating solar panels and reducing the total number of panels. It would also include a 3,491 acre conservation easement.

Alternative C – This scenario creates a 4,023 acre conservation easement and further reduces the number of solar panels (and also reduces the potential power output of the plant).

Westlands CREZ Alternative – This alternative considered moving the project site to 5,000 acres of disturbed and unusable agricultural lands in King and Fresno Counties in California. While this alternative may have fewer impacts on biological resources, aesthetics, and agriculture, it may have greater impacts on water resources.

After consideration of the alternatives listed above, the EIS concluded that Alternative C was the environmentally superior alternative because it reduced the size of the facility and the subsequent impacts.

Infeasible Alternatives

In addition to the alternatives considered above, several alternatives were considered and eliminated in the EIS. Two alternatives sites were rejected; a brownfield site and a site in the Mojave Desert. The brownfield site would certainly have reduced environmental impacts, but working on contaminated property exposes workers to health issues, leads to significant regulatory challenges, and represents a big liability. The Mojave Desert site was determined to also have sensitive biological resources and aesthetical qualities, thus eliminating potential advantages to using this alternative location.

Other infeasible alternatives were a different form of solar panel technology and a wind turbine farm. Wind turbines were determined to have similar environmental impacts as solar panels and were thus eliminated from consideration. The Conservation and Energy Demand Reduction alternative was also eliminated with the assumption that power companies have already taken aggressive conservation measures and expecting further conservation would be speculative and potentially unachievable.

As required by the environmental review process, the EIS also examined the “No Project” alternative. The EIS determined that three potential scenarios could arise if no project were built in Panoche Valley: the site would remain undeveloped and continue to be used for grazing/agricultural purposes, other solar panel farm projects would be proposed in the Panoche Valley, and other projects would be proposed elsewhere in California to meet the state-mandated renewable energy requirements.
Mitigation Measures

The EIR lists many mitigation measures to reduce environmental impacts to the kit fox, giant kangaroo rat, and the blunt-nosed leopard lizard. These measures include the development and implementation of the following:

- Worker Environmental Education Program
- Best Management Practices
- Habitat Restoration and Revegetation Plan
- Biological Construction Monitoring
- Permanente conservation easements
- Habitat Mitigation and Monitoring Plan
- Plan to reduce Fugitive Dust
- Grazing Plan
- Pre-construction surveys for fox, rat, and lizard populations and creation of appropriate avoidance measures

The mitigation measure for biological impacts listed above accompany many pages of mitigation measures for other project impacts to agriculture, noise, aesthetics, water resources, etc.