

**SUNRISE COGENERATION  
AND POWER PROJECT**

(98-AFC-4)

**ISSUE IDENTIFICATION REPORT**

March 8, 1999

**CALIFORNIA ENERGY COMMISSION**  
Energy Facilities Siting and Environmental Protection Division



# SUNRISE COGENERATION AND POWER PROJECT

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# SUNRISE COGENERATION AND POWER PROJECT ISSUE IDENTIFICATION REPORT

## PURPOSE OF THIS REPORT

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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 in our discussions with other agencies, intervenors, and potential parties during data adequacy, and our review of the Sunrise Cogeneration and Power Project Application for Certification (AFC) (98-AFC-4), as supplemented. The identification of major issues at this time does not preclude the staff or any other party from identifying additional major issues that may arise from new information or a change to the project description. Staff's examination of potential major issues was not limited to technical concerns but also considered procedural or policy concerns as well. Staff considers an issue to be major if it entails any of the following:

- potential significant impacts which may be difficult to mitigate;
- potential areas of noncompliance with applicable laws, ordinances regulations or standards (LORS);
- areas of conflict or potential conflict between the parties; or
- areas where resolution may be difficult or may affect the schedule.

The following table identifies the subject areas that were evaluated and whether or not staff has identified any major issues at this time. Even though an area is identified as having no "major" issues, it does not mean the area is fully resolved; it may still require discussion at workshops or even subsequent hearings. It, however, does not currently appear as if it will have an impact on the Commission making a timely decision or precluding the Commission from making a required finding.

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

The discussion that follows addresses each major issue and includes the identification of the parties that should be involved in resolving the issue and recommendations for a process to achieve resolution. During its review of the Sunrise Cogeneration and Power Project, staff will continue to obtain additional information and complete its independent Preliminary Staff Assessment (PSA) which will include an analysis of all issues with recommendations for mitigation measures with the objective of reducing all potentially significant impacts to levels of insignificance. This issue identification report will help to focus staff's analysis on the major issues and should allow the staff the ability to provide a condensed but sufficient analysis.

## **PROJECT SUMMARY**

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### **PROJECT LOCATION**

The facility is to be located approximately three miles northwest of the town of Fellows in western Kern County, approximately 35 miles southwest of Bakersfield, California. The project site is about 16 acres in size and is presently a vacant field in the Midway Sunset oil reserve.

### **PROJECT DESCRIPTION**

The applicant has proposed a combustion turbine generator (CTG) design with a nominal capacity of 320 megawatts (MW). The facility will consist of two General Electric Frame 7FA CTGs equipped with dry low oxides of nitrogen (NO<sub>x</sub>) (DLN) combustors, with two heat recovery steam generators (HRSGs) equipped with anhydrous ammonia type selective catalytic reduction (SCR) emission control and associated support equipment. Natural gas will be the only fuel used at the facility and will be supplied by the thermal host.

Each CTG system will consist of a stationary, heavy duty, industrial CTG capable of producing approximately 165 MW of electricity at site conditions. Power will be generated by the CTGs at 18 kilovolt (kV) and stepped up by two transformers to 230 kV in a new switchyard (the Sunrise Switchyard) directly east of the cogeneration plant. Power will be transmitted via a new 15-mile transmission line (the Sunrise-Valley Acres transmission line) to the new Valley Acres Switching Station for connection to the existing California Department of Water Resources and Pacific Gas and Electric Company 230 kV transmission line. Electricity produced by the facility will be sold through the California Power Exchange to the electricity market, through other power exchanges, and/or to third parties under bilateral contracts.

Exhaust gas from each CTG will flow directly through an unfired "single-pass" HRSG with an SCR, before passing through an exhaust stack. Each HRSG will be designed to produce steam at operating conditions of approximately 574° F and at 1,250 pounds per square inch gauge to steam injection wells in the vicinity of the project. Steam produced by the project will be used for thermally enhanced oil recovery. The injected steam will serve to lower the viscosity of crude oil in the oil-

bearing strata and physically displace the crude in the direction of oil production wells. Water produced along with the crude oil from the production wells will be treated and reused as HRSG feedwater. Because of the "once-through" design of the HRSG, there is no boiler blowdown stream during normal operation.

The facility's consumptive fresh water requirements will be minimal, since the primary project water supply will be pretreated, produced water from the adjacent oil field operations. A small quantity of potable water and service water will be required for domestic purposes and possibly evaporative cooler makeup.

The project will be subject to new source review by the San Joaquin Valley Unified Air Pollution Control District (SJVUAPCD) and federal Prevention of Significant Deterioration (PSD) review by the U.S. Environmental Protection Agency. Best Available Control Technology will be provided in conformance with both SJVUAPCD and PSD regulations. Additionally, emission offsets will be provided to mitigate proposed emissions.

NO<sub>x</sub> emissions from the combustion process will be reduced to 2.5 parts per million by volume dry (ppmvd), or less, at 15 percent oxygen, by utilizing dry low NO<sub>x</sub> combustion technology and a SCR system. The SCR system will use anhydrous ammonia for the reduction process.

The engineering and environmental details of the proposed project are contained in the AFC.

## **MAJOR ISSUES**

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### **AIR QUALITY**

There are two critical air quality issues that may significantly affect the timing and outcome of the proposed project; 1) the provision of offsets and; 2) the identification of indirect emissions associated with the project

#### ***OFFSETS***

The applicant has supplied a list of sources of Emission Reduction Credits (ERCs) that they are currently considering. Staff has submitted a data request to the applicant requesting identification of the ERCs that they propose to obtain for the project. This will enable staff to identify any problems (e.g., reasonably available control technology adjustments) and suggest appropriate solutions prior to issuing our final staff assessment. To complete this task, the Energy Commission will work with the SJVUAPCD, the California Air Resources Board and the U.S. Environmental Protection Agency.

## ***INDIRECT IMPACTS***

The proposed project may induce significant indirect emission impacts that have not been thoroughly investigated at this time. These emissions may stem from the TNAP Utility Corridor that is currently being built, or increased industrialization in the nearby oil fields that will draw steam from the proposed project. To make this determination, the Energy Commission will work with the SJVUAPCD, the California Air Resources Board and the U.S. Environmental Protection Agency.

## **BIOLOGICAL RESOURCES**

### ***PROJECT INDIRECT IMPACTS***

The Sunrise project will create steam to be used in enhanced oil recovery, however the project's potential indirect impacts have not been thoroughly investigated, and very little information has been provided at this time. Staff is concerned about the indirect biological resources impacts associated with power plant steam production and the steam used for enhanced oil recovery. A new steam source such as the proposed Sunrise power plant can result in new steam lines, new oil wells, and the removal and the displacement of existing steam generators and oil wells. All of these indirect activities can result in temporary and permanent impacts to wildlife habitat found in the oil field that is provided steam by the new power plant. The lack of information, and the potential for disagreement about the methods to be used for determining the project's indirect impacts, may significantly affect the timing and outcome of the proposed project.

For staff to complete its analysis, the applicant, BLM, CDFG, USFWS, and Energy Commission staff must be willing to work together to determine a suitable method for determining the projects indirect impacts and appropriate level of mitigation for these impacts.

## **REVIEW OF INDIRECT AND CUMULATIVE IMPACTS**

In order to evaluate the indirect impacts of the project, the Energy Commission staff has made the data requests for design descriptions, engineering drawings, acreage, and other information on the following:

The TNAP utility corridor, the 20-inch gas pipeline interconnecting the Kern River Gas Transmission Company\Mojave Pipeline Company natural gas pipeline, and any future Midway-Sunset oil field expansion, including new leaseholds, property acquisitions, and steam sales to business entities other than Texaco and its subsidiaries, occurring within the area affected by the project during the life of the project.

In order to evaluate the cumulative impacts of the project, the Energy Commission staff has made the data requests for information on the following:

La Paloma, Elk Hills power plant projects, other projects in the region of similar type and nature, and the Midway-Sunset and other oil field

expansion, under regulatory consideration in the reasonably foreseeable future need to be addressed.

Since there is a potential for disagreement between the applicant and the staff and other parties, specifically CURE, staff will initiate discussion on these issues during the March 10, 1999 Data Request Workshop where data requests on these issues will be introduced initially. Subsequent data response and issue resolution workshops will also be utilized to achieve consensus on these issues. Staff will report to the Committee at the March 18, 1999 Informational Hearing as to the status of these issues.

The staff needs to work with the applicant, agencies, CURE and other interested parties in resolving these issues.

## **SUMMARY OF SCHEDULING ISSUES**

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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 March 1, 1999. 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 be filed on August 2, 1999. 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 September 30, 1999.

Staff's proposed schedule for key events for the project is shown below. 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 SJVUAPCD, the SJVUAPCD'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 issues are resolved sooner than expected, staff may be able to file the PSA and FSA earlier than the proposed schedule indicates.

**Energy Facilities Siting & Environmental Protection Division**  
**Proposed Schedule For**  
Sunrise Cogeneration and Power Project

DATE	DAYS	EVENT
21-Dec-98	-58	Receive AFC
17-Feb-99	0	Energy Commission Deems AFC Complete
1-Mar-99	12	Staff Submits Data Requests
8-Mar-99	19	Staff Files Issue Identification Report
<b>18-Mar-99</b>	29	<b>Information Hearing, Issue Id. &amp; Site Visit</b>
31-Mar-99	42	Applicant submits data responses
19-Apr-99	61	Committee Issues Scheduling Order
17-Jun-99	120	APCD files Preliminary Determination of Compliance
17-Jun-99	120	ISO files findings on Transmission Line Interconnection Study
2-Aug-99	166	Staff Files PSA
16-Aug-99	180	APCD files Final Determination of Compliance
31-Aug-99	195	File Prehearing Conference statements
<b>14-Sep-99</b>	209	<b>Prehearing Conference</b>
30-Sep-99	225	Staff Files FSA
<b>19-Oct-99</b>	244	<b>Start Hearings</b>
<b>1-Nov-99</b>	257	<b>Conclude Hearings</b>
20-Dec-99	306	Committee Issues Draft Presiding Members Proposed Decision
18-Jan-00	335	End of PMPD comment period for agencies and others
1-Feb-00	349	Committee Issues Revised PMPD
<b>16-Feb-00</b>	364	<b>Commission Hearing on Revised PMPD</b>
16-Feb-00	364	Adopt Decision