

Memorandum

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To: Chairman Jackalyne Pfannenstiel, Presiding Member
 Commissioner Arthur Rosenfeld, Associate Member

From: California Energy Commission - John S. Kessler
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Subject: **PALMDALE HYBRID POWER PROJECT (08-AFC-9)**
ISSUES IDENTIFICATION REPORT

Attached is staff's Issues Identification Report for the Palmdale Hybrid Power Project (PHPP). This report serves as a preliminary scoping document that identifies the issues that Energy Commission staff believes will require careful attention and consideration. Energy Commission staff will present the issues report at the Informational Hearing and Site Visit to be held on December 4, 2008.

cc: Docket (08-AFC-9)
 Proof of Service List

Attachment

PALMDALE HYBRID POWER PROJECT

(08-AFC-9)

December 2, 2008

ISSUES IDENTIFICATION REPORT

CALIFORNIA ENERGY COMMISSION

Siting, Transmission & Environmental Protection Division

ISSUES IDENTIFICATION REPORT PALMDALE HYBRID POWER PROJECT

(08-AFC-9)

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ISSUES IDENTIFICATION REPORT

California Energy Commission Staff

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 our discussions with federal, state, and local agencies, and our review of the Palmdale Hybrid Power Project Application for Certification (AFC), Docket Number 08-AFC-9. The Issues Identification Report contains a project description, summary of potentially significant environmental 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 DESCRIPTION

On August 4, 2008, the City of Palmdale submitted an Application for Certification (AFC) to construct and operate the Palmdale Hybrid Power Project (PHPP), a hybrid of natural gas-fired combined cycle generating equipment integrated with solar thermal generating equipment, in the city of Palmdale, Los Angeles County. Although the original filing lacked required information, on October 1, 2008, the City of Palmdale provided a Volume III Data Adequacy Supplement to the AFC to satisfy the Energy Commission's informational requirements. On October 8, 2008, the Energy Commission accepted the AFC with the supplemental information as complete. This determination initiated Energy Commission staff's independent analysis of the proposed project.

The proposed PHPP would have a net electrical output of 617 megawatts (MW), with construction planned to begin in spring or summer of 2011 and commercial operation planned by summer of 2013. PHPP is designed to use solar technology to generate a portion of the project's output and thereby support the State of California's goal of increasing the percentage of renewable energy supplies. Primary equipment for the generating facility would include two natural gas-fired combustion turbine-generators (CTGs) rated at 172 MW each, two heat recovery steam generators (HRSGs), one steam turbine-generator (STG) rated at 292 MW, and 250 acres of parabolic solar-thermal collectors with associated heat transfer equipment. The solar-thermal collectors would contribute up to 50 MW of the STG's 292 MW output, and with plant auxiliary loads of about 19 MW, PHPP's net output would be 617 MW.

Construction of the proposed PHPP would require permanent use of 327 acres at the power plant site, located immediately north and west of the combined facilities of Los Angeles/Palmdale Regional Airport and Air Force Plant 42. Air Force Plant 42 supports facilities for the production, engineering, final assembly and flight testing of high performance aircraft. The power plant site would require 250 acres for the solar field, 26 acres for the power block, and 51 acres combined for the access road, setbacks and drainage facilities. Construction laydown would require a separate 50-acre temporary area located west of and adjacent to the proposed power plant site. The project site is situated approximately 60 miles north of downtown Los Angeles and in the northernmost portion of the city of Palmdale. The site address is 950 East Avenue M, and is part of an approximately 600-acre site owned by the city of Palmdale, bounded on the west by vacant land and then Sierra Highway, on the north by East Avenue M, on the east by East 15th Street and on the south by Avenue M-12.

The proposed PHPP facility would feed power through a 230- kilovolt (kV) transmission system and interconnect to the power grid through Southern California Edison's (SCE's) existing Vincent Substation. Vincent substation is located approximately 11 miles directly south-southwest of the proposed PHPP site, but the interconnection would require a total 35.6 miles of 230-kV overhead transmission line to avoid affecting aviation operations of the Los Angeles/Palmdale Regional Airport and Air Force Plant 42. The transmission line is characterized in two segments. Segment 1 of the line, consisting of new steel poles and conductor, would run approximately 23.7 miles through new and existing rights-of-way (ROWs) beginning at the northeastern boundary of the proposed PHPP site and extending generally eastward and then generally southward to a pole in the vicinity of SCE's Pearblossom Substation. Segment 2 extends from this point westward to SCE's existing Vincent Substation, and would consist of new steel poles and a double circuit of conductors within an existing SCE ROW.

Natural gas would be delivered to the project through a new 8.7-mile, 20-inch diameter pipeline designed and constructed by Southern California Gas (SCG), originating at the SCG facility on East Avenue S Street, and terminating at PHPP. The pipeline route would generally follow a northward heading near or adjacent to Sierra Highway through existing street ROWs within the city of Palmdale.

On an annual basis, the proposed PHPP would consume a maximum of about 3,150 acre-feet/year of water for power plant processes, primarily serving cooling demand for an evaporative (wet) cooling tower used for steam condensation and an evaporative cooler for each CTG's inlet air cooling. Process water needs would be met by the use of reclaimed water supplied by the Palmdale Water Reclamation Plant (PWRP). Reclaimed water would be conveyed in a new 7.4-mile, 14-inch pipeline extending from the PWRP located southeast of the proposed site, and then following a general path westward along East Avenue P Street, northward along Sierra Highway, and then eastward along East Avenue M Street. Potable water would be supplied to the proposed project by Los Angeles County Waterworks District No. 40 via a new 1.0-mile pipeline extending to PHPP along East Avenue M Street from a connection at an existing pipeline near the intersection with Sierra Highway. Process wastewater would be treated using a zero liquid discharge system, separating water for reuse from solids in the form of brine that would be processed into solids for landfill disposal. Sanitary wastewater would be sent to the Los Angeles County Sanitation District's sewer system via a new 1.0-mile sanitary wastewater line running northward from PHPP and connecting to the sewer system at the intersection of East Avenue L Street and 10th Street East.

Air emissions from the combustion of natural gas in the CTGs and duct burners within the HRSGs would be controlled using best available control technology applied to their exhaust. Oxides of nitrogen (NOx) from the CTG's stack emissions would be controlled by dry low-NOx combustors followed by a selective catalytic reduction system in each of the HRSGs. An oxidation catalyst located within each HRSG would also control carbon monoxide (CO) and volatile organic compounds (VOC). In order to be considered for

licensing by the Energy Commission, the project would be required to conform with rules and regulations of the Antelope Valley Air Quality Management District (Antelope Valley AQMD) and be issued a Determination of Compliance from the Air District.

The construction workforce would average 367 workers over the entire construction period, and would peak during month 12 with up to 767 workers onsite. Construction costs are estimated to be about \$715 million. The operation workforce is expected to require 36 workers. If approved by the Energy Commission, the City of Palmdale proposes to initiate construction of the project in spring of 2011. The project is expected to take about 27 months for construction and startup testing and could begin commercial operation in summer of 2013, if there are no delays.

POTENTIAL MAJOR 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 might not identify all of the significant issues that may arise during the case. Discovery is not yet complete, and other parties have not had an opportunity to voice their concerns. The identification of the potential issues contained in this report is based on comments of other government agencies and on our judgment of whether there may be:

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

The following table lists all the subject areas evaluated and notes the Air Quality and Land Use areas where potentially significant issues have been identified. Even though an area is identified as having no potential issues, it does not mean that an issue will not arise related to the subject area.

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

This report does not limit the scope of staff's analysis throughout this proceeding, but it acts to aid in the analysis of the potentially significant issues that the PHPP proposal poses. The following discussion summarizes the potential issues, identifies the parties needed to resolve the issues, and where applicable, suggests a process for achieving resolution. At this time, staff does not see these potential issues as non-resolvable.

AIR QUALITY

Availability of Emission Offsets

PHPP would be located in the Antelope Valley Air Quality Management District (Antelope Valley AQMD). Offsets are required for the project because certain project emissions exceed the 25 tons per year threshold triggering offset requirements. These emissions include particulate matter less than 10 microns in diameter (PM10) (135 tons per year), oxides of nitrogen (NOx) (115.3 tons per year) and volatile organic compounds (VOCs) (40 tons per year).

To offset PM10, the applicant proposes to complete paving of local unpaved roads prior to start of construction of the PHPP to provide emission reductions of PM10. This offset would require the applicant to work closely with the AVAQMD to develop a program to allow for the banking of PM10 emission reduction credits (ERCs) from the paving of unpaved roads. The recently approved Victorville 2 Hybrid Power Project relied on a similar program (Rule 1406) as developed by Mojave Desert AQMD, which was patterned after a rule developed by Maricopa County, Arizona Air Quality Department and was approved by the U.S. EPA.

For ozone precursors, NOx and VOCs, the applicant proposes that offsets would be obtained through interbasin, and perhaps interpollutant trading. While Antelope Valley AQMD maintains an ERC bank, efforts to date have not located ERCs that are available to purchase within the Antelope Valley AQMD. At the time the applicant prepared the AFC, the applicant stated these offsets would be obtained from one of several sources including the South Coast AQMD pursuant to South Coast AQMD Rule 1309.1 - Priority Reserve, purchases on the open market, or another appropriate mechanism. Since the filing of the AFC, Los Angeles Superior Court has issued a Writ of Mandate and Injunction directing the South Coast AQMD to set aside its approval of the inter-district transfer of VOC ERCs for this and other projects (*Natural Resources Defense Council, Inc. v. South Coast Air Quality Management District*, Superior Court Central district, 2008, No.BS110792). The PHPP is affected by the Court's ruling. On November 18, 2008, the South Coast AQMD filed a Notice of Appeal in the above-referenced case. The availability of offsets from the Priority Reserve may be dependent upon the ultimate outcome of this litigation.

Absent the availability of interbasin, interpollutant trading of ERCs to offset NOX and VOC under Rule 1309.1, staff understands that the applicant is currently in negotiations to obtain the necessary ERCs through other options. These other options are likely to include interbasin trading of credits from the San Joaquin Valley Air Pollution Control

District (San Joaquin Valley APCD). Since there are both VOC and NOX offsets available in the San Joaquin Valley APCD, these trades may, or may not, include an interpollutant aspect. Based on the precise nature of the proposed offsets, appropriate trading ratios approved by the Antelope Valley AQMD would be applied.

Staff has identified the applicant's need to obtain emission offsets as a potential significant issue due to the uncertainty raised by the recent court ruling precluding the availability of ERCs under South Coast AQMD's Rule 1309.1 at this time. The rule specifically allocated ERCs for the PHPP as well as other power plant projects, but the ability of power plant project applicants to secure alternative ERCs has been very limited since the court decision. However, staff understands that the applicant may be in a position in the future to demonstrate it is able to meet the offset requirements, and that upon completion of its current negotiations for ERCs, will file information with the Energy Commission.

LAND USE

Potential Schedule Impacts to Secure Transmission Line Right-of-Way

The PHPP transmission line will be approximately 35.6 miles long and consist of two segments. Segment 1 begins on the PHPP onsite switchyard and extends approximately 23.7 miles through new and existing right-of-ways (ROWs) to a pole adjacent to SCE's existing Pearblossom Substation and would involve stringing conductors on new steel poles. Average pole spacing would be approximately 750 feet; pole heights would range from 100 feet to 135 feet. Segment 2 would be approximately 11.9 miles long and the conductors would be strung on new steel poles in the existing SCE ROW between a pole adjacent to Pearblossom Substation and the Vincent Substation.

Staff has highlighted this as a potential issue, because the need for ROW acquisition for a new, lengthy transmission line proposal could be complex and factor into the overall project schedule considering numerous small parcels are involved in the Palmdale region. In addition, staff will need additional information describing the construction methods of the transmission line involving proposed road work, foundations and pulling sites. The following types of information is needed to conduct analysis of impacts for the transmission line:

5. The amount and width of right-of-way required;
6. The number, location, and size (in width and length) of maintenance access roads for the transmission line;
7. The location and distance of new rights-of-way required vs. existing rights-of-way to be used;
8. The number of pulling sites (and land disturbed) that would be required along the entire 35.6 miles of transmission line right-of-way; and

9. Right-of-way ownership issues associated with right-of-way acquisition.

10.

Staff has prepared detailed data requests for the applicant (i.e., the City of Palmdale) regarding these issues, and will be coordinating this information to discern the impacts of transmission line siting on land uses.

TRAFFIC AND TRANSPORTATION

Aviation Safety

The PHPP would be located adjacent to Air Force Plant 42 which includes the operation of a passenger terminal on the Plant 42 site known as the Palmdale Regional Airport. The proximity of the project to these facilities could cause aviation safety impacts related to airport operations. Staff's analysis will include consideration of project effects from thermal and visible plumes, possible glare from the solar collectors, as well as the proximity of the project to the traffic pattern of the airport.

SCHEDULING

Although staff has experienced some delays early in this AFC proceeding, the proposed schedule reflects an assumption that the PHPP AFC can be processed according to the Commission's normal 12-month AFC schedule. The delays experienced to date are attributable to limitations in the availability of staff and its consultants for evaluating the AFC in light of the very high current and expected workload of siting cases before the Energy Commission (i.e., as of December 1, 2008 there are 25 applications). The schedule has already been affected due to additional time needed by staff to prepare data requests given the overall siting case work load. However, staff has prepared a very comprehensive first round of data requests, and hopes to recover from current schedule delays by avoiding or minimizing the need for a second round of data requests as well as expediting other activities. Nonetheless, the Committee should be aware that the schedule in this case could continue to be affected by workload issues.

The schedule could also be affected if the Antelope Valley AQMD is for any reason delayed in issuing a Preliminary Determination of Compliance. The Air District has indicated that at this time, it believes it will be able to issue the Preliminary and Final Determinations of Compliance according to our regulations. Staff will continue to work closely with the Air District to support the efficient processing of the PHPP application and analysis of air quality impacts. Overall, staff, the applicant and agencies will coordinate closely and strive to ultimately achieve a 12-month AFC schedule for PHPP. Staff's proposed schedule, assuming that it is not necessary for staff to prepare and the applicant to respond to any more than two rounds of data requests, is presented as follows:

STAFF'S PROPOSED SCHEDULE - PALMDALE HYBRID POWER PROJECT

(08-AFC-9)

Activity	Proposed Date
Applicant files Application for Certification (AFC)	8/4/2008
Commission determined AFC is complete	10/8/2008
Staff files Issue Identification Report	12/2/2008
Staff files Data Request - Set 1	12/3/2008
Information Hearing and Site Visit	12/4/2008
Applicant provides Data Responses - Set 1	1/5/2009
Data Response and Issue Resolution Workshop (Round 1)	1/15/2009
Staff files Data Request - Set 2	1/28/2009
Local, state and federal agency draft determinations	2/5/2009
Applicant provides Data Responses - Set 2	2/28/2009
Preliminary Staff Assessment filed	3/14/2009
Preliminary Staff Assessment workshop(s)	4/1/2009
Local, state and federal agency final determinations	4/6/2009
Final Staff Assessment filed	5/6/2009
Prehearing Conference*	TBD
Evidentiary hearings*	TBD
Committee files proposed decision*	TBD
Hearing on the proposed decision*	TBD
Addendum/revised proposed decision*	TBD
Commission Decision*	TBD

* The assigned Committee will determine this part of the schedule.

11. Please note text discussion on page 9 regarding staff's current workload which may affect its ability to meet this schedule.



BEFORE THE ENERGY RESOURCES CONSERVATION AND DEVELOPMENT
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APPLICATION FOR CERTIFICATION
For the *PALMDALE HYBRID*
POWER PROJECT

Docket No. 08-AFC-9

PROOF OF SERVICE

(Revised 8/4/08)

INSTRUCTIONS: All parties shall either (1) send an original signed document plus 12 copies or (2) mail one original signed copy AND e-mail the document to the address for the Docket as shown below, AND (3) all parties shall also send a printed or electronic copy of the document, which includes a proof of service declaration to each of the individuals on the proof of service list shown below:

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DECLARATION OF SERVICE

I, Hilarie Anderson, declare that on December 2, 2008, I deposited copies of the attached Issues Identification Report in the United States mail at Sacramento, CA with first-class postage thereon fully prepaid and addressed to those identified on the Proof of Service list above.

OR

Transmission via electronic mail was consistent with the requirements of California Code of Regulations, title 20, sections 1209, 1209.5, and 1210. All electronic copies were sent to all those identified on the Proof of Service list above.

I declare under penalty of perjury that the foregoing is true and correct.

Original Signature in Dockets
Hilarie Anderson