

DOCKET 07-AFC-3	
DATE	DEC 19 2008
RECD.	DEC 19 2008

STATE OF CALIFORNIA

Energy Resources Conservation
And Development Commission

In the Matter of:)	Docket No. 07-AFC-3
)	
Application for Certification for the)	December 19, 2008
CPV Sentinel Energy Project)	
<u>by the CPV Sentinel, L.L.C.</u>)	

**Staff Response to Applicant's Project Design Refinements
and to Applicant's Response to SCE Comments**

Pursuant to the Committee's December 5, 2008 **Order Granting Motion to Supplement the Evidentiary Record**, staff hereby submits its response to the applicant's exhibits 134, 135, and 136, which were entered into evidence pursuant to that Order.

With respect to the Applicant's Response to SCE Comments of October 14, 2008 (Exhibit 134), staff concurs with the comments made by the applicant and believes no additional response is warranted.

With respect to the Project Design Refinements (Exhibit 135), staff has evaluated the proposed changes and concludes that the changes do not affect any of the testimony staff has already provided in the following technical areas: Biological Resources, Cultural Resources, Hazardous Materials, Land Use, Public Health, Socioeconomic Resources, Soil and Water Resources, Traffic and Transportation, Transmission Line Safety and Nuisance, Waste Management, Worker Safety and Fire Protection, Power Plant Efficiency, Power Plant Reliability, Transmission System Engineering, and Alternatives. Any response on the air quality aspects of Exhibit 134 will be addressed when the applicant files the additional information needed for the Energy Commission to complete its review of air quality issues for the project.

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Proof of Service (Revised 12-24-08) filed with original.
Mailed from Sacramento on 12-19-08 C. Hong

With respect to several other technical areas, staff has drafted supplemental comments. These address Noise and Vibration, Geology and Paleontology, Visual Resources, and Facility Design. Appendix A to this filing contains a declaration signed by John Kessler, the project manager under whose direction the supplemental comments were prepared. Appendix B contains the supplemental comments themselves.

Date: December 19, 2008

Respectfully submitted,



CARYN J. HOLMES
Staff Counsel IV
California Energy Commission
1516 9th St.
Sacramento, CA 95814

Ph: (916) 654-4178

Fax: (916) 654-3843

E-mail: cholmes@energy.state.ca.us

APPENDIX A

DECLARATION OF John S. Kessler

I, John S. Kessler, declare as follows:

1. I am presently a consultant to the California Energy Commission for the Siting Office of the Energy Facilities Siting Division as a Project Manager.
2. A copy of my professional qualifications and experience was included in the FSA, and is incorporated by reference herein.
3. Staff prepared the **Staff Response to Applicant's Project Design Refinements and to Applicant's Response to SCE Comments** for the CPV Sentinel Energy Project under my direction. This response is based on staff's independent analysis of the applicant's supplemental exhibits, data from reliable documents and sources, and professional experience and knowledge.
4. It is my professional opinion that the prepared testimony is valid and accurate with respect to the issues addressed therein.
5. I declare under penalty of perjury that the foregoing is true and correct to the best of my knowledge and belief.

Dated: 12/18/08 Signed: John S. Kessler

At: Sacramento, CA

APPENDIX B

NOISE - The applicant's proposed changes would increase project noise at sensitive receptors (LT-1 and ST-3) by 4 to 6 dBA. Staff's proposed Condition of Certification NOISE-4 establishes a performance standard which prohibits a noise level above 48 dBA L_{eq} at the nearest residence. Meeting this standard will prevent creation of a significant adverse impact at that residence as well as at those that are located farther away. Staff does not believe that the increase associated with the applicant's proposed changes will affect the project owner's ability to meet this standard. No changes to the Noise section of the Final Staff Assessment are required.

GEOLOGY AND PALEONTOLOGY – The applicant's proposed changes necessitate minor changes to the "Setting" portion of this section of the Final Staff Assessment. The changes are marked in underline and ~~strikeout~~:

The proposed CPV Sentinel project would be constructed on 37 acres located north of Interstate 10 and northeast of North Palm Springs in Riverside County, California. The peaker power plant would be capable of generating up to 850 megawatts (MW) of electricity from 8 natural gas-fired combustion turbine generators (CTG). Each CTG would discharge exhaust via 13.5-foot-diameter, 90-foot-tall exhaust stacks. Auxillary components include a spray-mist fogging system, a turbine intercooler, ~~natural gas compressors~~, generator step-up transformers, an emergency generator and a fire water pump skid. A single ~~control-operations~~ building, multiple ~~water~~ liquid storage tanks, natural gas compressors, and a wastewater treatment facility would be located along the east side of the property, and cooling towers for the turbine intercoolers would be located at ~~the north and south end~~ each CTG unit. A septic system is proposed for construction in the southeast corner of the parcel.

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FACILITY DESIGN – The applicant’s proposed changes necessitate the following minor changes to Condition of Certification GEN-2 marked in underline and strikeout:

FACILITY DESIGN
Table 2
Major Structures and Equipment List

Equipment/System	Quantity (Plant)
Combustion Gas Turbine (CGT) Foundation and Connections	8
CGT Generator Foundations and Connections	8
CTG Intercooler Foundations and Connections	8
CTG Inlet Air Filter Foundations and Connections	8
Exhaust Stack Foundations and Connections	8
Selective Catalytic Reduction Skid Foundations and Connections	8
CTG Auxiliary Skid Foundations and Connections	8
CTG Pump Skid Foundations and Connections	8
GSU Transformer Foundations and Connections	8
Unit Control/Electrical Room Foundations and Connections	8
Auxiliary Power Transformers Foundations and Connections	8
<u>Cooling Tower Foundations and Connections</u>	<u>8</u>
Gas Compression Building <u>Sound Wall Enclosure</u> Foundations and Connections	<u>21</u>
Cooling Tower Foundations and Connections	<u>2</u>
Cooling Tower Building / <u>Warehouse</u> Foundations and Connections	<u>21</u>
Switchgear Building Foundations and Connections	<u>21</u>
Operations Building Foundations and Connections	<u>21</u>
MCC Building Foundations and Connections	2
Circulating Water Pump Foundations and Connections	2
Raw Water Storage Tank Foundations and Connections	2
Treated Water Storage Tank Foundations and Connections	2
Ammonia Storage Tank Foundations and Connections	1
Waste & Wastewater Treatment Facility Foundations and Connections	1
Oil/Water Separator & Drain Sump Foundations and Connections	1
Fire Protection Pump Enclosure Foundations and Connections	1
Black State Generator Foundations and Connections	1
Prefabricated Assemblies	1 Lot

VISUAL RESOURCES - Because the placement of certain structures on the project site would change under the applicant's proposal, Visual Resources staff prepared the following supplemental comments discussing how the Visual Resources testimony in the Final Staff Assessment would be affected. No changes to staff's conclusions are needed.

PROJECT CHANGE

On November 19, 2008 the applicant submitted to the CEC design refinements for the CPV Sentinel Project (Project). The applicant identifies 13 design refinements, mostly involving the relocation of facilities within the project site with no additional disturbance beyond the 37-acre project site. Of the 13 identified design refinements, replacement of the 3-cell and 5-cell cooling towers with eight single-cell cooling towers would be the most visible change, as would the replacement of the two raw water storage tanks with one large tank at the south end of the site. Other proposed design refinements would not result in visually significant alterations to the appearance of the project and are not considered further.

The project design evaluated in the Final Staff Assessment (FSA) proposed a 5-cell cooling tower located at the north end of the site and a 3-cell cooling tower at the south. Both cooling structures had 46-foot high stacks (one stack for each cell). The 5-cell tower was 211 feet in length and the 3-cell tower was 127 feet in length. The proposed cooling tower design refinements in general, redistributes and slightly minimize the built mass associated with the cooling towers. Proposed design refinements call for removal of the 5-cell and 3-cell cooling towers, and replacement with eight individual single-cell cooling towers adjacent to each of the eight combustion turbine generator units. Each single cell tower would be 42 feet in length and width, with a 40-foot stack height. The single cell towers would result in slightly less building mass overall as compared to the 5-cell and 3-cell configuration: the single-cell towers would have a cumulative linear length of 336 feet as compared to 338 feet, would be 42 feet in width as compared to 55 feet, 40 feet in height as compared to 46 feet.

The project design evaluated in the FSA proposed two raw water storage tanks, one located at the northeast end of the site, the other at the southeast end. The tanks were 80 feet in diameter and 36 feet in height. Proposed design refinements would replace the two raw water storage tanks with one larger storage tank located at the southeast end of the site. The tank would be 110 feet in diameter and 64 feet in height. This change would concentrate the area of disturbance associated with the raw water storage tank to the south end of the site, but would result in a 28-foot increase in the height of the structure.

ANALYSIS

Staff reviewed the visual resource analysis and photo simulations presented in Section 3.11 of the Applicant's Project Design Refinements (URS November 2008) and revisited the FSA analysis, including the existing condition photographs and photo simulations of the previous project design. Staff evaluated this information to determine whether the proposed design refinements would affect the conclusions or conditions of certification in the FSA. The California Environmental Quality Act (CEQA) Appendix G Guidelines, as seen from the five Key Observation Points (KOPs) identified in the FSA, are the criteria used to evaluate the visual effects of the proposed design refinements.

Scenic Vistas

"Would the project have a substantial adverse effect on a scenic vista?"

The project design refinements would not alter the results of the FSA. There are no specific scenic vista points of notable importance in the project viewshed. The design refinements would not alter the conclusion that project would not result in substantial view intrusion or obstruction as seen from the KOPs as discussed in more detail below.

Scenic Resources

"Would the project substantially damage scenic resources, including but not limited to trees, rock outcroppings and historic buildings within a state scenic highway corridor?"

The project design refinements would not alter the results of the FSA regarding scenic resources. The design refinements would continue to result in the project contributing to the already low visual quality of the area. The visual impact of the project would continue to be adverse but insignificant due to the existing low visual quality of the project area as discussed in more detail under KOP 4 below.

Visual Character or Quality

"Would the project substantially degrade the existing visual character or quality of the site and its surroundings?"

Construction and Nighttime Construction Impacts

The design refinements would not alter the results of the FSA regarding construction and nighttime construction activities since these activities would not change substantially as a result of the design refinements. Condition of Certification VIS-2 is proposed to reduce potential visual impacts associated with night lighting to a less-than-significant level.

Operation Impacts

Visual impacts resulting from the proposed design refinements are evaluated from each of the five KOPs identified in the FSA.

KOP 1 - View from I-10, Looking North

KOP 1 is located on the westbound shoulder of I-10, approximately 1.75 miles south of the project site. Photo simulations presented in the AFC (URS 2007) indicate that the proposed design refinements would not be discernable from KOP 1 due to the distance from the site and intervening wind turbine development. A photo simulation of the design refinements was not prepared by the applicant for this KOP since there would be no apparent change as seen from KOP 1. The project design refinements would not alter the results of the FSA regarding KOP 1.

KOP 2 - View from Dillon Road, Looking Northwest

KOP 2 is located on the westbound shoulder of Dillon Road, approximately 1.20 miles southeast of the project site. Photo simulations presented in the AFC (URS 2007) indicate that the proposed design refinements would not be discernable from KOP 2 due to the intervening distance from the site and topography. A photo simulation of the design refinements was not prepared by the applicant for this KOP since there would be no visually apparent change as seen from KOP 2. Therefore, the project design refinements would not alter the results of the FSA regarding KOP 2.

KOP 3 - View from Diablo Road, Looking Northeast

KOP 3 is located on the northbound shoulder of Diablo Road, approximately 1.20 miles southeast of the project site. The project design refinements would result in a minor increase in the solid structural appearance of the project. Single cell cooling towers have been placed between, and west of the combustion turbines, resulting in an increase in the solid appearance of the project as seen from this KOP. The single cell cooling towers also provide partial screening of the many lower-level components of the combustion turbines. The 64-foot raw water storage tank is more visible as compared to the 36-foot tank and contributes the solid structural appearance of the project. Overall, the project continues to be dwarfed as compared to the surrounding electrical distribution towers, poles, wires and wind turbines that surround the site. While the design refinements have resulted in a minor increase in concentration of solid structures around the combustion turbines, the overall visual change is not readily noticeable as seen from this KOP. Therefore, the project design refinements do not alter the FSA results regarding KOP 3.

KOP 4 - View from Esparta Avenue near SR 62, Looking Southeast

KOP 4 is located on Esparta Avenue, near SR 62 and approximately 1.70 miles northwest of the project site. As seen from this KOP, the removal of the 5-cell cooling tower and raw water storage tank from the northern end of the site may slightly reduce visual contrasts associated with the project. The placement of single-cell cooling towers adjacent to the eight combustion turbines would concentrate and slightly increase the solid structural appearance of the project between the combustion turbines. Overall, the visual appearance would not be significantly different as a result of project design refinements and therefore the FSA results regarding KOP 4 are not altered.

KOP 5 - View from Western Avenue, Looking Southwest

KOP 5 is located on Western Avenue, approximately 1.15 miles northeast of the project site. The revised photo simulation indicates the proposed project design refinements would not significantly alter the appearance of the project as seen from this KOP. The removal of the 5-cell and 3-cell cooling towers, and addition of single-cell towers is not readily discernable from this location, nor is the taller raw water storage tank. The concentration of vertical elements in the landscape: wind turbines transmission towers and poles, and the project CTG stacks dominate the middleground view and detract from the visibility of other project structures. The design refinements would not alter the results of the FSA as seen from KOP 5.

Light and Glare

“Would the project create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?”

The proposed project design refinements appear not to significantly alter the need for safety and security lighting and therefore light and glare impacts are assumed to be similar to those discussed in the FSA.

Other Considerations

The analysis of project design refinements from each of the five KOPs found no changes to the FSA results. Therefore, there would also be no changes regarding the FSA results for visible vapor plume impacts, cumulative impacts, and compliance with LORS as a result of project design refinements.

The project owner would still comply with the requirements of treating all project surfaces and buildings to minimize visual intrusion and contrast as specified in Condition of Certification **VIS-1**, reducing nighttime light and glare as specified in **VIS-2** and reducing the visibility of the project by installing perimeter landscape screening as specified in **VIS-3**. The project owner would submit to the CPM for review and

approval and simultaneously to Riverside County for review and comment, a specific surface treatment plan, and landscaping plan. Therefore, there are no changes to staff's previous analysis of visual impacts or mitigation included in the proposed conditions of certification.

CONCLUSIONS

Based on the above analysis of potential issues, staff concludes that the proposed design refinements would not cause significant impacts to visual resources, nor would it change or necessitate additions to staff's previous conclusions or conditions of certification.

REFERENCES

URS November 2008. Project Design Refinements, Application for Certification (07-AFC-3) for CPV Sentinel Energy Project, Riverside County, California. November 2008. Prepared for CPV Sentinel, LLC, prepared by URS.



BEFORE THE ENERGY RESOURCES CONSERVATION AND DEVELOPMENT
COMMISSION OF THE STATE OF CALIFORNIA
1516 NINTH STREET, SACRAMENTO, CA 95814
1-800-822-6228 – WWW.ENERGY.CA.GOV

APPLICATION FOR CERTIFICATION FOR THE
CPV SENTINEL ENERGY PROJECT
BY THE CPV SENTINEL, L.L.C

DOCKET No. 07-AFC-3
PROOF OF SERVICE
(Revised 10/24/2008)

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:

CALIFORNIA ENERGY COMMISSION
Attn: Docket No. 07-AFC-3
1516 Ninth Street, MS-15
Sacramento, CA 95814-5512
docket@energy.state.ca.us

APPLICANT

CPV Sentinel, LLC
Mark O. Turner, Director
Competitive Power Ventures, Inc.
55 2nd Street, Suite 525
San Francisco, CA 94105
mturner@cpv.com

APPLICANT'S CONSULTANT

Dale Shileikis - URS Corporation
221 Main Street, Suite 600
San Francisco, CA 94105-1916
dale_shileikis@urscorp.com

COUNSEL FOR APPLICANT

Michael J. Carroll
LATHAM & WATKINS LLP
650 Town Center Drive, 20th Floor
Costa Mesa, CA 92626-1925
michael.carroll@lw.com

INTERESTED AGENCIES

California ISO
e-recipient@caiso.com

*Mohsen Nazemi, PE
South Coast AQMD
21865 Copley Drive
Diamond Bar, CA 91765-4178
mnazemi@aqmd.gov

INTERVENORS

ENERGY COMMISSION

JAMES D. BOYD
Vice Chair and Presiding Member
jboyd@energy.state.ca.us

JACKALYNE PFANNENSTIEL
Chair and Associate Committee Member
jpfannen@energy.state.ca.us

Kenneth Celli, Hearing Officer
kcelli@energy.state.ca.us

John Kessler, Project Manager
jkessler@energy.state.ca.us

Caryn Holmes, Staff Counsel
cholmes@energy.state.ca.us

Elena Miller
Public Adviser
publicadviser@energy.state.ca.us

DECLARATION OF SERVICE

I, **Chester Hong**, declare that on **December 19, 2008**, I deposited copies of the attached "**Staff Response to Applicant's Project Design Refinements and to Applicant's Response to SCE Comments w/ attached Appendices A & B**" 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.



Chester Hong

*indicates change