

CALIFORNIA ENERGY COMMISSION

1516 NINTH STREET
SACRAMENTO, CA 95814-5512

July 25, 2008

Perry H. Fontana, QEP
Vice President - Projects
Ausra, Inc.
2585 East Bayshore Road
Palo Alto, California 94303

DOCKET	
07-AFC-8	
DATE	JUL 25 2008
RECD.	JUL 25 2008

**SUBJECT: DATA REQUEST SET 3 - NUMBERS 101 THROUGH 112
CARRIZO ENERGY SOLAR FARM APPLICATION FOR CERTIFICATION (07-AFC-8)**

Dear Mr. Fontana,

Pursuant to Title 20, California Code of Regulations, section 1716, the California Energy Commission staff is asking for the information specified in the enclosed data requests related to the Carrizo Energy Solar Farm (CESF) Application for Certification (AFC) (07-AFC-8). The information requested is necessary to: 1) more fully understand the project, 2) assess whether the facility will be constructed and operated in compliance with applicable regulations, 3) assess whether the project will result in significant environmental impacts, 4) assess whether the facilities will be constructed and operated in a safe, efficient and reliable manner, and 5) assess potential mitigation measures.

This third set of data requests (#s 101-112) is being made in the area(s) of cultural resources, land use, noise, soil and water resources, and cumulative impacts. Written responses to the enclosed data requests are due to the Energy Commission staff on or before August 25, 2008, or at such later date as may be mutually agreeable.

If you are unable to provide the information requested, or object to providing the requested information, you must send a written notice to the Committee for the CESF project, and to me, within 20 days of receipt of this notice. The notification must contain the reasons for not providing the information and the grounds for any objections (see Title 20, California Code of Regulations, section 1716 (f)).

If you have any questions, please call me at (916) 654-4679, or email me at jkessler@energy.state.ca.us.

Sincerely,

John Kessler
John Kessler
Project Manager

Enclosure
cc: Dockets 07-AFC-8
Webworks
POS

PROOF OF SERVICE (REVISED 7/24/08) FILED WITH
ORIGINAL MAILED FROM SACRAMENTO ON 07/25/08

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**CARRIZO ENERGY SOLAR FARM (07-AFC-8)
DATA REQUEST SET 3**

Technical Area: Cultural Resources
Author: Beverly Bastian

BACKGROUND

The applicant identified and evaluated two farming complexes on the proposed project site, the King farm on the power plant parcel (Section 28) and the Cavanaugh farm on the laydown area (Section 33). The two complexes were described as “modest example[s] of a rural historic landscape” (p. 5.7-22). Following current professional historic preservation practice and the Secretary of the Interior’s Guidelines for Evaluating and Documenting Rural Historic Landscapes (1999), staff is assessing a larger potential cultural landscape—the entire northern Carrizo Plain, to which the King and Cavanaugh farms are potential contributors. To facilitate this assessment, staff needs to identify and evaluate the integrity of additional farms that may be contributors to the cultural landscape. Consequently, staff needs recorded data equivalent to those provided for the King and Cavanaugh farms for other farm complexes, farming structures, and major circulation features in the Northern Carrizo area.

Staff understands that the applicant’s architectural historian completed eight recordations of northern Carrizo farm complexes, roads, and earthworks features, including the King and Cavanaugh farms, during the preparation of the AFC. So, staff needs the additional six Carrizo recordations the applicant has already completed to facilitate its assessment of the potential cultural landscape staff has identified.

The farms listed in the data request below were compiled from a 1941 agricultural survey map as additional possible contributors to a cultural landscape predating 1967. Staff assumes that these *circa* 1941 farms are among those the applicant has already recorded, but requests additional field work by the applicant’s architectural historian to record any of the farms on the list below that have not already been recorded.

DATA REQUEST

101. Please have a qualified architectural historian provide DPR 523 forms, equivalent in detail to those provided for the King and Cavanaugh farms, for the Northern Carrizo farms and farming-associated features in the list below. Note that the names of the farms were compiled from a 1941 agricultural survey map, but the locations should be sufficient to identify the farms for which information is requested.
 - a. Werdon Property T29S R17E Section 11 SE ¼;
 - b. Cooper Property T29S R18E Section 24 NE ¼ (near section line) on Bitterwater Rd.;
 - c. Van Metre Property T29S R18E Section 24 SE ¼ on Bitterwater Rd.;
 - d. Lewis Property T29S R18E Section 30 SE ¼ and Section 29 NW ¼;

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- e. Travers Property T30S R18E Section 4 SE $\frac{1}{4}$;
- f. Cavanaugh Property (different from Cavanaugh ranch on the proposed laydown area) T30S R18E Section 1 SW $\frac{1}{4}$;
- g. No name property T29SR18E Section 22 SW $\frac{1}{4}$;
- h. "Red Tank" T30S R18E Section 3 NW $\frac{1}{4}$ (shows on 1941 map as a well with an associated building; not clear if it is a farm);
- i. Major rural roads dating before 1950; and
- j. Earthworks associated with farming or ranching before 1950.

**CARRIZO ENERGY SOLAR FARM (07-AFC-8)
DATA REQUEST SET 3**

Technical Area: Land Use
Author: Negar Vahidi

BACKGROUND

As part of its land use analysis, Energy Commission staff needs to know how San Luis Obispo County would address the CESF proposal to construct a 40,000 square foot manufacturing building on the project site, absent the Energy Commission's exclusive jurisdiction. As stated in the AFC, the San Luis Obispo County General Plan land use designation for the site and proposed transmission line is Agriculture; and the site is zoned Agricultural District (AG). According to the AFC, energy production is an unclassified conditional use in the AG zone district and electrical generation is an allowable use that is subject to the land use permit required by specific use standards. However, the County's Land Use Ordinance (Title 22 of the County Code) does not specifically list manufacturing as an allowable use in the AG zone district. According to Section 22.06.030, a use that is not listed must be reviewed based upon the characteristics of the use in order to determine whether it would be equivalent to the allowed uses. In addition, in preliminary discussions with the County's planning staff (John McKenzie, Senior Planner) on July 10, 2008, the County has stated that "...construction of a temporary manufacturing building...would be an allowed construction-related activity. If we were issuing the permit, we would probably require that a bond be posted with the county for full demolition and restoration."

DATA REQUEST

102. Please state whether the applicant has obtained San Luis Obispo County's position on the consistency of the proposed manufacturing building with its General Plan and Land Use Ordinance. If so, please provide the specifics of the County's position on this temporary use.

103. If the proposed manufacturing use would normally require the issuance of a Conditional Use Permit or any other permit, please provide documentation of the specific findings the County would make, and the conditions (similar to what was included as part of discussions with staff) that San Luis Obispo County would require for this use.

**CARRIZO ENERGY SOLAR FARM (07-AFC-8)
DATA REQUEST SET 3**

Technical Area: Noise and Vibration

Author: Shahab Khoshmashrab

BACKGROUND

Because CESF would be a solar power plant, there would be no generation operational activities at night. However, throughout the AFC, the applicant has indicated that limited activities, such as washing of solar reflectors and collectors, and limited operation of various pumps, would occur during the nighttime hours. The AFC does not discuss the noise impacts of these offline activities at the project's noise-sensitive residential receptors.

104. Please evaluate the noise impacts of the proposed nighttime activities at noise monitoring locations ML01, ML02, ML03, ML07, SR10, APN 072-051-026 (Strobridge), APN 072-301-001 (Bell Future Residence), and APN 072-311-004 (Bell Existing Residence) and provide the resultant predicted increases in the ambient noise levels at these locations in terms of L_{eq} , L_{10} , L_{50} , and L_{90} .

**CARRIZO ENERGY SOLAR FARM (07-AFC-8)
DATA REQUEST SET 3**

Technical Area: Soil and Water Resources
Authors: Mark Lindley

WATER RESOURCES AND WATER SUPPLY

Energy Commission staff has reviewed the "Hydrology and Hydrogeology of the Vicinity of the Proposed Carrizo Energy Solar Farm (CESF), San Luis Obispo County, California" dated June 26, 2008. This report was submitted by the applicant to help address concerns from the public, comments from local and state agencies, and comments from Commission staff related to water use at CESF and potential impacts to local groundwater resources and surface water delivery to Soda Lake. The report provides an overview of the hydrology and hydrogeology at the project site and an analysis of potential changes to surface water and groundwater resources associated with the proposed project. Please revise or supplement the report to address the following Data Requests/Comments.

BACKGROUND

SURFACE WATER HYDROLOGY

In the surface water analysis contained in the above report, the applicant estimated that between 162 to 208 acre-feet per year (afy) of runoff discharged from the project site under existing conditions would be captured in depressions and allowed to infiltrate and evaporate following implementation of the proposed project. In addition, perimeter swales are proposed to route runoff from up-gradient sub-watersheds (about 8.2 square miles) around the project site, discharging a portion of that runoff to the existing ephemeral drainage channel which flows through the laydown area south of the site towards Soda Lake.

DATA REQUESTS

105. Please revise Table 2-4. The Post-Project Annual Runoff Volume entering Soda Lake appears to have been transposed with the Pre-Project Annual Runoff Volume entering Soda Lake.

106. Please estimate the following regarding runoff from the upgradient watersheds which could be captured in the perimeter swale before the swale overtops and discharges towards the existing ephemeral drainage channel that flows through the laydown area:
 - a. the total storage capacity of the perimeter swales; and
 - b. the portion of the estimated average annual runoff that would be captured in the perimeter swales.

107. Please estimate the following regarding runoff captured onsite in the depressions and the perimeter swales:

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DATA REQUEST SET 3**

- a. the portion of the total project site runoff that is expected to percolate to the subsurface increasing groundwater recharge of the Upper Zone aquifer; and
 - b. the increase in average annual groundwater recharge attributable to infiltration of stormwater runoff for the proposed project.
108. Please revise the estimates of runoff delivered to Soda Lake for the post-project scenario to account for runoff from the up-gradient sub-watersheds that will be captured in the perimeter swales.

BACKGROUND

GROUNDWATER / HYDROGEOLOGY

In the groundwater modeling analysis in the subject report, the applicant identified 118 wells on the Carrizo Plain. The applicant assigned a steady pumping rate of 12 gpm (~19.4 afy) to wells with an unknown maximum yield. For wells with a known maximum yield, the applicant assigned a 35% duty cycle with pumping at the maximum yield. In total, these assumptions resulted in an estimated pumping rate of 4,861 afy which was about 25% greater than previous estimates by Kernnitzer in 1967. The Kernnitzer study is the only previously known basin-wide surface water and groundwater study completed on the Carrizo Plain and served as a basis for the applicant's study. For both the Project and No-Project scenarios, the applicant estimated a basin-wide recharge rate of 59,629 afy.

Data Requests/Comments

109. Please provide the following:
- a. a basis for assuming a 12 gpm constant pumping rate for wells with an unknown pumping rate and the 35% duty cycle for wells with a known maximum yield; and
 - b. An explanation of how these assumptions compare to the known withdrawal from users on the Carrizo Plain based on the surveys.
110. Please revise the estimated recharge rate of the model for the Project scenario to reflect the increase in groundwater recharge estimated in the surface water analysis (Data Request 108) above, rerun the model, and report the results.
111. Please provide additional detail figures for the revised groundwater drawdown model results. Specifically, please zoom in on the drawdown results presented in Figures 3-9 and 3-10 to highlight anticipated drawdown within 2 to 5 miles of the project site and to improve the illustration of effects.

**CARRIZO ENERGY SOLAR FARM (07-AFC-8)
DATA REQUEST SET 3**

Technical Area: Project Description/Cumulative Impacts
Author: John Kessler

BACKGROUND

In addition to the proposed CESF project, staff understands there are at least two other solar photovoltaic power projects planned for the Carrisa Plains, currently known as Optisolar's Topaz Solar Farm and a currently unnamed project to be developed by Sun Power. At the time the AFC was filed and up until recently, adequate information was not available for either of these projects for staff and the applicant to consider the potential cumulative impacts of these and the proposed CESF. However, staff has recently obtained a preliminary draft of Optisolar's Topaz Solar Farm Conditional Use Permit (CUP) Application filed with San Luis Obispo County on July 18, 2008. Staff will provide an electronic copy to the applicant. Staff believes that with the availability of the preliminary draft of the Topaz Solar Farm (CUP) application, its development is a reasonably foreseeable project that now should be considered in the cumulative impacts analysis conducted for the proposed CESF project.

DATA REQUEST

112. Please provide the following:
- a. an analysis addressing the expected cumulative impacts due to the construction, operation and maintenance of both the CESF and Topaz Solar Farm Projects; The analysis should be prepared to a level of detail that is reasonable based on the amount of information currently available and address the following technical areas: air quality, biology, cultural resources, geology, hazardous materials, land use, noise and vibration, paleontology, public health, socioeconomics, soil and water, transmission line safety and nuisance, traffic and transportation, visual resources, waste, and worker safety and fire protection.
 - b. measures proposed to mitigate adverse environmental impacts of the project, the effectiveness of the proposed measures, and any monitoring plans proposed to verify the effectiveness of the mitigation; and
 - c. an additional photo simulation using the KOP #4 viewshed showing both the CESF and Topaz Solar Farm Projects in the view.

BEFORE THE ENERGY RESOURCES CONSERVATION AND DEVELOPMENT COMMISSION OF THE
STATE OF CALIFORNIA

APPLICATION FOR CERTIFICATION
For the CARRIZO ENERGY
SOLAR FARM PROJECT

Docket No. 07-AFC-8

PROOF OF SERVICE

(Revised 7/24/2008)

INSTRUCTIONS: All parties shall either (1) send an original signed document plus 12 copies or (2) mail one original signed copy AND e-mail the document to the address for the Docket as shown below, AND (3) all parties shall also send a printed or electronic copy of the document, which includes a proof of service declaration to each of the individuals on the proof of service list shown below:

***CALIFORNIA ENERGY COMMISSION**

Attn: Docket No. 07-AFC-8
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DECLARATION OF SERVICE

I, Christina Flores, declare that on July 25, 2008, I deposited copies of the attached Data Request Set 3 – Numbers 101 through 112 for the Carrizo Energy Solar Farm Project (07-AFC-8) in the United States mail at Sacramento, Ca with first-class postage thereon fully prepaid and addressed to those identified on the Proof of Service list above.

OR

Transmission via electronic mail was consistent with the requirements of California Code of Regulations, title 20, sections 1209, 1209.5, and 1210. All electronic copies were sent to all those identified on the Proof of Service list above.

I declare under penalty of perjury that the foregoing is true and correct.


Christina Flores