State Of California The Resources Agency of California

Memorandum

Date: July 13, 2005
Telephone: 653-1245

To : Chairman Joseph Desmond, Presiding Member
Commissioner James D. Boyd, Associate Member

From : California Energy Commission - James W. Reede, Jr., Ed.D
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Subject : **PASTORIA ENERGY FACILITY EXPANSION 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 believes will require careful attention and consideration. Energy Commission staff will present the issues report at the Committee's Informational Hearing.

cc: Pastoria Energy Facility Proof of Service List
Richard Karrs, Southern Region, San Joaquin Valley APCD
Peter Cross, USFWS Endangered Species Office
Ron Daschmans, CAL-ISO Grid Planning
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Issue Identification Report

Pastoria Energy Facility Expansion (05-AFC-1)

July 2005

CALIFORNIA ENERGY COMMISSION

Systems Assessment & Facilities Siting Division

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ISSUE IDENTIFICATION REPORT
PASTORIA ENERGY FACILITY EXPANSION
(05-AFC-1)

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PURPOSE OF REPORT

This report has been prepared by the California Energy Commission staff to inform the Committee and all interested parties of the potential issues that have been identified in the case thus far. These issues have been identified as a result of discussions with federal, state, and local agencies, and review of the Pastoria Energy Facility 160 MW Expansion Application for Certification (AFC), Docket Number 05-AFC-1. The Issue Identification Report contains a project description, summary of potentially significant transmission system engineering issues, and a discussion of the proposed project schedule. The staff will address the status of issues and progress towards their resolution in periodic status reports to the Committee.

PROJECT BACKGROUND AND DESCRIPTION

Pastoria Energy Facility filed an Application for Certification with the California Energy Commission on November 30, 1999 to construct and operate a nominal 750 megawatt (MW), natural gas-fired, combined cycle, electric generation facility to be located on Tejon Ranch in southern Kern County. The project was approved December 2000 and is operational.

On April 29, 2005, Pastoria Energy LLC filed an Application for Certification (AFC) for the Pastoria Energy Facility 160 MW (megawatt) Expansion (PEFE) Project, seeking approval from the Energy Commission to construct and operate an additional 160 MW unit at its existing power plant site.

The project is proposed to be located on the existing 30-acre Pastoria Energy Facility site on the Tejon Ranch. The site is about 30 miles south of Bakersfield and about 6.5 miles east of Interstate 5 near the base of the Tehachapi Mountains, in Township 10 North, Range 18 West, and is approximately 0.85 mile north of the California Aqueduct and about 1.3 miles north of the Edmonston Pumping Plant (California Department of Water Resources). The facility address is 39789 Edmonston Pumping Plant Road, Lebec, CA.

The proposed PEFE incorporates one additional natural gas-fired, F-Class combustion turbine generator (CTG) operating in simple cycle mode into the original three-unit PEF, for a total of four units. The plant will continue to use Best Available Control Technology (BACT) to minimize gas turbine emissions. The PEFE applicant plans to use Selective Catalytic Reduction for pollution control with anhydrous ammonia as the reagent in the catalytic reduction process. The PEFE project will not require any changes to the existing facility's fuel or water supplies.

Calpine Corporation estimates the capital cost of the Pastoria Energy Facility to be between $60 and $80 million with a 12-month construction period. Operation of the expansion is expected to begin July 2007.

POTENTIAL ISSUES

This portion of the report contains a discussion of the potential issues the Energy Commission staff has identified to date. The Committee should be aware that this report may not include all the significant issues that may arise during the case, as discovery is not yet complete, and other parties have not had an opportunity to identify their concerns. The identification of the potential issues contained in this report 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 may arise between the parties about the appropriate findings or conditions of certification for the Energy Commission decision that could result in a delay in the schedule.

The following table lists all the subject areas evaluated and notes those areas where the critical issues have been identified. Even though an area is identified as having no potential issues, it does not mean that no issue will arise related to the subject area. For example, disagreements regarding the appropriate conditions of certification may arise between staff and applicant that will require discussion at workshops or even subsequent hearings. However, we do not believe such an issue will have an impact on the case schedule or that resolution will be difficult.

Technical Area	Major Issue
Air Quality	Yes
Alternatives	No
Biology	No
Compliance	No
Cultural	No
Efficiency	No
Facility Design	No
Geology	No
Hazardous Materials	No
Health	No
Land Use	No
Noise	No
Paleontology	No
Project Overview	No
Reliability	No
Socioeconomics/Environmental Justice	No
Soils	No
Trans Line Safety/Nuisance	No
Traffic and Transportation	No
Transmission System Engineering	Yes
Visual	No
Waste	No
Water	No
Worker Safety	No

The following discussion summarizes the potential issue, identifies the parties needed to resolve the issue and, where applicable, suggests a process for achieving resolution. At this time, the staff does not see that any of these potential issues cannot be resolved. The staff is ready to participate with the applicant, other agencies, etc., to address the resolution of these issues. We plan to use this report to focus our analysis on issues that will ultimately be addressed in the Preliminary Staff Assessment (PSA).

AIR QUALITY

There are two potentially critical air quality issues that may affect the timing and possible outcome of the licensing process for the Pastoria Energy Facility Expansion (PEFE) project. They include: 1) **project offsets**; and 2) **emission impacts analysis**.

PROJECT OFFSETS

The project is proposing a NOx for PM10 interpollutant offset ratio first proposed in 1999 for the La Paloma siting case and again for the original Pastoria AFC in 1999. This interpollutant offset ratio was calculated using a dated methodology, and more recent licensing cases in the San Joaquin Valley have proposed a revised methodology with revised assumptions for calculating interpollutant offset ratios. Additionally, the San Joaquin Valley Air Pollution Control District (SJVAPCD) Rules (Rule 2201 Section 4.13.3) allow the use of interpollutant offset ratios on a case by case basis. The applicant has not provided any information, other than noting that the interpollutant offset ratio was accepted in previous cases, to prove that the proposed interpollutant offset ratio is still valid for this case.

Additionally, the applicant is proposing the use of an extensive amount of pre-baseline year (aka “pre-1990”) emission reduction credits (ERCs). District rule requirements concerning the use of such credits could affect future project applicants or other major source projects seeking air permits in the San Joaquin Valley. The effect of these pre-baseline offsets on the future applicants and offset requirements needs to be clearly understood and the potential for significant impacts need to be evaluated.

The use of pre-baseline year offsets and interpollutant offsets have been the subject of past U.S. EPA comments on several projects, including the most recent PEF amendment. Therefore, staff believes that consultation with the U.S. EPA regarding the offset proposal should be obtained as early in the process as possible. If U.S. EPA raises significant concerns with the proposed offset approach late in the process, that could cause a delay in issuing the Determination of Compliance (DOC), and likely cause a delay to or affect the outcome of the overall licensing process.

EMISSION IMPACTS ANALYSIS

The operating emissions impact analysis primarily makes use of a screening level model (CTSCREEN) and screening level meteorological data rather than a refined model (such as ISCST3, AERMOD, CTDMPLUS) and local annual meteorological data. Staff and the SJVAPCD need to determine if the use of this screening level model is appropriate for the purposes for which it has been used in this case. If a revised modeling analysis is required by staff or the SJVAPCD, a delay in the DOC and/or staff analysis may occur.

TRANSMISSION SYSTEM ENGINEERING

The need for an environmental review of transmission facilities system upgrades could delay the schedule for the PEFE.

NEED FOR AN ENVIRONMENTAL ASSESSMENT OF TRANSMISSION FACILITIES SYSTEM UPGRADES

The System Impact Study (SIS) submitted by Southern California Edison (SCE) on May 13, 2005, identified the necessity for a Facility Study (FS) to interconnect the proposed PEFE. The proposed Facility Study will determine the feasibility, mitigation measures, and cost associated with upgrading the existing Pastoria-Pardee-Warne 230kV, Antelope-Mesa 230kV and Antelope-Magunden No.2 230kV transmission lines. Thermal overloads of the base and contingency cases have been triggered on these transmission lines, due to the projects in queue ahead of the PEFE.

The SIS indicates that the interconnection of the proposed PEFE could require reconductoring[1] the above 230 kV transmission lines, which include the replacement of the existing lines with larger lines. This process could also require construction of a new transmission line or complete strengthening and possible rebuild of the 230kV Transmission lines with bundled 1590 ACSR conductors. However, until a Facility Study is completed and provided to the California Energy Commission and CAISO, it is impossible to predict the scope of work that would be required to modify the transmission system to reliably accommodate the additional 160 MW of the project.

The line reconductoring or the construction of new transmission facilities may require current biological resource information for the transmission line route corridor width, in order to address the biological resource implications of the transmission line work. If spring/summer surveys are needed, this biological assessment may delay the project schedule. Additional surveys may also be required for cultural and paleontological resources depending on the adequacy of any existing resource information when the scope of work for upgrade of the transmission system is known. Additional environmental analysis may also be needed for other technical areas such as visual and land use. The applicant will have to work closely with SCE to obtain engineering and construction plans and available environmental impact data. The applicant will be responsible for providing the required environmental assessment for SCE's transmission system mitigation.

Potential indirect environmental impacts to biological resources, cultural resources, land use and visual resources could result from reconductoring of the transmission lines and/or addition of any new additional transmission towers. Staff has prepared Data Requests to obtain the information needed from Calpine to evaluate the environmental impacts of new or modified downstream transmission system facilities. Assuming that the needed transmission upgrade will not require construction of a new line or reconductoring and corresponding biological resources

[1] Reconductoring involves removing the old conductors and installing higher capacity conductors.

surveys, staff remains confident that the licensing process can be completed in approximately 8 months.

Energy Commission Staff's Proposed Schedule

DATE	EVENT
April 29, 2005	Pastoria Energy Facility Expansion Project AFC Filed
July 13, 2005	Energy Commission Deems AFC Complete
July 13, 2005	Staff Files Issue Identification Report
July 13, 2005	Staff Files Data Requests
July 26, 2005	Staff Data Request Workshop
Early August	Information Hearing, Issue Scoping & Site Visit
August 12, 2005	Data Responses Due from Applicant and Environmental Assessment of Transmission Line Upgrades & Mitigations (EATM)
August 22, 2005	SJVAPCD files Preliminary Determination of Compliance (PDOC)
September 15, 2005	Staff files Preliminary Staff Assessment (PSA)
September 30, 2005	Preliminary Staff Assessment Workshop
October 7, 2005	SJVAPCD files Final Determination of Compliance (FDOC)
October 15, 2005	Applicant Provides SCE's Facilities Study to the CAISO and Energy Commission
October 30, 2005	Applicant submits Final Environmental Assessment for Transmission Line Upgrades & Mitigations (EATM)
November 16, 2005	Staff files Final Staff Assessment
November 30, 2005	Final Staff Assessment Workshop