

## CALIFORNIA ENERGY COMMISSION

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



<b>DOCKET</b> 07-AFC-1	
<b>DATE</b>	MAR 19 2008
<b>RECD.</b>	MAR 20 2008

March 19, 2008

Dear Librarian:

**DOCUMENT HANDLING FOR THE VICTORVILLE 2 HYBRID POWER PROJECT  
(07-AFC-1)**

The enclosed Final Staff Assessment (FSA) contains the California Energy Commission staff's final engineering and environmental evaluation of the proposed Victorville 2 Hybrid Power Project. Please make this FSA available for those who may wish to be informed about the project. We request that you not allow the FSA or any of its contents to 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. Please retain the enclosed letter to the public behind the front cover of the FSA.

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 Commission distributes copies of staff documents such as the FSA to public libraries in communities near the proposed project, and in major cities throughout the state.

Thank you for your cooperation. If you have any questions, please contact John Kessler, Project Manager, at (916) 654-4679, or by e-mail at: [jkessler@energy.state.ca.us](mailto:jkessler@energy.state.ca.us)

Sincerely,

A handwritten signature in black ink that reads "Eileen Allen".

Eileen Allen  
Siting and Compliance Office Manager

Enclosure

**CALIFORNIA ENERGY COMMISSION**

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March 19, 2008

**To: MEMBERS OF THE PUBLIC**

**PUBLIC PARTICIPATION IN THE REVIEW OF VICTORVILLE 2 HYBRID POWER PROJECT PRELIMINARY STAFF ASSESSMENT (07-AFC-1)**

The enclosed Final Staff Assessment (FSA) contains the California Energy Commission staff's engineering and environmental evaluation of the Victorville 2 Hybrid Power (Victorville 2) project. Staff concludes that the Victorville 2 project would comply with all applicable laws, ordinances, regulations and standards (LORS) except for obtaining verification from the Federal Aviation Administration (FAA) that the project would not cause a hazard to air navigation. FAA's determination is still pending. Staff also concludes the project would avoid significant adverse direct, indirect or cumulative impacts. Staff's conclusions are contingent on its recommended conditions of certification being adopted in the Energy Commission's Final Decision. The most significant issues are summarized as follows:

- **Biology** – The project would impact three special-status animal species known to occur on the site or in the project vicinity and their habitat including desert tortoise, Mohave ground squirrel and burrowing owl, and could disturb special-status plants if found during surveys that need to be conducted during spring 2008 and prior to ground disturbance. Staff also believes it is likely a unique and protected plant assemblage, creosote bush rings greater than or equal to ten feet in diameter, occur onsite and would be impacted during clearing activities. Staff and California Department of Fish and Game (CDFG) have recommended that the project mitigate impacts to these animal and unique plant assemblages by implementing various management measures and by preserving habitat deemed suitable for these species by experts familiar with the species and their habitat needs at a 3:1 ratio. The applicant has proposed habitat compensation at a 1:1 ratio, and has identified lands that staff and the CDFG believe are not suitable habitat for all the affected species. These issues must be resolved before the Energy Commission licenses the project. In addition, staff recommends that the applicant continue to develop its Translocation Plan for desert tortoise in consultation with U.S. Fish and Wildlife Service, CDFG, and the Energy Commission, and be required to obtain staff approval of the plan prior to initiating construction.
- **Cultural Resources** – Additional archaeological surveys must be completed on five parcels on the main plant site. Staff recommends adoption and implementation of a mitigation measure requiring a post-certification, pre-construction archaeological survey, testing, and data recovery plan as a means of identifying, assessing, and mitigating, if necessary, the project's potential impacts to not-yet-identified archaeological resources possibly present on the five un-surveyed parcels.
- **Traffic and Transportation** – The Victorville 2 Project would be consistent with the Circulation Element in the city of Victorville General Plan and all other applicable local and state LORS related to traffic and transportation. However, two FAA consistency

determinations indicating whether the project would pose a hazard to navigable air space have not been issued to date. These would address the impact of the two Heat Recovery Steam Generator exhaust stacks on aircraft operations at the Southern California Logistics Airport. While staff has concluded that it does not believe these structures will pose a hazard to navigable air space, staff cannot conclude that the project would conform to the FAA LORS until it receives the FAA determinations.

## **Background**

On February 28, 2007, the city of Victorville submitted an Application for Certification (AFC) to construct and operate the Victorville 2 project, a hybrid of natural gas-fired combined cycle generating equipment integrated with solar thermal generating equipment, in the city of Victorville, San Bernardino County. The proposed Victorville 2 project would have a net electrical output of 563 megawatts (MW), with construction planned to begin in summer of 2008 and commercial operation planned by summer of 2010. Victorville 2 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 154 MW each, two heat recovery steam generators (HRSGs) with duct firing, one steam turbine-generator (STG) rated at 268 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 268 MW output, and with plant auxiliary loads of about 13 MW, Victorville 2's net output would be 563 MW.

Construction of the proposed Victorville 2 would require three areas that total 388 acres, located immediately north of the Southern California Logistics Airport which is the site of the former George Air Force Base. Including the land required for the solar collectors, the footprint of the power plant would require grading of approximately 338 acres, and construction laydown would require two separate temporary areas of 20 and 30 acres each. The project site is situated approximately 3.5 miles east of Highway 395 and approximately 0.5 mile west of the Mojave River.

The proposed Victorville 2 facility would connect via a single-circuit three-phase 230-kV transmission line to the power grid through Southern California Edison's (SCE's) existing Victor Substation, located approximately 10 miles south-southwest of the proposed Victorville 2 Project site. Segment 1 of the overhead line, consisting of new steel poles and conductor, would run approximately 4.3 miles in a new right-of-way beginning at the southern boundary of the proposed Victorville 2 plant site and extending southeastward to a point along SCE's existing High Desert Power Project - Victor right-of-way. Segment 2 extends from this point for 5.7 miles to SCE's existing Victor Substation, and would consist of primarily installing conductor on existing towers having space available for a second circuit, except for three locations where new towers would be needed to cross under existing SCE transmission lines. To accommodate the proposed Victorville 2, segment 3 involves increasing the capacity of the existing SCE system between SCE's Victor Substation and Lugo Substation, for a distance of approximately 11 miles south of the

Victor Substation. This would require the relocation of 6.6 miles of an existing 115 kV transmission line within the same ROW, and installing new steel poles or lattice towers and conductor for 11 miles of the proposed 21-mile long 230-kV Victorville 2 project transmission line.

Natural gas would be delivered to the project through the Kern River-High Desert Power Project Lateral pipeline. This existing 24-inch natural gas pipeline runs adjacent to the southwestern corner of the proposed Victorville 2 site. The project would install a new 12-inch natural gas line to connect with the existing 24-inch line at a point adjacent to the southwest corner of the proposed site and extending approximately 450 feet beyond the boundary.

Process water needs would be met by the use of reclaimed water supplied by the Victor Valley Wastewater Reclamation Authority (VWVRA) via a new 1.5 mile, 14-inch pipeline extending from the reclaimed water production system at the VWVRA treatment plant located southeast of the proposed site. On an annual basis, the proposed Victorville 2 project would consume a maximum of about 3,150 acre-feet/year of reclaimed water for power plant processes, primarily serving cooling demand using an evaporative (wet) cooling tower and including use for parabolic mirror washing in the solar field. Potable water would be supplied to the proposed project by a new onsite well, serving drinking, sanitary and other washing needs, and requiring up to 3.6 acre-feet/year. 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 waste would be sent to the VWVRA treatment plant in a new 1.25-mile sanitary wastewater line.

Air emissions from the combustion of natural gas in the CTGs and duct burners of 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 using aqueous ammonia in 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 to rules and regulations of the Mojave Desert Air Quality Management District (MDAQMD) and be issued a Determination of Compliance from the Air District. The MDAQMD issued their Final Determination of Compliance on January 10, 2008 determining that construction and operation of Victorville 2 would conform to all applicable MDAQMD rules and regulations.

The Energy Commission is responsible for reviewing and ultimately approving or denying all applications for construction and operation of thermal electric power plants, 50 MW and greater, proposed for construction 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

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the lead agency under the California Environmental Quality Act (CEQA), and produces several environmental and decision documents rather than an Environmental Impact Report.

The FSA contains the California Energy Commission staff's environmental and engineering evaluation of the Victorville 2 project and will serve as staff's testimony during evidentiary hearings. The Energy Commission Committee assigned to the Victorville 2 proceedings will consider and weigh the testimony, comments, or recommendations of all interested parties, including Energy Commission staff, the applicant, interveners, public, and other local, state, and federal agencies, before issuing the Presiding Member's Proposed Decision (PMPD) for consideration by the full Energy Commission. The public, intervenors, local, state and federal agencies are encouraged to participate in these hearings. The Energy Commission has scheduled the hearings for 10:00 AM on April 3, 2008 at the Southern California Logistics Airport as announced in a separate notice.

If you desire information on participating in the Energy Commission's review of the project, please contact the Energy Commission Public Adviser's Office, at (916) 654-4489 toll free in California at (800) 822-6228, or by email at: [pao@energy.state.ca.us](mailto:pao@energy.state.ca.us). Technical or project schedule questions should be directed 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 need reasonable accommodation in terms of assistance, please contact Lourdes Quiroz of the Administrative Services Division at (916) 654-5146, or e-mail Lourdes at [lquiroz@energy.state.ca.us](mailto:lquiroz@energy.state.ca.us). The status of the project, copies of notices, and other relevant documents are also available on the Energy Commission's Internet web site at: <http://www.energy.ca.gov/sitingcases/victorville2>. News media inquiries should be directed to the Media Office, at (916) 654-4989, or by email at: [mediaoffice@energy.state.ca.us](mailto:mediaoffice@energy.state.ca.us).

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