State Of California **The Resources Agency Of California**

M e m o r a n d u m

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Telephone : (916) 654-4074

To : Michal C. Moore, Presiding Member
William J. Keese, Chairman

File : issuerpt.mem

From : **California Energy Commission** - Paul C. Richins, Jr.
1516 Ninth Street Energy Facilities Siting Project Manager
Sacramento 95814-5512

Subject : **Sutter Power Project Issue Identification Report**

Attached is the staff's Issue Identification Report. This report serves as a preliminary scoping document as it identifies the issues the Energy Commission staff and Western Area Power Administration (Western) staff believe to be significant at this time. Since the Sutter Power Project will interconnect with Western's high voltage transmission line, the scoping of the issues and the review/analysis is being completed jointly with Western, the federal lead agency for this project. Energy Commission staff and Western will present the issues report at the Committee's scheduled Informational Hearing on March 3, 1998, at the Veterans Hall in Yuba City, California.

Attachment

cc Proof of Service
Ray Menebroker, ARB
Mike Negrete, CVRWQB
Mel Grandi, City of Lodi
Sam Castillo, DFG
John Nelson, DFG
Bob Orcutt, DFG
Ron Schlorff, DFG
Dale Whitmore, DFG
Jerry Boles, DWR
Ken Corbin, FRAQMD
Jeff Miller, ISO
Les Pereira, NCPA
Chris Mobley, NMFS
Peter Lai, PG&E
Keith Martin, RWMA
Gilbert Butler, SMUD
Larry Williams, SNWR
George Carpenter, Sutter County CSD
Gary Kraus, Sutter County OES
Ginger E. Fodge, USACE
Matt Haber, U.S. EPA, Reg. IX
Kelly Hornaday, USFWS
Mark Littlefield, USFWS
John Bridges, Western
Nick Chevance, Western
Loreen McMahon, Western
Morteza Sabet, Western
Krishna Shah, Western

SUTTER POWER PLANT

(97-AFC-2)

ISSUE IDENTIFICATION REPORT

CALIFORNIA ENERGY COMMISSION

Energy Facilities Siting and Environmental Protection Division

and

WESTERN AREA POWER ADMINSTRATION

February 11, 1998

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ISSUE IDENTIFICATION REPORT

PURPOSE

This report has been prepared by the California Energy Commission staff to inform the Committee and all interested parties of the major issues that have been identified as a result of our site visits and discussions with other agencies and interested participants during prefiling and the data adequacy phase, and our review of the Sutter Power Plant (SPP) Application for Certification (AFC), Docket Number 97-AFC-2. This report contains a project description, a summary of potential major issues, a summary of policy issues and a discussion of the staff's proposed project schedule.

A second purpose of this report is to serve as a preliminary scoping report on the potential issues for both the Energy Commission's energy facility siting review and Western Area Power Adminstration's (Western) National Environmental Protection Act (NEPA) review. Since the Sutter Project will interconnect with Western's high voltage electric transmission system, the review will be completed jointly with Western, the federal lead agency for this project.

PROJECT DESCRIPTION

The project, as proposed, will be located adjacent to Calpine's Greenleaf 1 electric cogeneration power plant approximately seven miles southwest of Yuba City on South Township Road near the intersection with Best Road. The land dedicated for the facility will comprise approximately 12 acres of Calpine's existing 77 acre parcel (Sutter County Assessor's parcel number 21-230-25). See Project Summary Figure 1 for the location of the project site and related facilities.

The project, as proposed by Calpine Corporation, is a 500 MW, natural gas-fired, combined cycle, electric generation facility. The combined cycle design consists of two combustion turbine generators (CTGs), two heat recovery steam generators (HRSGs) with duct burners and a steam turbine generator (STG).

A new 4 mile, 230 kilovolt (kV) overhead electric transmission line will be built to a new switching station which will interconnect to the Western Area Power Administration's electrical transmission system. A new 12 mile natural gas pipeline will be constructed to provide fuel for the project. The 16 inch gas pipeline will connect to an existing PG&E natural gas supply line located to the west of the facility site. Potable water and cooling water will be provided by an on-site well system that will be developed as part of the project. It is expected that three wells will be developed to meet the approximate need of 3,000 gallons per minute of water expected during peak operating conditions. Sanitary waste will be treated on-site. The treated sanitary waste and all other waste water generated in the operation of the plant will be discharged to the existing surface drainage system thus necessitating a National Pollutant Discharge Elimination System (NPDES) permit.

Project Summary Figure 1 can be viewed from the PROJECT LOCATION (MAPS) feature on the main web page for the Sutter Power Project.

MAJOR ISSUES

This portion of the report contains a discussion of the major issues Energy Commission staff and Western staff have identified to date. The Committee should be aware that the list may not include all the significant issues that could arise during the case, as discovery is not yet complete and other parties have not yet had an opportunity to identify their concerns. The identification of major issues was based on our judgement of whether any of the following circumstances will occur:

- significant impacts may result from the project which may be difficult to mitigate;
- the project as proposed may not comply with applicable laws, ordinances regulations or standards (LORS);
- conflicts arise between the parties about the appropriate findings or conditions of certification for the Energy Commission decision.

The following table identifies the subject areas evaluated and conclusions at this time. Even though an area is identified as having no "major" issues, it does not mean that no issue will arise related to the subject area. For example, disagreements regarding the appropriate conditions of certification my arise between staff and applicant which will require discussion at workshops or even subsequent hearings. However, staff does not believe such an issue will have an impact on the case schedule or that resolution will be difficult.

Major Issue	Subject Area	Major Issue	Subject Area
Yes	Air Quality	No	Noise
No	Alternatives	No	Paleontological Resources
Yes	Biological Resources	No	Public Health
No	Cultural Resources	No	Socioeconomics
No	Efficiency and Reliability	No	Soils
No	Electromagnetic Fields & Health Effects	No	Traffic and Transportation
No	Facility Design	No	Transmission Line Safety
No	Geology	**Yes**	Transmission System Engineering
No	Hazardous Materials	**Yes**	Visual Resources
No	Industrial Safety and Fire Protection	No	Waste
No	Land Use	**Yes**	Water Resources
No	Need Conformance		

The following discussion summarizes each major issue, identifies the parties needed to resolve the issue, and recommends a process for achieving resolution. Staff and Western plan to use this issue identification report to focus its analysis that will be included in the jointly developed Preliminary Staff Assessment and Final Staff Assessment.

AIR QUALITY

The two critical air quality issues that may affect the timing and possible outcome of the licensing process include: 1) the determination of what constitutes Best Available Control Technology (BACT) for the project; and 2) the provision of offsets consistent with Energy Commission licensing requirements.

Best Available Control Technology (BACT)

The applicant has proposed a combination of dry low-NOx combustors and a Selective Catalytic Reduction (SCR) system to control nitrogen oxides (NOx) emissions. To control particulate matter less than 10 microns (PM10), sulfur oxides (SOx), carbon monoxide (CO) and hydrocarbon emissions, the applicant has proposed "good-combustion" practices and natural gas fuel as BACT. The Feather River Air Quality Management District (District), in its Determination of Compliance (DOC) review, will decide whether the proposed control technologies for the various pollutants do indeed constitute BACT. The federal Environmental Protection Agency (EPA) and California Air Resources Board (ARB) have the option of commenting on the District's BACT determination.

EPA has recently endorsed a new technology, the Sunlaw Carbon Monoxide and Nitrogen Oxide (SCONOx^{TM}) process, as technologically feasible and practical for the control of NOx and CO emissions from combustion gas turbines. The District staff has also required the applicant to evaluate the feasibility of using the SCONOx^{TM} technology to control NOx and CO emissions from the proposed project. Therefore, EPA and ARB's timely review of the applicant's BACT evaluation, along with the District, will be needed to facilitate the licensing process. We expect that these agencies will express any concerns they have about the District's BACT determination within the 30 day review and comment period that follows the issuance of the preliminary DOC. However, if EPA or ARB do not comment until after the District has issued its preliminary DOC, a resolution of issues raised at that time could delay the issuance of the final DOC. This could potentially delay the completion of the Final Staff Assessment (FSA), the evidentiary hearings and the final decision.

Offsets

There are three issues related to offsets that could develop during the case. They are:

a) The offset package has not been specifically identified. Hopefully, before staff prepares its testimony, Calpine will identify the specific sources of Emission Reduction Credits (ERCs) that make up their offset package. Additionally, the District will not issue a preliminary DOC unless the ERCs are specifically identified.

b) A related question arises as to whether interpollutant offsets will be needed, specifically Volatile Organic Compounds (VOCs) for NOx. Since the NOx liability is so large (presently 274 tons per year), it is likely Calpine may pursue VOC ERCs for a portion or all of their NOx offset liability. The issue on this matter relates to the appropriate interpollutant ratio which has yet to be determined by the District.

c) The District only requires offsets for project emissions greater than 25 tons per year. The District applies this 25 ton per year exemption to each of the following criteria pollutants: NOx, VOCs and PM10. This "trigger level" approach differs from staff's approach of recommending, where justified, that all emission increases from a project be offset. The District, however, requires an offset ratio of 1.2 to 1.0 to assure that their overall New Source Review Program objectives are met, whereas staff normally recommends a project-specific offset ratio of only 1.0 to 1.0. The difference between these two approaches, one programmatic, and one project-specific, is usually minimal where project emissions that impact a given standard, such as ozone, exceed approximately 130 tons per year.

   The only pollutant for which this is not the case on the Sutter project is PM10, since the project's annual PM10 emissions are estimated to be 94 tons. However, before staff can recommend that the project's total PM10 emissions be offset at a 1.0 to 1.0 ratio, it must be determined whether the impact is significant. To do this staff will evaluate: the existing ambient PM10 conditions; the season(s) when PM10 is a problem; what sources could be contributing to that PM10 problem; whether PM10 levels are rising or going down over a span of years; whether the District has implemented any strategies for dealing with PM10 violations; the magnitude of the PM10 impacts from the Sutter Project; the locations and frequencies of those impacts; and whether any excess gaseous pollutant offsets (NOx and VOC) as precursors to secondary PM10 would compensate for the PM10 increase. If the evaluation determines that there is a significant PM10 impact, staff would recommend that total PM10 mitigation is warranted .

Staff has requested that Calpine provide a schedule outlining the expected time frames for acquiring the necessary ERCs. Calpine has indicated their commitment to securing the ERCs in a timely manner. Staff will continue to work with the Feather River Air District and U.S. EPA to ensure a timely BACT review and issuance of the DOC.

BIOLOGICAL RESOURCES

The critical biological resource issues that have been identified to date include: 1) effectively mitigating potential impacts from the wastewater discharge, 2) waterfowl collisions with the proposed transmission line, 3) loss of wetlands, and 4) timing of the various state and federal permits prior to the Final Staff Assessment (FSA).

Wastewater Discharge

The wastewater discharge, consisting primarily of cooling tower effluent, contains chemical constituents that could affect endangered fisheries in the Sutter Bypass, Sacramento River and the Delta, as well as the endangered giant garter snake in the wastewater discharge conveyance canals. This wastewater will be mixed with discharge from Greenleaf 1 and chemicals from irrigation run off in the conveyance system, which could create cumulative impacts that may not be mitigable to less than significant levels. The cooling tower effluent may also result in increased water temperature which may be harmful to endangered fisheries. California Department of Fish and Game, U.S. Fish and Wildlife Service, National Marine Fisheries Service and California Unions for Reliable Energy (CURE) have expressed concern about these issues.

The applicant has stated both in the AFC and in the January 16, 1998, supplemental filing that modeling will be conducted to help determine chemical and temperature related impacts from the wastewater discharge. Once the Commission has received the results of this modeling, staff will consult with agency experts to determine appropriate mitigation options.

Sandhill Crane and Waterfowl Collisions With The Proposed Transmission Line

The proposed Sutter Power Plant is located within a primary migration stop for the listed sandhill crane and Aleutian Canada goose and several other species of waterfowl protected under the Migratory Bird Treaty Act. Portions of the proposed transmission line route will traverse a segment of the Pacific Flyway, the primary route used for bird migration. Avian mortality from collisions with power lines is well documented, and this impact can be significant to locally concentrated populations, particularly of listed species. The California Department of Fish and Game has expressed concern with this issue.

In the AFC, the applicant proposes to mark the lines with colored bird flight diverters to make the lines more visible to birds in flight. While this measure has been shown to help reduce collisions, it may be ineffective during periods of fog or at night. Other measures used in the past to help reduce collisions are removing the uppermost ground wire from the top of the transmission towers or undergrounding the transmission line. Representatives from Western Area Power Administration (Western) have agreed to explore some of these options. However, removing the top

ground wire may not be possible in areas subject to frequent lightning storms, and undergrounding lines is considerably more expensive than overhead construction. Staff will hold a workshop with Fish and Game, Western, Calpine and all interested parties to address this issue.

Wetland Loss

The AFC includes a statement that 1 acre of a 4.19-acre seasonal wetland will be directly taken by the power plant footprint. The applicant states that only the 1 acre of that wetland will be impacted, and does not propose to mitigate for the remaining 3.19 acres of the wetland. Staff is concerned that the hydrology of the entire pool will be impacted by construction in a manner that requires mitigation. The 77-acre site supports some of the few remaining uncultivated wetlands in the area.

U.S. Fish and Wildlife Service has expressed a concern about this issue as well. Staff has requested additional information from the applicant in its first set of data requests. Staff will hold a workshop with the applicant and agencies to address this issue.

Timing of the Permit Process

Consultation and permits from federal and state agencies will be required to satisfy compliance with applicable laws, ordinances, regulations, and standards. Local, state and federal agencies have indicated that there may be potential concerns regarding listed fisheries and waterfowl, giant garter snake, wetlands, and Swainson's hawk. Consultation and permit processing with U.S. Fish and Wildlife Service and California Department of Fish and Game can be lengthy and does not always conform to our certification schedule. Often these agency permits require mitigation measures that must be incorporated into our conditions of certification.

The applicant has indicated that they will ensure all necessary permits will be obtained prior to construction of the plant and related linear facilities. Staff has requested, in a data request, that Calpine provide a schedule outlining the expected time frames for completing the biological consultation process with appropriate state and federal agencies and for obtaining the necessary permits. Western, as lead federal agency, will be able to assist in the timely federal review and biological consultation process.

TRANSMISSION SYSTEM ENGINEERING

For staff to make a recommendation on transmission system engineering, we will need a copy of the final interconnection study that is being prepared by the Western Area Power Administration (Western). It was staff's understanding that this study was to be completed by January 1998. In recent telephone conversations with Western, it appears that the interconnection study may not be completed until June, 1998. This delay could lead to future scheduling problems.

Staff will continue to work with Calpine, Western and the Sacramento Area Transmission Planning Group to resolve this scheduling matter. Energy Commission staff will identify the information that is needed to support their recommendation and

will coordinate with Western's staff, Calpine, and the Sacramento Area Transmission Plannning Group to determine whether this priority work can be scheduled and completed earlier than the planned for date of June, 1998.

VISUAL RESOURCES

Power Plant Impacts Due to Visible Plumes

The power plant may cause significant visual impacts to local residents due to visible vapor plumes. Staff's experience with the Procter & Gamble and the Campbell Soup plants in Sacramento County indicates that very large visible plumes can be created in climatic conditions similar to those at the Sutter site. Even though there is the existing Greenleaf #1 plant at the proposed site, the plumes from the Sutter Power Project would add a very noticeable industrial feature to a generally rural and rural-residential setting. If the plumes occur often enough, they may constitute a significant visual impact.

Staff and applicant should attempt to resolve this issue through discovery, workshops, and a condition of certification. Staff is monitoring the formation of visible plumes at the Procter & Gamble and Campbell Soup plants to be able to estimate the frequency and size of plumes that can be expected at the Sutter Power Project. If the impacts cannot be reduced to a less than significant level, a finding of overriding consideration by the Commission may be required for the project to proceed.

Transmission Line Impacts on Nearby Residents

The proposed electric transmission line may cause significant visual impacts to nearby residents because of its substantial height (much taller than local electric and telephone poles), its close proximity to a number of residences, and the generally rural character of the setting, including the scenic Sutter Buttes.

Staff, applicant, Western and local landowners should attempt to resolve this issue through discovery, workshops, and a condition of certification. Staff has prepared a data request to obtain information from the applicant to help determine the potential for visual impacts to the local residents and the effectiveness of proposed mitigation measures, including routing alternatives. If the impacts cannot be reduced to a less than significant level, a finding of overriding consideration by the Commission may be required for the project to proceed.

WATER RESOURCES

Water Supply

Operation of the Sutter Power Project may lead to water supply impacts. The facility will use an average of 4.33 million gallons per day of groundwater. This level of pumping, in conjunction with pumping for the adjacent Greanleaf 1 power plant, may adversely affect neighboring wells.

Staff has submitted a data request to the applicant asking for a drawdown analysis that reflects pumping by both power plant projects and identifies the effects on adjacent wells. The applicant has also been requested to evaluate potential alternative cooling technologies that could significantly reduce project water supply demand.

Water Quality

Groundwater to be used by the project contains low levels of substances such as metals and bromides which are concentrated during plant operations and then discharged to surface waters. This discharge will require a National Pollutant Discharge Elimination System (NPDES) Permit from the Central Valley Regional Water Quality Control Board.

Concerns have been raised about the project's wastewater discharge potentially affecting water quality in the Sutter Bypass, the Sacramento River and the Sacramento-San Joaquin Delta. These adverse effects may include: potential episodes when water quality standards may be exceeded; adverse affects on water treatment plants, related public health concerns and economic impacts on agencies and districts that rely on the Sacramento River-San Joaquin River Delta for their water supply; and cumulative impacts. We have received letters of concern from the Contra Costa Water Agency, the California Urban Water Agencies and the California Unions for Reliable Energy on this issue.

Staff has submitted data requests asking the applicant to model the fate and transport of pollutants within the wastewater discharge. Staff has also asked the applicant to model temperature effects of the wastewater discharge, as well as to evaluate potential wastewater treatment processes to reduce the level of contaminants in the discharge.

POLICY ISSUES

Staff has identified two policy issues that the Committee should consider during the review of this project: 1) determination of appropriate decommissioning requirements of a merchant facility; and 2) identification of the appropriate transmission planning agencies and potentially affected transmission owning utilities' responsibilites and roles relating to the Sutter Power Project's interconnection with the Western Area Power Adminstration's transmission system. These issues will be discussed further in the Preliminary Staff Assessment (PSA) and Final Staff Assessment (FSA) for consideration, and if appropriate, by the Committee and the parties during subsequent hearings.

1. Decommissioning was raised as an issue in both the 1994 and 1996 ***Electricity Reports*** proceedings because of the potential for project failure of merchant facilities. The Energy Commission's Energy Facility Siting Committee will address this issue in a separate rule making proceeding during the next six months. However, this issue may also need to be addressed separately in this case.

2. The interconnection of the Sutter Power Project with Western is being coordinated through the Sacramento Area Transmission Planning Group, chaired by Western with participation by: Sacramento Municipal Utility District, Pacific Gas and Electric, Northern California Power Agency and the City of Lodi. Since Western is not a participating transmission owner responsible to the California Independent System Operator (ISO), the interconnection of the Sutter Project may not be under the review of the ISO. The policy question to be addressed by the Committee is: what role should the ISO and other transmission owning utilities play in the Energy Commission's certification of the Sutter Power Project.

SUMMARY OF SCHEDULING ISSUES

Staff has begun its analyses of the major issues identified above, as well as its assessment of other environmental and engineering aspects of the applicant's proposal. As noted above, the first step in that assessment was the issuing of data requests to the applicant on February 2, 1998. Over the next few months staff may issue additional data requests and conduct public data request, data response, and issue resolution workshops to address concerns regarding the applicant's proposal.

Staff's initial findings regarding the major issues discussed above, as well as other environmental and engineering findings regarding the project, will be presented in the PSA which is expected to filed on July 1, 1998. After filing the PSA, staff will conduct public workshops to discuss its findings, recommendations and proposed conditions of certification. Based on these workshop discussions and other information that may be provided to staff, staff will present its conclusions and recommendations in the FSA which is expected to be filed by August 27, 1998.

Below is staff's proposed schedule for key events for the project.

DATE	DAYS	EVENT
15-Dec-97	-37	Calpine Files Sutter Power Project AFC
21-Jan-98	0	Energy Commission Deems AFC Complete
3-March-98	41	**Information Hearing, Issue Scoping & Site Visit**
4-March-98	42	Data Request Responses Due From Applicant
1-July-98	160	Staff Files Preliminary Staff Assessment
16-Jul-98	180	Feather River Air District Files Preliminary Determination Of Compliance (DOC)
13-Aug-98	204	**Prehearing Conference**
27-Aug-98	218	Staff Files Final Staff Assessment
16-Sep-98	240	Feather River Air District Files DOC
23-Sep-98-2-Oct-98	244--253	**Hearings**
20-Jan-98	364	Adopt Decision

Key events which will dictate whether staff will be able to meet these dates are the applicant's timely response to staff's data requests, the applicant's submittal of information required by the Feather River Air Quality Management District, the District's filing of its preliminary and final Determination of Compliance, the timely review and biological consultations by the U.S. Fish and Wildlife Service and the timely completion of electric transmission interconnection study. If these and other issuses are resolved sooner than expected, staff may be able to file the PSA and FSA eariler than the proposed schedule indicates.