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October 1, 2008

Via Electronic Service

Jim Rexroad, Project Manager
Avenal Energy Center, LLC
500 Dallas Street, Level 31
Houston, TX 77002

Jim.Rexroad@macquarie.com

Re: Avenal Energy Project (08-AFC-1)
CURE Data Requests, Set One (Nos. 1-59)

Dear Mr. Rexroad:

California Unions for Reliable Energy (CURE) submits this first set of data requests to Avenal Energy Center, LLC for the Avenal Energy 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.

CURE reserves the right to submit additional data requests on any other topic that requires further information. Our reservation is based in part on matters beyond our control; principally, the applicant released a System Impact Study on September 19, 2008; and a Phase 1 ESA for linear facilities as well as other key documents on September 24, 2008.

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, together with a statement of reasons, to Commissioners Byron and Rosenfeld and to CURE within 20 days.

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

Sincerely,

/s/

Loulena A. Miles

LAM:bh
Enclosure
cc: Docket (08-AFC-1)
Proof of Service List (08-AFC-1)

STATE OF CALIFORNIA
California Energy Commission

In the Matter of: The Application for Certification for the AVENAL ENERGY PROJECT	Docket No. 08-AFC-01

CALIFORNIA UNIONS FOR RELIABLE ENERGY DATA REQUESTS, SET ONE

October 1, 2008

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The following data requests are submitted by California Unions for Reliable Energy. Please provide your responses via email (if available) by October 31, 2008 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.

AIR QUALITY

Background: GREENHOUSE GAS EMISSIONS

The Avenal Energy Project would emit greenhouse gases during operation of the power plant, mainly from the turbines and duct burners, and from combustion exhaust emissions during construction. These additional greenhouse gases would contribute to global climate change, aggravating an existing, widely acknowledged significant global problem. The AFC fails to discuss greenhouse gas emissions from construction. The AFC quantifies annual operational greenhouse gas emissions and concludes that they are not substantial compared to global greenhouse gas emissions and are therefore not cumulatively significant. Comparison of the Project's contribution to global greenhouse gas emissions alone is not an acceptable threshold for determining significance as individually small contributions can result in a cumulatively significant impact. The lack of official thresholds and guidelines does not absolve the Applicant from the obligation under CEQA to determine the significance of, and adopt feasible mitigation for, the Avenal Energy Project's future greenhouse gas emissions. California contributes roughly 6% to total worldwide greenhouse gas emissions, and is the second largest emitter after Texas among U.S. states; only nine nations worldwide have greater greenhouse gas emissions than California. Electric power generation is responsible for about 20% of California's emissions of greenhouse gases.

The AFC states that any remaining cumulative impacts due to the Project's greenhouse gas emissions would be mitigated through implementation of California's Global Warming Solutions Act of 2006 ("AB 32"). The AFC does not demonstrate how allowing the additional annual GHG emissions from this plant, along with emissions from other expected new natural gas-fired electricity generation, is consistent with achieving the very extensive GHG reductions for the electricity sector that are required to meet the goals of AB 32. The California Air Resources Board's Draft Climate Action Scoping Plan for complying with AB 32 indicates that regulatory measures will be imposed to substantially reduce the electricity sector's annual greenhouse gas emissions below the current levels by 2020. The AFC fails to demonstrate that the Avenal Energy Project would be consistent with AB 32 including the Renewable Portfolio Standard, one of the major measures the state has adopted for the electricity sector to comply with AB 32. The Air Resources Board also indicates that reductions from regulatory measures will not be enough to achieve AB 32's goals, and it will require the electricity sector to

participate in a cap-and-trade program that achieves additional reductions. In light of the need for significant reductions in current statewide greenhouse gas emissions from the electricity sector, the additional emissions from the proposed plant constitute a significant cumulative contribution to statewide greenhouse gas emissions. This finding is appropriate given that Air Resources Board's new reporting requirements for AB 32 target "the most significant GHG emissions sources," and include any industrial source that emits over 25,000 metric tons of CO2 per year from general stationary combustion. The Project would directly emit 1.71 million metric tons per year of CO2-equivalent greenhouse gases, and is therefore cumulatively significant.

In lieu of, or in addition to, on-site mitigation measures such as using biodiesel in construction and on-site operations and maintenance vehicles, the Project Applicant could fund offsite projects that achieve net reductions of greenhouse gas emissions, for example, installation of photovoltaic panels on local businesses that use large amounts of electricity, as a means of mitigating the significant greenhouse gas emissions of this Project. This approach to mitigation of greenhouse gas emissions has been implemented, for example, by recent settlements in which two utilities agreed to significant reductions in greenhouse gas emissions. In the first, Kansas City Power and Light ("KCP&L") agreed to offset 100% of the increase in CO2 emissions from building a new 850-MW coal-fired power plant that otherwise would have increased CO2 emissions by over six million tons per year. The agreement requires KCP&L to add 400 MW of wind energy to its service area; create 300 MW of energy efficiency; reduce CO2 emissions from its other facilities by 20% by 2020; and finance community projects to reduce greenhouse gas emissions, among others. In the second, the City of Springfield, Illinois, agreed to purchase 120 MW of wind capacity; establish a green-pricing program; limit the load on existing coal-fired units; shut down an existing coal-fired power plant; and pay a carbon tax dedicated to energy efficiency, conservation, and purchase of renewable energy, among others.

To the extent that greenhouse gas emissions from the Avenal Energy Project cannot be fully mitigated by such measures, the Applicant should examine other options for reducing the global warming impact of the Project by the purchase of greenhouse gas offsets on the European market or from the Chicago Climate Exchange or payment into a mitigation fund. The offset approach has been taken by several cogeneration projects in Oregon and Washington. For example, the 506-MW Klamath Cogeneration Plant on the Oregon/California border recently sent a payment in the amount of $3.1 million to Oregon Climate Trust for CO2 mitigation. In addition to providing funding to the Climate Trust, the Klamath Cogeneration Plant has sponsored tree planting in Oregon, methane recovery at coal mines in Ohio, geothermal expansion in Klamath Falls, and solar electrification in Sri Lanka to offset part of its emissions. Other facilities in Oregon that contribute to the Climate Trust include the 253-MW natural gas-fired combined cycle Coyote Springs

2 power plant, the 468-MW natural gas-fired combined cycle Hermiston Power Project, the 93-MW simple-cycle natural gas-fired Klamath Expansion Project, and the natural gas-fired combined cycle 650 MW Port Westward Generating Plant. The BP Cherry Point Cogeneration Project in Whatcom County, Washington, committed to offset greenhouse gas emissions by the reduction of greenhouse gas emissions from other Applicant-owned operations worldwide. In case the Applicant sold the cogeneration facility, mitigation for greenhouse gas emissions would include either a) annual payments to a qualifying organization such as the Oregon Climate Trust of $0.57 per ton of CO2 for emissions in excess of the proposed CO2 emission standard of 0.675 pounds CO2 per kWh; b) greenhouse gas emission reductions obtained by the cogeneration owner; or c) a combination of the two.

Data Requests

1. Please discuss greenhouse gas emissions from the Avenal Energy Project in the context of the energy sector achieving the goals of AB 32.

2. Please discuss the greenhouse gas emissions reductions that could be achieved implementing the following mitigation measures for the Avenal Energy Project:

    a) Reducing greenhouse gas emission at other Applicant-owned operations worldwide;
    b) Installing or purchasing renewable energy;
    c) Financing community projects to reduce greenhouse gas emissions, e.g., installation of photovoltaic panels on local businesses;
    d) Paying offsets to a qualifying organization.

3. Please indicate whether the Applicant would be willing to implement measures to reduce the Avenal Energy Project's greenhouse gas emissions. If the answer is yes, please identify greenhouse gas mitigation measures and quantify emissions reductions. If the answer is no, please discuss why the Applicant does not deem mitigation of greenhouse gas emissions necessary.

Background: NOx OFFSETS

Energy Commission staff has expressed concerns about the integrity of the proposed NOx offset strategy which may be adversely affected by the SJVAPCD's annual equivalency demonstration. The Applicant responded that "as long as the Final Determination of Compliance (FDOC) is issued prior to any failure of the equivalency system, the offsets proposed by the Applicant for mitigation would not be subject to discounting at time of use or subject to any other discounting" and "believes the FDOC will be issued some time this year." The Applicant further

states that "the SJVAPCD has noted that they do not expect to fail the equivalency demonstration for 2008.

The latter statement appears to be contradicted by the Air District's staff report for proposed amendments to Rule 2201 which states that "it is very likely that the District will fail to demonstrate equivalency for NOx offsets for the 07-08 tracking year, due to an extremely large number of major projects proposed." The Applicant did not provide a contingency plan in case the FDOC is issued after a failure of the equivalency system is found.

Data Request

4. Please identify which of the Avenal Energy Project's proposed offsets would be subject to discounting under the proposed amendments to Rule 2201.

5. Please propose a contingency plan for the Avenal Energy Project's offset strategy in case some or all of the proposed offsets would be subject to discounting under Rule 2201.

AVENAL ENERGY PROJECT
CURE Data Requests Set One (# 1-59)

HEALTH RISKS

Background: **CONSTRUCTION WORKER EXPOSURE**

The 2001 Biological Resources Technical Report[1] states:

> The field is currently used to grow cotton. The entire site is highly disturbed from plowing, disking, irrigating, planting, and harvesting during normal agricultural operations.

The AFC identifies agricultural usage at the site in Figure 6.4-3A of the AFC to include cultivation of cotton and tomatoes. In addition to cultivation of cotton and tomatoes, the AFC states the site has been used for the cultivation of potatoes, barley, melons and onions since 1951 (p. 6.14-1).

Cultivation of the crops grown on the site involved the use of pesticides as described in a Phase I Environmental Site Assessment (Appendix 6-14-1 to the AFC, p. 16):

> Historical applications of herbicides or pesticides include aerial spraying and mechanical and hand spray applications.

Pesticides historically used in California for the cultivation of cotton include arsenic compounds and organochlorine compounds, including dieldrin, a probable human carcinogen that was applied until it was banned in 1985.[2, 3] According to the U.S. EPA, dieldrin binds tightly to soil and breaks down very slowly in soil.[4]

Pesticides that are currently associated with the cultivation with crops grown at the site include the following:

- Tomatoes: Metam-sodium, Chlorothalonil, 1,3-Dichloropropene, Mancozeb, Metam potassium, Metolachlor (S), Trifluralin, Dimethoate, Piperonyl

[1] Avenal Energy Project Biological Resources Technical Report, September 2001, p. 21, Appendix 6-6-1
[2] http://165.235.111.242/Schools/Projects/upload/Wilhelmina_FS_dRAW.pdf
[3] http://www.epa.gov/pbt/pubs/aldrin.htm
[4] http://www.epa.gov/region09/water/tmdl/nbay/tsdf0602.pdf

butoxide, Maneb, Carbaryl, Nicobifen, Buprofezin, Oxyfluorfen, Pyrethrins, and Pyrimethanil.[5]

- Melons: 1,3-Dichloropropene, Metam-sodium, Carbaryl, Trifluralin, Dimethoate, Bifenthrin, Thiophanate-methyl, Oxyfluorfen, Buprofezin, Ethalfluralin, Dicofol, Nicobifen, Permethrin, Thiamethoxam, and Pymetrozine[6].
- Potatoes: Metam-sodium, 1,3-Dichloropropene, Mancozeb, Chlorothalonil, Ethoprop, Metolachlor (S), Pendimethalin, Menab, Metolachlor, Permethrin, Iprodione, Carbaryl, Nicobifen, Trifluralin, and Dimethoate.[7]
- Barley: MCPA dimethylamine salt, 2,4-D dimethylamine salt, Malathion, 2,4-D 2-ethylhexyl ester, 2,4-D, butoxyethanol ester, 2,4-D, Tralkoxydim, and Propiconazole.[8]
- Onions: Mancozeb, Chlorothalonil, 1,3-Dichloropropene, Metam-soduim, DCPA, Maneb, Metam potassium, Pendimethalin, Oxyfluorfen, Iprodione, Malathion, Nicobifen (possible), Cypermethrin zeta, Permethrin, Cypermethrin, and Pyrimethanil.[9]

The Phase I ESA (Appendix 6-14-1 to AFC) states (p. 19):

> Mr. Kochergen indicated that the organic farming is currently practiced at the property and that this land will be certified as an organic farm in February 2008.

We have documented that Kochergen Farms is a certified organic farm at the following address: 33915 Avenal Cutoff Rd, Avenal, CA 93204.[10] However, no certifications were provided in the AFC or supporting documentation for the area specifically proposed for project development. Please note that the certification process typically requires documentation of land applications for the previous three years only.

The AFC states (p. 6.4-1):

> … no impacted soil is expected to be encountered during construction. A Phase I Environmental Site Assessment report substantiating this conclusion is referenced in Section 6.14 - Waste Management.

[5] http://pesticideinfo.org/DS.jsp?sk=11005
[6] http://pesticideinfo.org/DS.jsp?sk=29122
[7] http://pesticideinfo.org/DS.jsp?sk=14013
[8] http://pesticideinfo.org/DS.jsp?sk=29103
[9] http://pesticideinfo.org/DS.jsp?sk=14011
[10] http://www.goca.ws/esponal/certified_directory_customer.asp?id=14836543210062

Extensive earthwork will be required to prepare the proposed project site for construction, including excavation and compaction to create the plant grade, and excavation for foundations and underground systems. The AFC states (p. 2-48):

> Site grading will occur as necessary to form level building pads and achieve a cut/fill balance. The cut and fill depths are estimated to be approximately 10 and 6 feet, respectively.

The excavation as proposed has the potential to encounter soils that are contaminated with residual concentrations of pesticides, including dieldrin, from historic applications.

Data Request

6 (a) Please provide additional detail regarding application of pesticides at the proposed project site including documentation of types of pesticides used over the past 30 years and quantities applied.

6 (b) Please provide certification for organic farming for the property to be developed.

6 (c) Please conduct a limited soil sampling program to ensure that construction workers will not be exposed to pesticides adsorbed to dust particles.

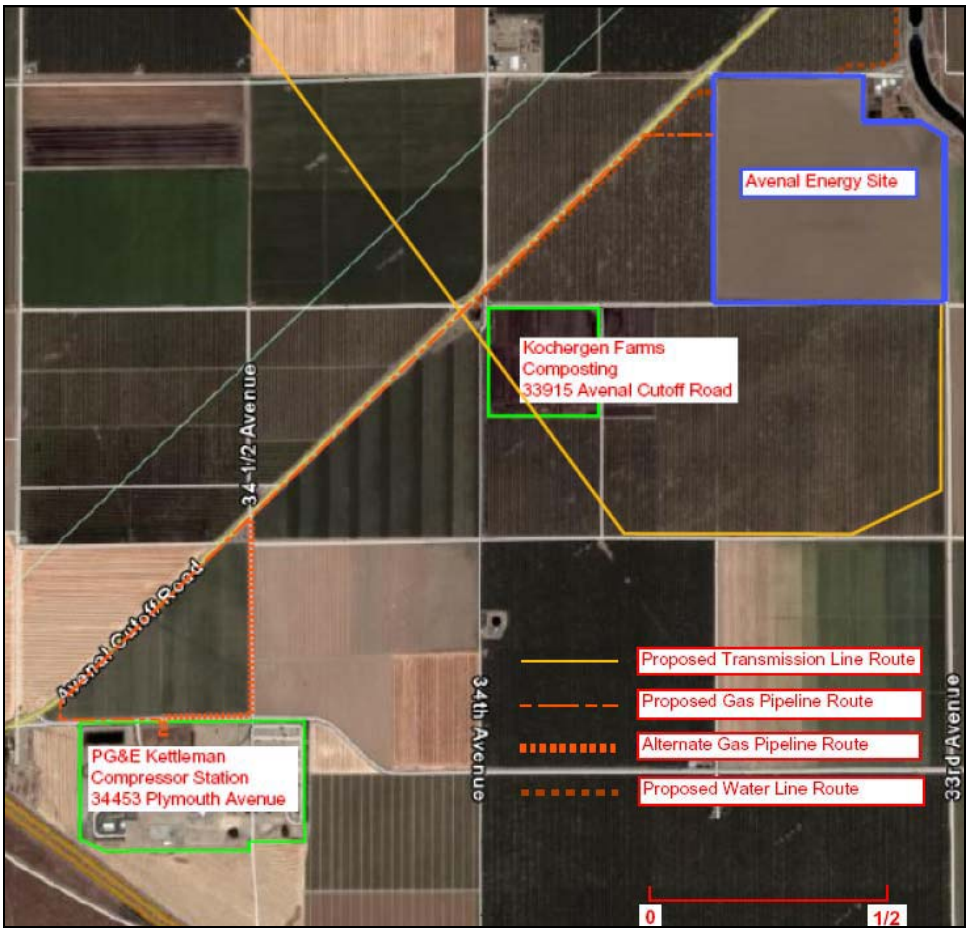
Background: EXCAVATION AND SOIL CONTAMINATION

Ground disturbance will result from excavation of natural gas pipeline and water pipeline routes. Additional ground disturbance will result from the construction of foundations for transmission lines.

The AFC states: (p. 2-52)

> Approximately 4,000 ft of the pipeline interconnection will occur outside Avenal Cutoff Road and Plymouth Avenue rights-of-way, with an average disturbance corridor of approximately 50 ft;
>
> and
>
> Each [transmission line] structure will require approximately 10,000 sq ft of temporary disturbance (total of 9.9 acres). Permanent average disturbance of 1,200 sq ft per structure will be required (total of 1.2 acres).

We have mapped the proposed and alternate locations of the pipeline routes and the transmission lines in the following figure:



As shown in the figure, the proposed and alternate natural gas pipeline routes cross the northern extent of the PGE Kettleman Compressor Station and run directly adjacent to Kochergen Farms Composting. The proposed transmission line is routed across the southwestern area of Kochergen Farms Composting as detailed in the figure below.

Both sites are listed at by the State of California as Cleanup Sites. The Kochergen Farms Composting facility is listed as an open cleanup site.[11] The PGE Kettleman Compressor Station is listed as a closed cleanup site: contaminants of concern are identified as metals and chromium.[12]

We have noted that the transmission line towers will have a spacing of approximately 800 feet (AFC, p. 2-49). The distance of the segment of the transmission line that will cross the Kochergen Farms Composting facility is approximately 1000 feet; therefore, at least one tower will need to be constructed within the compost materials as shown in the photograph above.

Data Request

7 (a) Please describe and map the contaminants at the PGE Kettleman Compressor Station and Kochergen Farms Composting. Please include any soil contaminant data that may indicate a risk to construction workers involved in the excavation or grading of soil at PGE Kettleman Compressor Station and Kochergen Farms Composting for transmission line or pipeline construction.

[11] http://geotracker.swrcb.ca.gov/profile_report.asp?global_id=L10001834977
[12] http://geotracker.swrcb.ca.gov/profile_report.asp?global_id=SLT5FP034291

7 (b) If no data are available in areas of soil disturbance, please conduct a limited sampling program to ensure construction workers are not at risk from dermal contact or ingestion of contaminated soil.

WATER SUPPLIES

Background: **WATER DELIVERY AGREEMENTS**

The AFC includes, in Appendix 6.5.3, a "will serve letter" from the City of Avenal for the delivery of a maximum of 200 acre-feet per year to the project. However, no documentation is included for any necessary agreements that may be required between the applicant and Kings County and Westlands Water District for the delivery of water from their Central Valley Project entitlements.

Data Request

8. Please provide all additional documentation that may be necessary to ensure water service from the City of Avenal, Kings County and Westlands Water District, including:
    - Any contractual agreements that are necessary with the City of Avenal and/or Kings County for the delivery of water from Central Valley Project Entitlements.
    - Any wheeling agreements with the Westlands Water District for conveyance of the Kings County SWP water to the proposed project site that may be necessary.

AVENAL ENERGY PROJECT
CURE Data Requests Set One (# 1-59)

SEISMICITY

Background: **GROUND MOTION IS INADEQUATELY CONSIDERED**

The AFC states (p. 6.3-14):

> The Site is in the CBC Seismic Zone 4; the requirements included in the CBC for Zone 4 apply to the Project. Relevant requirements include designing structures with adequate strength to withstand earthquake ground motion that has a 10 percent chance of being exceeded in 50 years, with a minimum acceptable horizontal acceleration coefficient of 0.4g.

The 2001 California Building Code (CBC) has been revised. The 2007 edition, Section 1613, establishes the basis for structural design of structures to include consideration of site class (soil type as defined in Section 1613.5.2), seismic design category, and site specific amplification coefficients (Fa and Fz). The analysis in the Avenal AFC failed to analyze these code changes. Consideration of these factors is necessary in calculating the design basis earthquake ground motion and the maximum credible earthquake ground motion.

We calculated peak horizontal ground acceleration for a design-basis earthquake (10% probability of being exceeded in 50 years) for the project site to be 0.46 g using the California Geological Survey Probabilistic Seismic Hazards Mapping Ground Motion Web Page[13] assuming an alluvial soil type which is reflective of site conditions (AFC p. 6.3-2). The AFC does include a model estimate for peak horizontal ground acceleration of 0.47 g due to the maximum credible earthquake (AFC, p. 6.3-4) which has a 10% probability of being exceeded in 100 years. The AFC estimate, based on the maximum credible earthquake, is likely too low because it estimates peak horizontal ground acceleration to be 0.47 g, just slightly higher than the estimate of 0.46 g we obtained using the design basis earthquake.

Data Requests

9. Please incorporate the requirements of the 2007 CBC in calculating the design basis ground motion and maximum credible ground motion for the project site to

[13] http://redirect.conservation.ca.gov/cgs/rghm/pshamap/pshamain.html

include project site-specific consideration of site class, seismic design category, and site amplification coefficients.

AVENAL ENERGY PROJECT
CURE Data Requests Set One (# 1-59)

TRANSMISSION SYSTEM ENGINEERING

Background: SYSTEM IMPACT STUDY

On September 19, 2008, Avenal Power Center, LLC, filed a System Impact Study with the Commission. This study was not performed by the California ISO and was instead performed by a private consulting company, Navigant Consulting. The Navigant-prepared SIS raises procedural issues regarding the relevance and applicability of an SIS that was neither approved by nor reviewed by the ISO, and substantive questions regarding the assumptions it contains.

The CEC needs to know for CEQA purposes what transmission additions will either be built (or paid for) by the Applicant to mitigate impacts identified in the SIS, and what other currently nonexistent transmission additions have been assumed by Navigant to be built/paid for by others. The CEC also needs to know (for purposes of evaluating the reliability implications of the Avenal proposal) what overload contingencies are likely to exist if the Avenal project is approved.

The following data requests are intended to clarify these issues.

Data Requests

10. When does the Applicant expect there to be an ISO-produced SIS, as opposed to the current SIS document prepared by a consultant to the Applicant?

11. When does the Applicant expect there to be an ISO-approved SIS?

12. Does the Applicant believe it can receive a CEC permit without an ISO-approved SIS? If so, on what basis?

13. Please provide any communications between the ISO and the Applicant on the subject of System Impact Studies not produced by or for the ISO itself.

14. Please provide any ISO-authored documents in the Applicant's possession in which the ISO indicates that it is appropriate for projects in the ISO queue to produce their own system impact studies.

15. Please provide any communications from the ISO or documents authored by the ISO that confirm that the applicant-funded SIS in this proceeding uses ISO-approved assumptions and/or ISO-approved methodology.

16. Please provide any documentation in the Applicant's possession that the ISO would not require the Applicant to mitigate overloads in excess of 100 percent that occur in with-Avenal cases if:

    a. Those overloads occur in no-Avenal cases as well.

    b. Higher overloads (of the same facilities) occur in different no-Avenal cases with different assumptions.

17. In cases where the Applicant's SIS shows overloads in a no-Avenal case, please explain the basis for assuming that such overloads would be mitigated by PG&E (and/or others) prior to the construction of Avenal.

18. If the Applicant does not believe that overloads in a no-Avenal case would be mitigated prior to the construction of Avenal, please explain why the Applicant believes it either (a) would, or (b) should be allowed to interconnect to a system that is already subject to overloads.

19. In cases where the Applicant's SIS shows overloads in a no-Avenal case, please explain what mitigation by PG&E (and/or others) the Applicant expects to be constructed/installed prior to the construction of Avenal.

20. If the Applicant's SIS shows a contingency that would result in a >100% loading without Avenal and an even higher loading with Avenal, please explain whether and why the CEC should expect that:

    (a) the >100% post-contingency loading without Avenal would be mitigated prior to the construction of Avenal, to a level just below 100%.

    (b) Avenal would then increase the post-contingency loading back to over 100%.

    (c) Avenal should thus be responsible for additional mitigation that has not yet been identified or priced.

21. If the Applicant's SIS shows a contingency that would result in a >100% loading without Avenal and an even higher loading with Avenal, please explain whether and why the CEC should expect that:

    (a) the >100% post-contingency loading without Avenal would be mitigated prior to the construction of Avenal, to a level well below 100%.

(b) Avenal would then increase the post-contingency loading back to a higher level, but not over 100%.

(c) Avenal should thus share in the cost of the mitigation that reduces post-contingency loadings below 100%, since it benefits from that mitigation.

22. Please describe in detail the ISO interconnection rules that the Applicant expects will be used by the ISO to evaluate Avenal's interconnection request, including citations to the relevant FERC approvals of those rules.

23. Please indicate Avenal's position in the ISO interconnection queue.

24. Please indicate if the SIS performed for Avenal assumed (a) the same interconnection rules identified in the response to question 12, (b) interconnection rules in effect in the past, or (c) some other set of interconnection rules.

25. Please identify the bases for the choices between transmission upgrades and special protection schemes (SPS's) as mitigation for the potential overloads in the Applicant-provided SIS.

26. Please provide any communications from the ISO to Avenal indicating that the ISO has or will approve the SPS's proposed in the Applicant-funded Avenal SIS.

27. Please provide any information in the Applicant's possession as to the identities of the projects ahead of Avenal in the ISO interconnection queue that are located electrically close to Avenal and are listed in the SIS by interconnection queue number.

28. Please provide the Applicant's current beliefs as to the identities of the projects ahead of Avenal in the ISO interconnection queue that are located electrically close to Avenal and are listed in the SIS by interconnection queue number.

29. Please identify each project currently in licensing at the CEC which the Applicant believes was included as a built project in its SIS.

30. Please identify each project licensed by the CEC in the last 5 years which the Applicant believes was included as a built project in its SIS.

AVENAL ENERGY PROJECT
CURE Data Requests Set One (# 1-59)

TRAFFIC AND TRANSPORTATION

Background: MISSING DATA

Portions of Section 6.11 of the AFC, Traffic and Transportation, make reference to various figures. As examples, Section 6.11.1.1 (Regional Setting) refers to Figure 6.11-1 (regional traffic and transportation facilities) and Figure 6.11-2 (details of the existing road system, bus routes, canals and major pipelines near the Project). Section 6.11.2.2.1 (Construction Worker Traffic) refers to Figure 6.11-3 (trip distribution of workers). However, the referenced figures are not included within Section 6.11 or in Appendix 6.11-1.

The footnote to Table 6.11-2, Average Daily Traffic (ADT) Volumes on the Existing Roadway System, states "Average daily traffic volumes, peak hour and percentages for the remaining segments are based on field data. Data for SR 269, Avenal Cutoff Road, and Jayne/Nevada Avenue was taken from daily classification counts. Data for 25th Avenue was taken from peak hour intersection counts." However, the referenced field data, classification counts, and peak hour intersection counts are not included within Section 6.11 or in Appendix 6.11-1.

Page 6.11-14 provides additional basis for the Project's construction worker traffic analysis and estimates that "…15 percent of the workers will carpool." No data is provided in Section 6.11 to support of this estimate.

Data Requests

31. Please provide the figures referenced in Section 6.11.

32. Please provide the count data referenced in the footnote to Table 6.11-2.

33. Please provide data and support for the estimate that "…15 percent of the workers will carpool."

Background: MITIGATION OF SIGNIFICANT TRAFFIC IMPACT

Page 6.11-14 indicates the intersection of Avenal Cutoff Road at the SR 198 EB ramps "…is currently operating below the recommended LOS standard in the Shift 2 PM analysis time period. The intersection is also projected to operate below the recommended LOS standard in the Shift 1 PM analysis time period in the 2011

No Project scenario. Without corrective measures, Project construction trips would increase the delay at this intersection for both time periods…"

Page 6.11-14 states "…Federal Power will mitigate the projected delay… by using a traffic monitor at this intersection for the period of time during each construction day when Project workers leaving the site are expected to pass through… An off-duty traffic officer will be stationed at this intersection to direct traffic such that Project construction workers leaving the site do not reduce the LOS. With this mitigation, and considering the low minor street volumes, this impact will be less than significant."

Data Request

34. Please provide calculations, data and support for the conclusion that the use of a traffic monitor as mitigation will result in an impact that is less than significant at Avenal Cutoff Road and the SR 198 EB ramps.

Background: SR 198 EB RAMPS AT AVENAL CUTOFF ROAD

Table 6.11-3, Existing and Projected Levels of Service without Project Workers beginning on Page 6.11-7, provides LOS for Existing (2007) and Construction No Project (2011). For SR 198 EB Ramps at Avenal Cutoff Road, the EB approach will deteriorate from LOS "C" to LOS "D" during the PM Peak Hour used for Shift 1 (2:30 to 3:30 PM) and will remain at LOS "D" during the PM Peak Hour used for Shift 2 (3:30 to 4:30 PM). Both of these PM peak hours will operate below the recommended standard of LOS "C" under "No Project" conditions in 2011.

Page 6.11-1 states "The largest routine operating shift will consist of approximately 17 employees… long-term effects to traffic and transportation systems in the vicinity of the site will be less than significant." Employees operating the Project will travel through SR 198 EB Ramps at Avenal Cutoff Road after completion of construction. Additional Project trips through this intersection between 2:30 and 4:30 PM when it is already forecast to operate at LOS "D" will further increase delay for side street traffic and may result in significant Project traffic impacts that require mitigation.

Data Request

35. Please provide LOS calculations for PM peak traffic hours in 2012 under both No Project and Project Operating conditions for the intersection of SR 198 EB Ramps and Avenal Cutoff Road. Please also describe what mitigation measures will be taken if a significant traffic impact is found to reduce the impact to a level that is less than significant.

Background: EXISTING BIKEWAY

Page 6.11-2 indicates that Avenal Cutoff Road is designated as an existing bikeway. Section 6.11 does not identify the type of bikeway that exists on Avenal Cutoff Road. Section 6.11 does not disclose, analyze, and mitigate any potentially significant impacts to the existing bikeway on Avenal Cutoff Road caused by the additional traffic during construction.

Data Requests

36. Please describe and define the type of bikeway that exists on Avenal Cutoff Road. Is it a Class I (bike path), Class II (bike lane), or a Class III (bike route) facility?

37. Please disclose and analyze any potentially significant impacts to the existing bikeway on Avenal Cutoff Road caused by the additional traffic during construction. If a significant impact is found, please describe what mitigation measures will be taken to reduce the impact to less than significant.

Background: WATER AND GAS LINES

Page 6.11-14 indicates that water and gas lines will be constructed along Avenal Cutoff Road. While the waterline may be constructed outside the existing roadway, it appears that the gas line will be constructed within the traveled way.

Data Requests

38. Please disclose, analyze, and mitigate any potentially significant impacts to traffic using the Avenal Cutoff Road roadway during construction of the water and gas lines.

39. Please disclose, analyze, and mitigate any potentially significant impacts to the existing bikeway on Avenal Cutoff Road caused by construction of the water and gas lines.

Background: GEOMETRIC CONSTRAINT

Page 6.11-6 indicates geometric constraints increase delay as eastbound semi truck and trailer traffic on Jayne Avenue turning southwest on Avenal Cutoff Road must traverse over the centerline of Avenal Cutoff Road to complete their turns. The discussion that follows indicates that this creates additional delay until there is a sufficient gap in traffic to complete the turn and that this condition will not adversely affect public safety provided that drivers are cautious and careful.

Data Requests

40. Please provide evidence to document semi truck and trailer traffic that must cross the roadway centerline to turn does not impact public safety.

41. Please identify specific improvements or controls that would be required to eliminate crossing of the roadway centerline by semi truck and trailers.

42. Is the project proponent willing to correct this condition at its cost?

Background: INDUSTRIAL PARK

Page 6.11-6 indicates the traffic analysis assumes a 1.5 to 3.5 percent per year growth factor for traffic volumes on all road segments, ramps and intersections.

In the transcript from the Energy Commission Hearing on May 20, 2008, City Manager Whitten characterized the proposed plant as an anchor tenant in the City's planned industrial park:

"[T]he power facility was to be our anchor facility for our industrial park. The industrial property has been zoned as such since 1993. So this is all part of a larger plan for the City of Avenal."

Data Request

43. Does the assumed growth factor also include trips forecast to occur to and from the other portions of the 900 acres of approved industrial park development immediately adjacent to the proposed project?

Background: MITIGATION

Page 6.11-29 indicates turning lanes will be provided at the Avenal Cutoff Road entrance but does not clearly indicate who will pay to install the lanes and the schedule for these improvements.

Data Request

44. Is the project proponent willing to install these improvements at its cost? What is the estimated schedule for these improvements?

BIOLOGICAL RESOURCES

Background: IMPACTS TO WETLAND RESOURCES

The AFC states: "On the infrequent occasions when surface drainage occurs, it flows generally northeast and either infiltrates or evaporates where it ponds in shallow topographic depressions along the west side of the San Luis Canal."[14] This statement is complemented by Figure 6.5-2 of the AFC, which identifies a relatively large closed depression in the northeast corner of the Project site. Seasonal ponds have the potential to support special-status species such as the western spadefoot (Spea hammondii), which lays its eggs in shallow temporary pools, and which is known to occur in the vicinity of the Project site.[15] [16] In addition, seasonal ponds have the potential to be classified as wetlands or other jurisdictional waters that are protected by the State or Federal Clean Water Act. Although the AFC classifies the entire Project site as agricultural, it's unclear whether any effort was devoted to investigating any potential wetland features associated with the seasonable ponds, including the closed depression.

Data Requests

45. Please discuss the potential for the closed depression or other onsite seasonal ponds to serve as breeding habitat for the western spadefoot or other special-status species associated with temporary pools.

46. Please discuss the efforts that were devoted to investigating the potential for the closed depression or other onsite seasonal ponds to serve as a wetland or other jurisdictional water.

47. Please provide the site-specific field data supporting the conclusion that the closed depression is not a wetland or other jurisdictional water (i.e., field data on soils, hydrology, and any hydrophytic vegetation).

[14] AFC, p. 6.5-5.
[15] 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.
[16] AFC, Figure 6.6-4.

Background: IMPACTS TO HABITATS FOR SPECIAL-STATUS SPECIES

Aside from the grassland adjacent to San Luis Canal, the AFC classifies all habitats in the vicinity of the Project site as agricultural (i.e., orchards, crops, vineyards, or compost).[17] Often the resolution used in creating a vegetation (or habitat) map determines the number of vegetation communities that are mapped.[18] For example, 6 vegetation types might be identified when using a minimum mapping unit (MMU) of 0.1-acre, whereas only 3 vegetation types are identified when the MMU is increased to 1.0-acre. The MMU used in a biological resource investigation should be appropriate for all identified species of interest. For example, if the species of interest only occurs in relatively large patches of contiguous habitat, the MMU can be large (i.e., coarse resolution); if the species can occur in small patches of habitat, the MMU should be small (i.e., fine resolution). Because the AFC does not provide any information on the MMU used in classifying habitats, it is difficult to assess the AFC's adequacy in identifying potentially sensitive biological resources.

Data Request

48. Please provide the MMU used in classifying habitats, and the appropriateness of the MMU with respect to the special-status species having potential to occur in the Project vicinity.

Background: IMPACT OF NOISE ON SPECIAL-STATUS SPECIES

Animals rely on hearing to avoid predators, obtain food, and communicate. Noise has the potential to disrupt these activities, and otherwise reduce fitness through injury (e.g., hearing loss), energy loss (from movement away from noise source), reduction in food intake, and habitat avoidance and abandonment.[19] The AFC states biological resources will be protected from significant indirect impacts associated with construction noise by following OSHA and other standards for noise.[20] The AFC also states wildlife are expected to become accustomed to [noise] disturbance within a relatively short period of time, similar to their acclimation to ongoing agricultural activity in the Project vicinity.[21] The AFC does not provide any scientific justification to support these conclusions. Studies have concluded that wildlife responses to noise vary among species and among individuals, and that

[17] AFC, Figure 6.6-5.
[18] Stohlgren TJ, GW Chong, MA Kalkhan, and LD Schell. 1997. Multiscale sampling of plant diversity: effects of minimum mapping unit size. Ecological Applications 7:1064 –1074.
[19] National Park Service, 1994. Report to Congress, Report on effects of aircraft overflights on the National Park System.
[20] AFC, p. 6.6-29.
[21] Ibid.

some species never become habituated to consistent noise disturbance.[22] The energy plant's noise levels along the north and east boundaries are predicted to be 59 and 63 dBA, respectively.[23] Research on the effects of traffic noise on breeding birds concluded ambient noise up to a given level resulted in no reduction in the density of bird populations. However, once an ambient noise threshold level was exceeded, densities decreased exponentially with increased noise. Threshold levels were found to range from 36 to 58 decibels, depending upon species.[24] There is little information on how noise affects the special-status species known to occur adjacent to the Project site (i.e., burrowing owl, tricolored blackbird, yellow-headed blackbird, and San Joaquin kit fox). However, colonially nesting birds such as the tricolored and yellow-headed blackbirds are known to be particularly sensitive to disturbance, and noise disturbance has been cited as a potentially significant problem to tricolored blackbirds.[25]

The AFC states the Project may involve intermittent noise levels including "steam blows" and "trips" that can produce clearly audible noise levels within sizable distances from the plant. During the commissioning and initial start-up phase, temporary vent silencers will be used to reduce noise levels of planned "steam blows" such that they will not result in significant impacts to the nearest residences.[26] However, the AFC does not provide any data on the amplitude of steam blows adjacent to the Project site where special-status wildlife are known to occur (or may occur).

In addition to planned "steam blows" and "trips", unplanned "trips" are expected during Project commissioning and initial start-up.[27] "Trips" may also occur infrequently during routine Project operations due to emergency pressure valve discharges.[28] It is expected that unsilenced "trips" will be clearly audible within approximately 3,000 feet of the plant.[29] The AFC states the potential noise impact from "trips" would be less than significant because "trips" will be infrequent and of short duration.[30] However, impulse noise (such as that generated by "trips") appears to be more stressful to wildlife, at least in part due to the unpredictability

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[22] National Park Service, 1994. Report to Congress, Report on effects of aircraft overflights on the National Park System.
[23] AFC, p. 6.12-24.
[24] Kaseloo PA. 2006. Synthesis of noise effects on wildlife populations. IN: Proceedings of the 2005 International Conference on Ecology and Transportation, Eds. Irwin CL, Garrett P, McDermott KP. Center for Transportation and the Environment, North Carolina State University, Raleigh, NC: pp. 33-35.
[25] Campbell KF. 2007. Species account for the tricolored blackbird (Agelaius tricolor). IN: West Mojave Habitat Conservation Plan [internet; cited 2008 Sep 28]. Available from: http://www.blm.gov/ca/st/en/fo/cdd/wemo_species_birds.html
[26] AFC. P. 6-12-21.
[27] AFC, p. 6.12-21.
[28] AFC, p. 6.12-29.
[29] AFC, p. 6.12-29.
[30] AFC, p. 6.12-21; 6.12-29.

of such noise.[31] As a result, "steam blow" and "trip" noise has the potential to have an adverse effect on special-status wildlife known to occur adjacent to the Project site.

Data Requests

49. Please discuss how OSHA and "other" standards for noise apply to wildlife, which are known to have different auditory sensitivities than humans.

50. Please provide any scientific data supporting the conclusions that special-status species known to occur adjacent to the Project site will become accustomed to, and not adversely affected by, Project noise.

51. Please quantify the amplitude of noise that will be generated by "steam blows," particularly along the northern and eastern Project boundaries where special-status wildlife occur (or may occur).

52. Please quantify the amplitude of noise that will be generated by unsilenced Project "trips," particularly along the northern and eastern Project boundaries where special-status wildlife occur (or may occur).

53. Please quantify the expected frequency of Project trips during commissioning and initial start-up, and under routine operating conditions.

54. Please discuss the potential effects of Project "steam blows" and "trips" on special-status wildlife occurring adjacent to the Project site.

Background: IMPACTS TO WILDLIFE CORRIDORS

The AFC states the Project vicinity is used by a variety of resident and migratory bird species during seasonal migrations and local flights.[32] Nonetheless, the AFC concludes there are no identified resident or migratory wildlife corridors that would be blocked by Project construction, and that Project operations will have a less than significant effect on species movement.[33] [34] The AFC does not provide any information on how these conclusions were reached, or how analysis of this potentially significant impact was conducted. CEQA guidelines stipulate a "No Impact" answer should be explained where it is based on project-specific factors as

[31] Larkin R. 1996. Effects of military noise on wildlife: A literature review. USA CERL Technical Report [internet; cited 28 Sep 2008]. Available from: http://nhsbig.inhs.uiuc.edu/bioacoustics/noise_and_wildlife.pdf
[32] AFC, p. 6.6-35.
[33] AFC, p. 6.6-33.
[34] AFC, p. 6.6-39.

well as general standards.[35] Explanation of wildlife corridor impact analysis is necessary to adequately assess any interference the Project will have on wildlife movement.

Data Requests

55. Please discuss the analysis that was conducted to reach the conclusion that the Project site is not a wildlife corridor.

56. Please identify any wildlife movement studies relevant to the Project.

Background: DIRECT IMPACTS TO SPECIAL-STATUS SPECIES

The AFC proposes a pre-construction clearance survey to mitigate any potential impacts on special-status species. Information on the methods that will be used to conduct the survey is needed to evaluate the ability of the survey to mitigate potential impacts.

Data Requests

57. Please list the target species of the proposed pre-construction survey.

58. Please discuss the survey methods that will be implemented in the pre-construction survey.

59. Please discuss the timing of the pre-construction survey in relation to Project construction activities.

Dated: October 1, 2008

Respectfully submitted,

_____/s/_____

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[35] CEQA Guidelines, Appendix G. 2007. Available from: http://ceres.ca.gov/topic/env_law/ceqa/guidelines/appendices.html

STATE OF CALIFORNIA

Energy Resources Conservation and Development Commission

In the Matter of: The Application for Certification for the AVENAL POWER CENTER	Docket No. 08-AFC-1

PROOF OF SERVICE

I, Bonnie Heeley, declare that on October 1, 2008, transmission via electronic mail of the attached **CALIFORNIA UNIONS FOR RELIABLE ENERGY DATA REQUESTS, SET ONE** was consistent with the requirements of California Code of Regulations, title 20, sections 1209, 1209.6, and 1210. All electronic copies sent to all those identified on the Proof of Service listed below.

Via U.S. Mail to:
CALIFORNIA ENERGY COMMISSION
DOCKET UNIT
ATTN: Docket Unit 07-AFC-8
1516 Ninth Street, MS-4
Sacramento, CA 95814-5512

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I declare under penalty of perjury that the foregoing is true and correct. Executed at South San Francisco, California, on October 1, 2008.

_____/s/_____
Bonnie Heeley