

**CALIFORNIA ENERGY COMMISSION**1516 Ninth Street  
Sacramento, California 95814Main website: [www.energy.ca.gov](http://www.energy.ca.gov)

August 22, 2008

Mr. Jim Rexroad  
Vice President  
Avenal Power Center, LLC  
500 Dallas Street, Level 31  
Houston, TX 77002

<b>DOCKET</b>	
08-AFC-1	
DATE	AUG 22 2008
RECD.	AUG 22 2008

Dear Mr. Rexroad:

**RE: AVENAL ENERGY (08-AFC-1) – DATA REQUEST SET 2 (# 75-94)**

Pursuant to Title 20, California Code of Regulations, section 1716, the California Energy Commission staff requests 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 manner, and 5) assess potential mitigation measures.

These data requests are being made in the technical areas of Air Quality, Cultural Resources, Waste Management, and Water Resources. Written responses to the enclosed data requests are due to the Energy Commission staff on or before September 22, 2008, or at such later date as may be mutually agreed upon.

If you are unable to provide the information requested, need additional time, or object to providing the requested information, please send a written notice to the Committee and me within 20 days of receipt of this notice. The notification must contain the reasons for the inability to provide the information or the grounds for any objections (see Title 20, California Code of Regulations, section 1716 (f)).

If you have any questions regarding the enclosed data requests, please call me at (916) 654-3836.

Sincerely,

A handwritten signature in black ink that reads "Michelle Woods".

Michelle Woods  
Energy Facility Siting Project Manager

Enclosures  
cc: Docket (08-AFC-1)

PROOF OF SERVICE (REVISED 7/31/08) FILED WITH  
ORIGINAL MAILED FROM SACRAMENTO ON 8/22/08

MF

**Technical Area:** Air Quality  
**Author:** Brewster Birdsall

## **BACKGROUND**

Offset Package – Energy Commission staff has not received the updated offset strategy and package of emission reductions credits (ERCs) that the applicant agreed to provide in response to Data Request Set 1 (#4), dated June 20, 2008. The applicant should provide the update of AFC Appendix 6.2-5 and confirm that the proposed mitigation matches the offset proposal currently shown in the Preliminary Determination of Compliance (PDOC) released by San Joaquin Valley Air Pollution Control District (SJVAPCD) on July 16, 2008.

## **DATA REQUEST**

75. Please confirm whether the offsets proposed as mitigation are the same as the offset proposal shown in Section VIII of the SJVAPCD Preliminary Determination of Compliance, or provide details of how the offset package has changed.

## **BACKGROUND**

Equivalency of Emission Reductions -- Energy Commission staff is concerned that the integrity of the proposed mitigation may be adversely affected by the SJVAPCD's annual equivalency demonstration required by SJVAPCD Rule 2201, Section 7. This rule requires the SJVAPCD to demonstrate that ERCs used by the project, a new major source, are surplus at the time of use. The applicant's proposed mitigation includes ERCs issued between 1991 and 2002, and some of the ERCs may be subject to discounting at the time of use under Rule 2201, Section 7. The Draft Staff Report issued by SJVAPCD on July 29, 2008 for revising Rule 2201 indicates that the SJVAPCD will likely fail to demonstrate equivalency for nitrogen oxides (NOx) this year because surplus NOx credits may make up less than 10 percent of the total banked credits in the SJVAPCD.<sup>1</sup> If the applicant's ERCs are discounted, or if they are not representative of real or surplus reductions, then Energy Commission staff may need to identify additional mitigation for the project. The applicant should describe whether its proposed mitigation represents real and surplus emission reductions.

## **DATA REQUEST**

76. Please describe whether any of the offsets proposed for mitigation would be subject to discounting at the time of use or subject to discounting under Rule 2201, Section 7.

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<sup>1</sup> SJVAPCD, Draft Staff Report, Draft Amendments to Rule 2201 (New and Modified Stationary Source Review Rule) and Rule 2530 (Federally Enforceable Potential to Emit). Prepared by Carlos Garcia, Senior Air Quality Engineer. Dated: July 29, 2008.

77. Please demonstrate that the offsets proposed for mitigation are representative of real and surplus reductions, taking into account possible discounting under Rule 2201, Section 7. This information should verify that the quantity of real and surplus reductions in the proposed mitigation strategy, after discounting, would be sufficient to mitigate the project's impacts.

**Technical Area:** Cultural Resources  
**Author:** Beverly E. Bastian

## **BACKGROUND**

The applicant's response to previous staff Data Request 19, dated June 20, 2008, indicated that a geotechnical study is expected to be completed in late 2008 or early 2009. Staff believes that this planned research presents an opportunity for the applicant to reduce the amount of archaeological monitoring that staff would recommend in the conditions for certification that would accompany a decision from the Energy Commission to permit the proposed project. If the applicant were to provide factual field data on the archaeological character of the undisturbed geological deposits that underlie the portions of the proposed project area that will be subject to project disturbance, then staff would have a more objective basis for scaling back the standard archaeological monitoring requirements. If this possibility interests the applicant, staff recommends that a professional geoarchaeologist participate in the proposed geotechnical study and collect the data needed for an analysis of the potential for buried archaeological deposits at the proposed Avenal Energy plant site. ("Professional geoarchaeologist" means a person who is able to demonstrate the completion of graduate-level coursework in geoarchaeology, Quaternary science, or a related discipline.)

Involving a geoarchaeologist in the planned geotechnical study is strictly voluntary. Staff offers two options below for this participation. The greater involvement the geoarchaeologist has in the geotechnical study, the more likely that the resulting cultural resources information would either reduce the project's archaeological monitoring requirements or focus them more efficiently and cost effectively than would otherwise be possible.

## **DATA REQUEST**

78. Please choose one of the following options for the participation of a geoarchaeologist in the planned geotechnical study at the Avenal Energy site.
  - a. Please provide a professional geoarchaeologist the opportunity to observe, in the field, the removal of any sediment cores by the geotechnicians, to examine the cores, in the field or a laboratory, for physical and chemical indices of human activity, and, where feasible, to collect chronometric dating samples from the cores. At least one of the cores should be drilled to a depth that exceeds, by approximately one meter, the deepest construction excavations planned for the project. Prior to the field work, the geoarchaeologist should conduct background research on the geology and geomorphology of the Avenal Energy project area to be able to place the stratigraphic units observed in the cores into a meaningful local sequence. The geoarchaeologist should write a brief letter report for staff that describes the fieldwork and the stratigraphic units observed, that estimates the probable age of those units, that interprets the depositional

history of the units, and that assesses the likelihood that the units contain buried archaeological deposits.

- b. Or, please have a trench excavated to the specifications of a professional geoarchaeologist in the part of the proposed project site where project excavations are expected to extend to the greatest depth. Prior to the field work, the geoarchaeologist should conduct background research on the geology and geomorphology of the Avenal Energy project area to be able to place the stratigraphic units observed in the trench into a meaningful local sequence. Have the geoarchaeologist record reasonably detailed written descriptions of the lithostratigraphic and pedostratigraphic units in one profile of the trench. The recordation of that profile should include a measured drawing of the profile, a profile photograph with a metric scale and north arrow, and the screening of a small sample (three 5-gallon buckets) of sediment from the major lithostratigraphic or pedostratigraphic units in the profile, or from two arbitrary levels in the profile, through ¼-inch hardware cloth. Soil humate samples for dating the profile's stratigraphic sequence should also be collected, as appropriate. Have the soil humate samples assayed at a professional radiocarbon laboratory, per the geoarchaeologist's instructions, and have the results provided to the geoarchaeologist. The geoarchaeologist should write a brief letter report for staff that describes the fieldwork and the stratigraphic units observed, estimates the probable age of those units, interprets the depositional history of the units, and assesses the likelihood that the units contain buried archaeological deposits.

## **BACKGROUND**

Staff has identified the Tesla–Midway 230-kV transmission line (currently known as the Gates–Arco–Midway 230-kV transmission line) in the vicinity of the proposed Avenal Energy as potentially eligible for the California Register of Historical Resources under Criterion 1, and staff has evaluated the integrity of design and integrity of materials of this resource as sufficient to convey its historical significance. Staff, however, needs to evaluate its integrity of setting, which may have been impaired by the past addition of two 500-kV transmission lines in the older line's right-of-way. Staff also needs an evaluation of the potential impact of the project's new 230-kV transmission line, proposed to run close and parallel to the Tesla–Midway 230-kV transmission line, on its integrity of setting.

Additionally, the 2006 cultural resources updated report indicates that the proposed project's 230-kV transmission line would require the raising of two existing transmission line towers of the old Tesla–Midway 230-kV transmission line to facilitate interconnection at the Gates Substation (Pacific Legacy 2006, p. 5). Staff needs clarification of this as a potential project impact to the integrity of design of two of the Tesla–Midway 230-kV transmission line towers.

## **DATA REQUEST**

79. Please provide a drawing or photograph comparing the towers of the Tesla–Midway 230-kV transmission line towers, the newer 500-kV transmission line towers, and project’s proposed new 230-kV transmission line monopoles, showing them to scale vertically and in their actual horizontal spatial relationship, looking north. Please indicate, also, the outer edges of the right-of-way.
80. Please have a qualified architectural historian evaluate the impact of the project’s proposed new 230-kV transmission lines on the integrity of setting of the Tesla–Midway 230-kV transmission line.
81. Please provide details of the proposed raising of two of the Tesla–Midway 230-kV transmission line towers, including methods and materials planned, anticipated new height, any changes to foundations, and any changes to other structural elements of these towers.
82. Please have project engineers discuss the feasibility of the avoidance of the potential project impacts to these two towers represented by this proposed “raising.” For example, consider the possibility of making the analogous monopoles of the project’s proposed new 230-kV transmission lines taller or shorter so no changes would have to be made to the old towers.

## **BACKGROUND**

The AFC did not include some details concerning the construction of the project’s proposed 230-kV transmission line that staff needs to evaluate all potential impacts to cultural resources. Staff needs more detailed information on the pull sites and access roads that would be needed to build the proposed transmission line.

## **DATA REQUESTS**

83.
  - a. On a map, please show any existing access roads that are available for use in constructing the proposed new 230-kV transmission line.
  - b. If no access roads are available for use in constructing the proposed new 230-kV transmission line, on the same map, please show the number and location of new access roads that would have to be cleared and graded, including new roads to each tower location, if any. Also, please provide an estimate of the extent of the area around the new roads where ground disturbance would occur as a result of the clearing and grading activities.
  - c. On the same map, please provide the number and location of the pull sites that Avenal Power expects to use to install the conductors of the proposed new 230-kV transmission line. Also, please provide an estimate of the extent of the area around the pull sites where ground disturbance would occur as a result of the installation activities.

## **BACKGROUND**

AFC Figure 1.5-3A shows a preferred natural gas pipeline route and an alternative natural gas pipeline route. To identify and evaluate all proposed project impacts on cultural resources, staff needs to know if Avenal Power is still considering both of these alternatives.

## **DATA REQUEST**

84. Please explain whether the project description includes two alternative natural gas line routes between the proposed project site and the Kettleman Compressor Station.

## **BACKGROUND**

Avenal Power proposes to install security fencing surrounding the project site, including the storm water evaporation pond (Avenal 2008f, exh. 7-2; dwg. A3DV01-0-SK-0-SI.PL-05). To identify and evaluate all proposed project impacts on cultural resources, staff needs a more detailed description of ground disturbance possibly associated with the installation of this fencing.

## **DATA REQUEST**

85. Please describe the kind of security fencing proposed and the extent and depth of ground disturbance associated with its installation.

## **BACKGROUND**

In AFC Figures 2.3-9 and 2.3-11, some features that look like rock concentrations are shown at the east corner of the plant site and to the west of the storm water evaporation basin. These features are not labeled on the figures, but appear to represent something that would be constructed by the project. To identify and evaluate all proposed project impacts on cultural resources, staff needs to know what these features are and if there would be any ground disturbance possibly associated with them.

## **DATA REQUEST**

86. Please identify the features in AFC Figures 2.3-9 and 2.3-11 that look like rock concentrations and that appear to represent something that would be constructed by the project. Describe the extent and depth of ground disturbance, if any, associated with them.

## **BACKGROUND**

Avenal Power is proposing to construct a storm sewer system consisting of ditches, culverts, inlets, and underground pipes that would collect storm water runoff and direct it to an on-site storm water holding basin for dissipation via percolation or evaporation (Avenal 2008b, App. 2.0, pp. 2-1-6–2-1-7). The AFC provides few details of this proposed system. To identify and evaluate all proposed project impacts on cultural

resources, staff needs a more detailed description of this system and any ground disturbance possibly associated with its construction.

**DATA REQUEST**

- 87. Please provide a detailed description of the proposed storm water drainage system, including the ditches, culverts, inlets, and underground pipes. Please provide the extent and depths of excavations required to install this system.
- 88. Please provide a map showing the location of these drainage system features on and adjacent to the proposed plant site.



**Technical Area:** Waste Management  
**Author:** Casey Weaver

**BACKGROUND:**

The Phase I Environmental Site Assessment (ESA) did not include an evaluation of project linear elements. Project construction will take place along these alignments. It is important for both worker safety and environmental protection that potentially hazardous conditions be evaluated and mitigation (avoidance) be considered prior to initiation of construction activity. Additionally, should disposal of construction derived waste be needed, assurance of the acceptance of the waste by a suitable disposal facility should be secured.

The applicant is proposing a new eight-mile- 230 kV transmission line interconnection and two alternative alignments for a 16-inch- diameter underground natural gas pipeline. A Phase I Environmental Site Assessment needs to be conducted for the entire length of both proposed natural gas line alignments and the length of the proposed transmission line interconnection.

**DATA REQUEST:**

89. Please provide a Phase I ESA, completed in accordance with ASTM E1527-05, for both proposed alignments of the 16-inch diameter underground natural gas pipeline corridor and the approximately eight-mile- long 230- kV transmission line interconnection route.

**Technical Area:** Water Resources  
**Author:** Casey Weaver

## **BACKGROUND**

Avenal Energy proposes to obtain a back-up water supply for the project from agricultural wells located on an adjacent parcel owned by John A. Kochergen Properties, Inc. Annual consumption of the proposed project is estimated to be 20 acre feet. As the backup supply will be used on a temporary/emergency basis, project use of backup water is expected to be significantly less than 20 acre feet per year (AFY).

The project site is located within the boundaries of the Westland Water District (Westlands). In 1996, Westlands developed a Groundwater Management Plan (Plan). Part of the Plan was the conversion of diesel powered groundwater pumps within the district to electric pumps. To assist with the conversion, Westlands offered to convert the pumps for Plan participants in exchange for control of the delivery of the water from the participants' wells.

In 1999, Mike and Tanya Kochergen of Kochergen Properties joined Westlands and entered into agreements which transferred full operational control of the pumps in their wells to Westlands (see attachment).

On May 1, 2001, Kochergen Properties, Inc. entered into a separate agreement with Duke Energy granting exclusive rights to a water supply from Kochergen Properties' wells of up to 3,000 gallons per minute, or 4,824 AFY. This amount of water was considered necessary when the design of the original power plant included evaporative cooling. It appears that the 2001 agreement submitted in the 2008 Application for Certification (AFC) was written for the previous (original) AFC. In addition, the term of the 2001 agreement was to commence on the "Effective Date" and expire 35 years later. However, no effective date was identified in the documents submitted in the AFC. Therefore, there is no indication that the agreement was ever finalized.

In a letter sent to the California Energy Commission dated May 29, 2008 (see attachment), Westlands indicated that it has control of the water delivered from the Kochergen Properties' wells and that any agreement for additional groundwater use from the wells would have to be approved by Westlands' Board of Directors. In addition, the letter stated, "To date, the District's Board has opposed projects that have the potential to increase demand from the groundwater basin which is currently overdrafted."

Given this information, the viability of the proposed back-up water supply is questionable. Staff needs a clear understanding of the entity in control of delivery of the proposed back-up water supply, a copy of the agreement from that entity to provide the water required for the back-up supply, the instantaneous and annual volumes of water dedicated for the proposed project, and the length of time committed to delivery of the back-up water supply.

## DATA REQUEST

90. Regarding the agreement between the applicant and Mike and Tanya Kochergen for delivery of up to 4,824 AFY:
- a. Please confirm whether the agreement is still valid and if it will be effective through the life of this project.
  - b. Please determine whether there is a role for Westlands Water District in approving the 2001 agreement, and if so, whether Westlands Water District concurs that delivery of 4,824 acre feet per year is acceptable given the current project water needs of 20 acre feet per year.
  - c. Please discuss the need and feasibility of entering into an updated agreement for the amount of water consistent with the needs of the proposed project (20 acre feet annually).
91. If the 2001 Kochergen agreement is no longer valid, please provide appropriate documentation confirming that a suitable back-up water supply has been acquired by the applicant, specify the instantaneous and annual volumes of water dedicated for the proposed project, and identify any steps that are necessary to ensure that the back-up water supply is available for the life of the project.

## BACKGROUND

Buildings for human occupancy will be constructed at the Avenal Energy site. These buildings will contain sanitary facilities (primarily sinks, and toilets) for site workers' and visitors' use. Avenal Energy proposes to provide non-disinfected raw water for this domestic use and bottled water for drinking purposes. Kings County has adopted the Uniform Plumbing Code as a minimum standard for protection of Public Health and Safety. Section 601.1 of the Uniform Plumbing Code states, in part:

*Except where not deemed necessary for safety or sanitation by the Administrative Authority, each plumbing fixture shall be provided with an adequate supply of potable running water piped thereto in an approved manner, so arranged as to flush and keep it in a clean and sanitary condition without danger of backflow or cross-connection.*

Avenal Energy has not provided documentation that the Administrative Authority agrees with the use of non-potable water for domestic use at the proposed facility. Staff needs this additional documentation to complete its analysis.

## **DATA REQUESTS**

92. Please explain why the use of non-potable water versus potable water is the preferred option for the facility's sanitation needs.
93. Please provide documentation that the Administrative Authority has concluded that it is not necessary to provide an adequate supply of potable running water throughout the facility.
94. If the Administrative Authority determines that potable water for domestic use should be supplied to the facility, please provide a description of the changes in the project design that would be required to supply the potable water to the facility.



BEFORE THE ENERGY RESOURCES CONSERVATION AND DEVELOPMENT  
COMMISSION OF THE STATE OF CALIFORNIA  
1516 NINTH STREET, SACRAMENTO, CA 95814  
1-800-822-6228 – WWW.ENERGY.CA.GOV

**APPLICATION FOR CERTIFICATION**  
***For the AVENAL ENERGY PROJECT***

**Docket No. 08-AFC-1**  
**PROOF OF SERVICE**  
(revised 7/31//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-9  
1516 Ninth Street, MS-15  
Sacramento, CA 95814-5512  
[docket@energy.state.ca.us](mailto:docket@energy.state.ca.us)

**APPLICANT**

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**INTERESTED AGENCIES**

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**DECLARATION OF SERVICE**

I, Mineka Foggie, declare that on August 22, 2008, I deposited copies of the attached Avenal Energy(08-AFC-1)- Data Request Set 2(#75-94) in the United States mail at Sacramento 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.

Original Signature in Dockets