

## CALIFORNIA ENERGY COMMISSION

1516 NINTH STREET  
SACRAMENTO, CA 95814-5512



May 8, 2008

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

<b>DOCKET</b>	
<b>07-AFC-8</b>	
<b>DATE</b>	MAY 0 8 2008
<b>RECD.</b>	MAY 0 8 2008

**SUBJECT: DATA REQUESTS 79 THROUGH 100 FOR THE CARRIZO ENERGY SOLAR FARM (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. 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 second set of data requests (#79-100) is being made in the area(s) of biological resources, noise, socioeconomics, soil and water resources, traffic and transportation, and visual resources. Written responses to the enclosed data requests are due to the Energy Commission staff on or before June 6, 2008, or at such later date as may be mutually agreeable.

If you are unable to provide the information requested, need additional time, or object to providing the requested information, you must send a written notice to both Chairman Jackalyn Pfannenstiel, Presiding Committee Member for the Carrizo Energy Solar Farm project, and to me, within 20 days of receipt of this notice. The notification must contain the reasons for not providing the information, the need for additional time, 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](mailto:jkessler@energy.state.ca.us).

Sincerely,

John Kessler, Project Manager  
Energy Facility Siting Project Manager

Enclosure

cc: Dockets 07-AFC-8

PROOF OF SERVICE (REVISED 2/5/08) FILED WITH  
ORIGINAL MAILED FROM SACRAMENTO ON 5/9/08

CF

## **CARRIZO ENERGY SOLAR FARM (07-AFC-8) DATA REQUESTS**

**Technical Area:** Biological Resources

**Author:** Brian McCollough

### **BACKGROUND**

Staff consulted with the California Department of Fish and Game (CDFG) regarding the biological surveys conducted for the Carrizo Solar Energy Farm. CDFG had concerns that last year was very dry, and the botanical surveys conducted last year would not be adequate to characterize the plants present on the site. Additionally, the surveys for blunt-nosed leopard lizard (BNLL) were done late in the season, and might not have been successful in finding BNLL due to a combination of the dry year and the timing of the surveys. CDFG staff indicated that the small mammal surveys may not have been adequate, and was concerned about the San Joaquin antelope squirrel, a state-listed threatened species. Another species of concern for the project site is the federally threatened Kern primrose sphinx moth.

### **DATA REQUEST**

79. Please provide the results for 2008 biological resources surveys for areas to be impacted by the project, including botanical surveys, small-mammal trapping surveys, and blunt-nosed leopard lizard surveys. Please contact Deb Hillyard at CDFG ((805)772-4318) to ensure that the appropriate survey protocols are followed.
  
80. Please contact the U.S. Fish and Wildlife Service (USFWS) to determine the survey needs and protocols for the Kern primrose sphinx moth, and provide the results of the sphinx moth surveys.

## **CARRIZO ENERGY SOLAR FARM (07-AFC-8) DATA REQUESTS**

**Technical Area:** Noise and Vibration

**Author:** Shahab Khoshmashrab

### **BACKGROUND**

AFC Table 5.12-2 shows the short term ambient noise level at ML03 (the nearest residential receptor identified in the AFC) of 46 dBA  $L_{eq}$ . This survey was taken for only 15 minutes between 7:43 p.m. and 7:58 p.m. The survey did not record the daytime ambient noise level. In order to evaluate the project's noise impact at ML03, staff needs to better understand the existing noise environment at this location.

81. Please conduct an ambient noise survey at noise monitoring location ML03. This survey should measure the ambient noise level during two different times of a 24-hour period, in the morning and in the afternoon. Each measurement should collect at least a one-hour sample. This survey should be conducted during calm weather conditions and provide the resultant noise levels expressed in terms of  $L_{eq}$ ,  $L_{10}$ ,  $L_{50}$ , and  $L_{90}$ .

### **BACKGROUND**

The ambient noise survey described in the AFC was performed in June 2007. Staff recently learned that since that time, more residences have been built or are planned to be built in the project area in the near future. The noise impacts of the CESF at these locations need to be addressed in staff's analysis.

### **DATA REQUEST**

82. Please identify all new residences built since June 2007 and all planned residential developments that the applicant is aware of, within the 3-mile radius of the center of the project site, on a noise contour map similar to AFC Figure 5.12-1.
83. Please conduct a short term ambient noise survey at these locations and provide the resultant noise levels expressed in terms of  $L_{eq}$ ,  $L_{10}$ ,  $L_{50}$ , and  $L_{90}$ . This survey should measure the ambient noise levels during three different times of a 24-hour period, in the morning, in the afternoon, and at night. This survey should be conducted during calm weather conditions.
84. Please provide the estimated project noise levels at these locations, during both construction and operation.
85. Please discuss whether residents living in these properties are likely to be present in their homes during the construction hours of 7:00 am to 7:00 pm Monday through Friday.

**CARRIZO ENERGY SOLAR FARM (07-AFC-8)  
DATA REQUESTS**

**BACKGROUND**

The applicant proposes to perform limited construction activities at night (beyond the normal construction period of 7:00 am to 7:00 pm). The AFC does not address the noise impacts of this proposal at the project's noise sensitive receptors. In order to evaluate the impacts of nighttime construction at the noise sensitive receptors, staff needs to know the following information.

**DATA REQUEST**

86. Please state the hours of night and early morning, and the length of time in terms of weeks or months, when the above nighttime construction would occur.
87. Please evaluate the noise impacts of the proposed nighttime construction activities at noise monitoring locations ML01, ML02, ML03, ML07, and SR10. This discussion should include the estimated construction noise levels and the resultant predicted increases in the ambient noise levels at these locations.

**CARRIZO ENERGY SOLAR FARM (07-AFC-8)  
DATA REQUESTS**

**Technical Area:** Socioeconomics

**Author:** Jacob Hawkins M.E.S.M.

**BACKGROUND**

AFC page 5.10-7 states Carrizo Energy, LLC will provide approximately \$170 million (in 2007 dollars) in construction payroll. However, the AFC, page 5.10-14, states that the anticipated construction cost to be paid out as wages and salaries (including benefits) is roughly \$55 million.

**DATA REQUEST**

88. Please describe the difference between "construction payroll" and "wages and salaries."
89. Please estimate the amount of construction payroll to be paid out to local construction workers (San Luis Obispo and Kern counties).

**BACKGROUND**

The AFC, page 5.10-14, states that when available, local products will be purchased. However, the AFC does not identify what is considered as the local area. Additionally, the AFC does not mention what materials or products will be purchased locally or what the tax revenue would be from the purchase of local products.

**DATA REQUEST**

90. Please clarify what is meant by "local area."
91. Please describe what materials and/or products are expected to be purchased locally.
92. Please estimate how much sales tax revenue would be generated by the purchase of local materials and/or products.

## **CARRIZO ENERGY SOLAR FARM (07-AFC-8) DATA REQUESTS**

**Technical Area:** Soil and Water Resources

**Authors:** Mark Lindley

### **BACKGROUND**

#### **Water Supply**

Public comments at the Informational Hearing and Data Response Workshops at the Carrisa Plains Heritage Association Community Center have illustrated the level of concern within the local community regarding potential impacts to groundwater supply and quality associated with the project's pumping of groundwater. The applicant has proposed pumping approximately 21 acre feet per year of groundwater annually, with a peak pumping period expected to last one month. Local experience indicates that the groundwater resource at the project site is very sensitive to pumping and prone to drawdown impacts. In addition, water quality in the Carrizo Plain Groundwater Basin varies both with depth and location. Areas to the south and east of the project site tend to have lower groundwater quality.

As discussed at the Data Response Workshop, the applicant is in the process of providing additional assessment of groundwater resources at the project site and the potential impacts associated with the project's planned groundwater pumping. Staff has compiled additional data requests, to help the applicant provide the necessary information for staff and the community to assess potential impacts to the groundwater basin in the vicinity of the proposed project.

Many neighboring residents indicated that the applicant has not contacted them to assess potential impacts related to noise, visual resources, and groundwater supply from their wells. Some have indicated they may be willing to share information regarding their wells. A survey of neighboring residents could enable the applicant to develop a better understanding of potential impacts from local, surrounding groundwater pumping in addition to the pumping planned at the project site.

### **DATA REQUESTS**

93. Please survey residents within a 2-mile radius regarding their use of groundwater and provide information on well location, depth, and screening interval; depth to groundwater; typical pumping rates; and groundwater quality.
94. Please provide an assessment of groundwater conditions to include analysis of any new information that may be obtained. The supplement should be prepared by a Certified Hydrogeologist or Professional Engineer experienced in conducting groundwater studies and should include the following:

## **CARRIZO ENERGY SOLAR FARM (07-AFC-8) DATA REQUESTS**

- a. Results of the survey of local residents to determine the location of wells within a 2-mile radius including details on depth, annual use, and groundwater quality.
- b. Review of the soils, hydro-geology, and groundwater horizons at the project site.
- c. Review of the quality of groundwater in each groundwater horizon at the site, identifying the lowest quality groundwater for use by the project.
- d. The effects of groundwater pumping on groundwater quality.
- e. Results of pump tests at the project site.
- f. Results of groundwater modeling analysis and model documentation that includes a discussion of rationale for characterization of the groundwater system, selection of model parameters, and any supporting technical information.
- g. Further assessment of the expected groundwater recharge at the project site taking into account evaporation, transpiration, and current project design which includes surface water retention and infiltration.
- h. An assessment of expected drawdown at neighboring wells.
- i. A summary assessment of the Carrizo Plain Groundwater Basin.

### **BACKGROUND**

#### **Stormwater Management**

At the Data Response Workshop, representatives from San Luis Obispo County and California Department of Fish and Game indicated concerns about impacts to surface water flows to Soda Lake and the Carrizo Plain National Monument.

The current project design includes capture of surface water runoff and retention on site for infiltration and groundwater recharge purposes. Natural drainages dissecting the site flow to Soda Lake. Capture of flow contributions from the site to natural drainages could affect the volume of water that reaches Soda Lake. As discussed at the Data Response Workshop, the applicant plans to provide an estimate of water supply to Soda Lake pre- and post-project to illustrate potential impacts to Soda Lake. Staff has compiled an additional data request, to assist the applicant in providing the necessary information for staff and other agencies to assess potential impacts to Soda Lake.

**CARRIZO ENERGY SOLAR FARM (07-AFC-8)  
DATA REQUESTS**

**DATA REQUEST**

95. Please provide an assessment of average annual runoff flowing into Soda Lake in the drainage channel that traverses the laydown area south of the project site for pre- and post-project conditions.
96. Please provide an assessment of the total average annual runoff from the total contributing watershed that flows to Soda Lake.
97. Please compare the total runoff flowing to Soda Lake pre- and post-project.

# CARRIZO ENERGY SOLAR FARM (07-AFC-8) DATA REQUESTS

**Technical Area:** Traffic and Transportation  
**Author:** Jason Ricks

## BACKGROUND

Portions of SR58 are characterized by extremely sharp turns and curves at varying grades. There has been public concern that, on some segments of SR58, construction workers and truck drivers unfamiliar with the road could present serious safety issues to the general traveling public. Most of the project's construction workers are expected to drive from Kern County westbound on SR58. Similarly, most project-related truck trips are expected to come from Kern County on SR58.

## DATA REQUEST

98. Please conduct an engineering review of SR58 to verify that construction trucks and buses would likely be able to stay within the roadway striping along the particularly winding segment located approximately 14 miles east of the project site and identified on the attached map.
99. If the engineering study shows a likelihood that trucks would cross the roadway centerline along this segment, please identify specific controls for truck traffic, such as one-way corridors, traffic signals, flagpersons, etc. that could be implemented to ensure safe passage of construction trucks and buses through this roadway segment.



## **CARRIZO ENERGY SOLAR FARM (07-AFC-8) DATA REQUESTS**

**Technical Area:** Visual Resources

**Author:** Mark R. Hamblin

### **BACKGROUND**

#### **Lighting Plan**

Public comments at the Informational Hearing and Data Response Workshop and written correspondence received from the local community and county officials have illustrated a heightened level of concern regarding potential impacts generated by the proposed Carrizo Energy Solar Farm (CESF) exterior lighting.

Staff spoke to the applicant's consultant (URS) regarding the project's exterior lighting during the March 12, 2008 public workshop. URS at that time informed staff that they would provide a lighting plan for staff to review prior to the preparation of the preliminary staff assessment for the project.

URS staff has informed Energy Commission staff that the exterior lighting plan for the project would be provided in the AFC supplement to be filed with the Energy Commission in June 2008. The following data requests provide detail on the information staff will need.

### **DATA REQUESTS**

100. Please provide an exterior lighting plan for the CESF project. The exterior lighting plan should include at the minimum the following:
  - a. A plot plan showing the location on the project site and structure where the outdoor light fixtures are to be installed;
  - b. A diagram showing the type of light fixture to be installed at the specific location;
  - c. A description of the outdoor light fixtures, including, but not limited to, the manufacturer's catalog cut sheets and drawings, the total lumen output, and the character of the shielding of the fixture, or its construction so that light rays emitted by the fixture are projected below the horizontal plane passing through the lowest point on the fixture from which light is emitted. Lighting is to be fully shielded if feasible and partially shielded in all other cases, and must be focused to minimize spill light into the night sky and onto adjacent properties. The following items are suggestions:
    - i. Exterior lighting originating on a property should be limited to a maximum of 0.5 horizontal foot candles (HFC) at a distance of 25 feet beyond the property lines. This specification will allow the controlled placement of lighting poles and luminaires adjacent to the property lines. With many outdoor luminaires, it is difficult to comply with low level foot candle requirements at the property line.

**CARRIZO ENERGY SOLAR FARM (07-AFC-8)  
DATA REQUESTS**

- ii. Direct glare shall not be observable outside the property boundary at an angle greater than 85 degrees from the nadir of the vertical axis of the light source. Direct glare is defined as the visual discomfort resulting from insufficiently shielded light sources in the field of view. One should “see the effect, not the light source”.
- d. Lights in high illumination areas not occupied on a continuous basis (such as maintenance platforms) shall, in addition to hoods, have switches, timer switches, or motion detectors so that the lights operate only when the area is occupied. All lighting should be of minimum necessary brightness consistent with operational safety and security.
- e. Identify onsite areas that are to use motion detectors with security lights instead of dusk to dawn types. Sudden illumination of an area triggered by a person’s movement is more likely to catch the interest or sensitivity of a neighbor than a light that is continuous.

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 2/5/2008)

**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  
1516 Ninth Street, MS-14  
Sacramento, CA 95814-5512  
[docket@energy.state.ca.us](mailto:docket@energy.state.ca.us)

**APPLICANT**

Perry H. Fontana, QEP  
Vice President-Projects  
Ausra, Inc.  
2585 East Bayshore Road  
Palo Alto, California 94303  
[perry@ausra.com](mailto:perry@ausra.com)

**APPLICANT CONSULTANT**

Angela Leiba, GISP  
Senior Project Manager  
GIS Manager/Visual Resource  
Specialist  
URS Corporation  
1615 Murray Canyon Road, Suite 1000  
San Diego, CA 92108  
[angela\\_leiba@urscorp.com](mailto:angela_leiba@urscorp.com)

Kristen E. Walker, J.D.  
URS Corporation  
1615 Murray Canyon Road, Suite 1000  
San Diego, California 92108  
[kristen\\_e\\_walker@urscorp.com](mailto:kristen_e_walker@urscorp.com)

**COUNSEL FOR APPLICANT**

Jane Luckhardt, Esq.  
Downey Brand Law Firm  
555 Capitol Mall, 10th Floor  
Sacramento, CA 95814  
[jluckhardt@downeybrand.com](mailto:jluckhardt@downeybrand.com)

**INTERESTED AGENCIES**

Larry Tobias  
CA Independent System Operator  
151 Blue Ravine Road  
Folsom, CA 95630  
[ltobias@caiso.com](mailto:ltobias@caiso.com)

Electricity Oversight Board  
770 L Street, Suite 1250  
Sacramento, CA 95814  
[esaltmarsh@eob.ca.gov](mailto:esaltmarsh@eob.ca.gov)

**INTERVENORS**

\* California Unions for Reliable Energy  
(CURE)

**c/o Tanya Gulesserian**

Adams Broadwell Joseph & Cardozo  
601 Gateway Boulevard, Suite 1000  
South San Francisco, CA 94080  
[tgulesserian@adamsbroadwell.com](mailto:tgulesserian@adamsbroadwell.com)

**ENERGY COMMISSION**

Jackalyn Pfannenstiel  
Chairman and Presiding Member  
[jpfannen@energy.state.ca.us](mailto:jpfannen@energy.state.ca.us)

Jeffrey D. Byron  
Commissioner and Associate Member  
[jbyron@energy.state.ca.us](mailto:jbyron@energy.state.ca.us)

Gary Fay  
Hearing Officer  
[gfay@energy.state.ca.us](mailto:gfay@energy.state.ca.us)

Mary Dyas  
Project Manager  
[mdyas@energy.state.ca.us](mailto:mdyas@energy.state.ca.us)

Caryn Holmes  
Staff Counsel  
[cholmes@energy.state.ca.us](mailto:cholmes@energy.state.ca.us)

Michael Doughton  
Staff Counsel  
[mdoughto@energy.state.ca.us](mailto:mdoughto@energy.state.ca.us)

Public Adviser's Office  
[pao@energy.state.ca.us](mailto:pao@energy.state.ca.us)

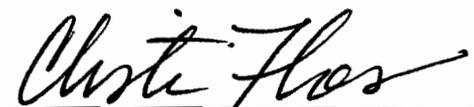
**DECLARATION OF SERVICE**

I, Christina Flores, declare that on May 9, 2008, I deposited copies of the attached Data Requests 79 through 100 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