

## CALIFORNIA ENERGY COMMISSION

1516 NINTH STREET  
SACRAMENTO, CA 95814-5512  
www.energy.ca.gov

<b>DOCKET</b> 08-AFC-9	
<b>DATE</b>	AUG 21 2008
<b>RECD.</b>	AUG 21 2008



August 21, 2008

Dear Librarian:

**DOCUMENT HANDLING FOR THE PALMDALE HYBRID POWER PROJECT,  
APPLICATION FOR CERTIFICATION (08-AFC-9)**

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. The PHPP would be a hybrid of natural gas-fired combined cycle generating equipment integrated with solar thermal generating equipment with a combined net generating capacity of 617 megawatts (MW).

The power plant project is under the Energy Commission's siting authority. The power plant certification process examines engineering, environmental, public health, and safety aspects of power plant proposals and provides analyses required by the California Environmental Quality Act (CEQA). When issuing a license, the Energy Commission is the lead state agency under CEQA, and the documents it prepares are functionally equivalent to an Environmental Impact Report.

The Energy Commission's siting process is open to the public and incorporates the input of the public as well as local, state, and federal agencies. To facilitate public participation in our review process, the Energy Commission has sent copies of the AFC to libraries in the project area, and to libraries in Los Angeles, San Diego, Fresno, Sacramento, San Francisco and Eureka.

Please make the enclosed AFC available for those who may wish to be informed about the proposed project. We request that you not allow the AFC or any of its contents be removed from the library. To increase accessibility of the document, we ask, if possible, that you cross reference it as a general reference work under the title and author categories, as well as under such subjects as "Energy Commission," "electricity," "energy/generation," "power plant siting," or any other relevant subject.

Thank you for your cooperation. If you have any questions, please contact John Kessler, Energy Commission Project Manager, at (916) 654-4679, and email [jkessler@energy.state.ca.us](mailto:jkessler@energy.state.ca.us), or Angela Hockaday, Project Secretary, at (916) 654-3925, or by email at [ahockada@energy.state.ca.us](mailto:ahockada@energy.state.ca.us).

Sincerely,

EILEEN ALLEN, Manager  
Energy Facilities Siting and Compliance Office

Enclosure

**CALIFORNIA ENERGY COMMISSION**

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August 21, 2008

**To: MEMBERS OF THE PUBLIC**

**PUBLIC PARTICIPATION IN THE REVIEW OF THE PALMDALE HYBRID POWER PROJECT, APPLICATION FOR CERTIFICATION (08-AFC-9)**

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.

**Project Description**

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 15<sup>th</sup> Street and on the south by Avenue M-12.

The proposed PHPP facility would feed power through a 230- kilovolt (kV) transmission system into Southern California Edison's (SCE's) existing Pearblossom Substation and ultimately interconnect to the power grid through SCE's existing Vincent Substation. As a direct sight distance, Vincent substation is located approximately 11 miles 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 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 of 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 10<sup>th</sup> 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 (NO<sub>x</sub>) from the CTG's stack emissions would be controlled by dry low-NO<sub>x</sub> 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 and be issued a Determination of Compliance from the Air District.

## **Energy Commission's Facility Certification Process**

The Energy Commission is responsible for reviewing and ultimately approving or denying all applications to construct and operate thermal electric power plants, 50 MW and greater, in California. The Energy Commission's facility certification process carefully examines public health and safety, environmental impacts, and engineering aspects of proposed power plants and all related facilities, such as electric transmission lines and natural gas and water pipelines. The Energy Commission is the lead agency under the California Environmental Quality Act (CEQA), but it produces several environmental and decision documents rather than an Environmental Impact Report.

As part of our review process, the staff of the Energy Commission works closely with local, state and federal agencies to ensure that all laws, ordinances, regulations and standards are addressed in the final decision of the California Energy Commission. The first step in the review process is for Energy Commission staff to determine whether or not the AFC contains all the information required by our regulations. When the AFC is deemed data adequate, we will begin data discovery and issue analysis phases. At that time, a detailed examination of the issues will occur.

## **Public Participation**

Over the coming months, the Energy Commission will conduct a number of public workshops and hearings to determine whether the proposed project should be approved for construction and operation and under what set of conditions. The workshops will provide the public as well as local, state and federal agencies the opportunity to participate in reviewing the proposed project. The Energy Commission will issue notices for these workshops and hearings at least 10 days prior to the meeting. If you are not currently receiving these notices and want to be placed on the mailing list, please contact Angela Hockaday, Project Secretary, at (916) 654-3925, or by email at [ahockada@energy.state.ca.us](mailto:ahockada@energy.state.ca.us).

Please direct your technical or project schedule questions to John Kessler, Energy Commission Project Manager, at (916) 654-4679, or by email at [jkessler@energy.state.ca.us](mailto:jkessler@energy.state.ca.us). If you desire information on participating in the Energy Commission's review of the project, please contact the Energy Commission's Public Adviser, Elena Miller, at (916) 654-4489, or toll free in California at (800) 822-6228, or by email at [pao@energy.state.ca.us](mailto:pao@energy.state.ca.us). News media inquiries should be directed to Assistant Director, Susanne Garfield, at (916) 654-4989, or by email at [mediaoffice@energy.state.ca.us](mailto:mediaoffice@energy.state.ca.us). The status of the proposed project, copies of notices, an electronic version of the AFC, and other relevant documents are also available on the Energy Commission's Internet web site at: <http://www.energy.ca.gov/sitingcases/palmdale>. You can also subscribe to receive email notification of all notices at <http://www.energy.ca.gov/listservers>.

**Note: Please retain this letter behind the front cover of the AFC. Thank You.**