

CALIFORNIA ENERGY COMMISSION

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October 16, 1997

Mr. Curt Hildebrand
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Dear Mr. Hildebrand:

**SUMMARY OF THE SEPTEMBER 25, 1997 SUTTER POWER PROJECT
PREFILING MEETING -- Data Adequacy Discussion of Various Draft AFC
Sections**

Enclosed is the staff's summary and list of those attending the subject publicly noticed prefilng meeting. The summary is an informal record of the discussions that took place. The summary provides the meeting participants the opportunity to correct information that may have been misunderstood. If you would like to make any additions or changes to the summary, please send them to me in writing, and I will see that they are placed in the project file and that the appropriate meeting participants receive them.

Also enclosed is a summary of some of the comments and issues raised by California Unions for Reliable Energy (CURE). These were provided by Marc Joseph as requested at the meeting.

If you have any questions, please call me at (916) 654-4074 or e-mail me at prichins@energy.state.ca.us. The FAX is (916) 654-3882.

Sincerely,

Paul C. Richins, Jr.
Siting Project Manager

Enclosures

cc: Charlene Wardlow, Calpine Corporation

Sutter Power Project Summary of September 25, 1997 Prefiling Meeting

Energy Commission staff, Calpine, Calpine's consultants and various interested parties met to discuss the Energy Commission data adequacy requirements for various draft Sutter AFC sections provided by Calpine. Draft sections reviewed were: facility design, efficiency and reliability, air quality, soils, water, land use, public health, natural gas transmission and electric transmission.

The following summary includes staff's comments and some, but not necessarily all, of the comments made by California Unions for Reliable Energy (CURE). A summary of CURE's major points, as provided by Marc Joseph, are attached.

Facility Design

Since the Appendix on Mechanical Design Criteria (Appendix C) was not available for staff's review at the time of the meeting, Kisabuli pointed out specific code sections that Calpine should review and key items of information that would be required to make the Application for Certification (AFC) filing complete.

Regarding civil engineering, the AFC (Appendix A) should correlate foundation types with the structure types to be supported. An inconsistency was noted in the section on grading and drainage. One part indicates that the project will be designed to a 25-year storm, yet elsewhere it is noted that the plant will be protected from a 100-year storm.

At the meeting, staff encouraged Calpine to use the 1997 California Building Code (CBC) when filing the AFC. This was incorrect and we apologize for any confusion this may have caused. The AFC should indicate that either the 1995 California Building Code (CBC) or the 1997 Uniform Building Code (UBC) is the principal code being followed.¹ The AFC should also highlight those Sutter County and Colusa County ordinances that apply to engineering, and should refer to the Institute of Electrical and Electronic Engineers (IEEE) 693-84, for seismic design of some electrical

¹The applicable building code currently in effect is the 1995 California Building Code (1995 CBC), which is based on the 1994 Uniform Building Code (1994 UBC). For purposes of filing an Application that is data adequate, Calpine can refer to the 1995 CBC in the filing, and describe designs performed to this code. A filing that uses the 1997 UBC would also be acceptable and may lessen the changes that may be required during the siting process.

The California Buildings Standards Commission is currently promulgating what will become the 1998 CBC, based on the 1997 UBC. We expect the 1998 CBC to become law, and take effect, perhaps before Calpine receives CEC certification for the Sutter project, and certainly before construction begins on the project. Our past practice has been to recommend to the Commission Conditions of Certification that require the project to be built to the most recent applicable standards at the time of construction.

components.

Staff will complete the data adequacy review of the draft submittal as soon as the Mechanical Engineering Design Criteria, Appendix C, is submitted.

Reliability and Efficiency

There were no questions regarding reliability or efficiency. Curt Hildebrand explained that his concerns about efficiency had been satisfied during his 9/8/97 telephone conversation with Steve Baker.

Air Quality

Chris Tooker, Keith Golden and Magdy Badr lead the discussion on air quality.

Regarding the air quality impacts from the project during construction, we advised Calpine to: a) describe the direct, indirect and cumulative impacts during the construction of the natural gas line and transmission lines; b) limit the cumulative air quality construction impacts from the facility to one mile; c) submit a quantitative and qualitative description for the construction activities. No modeling of the construction emission impacts is required. Staff also recommended that a discussion of the mitigation measures for the construction of the linear facilities be included in the AFC.

Regarding the natural gas fuel composition, the Feather River Air Quality Management District and CURE expressed a concern with the composition of the fuel which will be utilized in the project. The District suggested that Calpine should analyze a sample of the natural gas and show the fuel composition. Marc Joseph, with Adams, Broadwell & Joseph, expressed a concern about the level of toxics such as benzene in the fuel. Staff advised the parties that the natural gas toxics issue is a public health issue rather than an air quality issue, and may be discussed as a part of the public health analysis. Marc Joseph suggested that Calpine look into the fugitive natural gas leaks from valves, separators and other parts and equipment.

Regarding the cumulative air quality modeling impact analysis, Marc Joseph suggested that Calpine look into and analyze (model) the cumulative air quality impacts from the Sutter Project and the existing Greenleaf 1 power plant. He added that the combined NOx emissions from both plants could have a significant impact on the ambient air quality. Staff stated that this issue was not a data adequacy issue and may be addressed during the discovery and analysis process.

Regarding the topographic map at a scale of 1:24,000, staff advised Calpine to include a copy of the letter dated August 8, 1997, from Calpine to the Energy Commission Executive Director and the letter dated August 19, 1997 from the Executive Director to Charlene Wardlow, that discusses why a different scale map is provided.

Regarding the District's New Source Review Rule 10.1, staff advised Calpine to include a discussion on how the project will comply with the District's Rules including New Source Review, Rule 10.1. Calpine will be including the required information

Soils and Water Resources

The first subject area discussed was soils. Although the draft section was adequate, there were several areas where additional information would be very helpful. The primary area was a lack of discussion on conformity with applicable laws, ordinances and standards. The major concern here was a lack of information on Sutter County erosion control and grading requirements in the submittal. Calpine representatives indicated that Sutter County has no erosion or grading requirements and that this will be included in the submittal.

CURE asked about the lack of a discussion on soil contamination at the site. Joe O'Hagan indicated that a phase I environmental site assessment had been submitted which evaluated the existing facility and the proposed site. This information was provided under worker safety and hadn't been seen by CURE yet. Calpine stated that a revised environmental site assessment has been completed and will be submitted as an appendix in the filing.

The next topic was water resources. Joe O'Hagan explained that the section was inadequate as it had not been fully completed. The first section, which requires a discussion of the setting, impacts and mitigation was inadequate due to a lack of any information on groundwater contamination in the project vicinity. Calpine indicated that this information has been collected from different data bases as part of the revised environmental site assessment. The next data deficiency was the information necessary to submit to the regional board for an National Pollutant Discharge Elimination System (NPDES) Permit. Calpine indicated that this information was being developed and would be provided. Staff encouraged Calpine to apply for the NPDES permit as soon as the project is data adequate. Calpine indicated that this is their plan.

CURE indicated that they have not seen the project water treatment and disposal system discussion. That section is in the project description which they apparently had not seen.

The next item was the lack of a map at a suitable scale that would indicate the drainage on and off the site. Joe O'Hagan suggested a map scale of 1:6,000 as the 1:24,000 scale was too small. Also missing was the physical and chemical description of the source and wastewater as well as the amount of water to be used for construction. Calpine indicated that they are working on these and they will be provided. CURE asked about a water balance diagram which was included in the project description which they apparently hadn't seen. CURE pointed out that in the air quality section the discussion on cooling tower blow down indicates that the total dissolved solids (tds) level was approximately 8,600 parts per million (ppm) while the total dissolved solids (tds) level for wastewater (which should primarily consist of cooling tower blow down) was only 1,800 ppm. No one had an explanation for the discrepancy, but Calpine said they would investigate. Another concern voiced by CURE was the need for the analysis to address wastewater discharge impacts to the

Sutter Bypass and, more importantly, the Sacramento River. CURE thought a mass balance analysis was appropriate. Calpine indicated that they would look into this issue and address the matter in the AFC.

Other information lacking from the submittal was runoff and drainage information. Calpine indicated this information was being developed as well. The final item was the lack of a conformance discussion for all applicable laws, ordinances, etc. and a schedule for when each permit will be obtained. These items will also be supplied by Calpine in the filing.

Land Use

The written summary of the conference call between the Energy Commission and Sutter County on 9/4/97 was discussed and passed out (see enclosure).

Public Health

The major point of discussion was the toxic emissions factors to be used in the public health risk analysis. Mike Ringer presented a table (enclosed) which listed emissions from gas-fired combustion turbines (cogeneration mode) as found in the California Toxic Emissions Factors (CATEF) database maintained by the Air Resources Board (ARB). The table also includes ammonia from the selective catalytic reduction system, although it is not found in the CATEF data. The table also lists relevant reference exposure levels (noncancer) and cancer potency values (from ARB's Health Risk Assessment Program version 2.0e User's Guide) for each of the emissions listed (see table at end of summary). A few of the emissions were categorized by ARB as not having sufficient data to validate the results. These factors should probably not be included in the risk analysis.

CURE requested that emissions from several sources also be included in the risk analysis. These included the natural gas dehydrator, cooling tower, duct burner, and the oil-water separator.

Natural Gas Transmission

Natural gas transmission does not have a separate set of data adequacy requirements; rather, the requirements are included in various other disciplines such as biology, paleontological and cultural resources, etc. The comments and suggestions for natural gas transmission are as follows:

1. Provide biology, cultural and paleontological survey information for the 5,000 square foot area required for the dehydrator station located just east of the Sacramento River. We also understand that several walnut trees will need to be removed to accommodate this dehydrator station. Please provide details regarding site preparation.

2. Identify the length of natural gas pipeline, Segment F.
3. Per the discussion in the natural gas transmission section, a detailed description of the proposed route will be provided in an appendix and should include a copy of the non-confidential portions of the appendix.
4. A second dehydrator station will be installed at the Poundstone Drip Station, west of the Sacramento River. Will this require more land area than the existing drip station? If so, include the amount of additional land area that will be used, details of site preparation and provide biology, cultural and paleontological survey information for the added land area.
5. The 8,000 foot, new 4-inch pipeline was not addressed in the biology section. Please provide survey information on this section of the pipeline.
6. Page 3 refers the reader to an appendix for a detailed description of directional boring. Please provide the details contained in the appendix.

Page 5 indicates that the proposed route would have no significant impact on biological resources. Since the entire route parallels giant garter snake habitat, we suggest a more appropriate wording would be that mitigation is being proposed to reduce the impacts to biological resources.

The following was not discussed in the meeting but we include it here for your information. Since the natural gas transmission section was provided to us as part of the last set of AFC sections, staff did not consider nor comment on the gas line and dehydrators as fully as they might have on many of the earlier data adequacy worksheets. In addition, portions of the gas line and the Poundstone Drip Station are located on the west side of the Sacramento River in Colusa County and in Colusa County Air Pollution Control District. In previous comments to you and on data adequacy worksheets, staff did not mention a need to identify and discuss Colusa County ordinances and/or Colusa County Air Pollution Control District rules. Please identify and discuss Colusa County and Colusa County Air Pollution Control District applicable ordinances, conformity with these ordinances, schedules for obtaining permits outside the Energy Commission jurisdiction and local agency contacts for all applicable AFC sections.

Electric Transmission

Data adequacy review covered Section 6 and an attached Sutter Power Project--Western Area Power Administration (Western) Interconnection study (July 29, 1997) completed by Western for Calpine. Al McCuen of the Energy Commission staff provided the following comments on data adequacy and draft Section 6--Electric Transmission.

Although the study was not initially attached to Section 6, Calpine verified that it was intended to be attached. A copy was given to staff at the workshop. Staff advised that there would be significant data inadequacies if the study was not part of the filing.

It was verified in discussions that Western will provide a copy of their reliability criteria for inclusion in Section 6; this would make the Appendix B (b) (2) (C) information requirements adequate. It was noted by Morteza Sabet of Western that this information is available in the FERC Form 715 filings but staff felt the information should be included in the AFC.

Staff suggested that a general discussion of the Sutter to Elverta transmission system addition be placed in the AFC. It was suggested that this discussion be included in the Executive Summary or the Project Description. Additionally, the discussion of the preliminary nature of the study should be expanded to identify when a final study and the scope of the study will be available. We would further suggest that Calpine consider providing a general discussion of potential foreseeable environmental and system impacts associated with this potential system addition in the AFC. These suggestions are not required for data adequacy but would be helpful to the Energy Commission; local, state and federal agencies reviewing the project; the public; and interested parties.

Staff noted that although termination alternatives are discussed in Section 6, no discussion of how the route was selected was included. This is required by Appendix B (b) (2) (D) and will be remedied by Calpine.

Staff noted that measures to reduce magnetic fields were not discussed. However, it is an industry standard in California to consider magnetic field reduction techniques and costs. Calpine indicated that they will briefly discuss the need (if any) for such techniques. It was also noted by staff that the proposed steel pole, delta configured line was indeed a line design which reduced magnetic fields and would, in staff's opinion, qualify as a reduction measure.

Although many of the assumptions for magnetic and electric field predictions appeared on page 11, it was not clear whether the milligauss level was average, peak, root mean square or some other unit. Additionally, the conductor height used for the calculations was not stated. Calpine agreed to provide this information.

Staff noted that Public Resources Code Sections 4292-4296 could be added to the table on page 10 as could CPUC General Order 95, Rule 35, both of which cover fire hazards and clearances. The table or tables per Appendix B (h) (1) (B) were not provided.

Loose Ends

Marc Joseph brought up a couple of loose ends from the previous meeting on 9/3/97. One related to transportation of hazardous materials to the project site and the other

related to flooding of the site in the event of a levee break. It was agreed that Marc Joseph would provide a summary of these points as well as other points made by CURE during the meeting. These have been received and are enclosed. Energy Commission staff will be addressing each point and providing copies of our response to CURE and Calpine.

Calpine indicated that this would probably be the last pre-filing workshop. Only the draft facility design section remains for the staff to review. Calpine hoped to complete and submit that section shortly. A conference call may be appropriate once the Energy Commission staff has reviewed this submittal. Calpine indicated that they hoped to file the Sutter Project AFC in the fall of 1997.

**NONCANCER REFERENCE EXPOSURE LEVELS (REL) AND CANCER POTENCY VALUES
FOR COMBUSTION TURBINE EMISSIONS¹**

Substance Emitted²	Acute REL _g/m³	Chronic REL _g/m³	Cancer Unit Risk _g/m³⁻¹	Oral Potency Value mg/kg⁻¹	Oral REL mg/kg/day
Ammonia	2.10e+03	1.00e+02			
Acenaphthene					
Anthracene					
Benzo(a)anthracene			1.10e-04	1.15e+00	N/A
Benzo(a)pyrene			1.10e-03	1.15e+01	N/A
Benzo(b)fluoranthene			1.10e-04	1.15e+00	N/A
Benzo(e)pyrene*					
Benzo(g,h,i)perylene					
Benzo(k)fluoranthene			1.10e-04	1.15e+00	N/A
Chrysene			1.10e-05	1.15e-01	N/A
Dibenz(a,h)anthracene			3.90e-04	4.10e+00	N/A
Fluoranthene					
Fluorene					
Indeno(1,2,3cd)-pyrene			1.10e-04	1.15e+00	N/A
Napthalene		1.40e+01		N/A	4.00e-03
Phenanthrene					
Pyrene					
2-Chloronaphthalene*					
2-Methylnaphthalene*					
Ethylbenzene					
Perylene*					
1,3-Butadiene*			1.70e-04		
Acetaldehyde		9.00e+00	2.70e-06		
Acrolein		2.00e-02			
Benzene		7.10e+01	2.90e-05		
Formaldehyde	3.70e+02	3.60e+00	6.00e-06		
Hexane*					
Propylene					

Propylene Oxide*	1.00e+03	3.00e+01	3.70e-06		
Toluene		2.00e+02			
Xylene (Total)	4.40e+03	3.00e+02			
Xylene (m,p)*					
Xylene (o)*					

¹ Reference exposure levels and cancer potency factors from ARB's Health Risk Assessment Program version 2.0e User's Guide for AB 2588 risk assessments

² from California Toxic Emissions Factors (CATEF) database for natural gas-fired combustion turbine cogeneration

* insufficient data for validation of results

Attachment A

Conference Call with Sutter County--9/4/97 *(Summary by Paul Richins)*

Roger Johnson, Shawn Pittard, Amanda Stennick, Jeffery Evans and Paul Richins completed a conference call with Sutter County Planning Office (George Carpenter and Tom Last) to discuss coordination (process and procedures) between the Energy Commission and Sutter County on the General Plan amendment and Planned Development rezone of the entire 77-acre Sutter Power Project site. In addition, Energy Commission staff sought information from Sutter County to ensure that the scope of the environmental review conducted by the Energy Commission will meet the needs and requirements of Sutter County. The following was discussed and agreed to by the Energy Commission and Sutter County staffs:

Calpine will submit to the Energy Commission an Application for Certification (AFC) for the Sutter Power Project--a 500 MW natural gas-fired combined cycle project.

Calpine will concurrently submit to Sutter County an application for a General Plan amendment and a Planned Development rezone of the entire 77-acre site. Calpine's application to Sutter County will show all current, planned and proposed uses and developments on the 77-acre Planned Development site plan. A copy of this application to Sutter County will be appended to the AFC.

The Energy Commission will analyze the uses and developments as indicated by Calpine on the 77-acre Planned Development site plan including the Sutter Power Project as well as Capine's request for a General Plan amendment and a Planned Development rezone. Any additional developments, not included in the Planned Development site plan, will require additional review and subsequent discretionary actions by Sutter County and may require a project amendment, if certified by the Energy Commission.

The Energy Commission's environmental analysis documents will be relied upon by the Sutter County Planning Commission and the Sutter County Board of Supervisors to act upon the request of Calpine for a General Plan amendment and Planned Development rezone of the entire 77-acre Sutter Power Project site.

Pursuant to 15253 (b) (1) of the CEQA Guidelines, the Energy Commission, acting as the certified agency, will be the first agency to grant a discretionary approval for the project. The County will use the Energy Commission prepared environmental documents prior to the consideration of any discretionary approvals for the project as prescribed by section 15253.

Attachment B

**FAX from Adams Broadwell & Joseph to Paul Richins, Project Manager re:
Sutter Power Project - Prefiling Review: no electronic copy available.**

Attachment C

Sutter Power Project Prefiling Meeting September 25, 1997

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