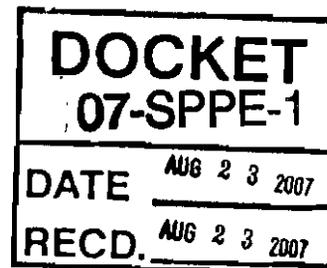


Memorandum

To: Commissioner Jeffrey D. Byron, Presiding Member
Commissioner Arthur H. Rosenfeld, Associate Member

Date: August 23, 2007
Telephone: (916) 651-8891
File: 07-SPPE-1

From : **California Energy Commission** Mary Dyas
1516 Ninth Street Energy Facility Siting Project Manager
Sacramento CA 95814-5512



Subject: **CHEVRON POWER PLANT REPLACEMENT PROJECT – SMALL POWER PLANT EXEMPTION (07-SPPE-1)**

ISSUE IDENTIFICATION REPORT

Attached is staff's Issue Identification Report for the Chevron Power Plant Replacement Project Application for a Small Power Plant Exemption (07-SPPE-1). This report serves as a preliminary scoping document identifying a potential issue Energy Commission staff believes will require careful attention and consideration. Energy Commission staff will present this Issue Identification Report at the Informational Hearing to be held by the Commission's Chevron Project Committee in Richmond, Contra Costa County on August 30, 2007.

Attachment

cc: Docket (07-SPPE-1)
POS

**CHEVRON POWER PLANT REPLACEMENT PROJECT
SMALL POWER PLANT EXEMPTION
(07-SPPE-1)**

ISSUE IDENTIFICATION REPORT

August 23, 2007

CALIFORNIA ENERGY COMMISSION

Facilities Siting Division

ISSUE IDENTIFICATION REPORT

CHEVRON POWER PLANT REPLACEMENT PROJECT APPLICATION FOR SMALL POWER PLANT EXEMPTION (07-SPPE-1)

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ISSUE IDENTIFICATION REPORT

This report has been prepared by the California Energy Commission staff to inform the Committee and all interested parties of a potential issue identified in the case thus far. This Issue Identification Report contains a project description, summary of the potential issue, and a discussion of the proposed project schedule. The staff will address the issue and progress towards resolution in periodic status reports to the Committee.

PROJECT DESCRIPTION

On June 22, 2007, Chevron filed an application for a Small Power Plant Exemption (SPPE) which, if granted, would result in an exemption from the California Energy Commission's licensing requirements. Chevron proposes to add an additional 60 megawatts (MW) net capacity to its existing electrical generation system within its Richmond Refinery in the City of Richmond, Contra Costa County, California. The approximately 2,900-acre refinery occupies most of the Point San Pablo Peninsula with east and south boundaries near the residential communities of North Richmond and Point Richmond, respectively. The proposed Power Plant Replacement Project (PPRP) is part of Chevron's plans to meet its growing refinery electrical load and produce steam for refinery process needs.

The PPRP would consist of (1) a replacement cogeneration train (Cogen 3000) to be located within the refinery's existing cogeneration facility, (2) a steam turbine generator (H2-STG) and an associated cooling tower to be located in a new hydrogen production facility within the refinery, (3) reconductoring to upgrade approximately 4,000 feet of existing double-circuit overhead 115-kV transmission line located between the existing cogeneration facility substation and the refinery's main switchyard, and (4) shutdown of the boilers located in the existing No. 1 Power Plant facility, which is currently providing steam to the refinery.

Cogen 3000 is proposed to be a nominal 43-megawatt (MW) net power output GE Frame 6B combustion turbine generator (CTG), which would have an inlet evaporative cooling system to maximize power output from the machine. The CTG exhaust would discharge through a heat recovery steam generator (HRSG) that would be equipped with refinery fuel gas-fired duct burners to provide additional steam production. The refinery proposes to burn natural gas, medium-Btu gas, or liquid petroleum gas in the CTG, and refinery fuel gas in the HRSG duct burner. The HRSG will be equipped with an SCR emission control system that uses anhydrous ammonia in the presence of a catalyst to reduce NOx in the exhaust gases. An oxidation catalyst will also be installed within the HRSG casing to control carbon monoxide and volatile organic compound emissions. Fuel for the facility would be delivered via existing pipelines. The Cogen 3000 unit would be located on a previously developed site within the existing 5.2-acre cogeneration area of the Richmond Refinery.

In addition to the additional generation capacity provided by Cogen 3000, the H2-STG would have a nominal 17 MW maximum net output. The H2-STG would be installed as a physical part of the new hydrogen production plant to be built within the refinery by a third-party owner, Praxair. The H2-STG would tie-in to the refinery's electrical system via a 2,000-foot onsite interconnection with the refinery's electrical distribution system to the main transmission substation, called the Standard Oil Switching Station (SOSS). The SOSS is the point of common coupling with the Pacific Gas and Electric (PG&E) existing 115-kV El Sobrante transmission line.

For cooling tower makeup, the H2-STG would use up to 484 acre-feet per year (afy) of recycled water provided by the East Bay Municipal Utility District (EBMUD). Cooling water would be cycled in the H2-STG cooling tower approximately 3.5 times. The blowdown would be sent to the refinery wastewater treatment system. The recycled water would be delivered to the H2-STG cooling tower from an existing recycled water pipeline. Additional in-plant water distribution piping would be added to route the recycled water to the new cooling tower. For Cogen 3000, the CTG would use approximately 949 afy of refinery-treated water for the turbine inlet air evaporative cooling system makeup, and other uses. The refinery-treated water is proposed to be supplied from EBMUD.

Potable water for drinking, safety showers, fire protection, and service water uses would be served from the existing EBMUD potable water system that currently serves the refinery. No additional sanitary wastewater disposal is proposed to be used for the PPRP.

If the exemption is approved by the Energy Commission, Chevron would acquire all necessary permits for project construction. The start of commercial operation for the H2-STG is proposed for the first quarter of 2009 and for Cogen 3000 in the second quarter of 2010. Cogen 3000 would be operated by existing cogen and power plant facility operators, and H2-STG would be operated by hydrogen plant operators, therefore, no personnel would be added for this project. There would be up to 180 construction workers employed for Cogen 3000 and up to 95 construction workers for H2-STG. The initial estimated capital cost of the PPRP is \$100 million.

SMALL POWER PLANT EXEMPTION PROCESS AND POTENTIAL MAJOR ISSUE

Public Resources Code section 25541 states “[t]he commission may exempt ... thermal power plants with a generating capacity of up to 100 megawatts and modifications to existing generating facilities that do not add capacity in excess of 100 megawatts, if the commission finds that no substantial adverse impact on the environment or energy resources will result from the construction or operation of the proposed facility or from the modifications.” The SPPE process is different from the Application for Certification (AFC) process since the Energy Commission will not license the project but exempt the project from the licensing process. The Energy Commission is the lead agency for the PPRP under the California Environmental Quality Act (CEQA). If an exemption is granted, the applicant will use the Energy Commission’s environmental document to secure the appropriate licenses and permits for the project from various local, state and federal agencies.

The SPPE process also uses a different format of analysis from that used in the AFC process. For an SPPE, staff prepares an Initial Study that evaluates whether the project will result in any significant environmental or energy resource impacts, identifies mitigation measures that will reduce any identified impacts to less than significant levels, and establishes proposed conditions of exemption. Staff will use the Environmental Checklist Form contained in CEQA Guidelines Appendix G (California Code of Regulations, Title 14) as a guideline for the types of issues that will be examined in the Initial Study.

This Issue Identification Report contains staff’s preliminary findings. The following discussion focuses on the issue where staff has concluded that (a) a “potentially significant impact” may occur, (b) resolution of the issue may cause delay in the schedule, and (c) staff has insufficient information at this time to reach a conclusion. 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.

This report does not limit the scope of staff’s analysis throughout this proceeding but acts to aid in the analysis of potentially significant issues that the Chevron PPRP proposal may pose. The following discussion summarizes the potential issue, identifies the parties needed to resolve the issue and, where applicable, suggests a process for achieving resolution. However, staff does not see this potential issue as insolvable.

The following table lists all the subject areas evaluated and notes those areas where the critical or significant issues have been identified and if data requests have been requested. Even though an area is identified as having no potential major issues in this report, it does not mean that an issue will not arise related to the subject area.

Major Issue	Data Request	Subject Area
Yes	Yes	Air Quality
No	Yes	Biological Resources
No	Yes	Cultural Resources
No	No	Energy Resources
No	Yes	Geology / Paleontology Resources
No	Yes	Hazardous Materials Management
No	No	Land Use, Recreation and Agriculture
No	No	Noise and Vibration
No	Yes	Project Description
No	Yes	Public Health
No	No	Reliability / Efficiency
No	Yes	Socioeconomics
No	Yes	Soil & Water Resources
No	No	Traffic & Transportation
No	No	Transmission Line Safety & Nuisance
No	Yes	Transmission System Engineering
No	Yes	Visual Resources/Plume
No	Yes	Waste Management

The following section contains staff's preliminary findings. The Initial Study will provide additional analysis, descriptions of the recommended mitigation measures, and any proposed conditions of exemption.

AIR QUALITY

Staff reviewed the application for the Chevron Power Plant Replacement Project Small Power Plant Exemption (SPPE) and found a potential air quality issue that could delay the Commission review process.

Mitigation of PM10 and PM2.5 Impacts

The project would be located in the Bay Area Air Quality Management District (Air District) where particulate matter occurs at levels that exceed the state ambient air quality standards and recently-adopted federal standards. The proposed Cogen 3000 CTG, HRSG, and H2-STG cooling tower would emit about 47.3 tons per year of particulate matter including particles that are 10 micrometers and under (PM10) and those 2.5 micrometers and under (PM2.5). Chevron is proposing to offset these increases through a combination of existing source shutdowns and emission reduction credits (ERCs). However, the application does not identify the specific shutdowns, the schedule for shutdowns, or the expected emission reductions to be achieved. The Air District and staff must ensure that the emission reductions are made enforceable, real, and permanent, and the applicant would need to agree to the emission reduction plan. Staff has developed data requests to identify enforceable reductions as a mitigation strategy for the proposed emission increases. Staff will work with the applicant and the Air District to address this issue.

SUMMARY

Staff provided air quality data requests to Chevron on August 8, 2007 to illicit information to address the identified concern regarding the PPRP. Staff will address any additional technical concerns that may arise in the Initial Study. Timely responses to data requests and resolution of the above issue are necessary to stay within the time frames of the attached proposed schedule. All agencies, intervenors, and interested parties will be informed of future workshops and project events. The following page presents staff's proposed schedule.

**ENERGY COMMISSION STAFF'S
PROPOSED SCHEDULE
Chevron Power Plant Replacement Project
(07-SPPE-1)**

EVENT	DATE
Applicant files Application for SPPE	22-Jun-07
Staff provides data requests to applicant	8-Aug-07
Information Hearing and Site Visit	30-Aug-07
Applicant provides data responses	10-Sep-07
Data Response and Issue Resolution Workshop	20-Sep-07
Draft Initial Study filed	24-Oct-07
Draft Initial Study workshop	7-Nov-07
Agency, applicant, public comments on the Application and Draft Initial Study	26-Nov-07
Final Initial Study filed	14-Dec-07
Prehearing conference	TBD*
Evidentiary hearings	TBD*
Committee files Proposed Decision/Negative Declaration	TBD*
Comments on the Initial Study and Proposed Decision	TBD*
Commission Decision	TBD*

Note: All dates are approximate and will be determined by staff and committee. Actual dates will be announced by staff notices or Committee order.

* Date to be determined