State Of California

The Resources Agency of California

Memorandum

Date: May 30, 2007
Telephone: (916) 654-4679

File: 07-AFC-1

To: Commissioner James Boyd, Presiding Member
Commissioner Jackalyne Pfannenstiel, Associate Member

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From: California Energy Commission - John S. Kessler
1516 Ninth Street
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Siting Project Manager

Subject: **VICTORVILLE 2 HYBRID POWER PROJECT (07-AFC-1)**
ISSUES IDENTIFICATION REPORT

Attached is staff's Issues Identification Report for the Victorville 2 Hybrid Power Project (07-AFC-1). 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 June 8, 2007.

cc: Docket (07-AFC-1)
Proof of Service List

Attachment

PROOF OF SERVICE (REVISED 5/2/07) FILED WITH
ORIGINAL MAILED FROM SACRAMENTO ON 5/30/07

VICTORVILLE 2 HYBRID POWER PROJECT

(07-AFC-1)

May 30, 2007

ISSUES IDENTIFICATION REPORT

CALIFORNIA ENERGY COMMISSION

Energy Facilities Siting Division

ISSUES IDENTIFICATION REPORT
VICTORVILLE 2 HYBRID POWER PROJECT

(07-AFC-1)

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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 Victorville 2 Hybrid Power Project Application for Certification (AFC), Docket Number 07-AFC-1. 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 February 28, 2007, the city of Victorville submitted an Application for Certification (AFC) to construct and operate the Victorville 2 Hybrid Power Project (Victorville 2), a hybrid of natural gas-fired combined cycle generating equipment integrated with solar thermal generating equipment, in the city of Victorville, San Bernardino County.
On April 10, 2007, the city of Victorville provided a Volume III Data Adequacy Supplement to the AFC to satisfy the Energy Commission's informational requirements. On April 11, 2007, 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 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), 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 facility would require three areas that total 388 acres, located immediately north of the Southern California Logistics Airport (SCLA) 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 21-mile 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 primarily consist of installing conductors 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 facility, 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 right-of-way, and installing new steel poles or lattice towers and conductors for 11 miles associated with Segment 3 of the 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 (VVWRA) via a new 1.5-mile, 14-inch pipeline extending from the reclaimed water production system at the VVWRA 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. The water would be reused and the solids would be disposed in a local landfill. Sanitary waste would be sent to the VVWRA 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 limited 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 the HRSGs. An oxidation catalyst located within each HRSG would also control carbon monoxide (CO) and volatile organic compounds (VOC). Certain project emissions are proposed to be offset by using interdistrict, interpollutant priority reserve credits from the South Coast Air Quality Management District. In order to be considered for licensing by the Energy Commission, the project would be required to conform with rules and regulations of the Mojave Desert Air Quality Management District and be issued a Determination of Compliance from the Air District.

The construction workforce would average 360 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 $445 million.

If approved by the Energy Commission, the City of Victorville proposes to initiate construction of the project in Summer 2008. The project is expected to take about 27 months for construction and startup testing and could begin commercial operation in late summer 2010, 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 include 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 identify 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 any of the following circumstances will occur:

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 Water Resources 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	Electromagnetic Fields & Health Effects	No	Traffic and Transportation
No	Facility Design	No	Transmission Line Safety
No	Geology	No	Transmission System Engineering
No	Hazardous Materials	No	Visual Resources
No	Industrial Safety and Fire Protection	No	Waste
No	Land Use	**Yes**	**Water Resources**
No	Project Overview	No	Alternatives
No	Noise		

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 Victorville 2 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

Victorville 2 Hybrid Power Project (Victorville 2) would be located in the Mojave Desert Air Quality Management District (Air District), and will rely on emission reduction credits from the priority reserve and interpollutant trading with the South Coast Air Quality Management District.

Violations of the State 1-hour NO_2 Standard

The oxides of nitrogen (NOx) emissions emitted during construction activities of the project could cause new violations of the State 1-hour nitrogen dioxide (NO_2) air quality standard. Staff will work closely with the District staff and the applicant to limit the NOx emissions from construction equipment, or to implement favorable construction schedules to avoid causing violation of the NO_2 standard.

Interpollutant Trading

The applicant proposes to use volatile organic compounds (VOC) emission reduction credits from the priority reserve of the South Coast Air Basin to mitigate the project's NOx emissions. Because both VOC and NOx contribute to ozone formation, which could worsen the existing ozone violations in the area, the proposed interpollutant trading of VOC to mitigate NOx emissions has merit. The key concern is determining the appropriate quantity of VOC emission reductions needed to mitigate a certain amount of the project's NOx emissions. The applicant proposes to use 2.08 pounds of VOC emission reduction credits to mitigate every pound of the project's new NOx emissions. This 2.08:1 ratio was calculated and approved for use for the High Desert Power Plant, which is operating within 10 miles of the proposed project. However, the interpollutant trading ratio for the High Desert Project which was permitted in 2000 was determined using data collected in the South Coast and Mojave air basins during the 1990s. The ambient air quality of the air basins today is significantly different from the 1990s; therefore, new analysis will be necessary. Additionally, the location of the VOC emission reductions relative to the location of the NOx emissions needs to be factored into the ratio.

The Air District's timing for issuing a Preliminary Determination of Compliance is uncertain since the applicant is proposing use of the South Coast Air Quality Management District's Priority Reserve. The South Coast Air Quality Management District is revising its rules governing the Priority Reserve, and the completion date for that process is in flux, although expected sometime this summer.

Staff is preparing related data requests and plans to work with the California Air Resources Board, U.S. Environmental Protection Agency, the Air District staff, and the applicant during the discovery phase to identify the specific emission reduction credits required to reduce impacts to a less than significant level.

WATER RESOURCES

Victorville 2 proposes to utilize reclaimed water to supply most of its project water demand. This water would be used for cooling, with State Water Project water providing an emergency backup supply for cooling. The applicant is proposing use of groundwater for potable needs. Water use in the Mojave Basin is highly regulated. The adjudication of the Mojave Basin establishes rules and regulations for all of its water users. The Mojave Water Agency, serving as Watermaster for the basin, has developed Regional and Urban Water Management Plans that address long-term supply issues. There are also additional existing agreements between state and local agencies regarding water use in the basin. The AFC did not contain a complete discussion about how the proposed uses of water would comply with the terms of these requirements and plans. Staff is preparing data requests on this topic.

Reclaimed Water

Reclaimed water is produced at the Victor Valley Water Reclamation Authority's (VVWRAs) Shay Road facility and would be conveyed to the project via a 1.5-mile pipeline from the treatment plant. Reclaimed water, consisting of wastewater treated to tertiary standards, is currently committed to discharge into the Mojave River for maintaining aquatic habitat in accordance with a Memorandum of Understanding between the California Department of Fish and Game (CDFG) and VVWRA, with the balance utilized for irrigation of the Westwinds Golf Course.

Staff is reviewing the legal requirements guiding the use of reclaimed water, and given these requirements, whether or not the project's proposed use of reclaimed water would reduce aquifer recharge in such a manner as to create a significant adverse impact.

Staff will present related data requests and work closely with the applicant, VVWRA, CDFG and the Mojave Water Agency, to determine if reclaimed water is available without impacting the environment or other water users and if the use conforms with laws, ordinances, regulations and standards (LORS).

Groundwater

Groundwater in the Victorville area supplies most of the local potable water needs. However, the Mojave Basin is in overdraft. Although the project's estimated use of groundwater for potable needs is only 5,400 gallons per day (3.6 acre-feet/year), our preliminary review indicates that replacement water must be purchased to offset any increase in groundwater use. Given the existing state of basin-wide overdraft, it appears that Victorville 2's groundwater use, in the absence of mitigation, could contribute to further depletion of groundwater and could violate the requirements of the Mojave Basin Adjudication.

Staff is preparing related data requests and will work closely with the applicant and Mojave Water Agency to determine if the project's use of groundwater would result in a significant impact and if it is consistent with the adjudication of the Mojave Basin and other applicable LORS.

Water from the State Water Project

Water from the State Water Project (SWP) is conveyed to the Victorville area via the Mojave Water Agency's 72-mile Mojave River Pipeline. This SWP water is allocated to the Mojave Water Agency who provides water to retailers in the high desert area of San Bernardino County including the city of Victorville. This water is used for groundwater recharge to the Mojave Basin and for other local water needs.

At this time, staff is not clear that SWP water would be available to the project as an emergency backup supply considering the following factors:

1. Concern if water would be available at any time without being pre-scheduled as a delivery from the Mojave Water Agency so as to avoid impacting other users;
2. Uncertainty regarding sufficiency of SWP supplies being available for Victorville 2 for the life of the project in consideration of the Mojave Water Agency's pre-existing contractual or legal water supply commitments and overall state water supply issues.

Staff is preparing related data requests and will work closely with the applicant and Mojave Water Agency to determine if SWP water is available without impacting the environment or other water users and if the use conforms with LORS.

SCHEDULING

Although staff has experienced some delays early in this AFC proceeding, the proposed schedule reflects accomplishing the processing of the Victorville 2 AFC according to the Commission's normal 12-month AFC schedule. The delays experienced to date and foreseeable beyond 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. The schedule has already been affected due to additional time needed by staff to prepare data requests in coordination with other siting case load. However, staff has prepared a very comprehensive first round of data requests consisting of about 120 information 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.

The schedule could also be affected if the Air District is delayed in issuing a Preliminary Determination of Compliance attributable to the timing of the South Coast Air Quality Management District's final determination of its rules governing the Priority Reserve. 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 Victorville 2 application and analysis of air quality impacts. In addition, staff will work closely with the Mojave Water Agency to evaluate and seek resolution of water supply issues. Overall, staff, the applicant and agencies will coordinate closely and strive to ultimately achieve a 12-month AFC schedule for Victorville 2.

Staff's proposed schedule, assuming that it is not necessary for staff to prepare and the applicant to respond to a second data request is presented as follows:

STAFF'S PROPOSED SCHEDULE - VICTORVILLE 2 HYBRID POWER PROJECT (07-AFC-1)

ACTIVITY	DATE
Applicant files Application for Certification (AFC)	2/28/07
Executive Director's recommendation on data adequacy	3/28/07
Commission's determination on data adequacy	4/11/07
Staff files Issue Identification Report	5/30/07
Staff files data requests – Set 1	est. 6/4/07
Informational Hearing and Site Visit	6/8/07
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Applicant provides data responses – Set 1	7/6/07
Data response and issue resolution workshop	7/10/07
Staff and applicant each file Status Report 1	7/27/07
Local, state and federal agency draft determinations & MDAQMD PDOC	8/9/07
Staff files Preliminary Staff Assessment (PSA)	9/10/07
PSA workshop	9/27/07
Local, state and federal agency final determinations & MDAQMD FDOC	10/9/07
Staff files Final Staff Assessment (FSA)	11/9/07
Evidentiary hearings*	TBD
Committee files proposed decision*	TBD
Hearing on the proposed decision*	TBD
Committee files revised proposed decision*	TBD
Commission Decision	4/9/08

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

BEFORE THE ENERGY RESOURCES CONSERVATION AND DEVELOPMENT COMMISSION OF THE STATE OF CALIFORNIA

APPLICATION FOR CERTIFICATION FOR THE VICTORVILLE 2 *HYBRID POWER PROJECT*	**Docket No. 07-AFC-1 PROOF OF SERVICE**

INSTRUCTIONS: All parties shall 1) send an original signed document plus 12 copies OR 2) mail one original signed copy AND e-mail the document to the web address below, AND 3) all parties shall also send a printed OR electronic copy of the documents that shall include a proof of service declaration to each of the individuals on the proof of service:

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DECLARATION OF SERVICE

I, Dora Gomez, declare that on May 30, 2007, I deposited copies of the attached Issues Identification Report in the United States mail at Sacramento, California 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.

Dora Gomez