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August 24, 2009

Via Electronic Mail and U.S. Mail

Mr. Kent Larson, Vice President
Martifer Renewables Solar Thermal LLC
12555 High Bluff Drive, Suite 100
San Diego, CA 92130

Re: San Joaquin Solar 1 and 2 Hybrid Project (08-AFC-12)
CURE Data Requests Set Four (Nos. 100-205)

Dear Mr. Larson:

California Unions for Reliable Energy (CURE) submits this fourth set of data requests to Martifer Renewables Solar Thermal LLC for the San Joaquin Solar 1 and 2 Hybrid Project, pursuant to Title 20, section 1716(b), of the California Code of Regulations. The requested information is necessary to: (1) more fully understand the project; (2) assess whether the project will be constructed and operated in compliance with all laws, ordinances, regulations and standards; (3) assess whether the project will result in significant environmental impacts; (4) assess whether the project will be constructed and operated in a safe, efficient and reliable manner; and (5) assess potential mitigation measures.

Pursuant to section 1716(f) of the Energy Commission's regulations, written responses to these requests are due within 30 days. If you are unable to provide or object to providing the requested information by the due date, you must send a written notice of your objection(s) and/or inability to respond to Commissioners Levin and Boyd and to CURE within 20 days.

2303-030a

Please contact us if you have any questions. Thank you for your cooperation with these requests.

Sincerely,

/s/

Tanya A. Gulesserian

TAG:bh
Enclosure

STATE OF CALIFORNIA
California Energy Commission

In the Matter of:	
The Application for Certification for the San Joaquin Solar 1 and 2 Hybrid Power Plant Project	Docket No. 08-AFC-12

CALIFORNIA UNIONS FOR RELIABLE ENERGY

DATA REQUESTS, SET FOUR

August 24, 2009

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Attorneys for the CALIFORNIA UNIONS FOR RELIABLE ENERGY

The following data requests are submitted by California Unions for Reliable Energy. Please provide your responses as soon as possible, but no later than September 23, 2009, to each of the following people:

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Please identify the person who prepared your responses to each data request. If you have any questions concerning the meaning of any data requests, please let us know.

San Joaquin Solar ("SJS") 1 & 2

CURE Data Requests Set #4

LAND USE

Background: ENVIRONMENTAL SETTING

The AFC's description of current land uses on the Project site is overbroad and inconsistent. An accurate description of the environmental baseline is necessary for an adequate analysis of potentially significant impacts. For example, the AFC states that the Project site is currently active farmland recently cleared and planted with wheat and pistachios, including cotton, safflower and garlic.[1] The AFC also states that the majority of the Project site is actively cultivated at this time, with pistachio and wheat cultivation in progress.[2] However, a portion of the Project site is not in agricultural production.[3] In addition, the Project site is bare due to recent plowing.[4] Finally, with respect to the land use baseline for the Project's proposed transmission corridor, the AFC states that "the majority of the proposed transmission line alignment is comprised of orchards and row crops."[5]

Data Requests:

100. Please provide documentation supporting the AFC's statement on page 5.6-1 that the Project site is recently planted with wheat and pistachios, including cotton, safflower and garlic.

101. Please explain the AFC's statement on page 5.6-5 that a "majority of the Project site is actively cultivated at this time" by describing the number and location of acres actively cultivated at this time.

102. Please provide documentation reflecting the last date of planting of each crop type at the Project site. The response should provide the year and month.

103. Please provide documentation supporting the AFC's statement that the majority of the proposed transmission line alignment is comprised of orchards and row crops.

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[1] AFC, p.5.6-1.
[2] AFC, p.5.6-5.
[3] AFC, p.5.4-1 ("The northeastern corner of the site was previously used for oil exploration.")
[4] AFC, p.5.6-4.
[5] AFC., p. 5.6-5.

104. Please clarify what the AFC means by a "majority" of the transmission line has been comprised of orchards and row crops, by stating how many acres of the proposed southern and northern transmission line alignments are in active agricultural production, and provide documentation to support your answer. Please provide the zoning of the proposed transmission line alignments for both the southern and northern route alignments. Your response should include acreages subject to each type of zone.

Background: ENVIRONMENTAL SETTING: PRIME AGRICULTURAL LAND

Prime farmland is defined by the California Department of Conservation as land having particular soil quality that has been used for production of irrigated crops for four years prior to mapping in the Important Farmland Map.[6] The AFC states that the Project site is not prime farmland. However, the AFC also states that, "the Project site is actively cultivated at this time, with pistachio and wheat cultivation in progress."[7] The AFC does not explain whether each of the transmission line routes impacts prime farmland, farmland of statewide importance, unique farmland, or farmland of local importance. The AFC only states that, "the majority of the proposed transmission line alignment is comprised of orchards and row crops."[8]

Data Requests:

100. Please clarify when the site was last irrigated and planted.

101. Please explain whether the transmission line routes are on prime farmland, farmland of statewide importance, unique farmland, or farmland of local importance.

Background: IMPACTS TO AGRICULTURAL USES

Under CEQA, the lead agency is required to determine whether a proposed project could have a potentially significant impact on agriculture, and if such impact exists, to consider feasible mitigation and alternatives that would lessen or eliminate that impact.[9] CEQA Guidelines, Appendix G provides that a project may have a potentially significant impact to agriculture if it, 1) conflicts with existing zoning for agricultural use or a Williamson Act contract; (2) involves changes to the

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[6] California Department of Conservation, http://www.conservation.ca.gov/dlrp/fmmp/overview/Pages/prime_farmland_fmmp.aspx.
[7] AFC, p.5.6-5.
[8] *Id*.
[9] Pub. Resources Code § 21002; CEQA Guidelines §§ 15126.4, subd. (a), 15126.6, subd. (b).

existing environment that, because of their location or nature, could result in conversion of farmland to nonagricultural use; or (3) converts prime farmland, or farmland of statewide importance to nonagricultural uses.

The Fresno County Planning Code provides that, in order to obtain a conditional use permit, a finding must be made that the proposed use will have no adverse effect on abutting property or the permitted use thereof.[10] The Williamson Act was passed to preserve agricultural and open space lands by discouraging premature and unnecessary conversion to urban uses.

In addition, the California Agricultural Land Evaluation and Site Assessment Model ("LESA"), created by the California Department of Conservation, provides a specific threshold of significance to determine the Project's impacts on agricultural lands.[11] The Department of Conservation developed LESA to provide lead agencies with a methodology to ensure that significant effects on the environment of agricultural land conversions are quantitatively and consistently considered in the environmental review process.[12] LESA evaluation factors include two land evaluation measures regarding soil resource quality and four site assessment factors, including a project's size, water resource availability, surrounding agricultural lands, and surrounding protected resource lands. The project score then becomes the basis for making a determination of a project's potential significance.[13]

The AFC states that land uses in all four directions from the Project site and within the Project site are predominantly in agricultural production.[14] The AFC further provides that lands directly north of the site, some parcels to the east of the Project site, and 171.12 acres within the Project site are zoned for exclusive agricultural use.[15] The Applicant explains that the remaining 468.88 acres of the Project site are under Williamson Act contract.[16]

If approved, the Project would remove 640 acres from agricultural use: 171.12 acres currently zoned for exclusive agricultural use and 468.88 acres from the Williamson Act program. The Soils Section of the AFC admits that the Project will lead to the conversion of farmland of local importance to non-agricultural uses and

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[10] Fresno County Zoning Ordinance, § 873(F).
[11] *See e.g.* Final Program Environmental Impact Report, Coalinga Wastewater Treatment Plant (Apr. 2006), p. V-55.
[12] Pub. Resources Code § 21095.
[13] *See e.g.* 6-AFC-5C, Final Staff Assessment Panoche Energy Project (Sep. 20, 2007), p.4.5-1.
[14] AFC, p.5.9-5.
[15] *See* AFC, p.5.9-1.
[16] San Joaquin Solar 1 & 2 Hybrid Project Supplemental Information in Response to CURE Data Request Set #2, Response to Data Request No. 30. The contract was executed on January 2, 1971 between Standard Oil Company of California and the County of Fresno. San Joaquin Solar 1 & 2 Hybrid Project Supplemental Information in Response to CURE Data Request Set #2, Attachment DR-32.

will conflict with the existing Williamson Act contract[17] but does not cite to any LESA analysis, or otherwise analyze significant impacts to agriculture. Nor does the Soils Section provide mitigation for significant impacts to agriculture. The Land Use section of the AFC states that the land will be taken out of agricultural production, but also does not analyze significant impacts to agriculture.[18] Furthermore, the Land Use section summarily concludes that the Project will not create significant impacts to surrounding lands and that renewable energy is a "tradeoff" that is "an inherent form of mitigation."[19]

Data Requests:

103. Please provide an analysis of the Project's impacts on agriculture.

104. Please provide the LESA score for the 640 acres that will be withdrawn from agricultural use as a result of the Project and the analysis that supports the score obtained.

105. Please discuss the project's consistency with LORS, including the Fresno County Planning Code's requirement that the proposed use will have no adverse effect on abutting property or the permitted use thereof.

106. Please discuss the impacts on agriculture from each of the proposed transmission line routes.

Background: CUMULATIVE IMPACTS

CEQA requires a discussion of cumulative impacts.[20] The AFC states that the Applicant will provide a list of new projects planned within the six miles from the proposed site.[21]

In its discussion of cumulative impacts on land use, the AFC identifies the Coalinga wastewater treatment project as a forseeable future project.[22] However, the AFC concludes that the wastewater treatment plant will not result in conversion of active farmland to another use, and therefore no cumulative land use

[17] AFC, 5.4-13.
[18] AFC, p. 5.9-12.
[19] AFC, p. 5.9-12.
[20] Cal. Code Reg. §15130(a).
[21] AFC, p. 5.18-6.
[22] AFC, p. 5.9-12.

impacts are expected to arise from the Project in combination with the Coalinga wastewater treatment project.[23]

The AFC's conclusion regarding cumulative impacts on land use is inconsistent with the April 2006 Final Environmental Impact Report ("FEIR") prepared for the City of Coalinga wastewater treatment plant. The FEIR states that the wastewater treatment plant site is in active agricultural production.[24] Specifically, 223 acres were farmed for cotton, and 136 acres were farmed for grain.[25] Further, the entire wastewater treatment plant project site, with the exception of 10 acres, was under a Williamson Act contract at the time of issuance of the FEIR.[26] The FEIR concluded that the wastewater treatment plant, and the related implementation of the proposed annexation and General Plan Amendment, would result in significant project and cumulative impacts on agriculture.

Data Requests:

107. Please provide the AFC's referenced list of new projects planned within the six miles from the proposed site.

108. Please provide a revised discussion of cumulative impacts on agriculture in light of the wastewater treatment project FEIR's conclusion that the wastewater treatment site was in active agricultural production and any other past, present and reasonably foreseeable projects identified by the Applicant.

Background: AGRICULTURE IMPACT MITIGATION

If approved, the Project would remove 640 acres from agricultural use; 171.12 acres currently zoned for exclusive agricultural use and 468.88 acres from the Williamson Act program. The April 2006 Final Environmental Impact Report ("FEIR") prepared for the City of Coalinga's wastewater treatment plant found similar impacts to be significant. Specifically, the City concluded that the removal of 468 acres from the Williamson Act Program was a significant impact under CEQA.[27] The City also found, based on a LESA analysis, that the wastewater treatment plant would result in a loss of 185 acres of agriculturally productive land, and that the wastewater project would result in a loss of land zoned exclusive agriculture.[28] Both of these impacts were also deemed significant.[29]

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[23] AFC, p. 5.9-12.
[24] Final Program Environmental Impact Report, Coalinga Wastewater Treatment Plant (Apr. 2006), pp. V-50.
[25] *Id*.
[26] *Id*., p. V-51.
[27] Final Program Environmental Impact Report, Coalinga Wastewater Treatment Plant (Apr. 2006), pp. V-56-57.
[28] *Id*.

The FEIR mitigated these agriculture impacts by recommending that 212 acres of the wastewater treatment plant project site be placed in an agricultural conservation easement, to be irrigated by treated effluent from the proposed wastewater treatment plant. In order to mirror the protections provided by the Williamson Act, the mitigation measure was crafted such that the easement would be in effect for a minimum of ten years.[30]

Similar mitigation was required by the California Energy Commission ("CEC") in its 2007 approval of the Panoche Energy Project, also sited in Fresno County. There, the CEC adopted mitigation requiring the Applicant to pay a fee to an agricultural land trust for the purchase of a conservation easement in Fresno County to mitigate for the loss of agricultural land.[31]

For San Joaquin Solar 1 and 2, the AFC states:

> While the Project removes land from agricultural use, it provides a source of renewable energy. This tradeoff is an inherent form of mitigation. The agricultural lands that are available on the site are sub Prime, and are underutilized dry farm lands. The impact of the Project will not substantially diminish the agricultural productivity of the region. Alternatively the Project will add a renewable energy source that has a 106.8 MW production capacity to the area.[32]

Thus, no mitigation for significant impacts to agriculture is identified.

Data Requests:

109. Please explain how withdrawing 640 acres of agricultural land for renewable energy production is an inherent form of mitigation for the loss of agricultural land.

110. Please provide documentation to support the statement that the Project will not substantially diminish the agricultural productivity of the region. Your response should include dollar amounts lost due to cessation of agricultural production on the Project site.

111. Please explain whether the Project proposes any mitigation for significant impacts to agriculture, such as an irrigated agricultural conservation easement, as required for the wastewater treatment

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[29] *Id*.
[30] Final Program Environmental Impact Report, Coalinga Wastewater Treatment Plant (Apr. 2006), pp. V-56.
[31] 6-AFC-5C, Final Staff Assessment, Panoche Energy Project (Sep. 20, 2007), p.4.5-1.

plant, or the payment of a fee to an agricultural land trust for the purchase of a conservation easement in Fresno County, as required for the Panoche Energy Project.

HAZARDOUS MATERIALS HANDLING

Background: HEAT TRANSFER FLUID SPILLS

According to the AFC, the Project's solar array would contain 185,000 gallons of heat transfer fluid ("HTF") in a circulation loop system at each plant.[33] Therefore, a total of 370,000 gallons of HTF will be used for the Project. The AFC states that the maximum spill that would occur would result from a rupture of one of the expansion vessels and that a containment pit under the vessel "of sufficient size" will hold the spill.[34] During the August 6, 2009 data request workshop, the Applicant stated that the maximum spill of HTF that could occur from an expansion valve is 250 gallons.

The AFC states that shutoff valves are located on the end of every row to isolate leaks. Only "[m]ajor HTF flow lines will have isolation valves "in strategic locations."[35] The AFC states that the Applicant will update the waste management procedures for construction and implement them for operations, and develop a Hazardous Materials Business Plan to minimize potential plant operation-related impacts.[36]

Data Requests

112. Please explain the AFC's distinction on page 5.14-10 between a "major" HTF flow line and other HTF flow lines.

113. Please describe the number and location of all "major" HTF flow lines associated with the Project.

114. Please specify how many isolation valves will be installed.

115. Please clarify whether isolation valves will be installed on non-major HTF flow lines throughout the solar field.

[33] AFC, p. 5.15-5.
[34] AFC, p. 5.14-10.
[35] AFC, p. 5.14-10.
[36] AFC, p. 5.14-13.

116. If the Project will employ isolation valves on non-major HTF flow lines, please describe how many isolation valves will be installed.

117. Please quantify the maximum quantity of HTF that could potentially leak from the system between two isolation valves. Please provide documentation to support your answer.

118. Please explain the basis for the Applicant's estimate made during the August 6, 2009 data request workshop that the maximum spill of HTF that could occur from an expansion valve is 250 gallons, or provide a revised estimate regarding the maximum spill that could occur from an expansion valve. Please provide documentation to support your answer.

119. Please provide the volume of HTF fluid that can be contained in an expansion vessel.

120. Please provide the volume of HTF fluid that can be contained in the secondary containment pits to be located under each expansion vessel that the AFC states will be of "sufficient size."

Background: HEAT TRANSFER FLUID FIRE RISK

Therminol VP-1, the heat transfer fluid used in the solar arrays for the Project, is a Class III-B combustible liquid.[37] Fires in parabolic trough solar generating facilities are serious threats which have occurred in the past. For example, in 1999, a storage tank containing 900,000 gallons of Therminol exploded at the SEGS II solar power plant in Daggett, CA.[38] In another incident on August 21, 1995, a heat transfer pump oil transfer that allowed the release of fluid caught fire at the Daggett facility.[39] On August 2, 1994, one of the heat transfer fluid pipes at the SEGS VI facility in Kramer Junction, CA ruptured and the spilled heat transfer fluid caught fire.[40]

The AFC does not contain a discussion of potential risks due to the flammability of the heat transfer fluid. The AFC only states, "other flammable materials that are difficult to ignite will be used at the site during the operational phase: HTF, transformer insulating oil and diesel fuel for the operations vehicles. The risk of a fire and/or explosion will be minimized through the adherence to

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[37] *See* Victorville 2 AFC, p. 6.7-18 at http://www.energy.ca.gov/sitingcases/victorville2/documents/applicant/afc/6.07%20Haz%20Mat.pdf
[38] CBS News, Blast: Big Flames, No Injuries, February 27, 1999; http://www.cbsnews.com/stories/1999/02/27/national/main36899.shtml?source=search_story.
[39] Governor's Office of Emergency Services, Hazardous Materials Spill Report; http://www.oes.ca.gov/operational/malhaz.nsf/.
[40] *Id.*

applicable codes and implementation of effective safety management practices."[41] The AFC concludes that the potential impacts presented by the use of HTF do not appear significant.[42]

Data Request:

121. Please provide a discussion of potential fire and explosion risks due to the flammability of Therminol VP-1, the heat transfer fluid used in the solar arrays for the Project.

Background: HEAT TRANSFER FLUID SOIL CONTAMINATION

The AFC states that HTF is a hazardous waste, but does not state whether the Applicant will treat HTF contaminated soil as hazardous waste. Page 5.14-10 of the AFC states that the amount of contaminated soil from HTF spills should not exceed 20 cubic yards in a 3-month period. The AFC proposes to use a 2 acre parcel in the common area for temporary storage of contaminated soil until it is transported off-site.[43] The AFC states that in areas of potential HTF contamination, the runoff will be diverted to the lined evaporation ponds.[44]

At the August 6, 2009 data request workshop, CURE asked where the Project proposes to locate the 2 acre storage area for contaminated fill. The Applicant responded that it did not know. However, CEQA requires an adequate description of the proposed Project, which includes the location of proposed Project components.

Data Requests

122. Please clarify if spills of HTF will trigger hazardous waste reporting requirements or CERCLA spill notification and any necessary facility response to the notification, such as containment, diking, or temporary cover.

123. Please explain the basis for the AFC's estimate on page 5.14-10 that the amount of contaminated soil from HTF spills should not exceed 20 cubic yards in a 3-month period.

[41] AFC, p. 5.15-6.
[42] AFC, p. 5.15-7.
[43] AFC, p. 5.14-10.
[44] AFC, p. 5.5-15.

124. Please provide a revised project layout diagram showing the location of the Project's proposed 2 acre parcel for temporary storage of HTF contaminated soil.

125. Please provide the number of hours in which HTF leaks would be abated following detection.

126. Please described how HTF contaminated soil will be transported to the proposed 2-acre parcel for temporary storage.

127. Please explain how the proposed 2-acre parcel for temporary storage of HTF contaminated soil will be constructed, including whether the storage area will be lined.

128. Please explain whether the 2-acre parcel for temporary storage of HTF contaminated soil will be constructed to meet any necessary requirements for storage of hazardous waste.

129. Please state the length of time that contaminated soil will remain in the 2-acre parcel and how it would be treated.

130. Please explain how many trucks will be required to haul the HTF contaminated soil and whether these trucks are included in the AFC's analysis of truck trips during Project operation.

Background: HEAT TRANSFER FLUID STORM WATER CONTAMINATION

The AFC states that in areas of potential HTF contamination, the runoff will be diverted to the lined evaporation ponds.[45] According to the AFC, the Project's solar array would contain 185,000 gallons of heat transfer fluid ("HTF") in a circulation loop system at each plant.[46] Table 3-1 of the Industrial SWPPP identifies HTF as a "significant material," and provides that the maximum allowable quantity on-site of HTF is 185,000 gallons of HTF at each plant. However, the SWPPP fails to include HTF in its discussion of Significant Leaks and Spills (3-1), Liquid Wastes (3-3), or BMPs for controlling and responding to HTF spills (4-9). The SWPPP also fails to include measures for monitoring and reporting HTF spills. (SWPPP, Monitoring and Reporting Plan).

[45] AFC, p. 5.5-15.
[46] AFC, p. 5.15-5.

Data Requests:

131. Please explain whether the Project includes groundwater monitoring for HTF compounds, including biphenyl and diphenyl oxide.

132. Please state the number of gallons of HTF that would be necessary to generate 53.4 MW.

133. Please explain what measures will be taken to segregate stormwater that may contain HTF.

BIOLOGICAL RESOURCES

Background: IMPACTS TO THE BURROWING OWL

The AFC indicates burrowing owls have not been observed in the Project vicinity for several years.[47] This statement appears to be inconsistent with the Applicant's "Sensitive Species Locations" map,[48] which further conflicts with information available from the California Natural Diversity Database (CNDDB).[49] Specifically, the CNDDB has nine records of burrowing owls documented as occurring within 10 miles of the Project site between 2001 and 2006.[50] This includes four burrow sites that in 2005 were approximately 765 feet from the eastern border of the Project site.[51]

The AFC indicates biological field surveys were conducted in accordance with CEC regulations, and California Department of Fish and Game (CDFG) and U.S. Fish and Wildlife Service (USFWS) protocols.[52] During the Project surveys, biologists searched for burrowing owl signs or burrows, and burrows that appeared to be suitable for burrowing owl use were scoped to confirm use.[53] Burrowing owls were not detected by surveys in the Project area during 2008, and they were not detected during surveys for the habitat conservation planning process in 2005 and 2006.[54]

[47] AFC: Bio Tech Report, p. 2-4.
[48] AFC, Figure 5.6-3.
[49] Department of Fish and Game, Biogeographic Data Branch. 2009. California Natural Diversity Database. Version 3.1.0. Updated 01 Aug 2009.
[50] *Id.*
[51] *Id,* occurrence number 829.
[52] AFC, p. 5.6-2.
[53] AFC, p. 5.6-3.
[54] AFC, p. 5.6-10.

Phase II of the burrowing owl survey protocol entails a search for burrows.[55] If burrows are present, they should be mapped and Phase III of the protocol should be conducted. Phase III requires site visits on four separate days, with surveys conducted around sunrise or sunset.[56] During these surveys, observations should be conducted from as many fixed points as necessary to provide visual coverage of the site.[57] If no owls are observed using the site during the breeding season, a winter survey is required.[58] Once surveys are completed a report (i.e., Phase IV of the protocol) should be prepared for CDFG that gives the results of each Phase of the survey protocol.[59] The specific information that should be included in the survey report is outlined in the protocol.

Further, the AFC states that the power block areas and the solar fields will be graded during the first six months of construction.[60] Thereafter, the Project footprint will occupy the entire 640-acre project area.[61] Although the AFC concludes that smaller raptors (including burrowing owl) would still be able to use the site, the AFC provides no justification for this conclusion or mitigation measures to make it plausible.[62] Most raptor species forage in open habitats where they visually search for prey.[63] Once prey is located, the raptor will dive and attempt to capture the prey by pouncing on it.[64] The Project solar collector assemblies will impede these basic foraging behaviors by blocking a raptor's line of sight (to prey) and by preventing an unobstructed attack approach. The ability for burrowing owls to use the site will be further limited by Project grading, which will eliminate any existing burrows. Not only are burrows a constituent habitat element for the species, but they also provide habitat for small mammals (which are prey species).[65]

Data Requests:

134. Please clarify whether focused surveys were conducted within the Project site to identify the presence of burrows.

135. Please provide the Phase II and III burrowing owl survey results. Your response should include the date and time of visits including

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[55] The California Burrowing Owl Consortium. 1993. Burrowing Owl Survey Protocol and Mitigation Guidelines. Available online at: http://www.dfg.ca.gov/wildlife/species/docs/boconsortium.pdf.
[56] *Id.*
[57] *Id.*
[58] *Id.*
[59] *Id.*
[60] AFC, p. 3-16 and 3-26.
[61] AFC, p. 3-1.
[62] AFC, p. 5.6-23.
[63] California Wildlife Habitat Relationships System. 2005. California Department of Fish and Game. California Interagency Wildlife Task Group. CWHR version 8.1 personal computer program. Sacramento (CA).
[64] *Id.*
[65] *Id.*

weather and visibility conditions; survey methods including transect spacing and burrow monitoring; and a description of the area(s) surveyed.

a. For any and all Phase II and III burrowing owl surveys conducted, please provide a map of burrow concentrations.

b. For any and all Phase II and III burrowing owl surveys conducted, please provide a discussion of any burrowing owls or burrowing owl sign detected.

136. Please provide the anticipated schedule for the burrowing owl winter survey and provision of the Phase IV report required of the protocol.

137. Please provide the rationale behind the conclusion that smaller raptors (including burrowing owl) will still be able to use the site after Project grading and construction.

138. Please discuss the measures that will be implemented to avoid direct impacts to burrowing owls.

139. Please discuss the measures that will be implemented to offset impacts to burrowing owl habitat if owls are detected once protocol surveys have been completed.

140. Please provide documentation that supports the statement in the AFC that no burrowing owls were detected during the 2005 and 2006 HCP planning process.

141. Please identify the methods that were used to determine whether owls were using the burrows that were detected within the Project study area, including any visual burrow monitoring that occurred. The response should include information on the length of time spent observing burrows to minimize potential for false absence (in the event that an owl was flushed from its burrow or was foraging when the burrow was scoped).

142. Please provide a revised Sensitive Species Locations map that accurately depicts historic burrowing owl occurrences within the Project vicinity.

Background: FEDERAL ENDANGERED SPECIES ACT COMPLIANCE

The AFC indicates that the Project will potentially impact federally endangered species. Once species have been listed as threatened or endangered

under the federal Endangered Species Act (ESA), they are entitled to certain regulatory protections. Section 9 of the ESA specifically prohibits the taking of any endangered species of fish or wildlife. The term "take" is defined as "to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or attempt to engage in any such conduct."

Under Section 10 of the ESA, private individuals and states may receive exemptions from the prohibitions on incidentally taking species. An incidental take permit can be obtained to develop land or conduct any legal activities not directed at harming the species. As a requirement to obtain an incidental take permit to develop land, the landowner must formulate a Habitat Conservation Plan (HCP). HCPs allow development of portions of habitat used by listed species in exchange for the creation and implementation of a plan designed to conserve the same species in the remainder of the habitat.

The Applicant has indicated that federal ESA compliance will be achieved through formal consultation pursuant to section 7 of the ESA. Section 7 consultation occurs between federal agencies only, covering a specific, discretionary federal action that may affect a listed species (a federal nexus). The Applicant has indicated that U.S. Army Corps of Engineers (USACE) will initiate section 7 consultation with the U.S. Fish and Wildlife Service (USFWS) in connection with the 404 permitting process.[66]

Data Requests:

143. If the Applicant intends to apply for a Section 404 permit, please describe the Project component that would require such permit.

144. Please describe the status of the Applicant's application to the USACE and provide a copy of any application that has been filed with USACE.

145. Please describe the status of consultations between the USACE and USFWS.

146. Please list the species that will be subject to Section 7 consultation between USACE and USFWS.

147. Please provide any correspondence or other documentation among the Applicant, federal action agencies, and state and federal wildlife agencies regarding Section 7 consultation for the Project.

148. Please state whether the Applicant intends to apply for an Incidental Take Permit under Section 10 of the ESA.

[66] AFC, p.5.6-24.

149. If the Applicant intends to apply for an Incidental Take Permit, please provide the status of Applicant's Habitat Conservation Plan.

Background: IMPACTS TO NESTING BIRDS

To mitigate impacts to nesting bird species, the applicant has proposed pre-construction nest surveys of trees within the Project area during the non-breeding season.[67] If nests are detected, nest trees will be removed during the non-breeding season.[68] The Applicant has also proposed that vegetation clearing will only occur during the non-breeding bird season (September 1 to January 31).[69]

Most birds construct new nests for each breeding attempt.[70] Therefore, nests detected during the non-breeding season may not be an accurate indicator of use during the subsequent breeding season.

Data Requests:

150. Please clarify whether all vegetation removal (including trees) will occur during the non-breeding season.

151. Since most birds construction new nests for each breeding attempt, please explain how surveys during the non-breeding season will ensure that birds are not impacted during the breeding season.

152. If vegetation and tree-clearing occurs during the non-breeding season, please discuss the Project's potential impacts on migratory birds in the subsequent breeding season.

153. If any vegetation removal will occur during the breeding season, please discuss the following:

a. How the Applicant intends to comply with the Migratory Bird Treaty Act which provides protection to most nesting bird species.

b. The vegetation types that will be removed.

c. The approximate number of trees that will be removed, by species, and the heights of the trees that will be removed.

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[67] AFC, p. 5.6-23.
[68] *Id.*
[69] AFC, p. 5.6-24.
[70] Hansell, M. H. 2000. Bird Nests and Construction Behaviour. Cambridge University Press, Cambridge, United Kingdom.

Background: IMPACTS TO RARE PLANTS

The AFC indicates CDFG protocol rare plant surveys would be conducted along both transmission line alignments during spring 2009. Although the AFC indicates Hoover's eriastrum (*Eriastrum hooveri*) is likely to occur in the Project area where suitable habitat is present, the Applicant has not proposed surveying the Project area to determine impacts to this or other rare plant species.[71]

The AFC provides a list of the plant species that were detected within the Project study area during 2008 surveys. Several of the species listed are within the same genus as one or more special-status species, but they were apparently not identified to the level necessary to determine whether the plant detected was a special-status species. Specifically, "*Astragalus* sp.", "*Cryptantha* sp.", "*Eriogonum* sp.", "*Hemizonia* sp.", and "*Plagiobothrys* sp." are listed as occurring within the Project study area.[72] Each of these genera has one or more species with special-status listing.

Data Requests:

154. Please provide the results of the 2009 rare plant surveys.

155. Please clarify the portions of the Project study area that were (or will be) surveyed for rare plants.

156. Please provide any ecological evidence that helps rule out the possibility that the plant species that were detected, but that were not identified to the species level, were not special-status species.

157. Please clarify whether the Applicant considered potential Project impacts to pale yellow layia (*Layia heterotricha*).

158. Please clarify whether the Applicant considered potential Project impacts to the Miles' milk-vetch *Astragalus didymocarpus* var. *milesianus*).[73]

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[71] Because the Applicant distinguishes likelihood of occurrence between the transmission line route and Project area, we assume the Project area refers to the SJS 1&2 Project site. *See* AFC, Appendix F-2.

[72] AFC, Appendix F-4.

[73] The AFC associates the scientific name for Mile's milk-vetch with pale yellow layia. *See* AFC, Appendix F-2.

Background: IMPACTS TO THE BLUNT-NOSED LEOPARD LIZARD

In 2008, one blunt-nosed leopard lizard (BNLL) was detected during surveys of the CDFG-owned Pleasant Valley Preserve near the southern transmission line route.[74] No BNLL were observed on the SJS 1&2 site.[75] The Applicant has proposed focused surveys of the southern transmission line route in 2009 to determine if the BNLL that was detected is still present.[76] If detected, the pole locations near the CDFG reserve will be sited to avoid native vegetation and monitoring would be conducted to preclude BNLL mortality.[77]

Common ravens may prey on the blunt-nosed leopard lizard and other sensitive wildlife species. Ravens depend on human encroachment to expand into areas where they were previously absent or in low abundance.[78] Ravens adapt to human activities and are sustained by the food and water, as well as roosting and nesting resources that are introduced or enhanced by human encroachment.[79] Man-made structures, such as buildings, signs, lamps, and utility poles provide roosting and nesting opportunities that otherwise would be unavailable.[80] Landscape irrigation, swimming pools, decorative fountains and ponds provide valuable water.[81]

Data Requests:

159. Please provide a map that shows the relationship among the Pleasant Valley Preserve, the southern transmission line route, and the location of the BNLL that was detected.

160. Since the Applicant's surveys have already established presence of the BNLL along the southern transmission line route, please clarify why the results of 2009 surveys will be relied on to dictate the need for monitoring and avoidance of native vegetation.

161. Please qualify the statement that no BNLL were observed on the SJS 1&2 Project site by discussing the focused survey effort that was dedicated to the site (including number of hours spent surveying the site).

162. Please provide the results of the 2009 BNLL surveys conducted for the

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[74] AFC, p. 5.6-21.
[75] AFC: Bio Tech Report, p. 3-6.
[76] AFC, p. 5.6-21.
[77] *Id.*
[78] URS. 2009. Raven monitoring and control plan for the SES Solar One site in San Bernardino County, California. Available at:
http://www.energy.ca.gov/sitingcases/solarone/documents/index.html
[79] *Id.*
[80] *Id.*
[81] *Id.*

Project.

163. Please provide the Applicant's analysis of the Project's impacts on BNLL, including a discussion of the following:

a. the habitat associated with the BNLL that was detected,

b. the amount of potential BNLL habitat that may be impacted by the Project, and

c. the significance of Project impacts on the BNLL.

164. Please indicate whether the Applicant intends to implement a raven control plan to minimize increased raven predation on the BNLL (and other sensitive wildlife species) resulting from the Project.

Background: IMPACTS TO RAPTORS AND MIGRATORY BIRDS

The Applicant concluded that potential impacts to raptors and migratory birds from collisions with the proposed transmission lines are anticipated to be less than significant, as the SJS 1&2 Project site is not within an area that would concentrate migratory birds.[82] Because the SJS 1&2 Project site is not located near a large perennial waterbody, the Applicant concluded large numbers of susceptible waterfowl species are absent from the Project vicinity.[83] As a result, the Applicant concluded a conservative estimate of between 10 and 430 birds (all bird species) per year could be killed from collisions with the proposed transmission line associated with the Project. The AFC provides that the use of FireFly bird flight diverters or similar devices placed on the transmission lines will make the structures more visible and minimize the risk of bird collisions.[84]

The Project site is located within the Pacific Flyway. California provides vital winter habitat for about 60 percent of the waterfowl population in the Pacific Flyway.[85] This is estimated to be between four and six million birds a year.[86] The greatest concentration of these birds is found in the Central Valley, where agricultural lands and remaining wetlands provide the nutrition and other requirements necessary for survival.[87] During the winter, nearly 170 bird species reside in the Central Valley (combined winter residents and permanent residents).[88]

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[82] AFC: Bio Tech Report, p. 4-2.
[83] *Id.*
[84] *Id.*
[85] Department of Fish and Game, the Resources Agency, State of California. 2003. Atlas of the biodiversity of California. Sacramento (CA): California Department of Fish and Game.
[86] *Id.*
[87] *Id.*
[88] Ducks Unlimited, In. 1995. Wildlife resources of the Central Valley, California Birds – Part II: Winter residents and transients.

The AFC indicates transmission line towers often provide habitat in the form of perching and nesting sites for raptors.[89] The AFC further indicates the transmission poles will be sited so that they will span any habitats that may potentially support special-status species, as well as the jurisdictional waters and any associated riparian vegetation associated with Zapato Chino Creek.[90] However, the AFC also states it is not possible to determine the habitats that will be impacted by the installation of the transmission line poles because pole locations have not yet been determined.[91]

Data Requests:

165. Please provide a discussion of the Project's impacts on migratory birds traveling through the Pacific Flyway.

166. Please state whether the Applicant's consultant has conducted any waterfowl surveys within the Project study area during the times of year when waterfowl are most abundant in the central valley (i.e., migration and winter).

167. Please quantify the AFC's estimate of 10 to 430 birds (killed) by providing the unit of measurement (e.g., per mile) associated with the estimate.

168. Please clarify whether bird flight diverters will be installed on transmission lines associated with the Project.

169. Please clarify whether Project transmission line poles will encourage or discourage perching and nesting of predatory bird species.

170. Please identify the habitats that may support special-status species that will be spanned by transmission poles.

Background: IMPACTS TO SMALL MAMMAL SPECIES

Several small mammal species with special-status listing have the potential to occur in the Project study area.[92] Applicant's supplemental information provides that "protocol" small mammal trapping surveys were conducted, and although the

[89] AFC: Bio Tech Report, p. 5-2.
[90] AFC: Bio Tech Report, p. 4-2.
[91] *Id.*
[92] AFC, Appendix F-2.

AFC provides a small mammal report that summarizes the results of small mammal trapping conducted along the transmission line routes, the objectives and justification for the work were not provided.[93]

The northern transmission line corridor will be approximately six miles long.[94] However, the transects established for small mammal trapping only extended about two miles along the northern transmission line route and about one mile along the southern transmission line route.[95] As a result, they did not constitute a robust sampling design and may not have yielded a representative capture of the species present along the transmission line routes.

The small mammal trapping report does not describe the habitat(s) associated with the small mammals that were captured. Without any description of habitat at each site, conclusions (other than what animals were captured) remain qualitative and speculative.

Data Requests:

171. Please cite the protocol used for the small mammal trapping study.

172. Please provide the objectives and justification for the small mammal trapping efforts.

173. Please provide justification for why only the western portions of the transmission line routes were sampled.

174. Please describe and quantify the habitat variables associated with each trap site.

175. Please clarify whether the black-tailed jackrabbit is a species of special concern impacted by the project, as indicated in the AFC.[96]

Background: HABITAT IMPACTS FROM TRANSMISSION POLES

The AFC indicates habitat along the transmission line route will be returned back to the existing state once construction is finished.[97] However, the AFC lacks a revegetation plan or any information on how habitat impacted by pole installation

[93] *See* AFC: Bio Tech Report, pp. ES-1, 3-4
[94] AFC, p. 5.6-1.
[95] AFC: Summary Report of Small Mammal Trapping along Two Proposed Transmission Line Corridors for the San Joaquin Solar 1 and 2 Project, Figure 3.
[96] AFC, p. 5.6-8.
[97] AFC: Bio Tech Report, p. 4-4.

will be restored.

Data Request:

176. Please provide information on the Applicant's proposed efforts to restore habitat, such that their likely effectiveness can be evaluated.

Background: GLINT AND GLARE IMPACTS ON WILDLIFE

The AFC states that, "[d]uring rotation of the collectors from the stow position, potential glint/glare from the mirrors may be visible to adjacent areas to the east/west; however, as this would occur in the early hours of the morning, sunlight is not strong and glint/glare from the mirrors is not anticipated to be significant."[98] In the analysis of glint and glare impacts on planes flying over the Project site, the AFC provides that "[v]iews and/or potential glint/glare from the Project are anticipated to be similar to a body of water to pilots in aircraft flying over the site."[99] The Applicant has stated that the Project site is not near a large perennial waterbody.[100] Therefore, if the Applicant's analysis is correct, waterbirds, which require stopover sites during migration, may view the Project site as the only large water resource in the region and collide with the Project's mirrors when they attempt to land.

Data Request:

177. Because the AFC states that the Project site is not near a perennial waterbody and that glint and glare impacts are anticipated to be similar to a body of water to pilots in aircraft flying over the site, please provide a discussion of the Project's glint and glare impacts on birds that may require stopover sites during migration.

Background: EFFECTIVENESS OF MITIGATION

The Applicant proposes preparing construction monitoring and compliance reports that analyze mitigation measure effectiveness.[101] CEC siting regulations require the Applicant to provide a discussion of proposed compliance and monitoring programs that will be implemented to ensure the effectiveness of impact

[98] AFC, p. 5.13-25.
[99] AFC, p. 5.13-26.
[100] AFC: Bio Tech Report, p. 4-4.
[101] AFC, p. 5.6-24.

avoidance and mitigation measures incorporated into the Project.[102] CEC siting regulations also require a discussion of all proposed off-site habitat mitigation and habitat improvement or compensation, and an identification of contacts for compensation habitat and management.[103]

Data Requests:

178. Please specify the biological resources that will be monitored and the contents of the associated compliance reports. In your response please include:

    a. The frequency and duration of monitoring and reporting.

    b. Monitoring methods.

    c. Success criteria and triggers for additional mitigation if success criteria are not met.

179. Please provide a discussion of all proposed off-site habitat mitigation and habitat improvement or compensation, and an identification of contacts for compensation habitat and management.

Background: EVAPORATION POND IMPACTS TO BIRD SPECIES

The Project evaporation pond serves as a mortality hazard to wildlife, in part due to its potentially toxic condition.[104] In response to this concern, the Applicant responded to CEC Data Request 47 by stating:

> Waterfowl are not common in the immediate SJS 1&2 project vicinity; however, a variety of waterfowl and shorebirds may seasonally utilize evaporation ponds as resting, foraging, and nesting areas. It is not likely that most resident or migrant birds and other small wildlife species would ingest large amounts of highly saline water or water with high concentrations of selenium from the evaporation pond because the majority of these species obtain their water from their food. Therefore, wildlife impacts from evaporation ponds may occur but are not expected to be significant.

The fact that some species can obtain water from their food does not mean they won't drink water if it is available, especially in an arid environment. In addition, the Applicant's response does not address the hazard to waterfowl and shorebird

[102] California Energy Commission. 2007. Appendix B *of* Rules of practice and procedure & power plant site certification regulations. Document No. CEC-140-2007-003. Also see the updated Appendix B from July 2008 at http://www.energy.ca.gov/2008publications/CEC-140-2008-003/CEC-140-2008-003.PDF

[103] *Id.*

[104] Applicant's response to CEC Data Request 47.

species that may seasonally use evaporation ponds (and that drink and ingest water). Finally, the Applicant's response with respect to saline and selenium does not address impacts from ingestion of HTF contaminated water. The AFC states that in areas of potential HTF contamination, the runoff will be diverted to the lined evaporation ponds.[105]

Data Requests:

180. Please discuss how the mortality hazards associated with HTF contamination and other discharges held in the evaporation pond will be minimized for waterfowl and shorebirds that may use it for resting, foraging, and nesting.

Background: IMPACTS TO THE SWAINSON'S HAWK

The AFC's discussion of the Swainson's hawk states: "This species was not observed in the Project area during the 2008 surveys, and there are no historical sightings recorded on the CNDDB nearby. Therefore, Swainson's hawk utilizes the habitat in the vicinity of the SJS 1&2 site." Although the AFC had previously indicated field surveys were conducted according to CDFG and USFWS protocols, there is nothing to suggest protocol surveys for the Swainson's hawk were conducted.[106] Furthermore, the implication that there have been no historical sightings in the vicinity of the Project site is incorrect. At least two active (defined by the CDFG as used during one or more of the last five years) Swainson's hawk nests have been documented within 10 miles of the Project site.[107] Both of these nests were (are) associated with conditions similar to those described for Zapato Chino Creek within the Project area (i.e., cottonwood and tamarisk trees adjacent to a water channel and surrounded by agricultural land), suggesting that habitat suitable for Swainson's Hawk may be present within the Project area.[108]

Department of Fish and Game guidelines state, "Projects within 10 miles of an active nest tree but greater than 5 miles from an active nest tree shall provide 0.5 acres of HM [Habitat Management] and for each acre of urban development authorized (0.5:1 ratio)" and "project sponsors shall provide for the long-term management of the HM lands by funding a management endowment (the interest

[105] AFC, p. 5.5-15.
[106] Swainson's Hawk Technical Advisory Committee. 2000. Recommended timing and methodology for Swainson's hawk nesting surveys in California's Central Valley. Available at: http://www.dfg.ca.gov/wildlife/nongame/survey_monitor.html
[107] Department of Fish and Game, Biogeographic Data Branch. 2009. California Natural Diversity Database. Version 3.1.0. Updated 01 Aug 2009. Occurrence numbers 1431 and 1432.
[108] AFC, p. 5.6-6.

on which shall be used for managing the HM lands) at the rate of $400 per HM land acre (adjusted annually for inflation and varying interest rates)."[109] The Applicant has not proposed any specific mitigation for impacts to Swainson's hawk nest sites or foraging habitat.

Data Requests:

181. Please clarify whether the Applicant's consultant conducted protocol surveys for the Swainson's hawk.

182. If protocol surveys for Swainson's hawk were conducted, please provide the methods that were used to conduct the surveys.

183. If protocol surveys for Swainson's hawk were not conducted, please provide the anticipated schedule for conducting the surveys.

184. Please clarify why Swainson's hawk nest locations were not included on the "Sensitive Species Locations" map provided in the AFC (i.e., Figure 5.6-3).

185. Please provide a revised "Sensitive Species Locations" map that depicts at least the two active Swainson's hawk nest locations documented by DFG within 10 miles of the Project site.

186. Please provide information on any correspondence between the Applicant and the CDFG related to the Swainson's hawk, including any needed studies and the presence of more recent nest records (that have yet to be entered into the CNDDB).

187. Please quantify the amount of potential Swainson's hawk foraging habitat that will be impacted by the Project.

188. Please specify any measures that will be implemented to mitigate potential impacts to Swainson's hawk nest sites and foraging habitat.

Background: CHARACTERIZATION OF VEGETATION COMMUNITIES

A habitat assessment survey was conducted for the Project site, both sides of the northern transmission line alignment, and areas within one mile of the Project study area.[110] According to the AFC, all areas were surveyed on foot, and all areas

[109] CDFG. 1994. Staff report regarding mitigation for impacts to Swainson's hawks (Buteo swainsoni) in the Central Valley of California. Available from Department of Fish and Game, Sacramento (CA).
[110] AFC: Bio Tech Report, p. 2-2.

were visible from the survey routes.[111] However, it appears the habitat assessment was conducted in less than five man-hours, making it impossible for the surveyors to have visually observed all the areas indicated.[112] The habitat assessment resulted in the delineation of four vegetation communities within the Project study area (Developed, Agricultural Land, Disturbed Valley Saltbrush Scrub/Non-Native Grassland Mosaic, and Non-Vegetated Channel),[113] and the determination that focused special-status species surveys were not necessary for the Project site.[114]

DISTURBED VALLEY SALTBUSH SCRUB/NON-NATIVE GRASSLAND MOSAIC

The Applicant delineated 165.1 acres of Disturbed Valley Salbush Scrub/Non-Native Grassland along the northern transmission line route and 32.2 acres along the southern route.[115] The AFC states that Valley Saltbush Scrub is typically characterized by open, gray- or blue-green chenopod scrubs (10-40% cover).[116] The AFC further states that because the Valley Saltbush Scrub habitat that is present in the proposed transmission line alignment is sparsely distributed within the non-native grassland community, it is considered disturbed.[117]

NON-VEGETATED CHANNEL

The Applicant delineated 2.4 acres of Non-Vegetated Channel along the northern transmission line route and 20.1 acres along the southern route.[118] The AFC indicates non-vegetated channels or floodways are unvegetated or sparsely vegetated drainages outside of the area of tidal influence.[119] The AFC classifies the portions of Zapato Chino Creek within the Project study area as Open (or Non-Vegetated) Channel.[120] However, the creek banks are characterized as being dominated by tamarisk, with non-native grasses and cottonwood trees also present.[121] In subsequent portions of the AFC, the creek is characterized as having riparian habitat.[122] As a result, it appears inappropriate to classify vegetation along the creek as "Non-Vegetated Channel."

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[111] *Id.*
[112] AFC, Appendix F-3.
[113] AFC: Bio Tech Report, p. 3-1.
[114] AFC: Bio Tech Report, p. 2-2.
[115] AFC: Bio Tech Report, p. 3-1.
[116] AFC: Bio Tech Report, p. 3-2.
[117] *Id.*
[118] AFC: Bio Tech Report, p. 3-1.
[119] *Id.*
[120] AFC: Bio Tech Report, p. 3-3.
[121] *Id.*
[122] AFC: Bio Tech Report, p. 4-5.

AGRICULTURAL LANDS

The AFC characterizes the entire 640-acre Project site as Agricultural Lands[123] that were bare (at the time of surveys) due to recent plowing, except in small areas of the Project site that appear to be access areas.[124] As a result, focused special-status species surveys were not conducted on the Project site.[125] The statement that the entire Project site is (or was) bare (except small areas) is not supported by imagery available through Google Earth and Google Maps "Street View."[126] In particular, there appear to be several areas within the Project site that have characteristics similar to areas the AFC classifies as Non-Native Grassland/Saltbrush Scrub.

Data Requests:

189. Please characterize the Applicant's referenced disturbance within the Valley Saltbrush Scrub habitat present in the Project study area by discussing the features that make it disturbed (e.g., roads, recent agricultural activity, off-road vehicle use) and quantifying the level(s) of disturbance.

190. Please provide a more thorough description of the vegetation present along Zapato Chino Creek within the Applicant's Project study area and justify the inclusion of bank vegetation in the Non-Vegetated Channel community.

191. Please characterize the vegetation along the creek bank in the Applicant's Project study area such that its ecological values can be inferred. In particular, please provide:

    a. The height range of tamarisk trees.

    b. The height range of cottonwood trees.

    d. The relative abundance of tamarisk trees to cottonwood trees.

    e. The density and distribution of trees along the creek banks.

    f. The approximate minimum, maximum, and mean distance trees extend from the bank.

192. Please provide the minimum mapping unit used by the Applicant to map vegetation communities within the Project study area.

193. Please clarify the vegetation community present (baseline) at the

[123] AFC: Bio Tech Report, p. 3-2.
[124] AFC: Bio Tech Report, p. 3-1.
[125] AFC: Bio Tech Report, p. 2-2.
[126] Images taken 31 Jul 2009.

following locations within the Project site:[127]

a. Lat 36.136411°, Lon –120.221974°
b. Lat 36.135362°, Lon –120.222403°
c. Lat 36.135439°, Lon –120.220004°
d. Lat 36.135534°, Lon –120.224342°
e. Lat 36.136587°, Lon –120.226192°
f. Lat 36.132468°, Lon –120.221586°
g. Lat 36.123411°, Lon –120.229823°
h. Lat 36.124231°, Lon –120.227991°
i. Lat 36.125118°, Lon –120.227346°
j. Lat 36.125115°, Lon –120.228099°

194. Please describe the methods used by the Applicant to characterize the vegetation and habitat for the southern transmission line alignment given "general" plant surveys had not yet been performed when the AFC was submitted.[128]

Background: IMPACTS TO THE SAN JOAQUIN ANTELOPE SQUIRREL

The Applicant concluded the San Joaquin antelope squirrel is likely within the Project area where suitable habitat is present.[129] Because the Applicant's small mammal trapping efforts were not specifically designed to detect the presence of the San Joaquin antelope squirrel, the AFC recommends focused trapping for the species be conducted prior to ground clearing activities for the transmission line.[130] The San Joaquin antelope squirrel is a State-listed threatened species. Sections 2081(b) and (c) of the California Endangered Species Act allow CDFG to issue an incidental take permit for a State listed threatened or endangered species only if specific criteria are met. An incidental take permit may be issued only if the Applicant minimizes and fully mitigates the impacts of the authorized take. The AFC fails to provide a description of potential Project impacts to the species, or plans for mitigating those impacts.

Data Requests:

195. Please provide the results of focused trapping efforts for the San Joaquin antelope squirrel or provide the schedule for their completion.

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[127] WGS84 datum.
[128] *See* AFC: Bio Tech Report, p. 2-2. AFC, p. 5.6-2.
[129] AFC: Appendix F, p. F-2-2.
[130] AFC: Bio Tech Report, p. 3-4.

196. Please provide a discussion of potential Project impacts to the San Joaquin antelope squirrel, including the amount of suitable habitat that may be impacted.

197. Please discuss any measures that will be implemented to minimize and mitigate impacts to the San Joaquin antelope squirrel, including whether compensation will be provided for impacts to the species' habitat.

Background: IMPACTS TO JURISDICTIONAL WATERS

A jurisdictional waters delineation was conducted for the Project. However, it is unclear whether the delineation encompassed the entire Project study area, or only the portions of the study area where Zapato Chino Creek crosses the transmission line alignments.[131]

Data Requests:

198. Please clarify the portion(s) of the Project study area covered by the Applicant's jurisdictional waters delineation.

199. If the Applicant's jurisdictional waters delineation does not encompass the entirety of the Project study area, please provide wetland delineations for all areas to be impacted by the Project.

200. Please provide a copy of all correspondence with the U.S. Army Corps of Engineers regarding potential wetlands within the Project study area.

Background: IMPACTS TO THE SAN JOAQUIN KIT FOX

The Applicant has assumed presence of the San Joaquin kit fox within the 640-acre Project site. Habitat along the transmission line routes is also likely to support the San Joaquin kit fox.[132] During Project surveys, potential San Joaquin kit fox dens were observed along the northern transmission line route. However, the surveyors concluded the dens were not active.[133]

[131] *See* AFC: Bio Tech Report, p. 2-5.
[132] AFC, p. 5.6-21.
[133] AFC, p. 5.6-8.

To mitigate impacts to 640 acres of kit fox habitat, the Applicant has proposed habitat compensation at a 1.1:1 ratio.[134] The AFC states this mitigation ratio is consistent with other CEC-permitted projects located on active agricultural lands within a landscape also dominated by agricultural lands.[135] However, in the Carrizo Energy Solar Farm proceeding, the Applicant had to undertake a habitat evaluation to determine the appropriate mitigation ratio.[136]

Finally, the Applicant's proposed mitigation does not encompass impacts to kit fox habitat along the proposed transmission line route alignments.[137]

Data Requests:

201. Please clarify the Project's impacts to San Joaquin kit fox habitat, both within the Project site and along each proposed transmission line route, and specify whether the proposed habitat compensation is intended to mitigate impacts to habitat in both areas.

202. Please clarify how surveyors concluded potential kit fox dens were not active as opposed to not occupied (when inspected).

203. Please identify the other species that could have created (or used) the "potential" kit fox dens that were detected.

204. Please state how the Applicant's proposed 1.1:1 mitigation for impacts to San Joaquin kit fox was derived.

205. Please explain how the Applicant's proposed 1.1:1 mitigation ratio is consistent with other CEC-permitted projects located on active agricultural lands within a landscape also dominated by agricultural lands.

[134] AFC, p. 5.6-23.
[135] AFC, p. 5.6-23.
[136] *See e.g.* Carrizo Energy Solar Licensing Case, 07-AFC-08, Application for Certification, p. 5.6-22 (applying San Luis Obispo County Guidelines).
[137] AFC, p. 3-1.

Dated: August 24, 2009

Respectfully submitted,

_____/s/_____

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Attorneys for California Unions for Reliable Energy

STATE OF CALIFORNIA

Energy Resources Conservation

and Development Commission

In the Matter of:	
The Application for Certification for the San Joaquin Solar 1 and 2 Hybrid Power Plant Project	Docket No. 08-AFC-12

DECLARATION OF SERVICE

I, Bonnie Heeley, declare that on August 24, 2009, I served and filed copies of the attached **CALIFORNIA UNIONS FOR RELIABLE ENERGY DATA REQUESTS, SET FOUR**. The original document, filed with the Docket Unit, is accompanied by a copy of the most recent Proof of Service list, located on the web page for this project at http://www.energy.ca.gov/sitingcases/sjsolar/SJSOLAR_POS.PDF. The document has been sent (1) electronically, and (2) via US Mail by depositing in the US Mail at South San Francisco, CA, with first-class postage thereon full prepaid and addressed as provided on the attached Proof of Service list to those addresses NOT marked "email preferred." It was sent for filing to the Energy Commission by sending an original paper copy and one electronic copy, mailed and emailed respectively, to the address shown on the attached Proof of Service list.

I declare under penalty of perjury that the foregoing is true and correct. Executed at South San Francisco, California, on August 24, 2009.

_____/s/_____
Bonnie Heeley

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