

Memorandum

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To: Commissioner, Jeffrey Byron Presiding Member
Commissioner Karen Douglas, Associate Member
Hearing Officer Raoul Renaud

From: California Energy Commission - Alan Solomon
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Subject: **PALEN SOLAR POWER PROJECT (09-AFC-7)**
ISSUES IDENTIFICATION REPORT

Attached is staff's Issues Identification Report for the Palen Solar Power Project. This report serves as a preliminary scoping document that identifies issues that Energy Commission staff believes will require careful attention and consideration. Energy Commission staff will present the issues report at the January 25, 2010 Informational Hearing and Site Visit, to be separately noticed by the assigned Committee for this proceeding.

This Issues Identification Report also provides a proposed schedule pursuant to the agreement for solar thermal projects 50 MW or larger with joint Bureau of Land Management and California Energy Commission jurisdiction.

cc: Proof of Service List
Docket 09-AFC-7

PALEN SOLAR POWER PROJECT
(09-AFC-7)

ISSUES IDENTIFICATION REPORT

CALIFORNIA ENERGY COMMISSION

Siting, Transmission and Environmental Protection Division

ISSUES IDENTIFICATION REPORT PALEN SOLAR POWER PROJECT

(09-AFC-7)

Table of Contents

PROJECT DESCRIPTION.....	4
POTENTIAL MAJOR ISSUES.....	5
BIOLOGICAL RESOURCES.....	6
CULTURAL RESOURCES.....	6
SOILS AND WATER RESOURCES.....	7
TRANSMISSION SYSTEM ENGINEERING.....	8
VISUAL RESOURCES.....	8
CUMULATIVE IMPACTS.....	8
SCHEDULE	9

ISSUES IDENTIFICATION REPORT

Energy Commission Staff Report

PURPOSE OF THE REPORT

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 Palen Solar Power Project Application for Certification (AFC) filed August 24, 2009 and AFC Supplemental material filed October 26, 2009. The Issues Identification Report contains a project description, summary of potentially significant environmental and engineering issues, and a discussion of the proposed project schedule. The staff will continue to address the status of issues and progress towards their resolution in periodic status reports to the Committee.

PROJECT DESCRIPTION

The Palen Solar Power Project (project) is a concentrated solar thermal electric generating facility with two adjacent, independent, and identical units of 250 megawatt (MW) nominal capacity each for a total nominal capacity of 500 MW. The project is proposed to be located in the Southern California inland desert, approximately 10 miles east of the small community of Desert Center, in eastern Riverside County, California; approximately halfway between the cities of Indio and Blythe; and about three miles east of the southeast end of Joshua Tree National Park. The applicants are seeking a right-of-way grant for approximately 5,200 acres of lands owned by the federal government and administrated by the Bureau of Land Management (BLM). Construction and operation of the project would disturb a total of about 2,970 acres.

The project would generate electric power through solar energy using parabolic trough technology. Pipelines supplying water would be routed from on-site wells to water treatment units. Water would be used principally for solar mirror washing, feedwater makeup, onsite domestic use, cooling of auxiliary equipment, and firewater supply. Total water consumption for the project is estimated at 300 acre-feet per year.

The project would use two propane-fueled boilers for quick startup and two heaters for freeze protection. Electric transmission lines would connect each steam turbine generator to a central internal switchyard. From this switchyard, a new double-circuit 230 kilovolt (kV) transmission line would interconnect with Southern California Edison's (SCE) regional transmission system at its planned Red Bluff substation.

If approved, project construction would begin in the fourth quarter of 2010, with commercial operation commencing in mid 2013.

POTENTIAL MAJOR ISSUES

This portion of the report contains a discussion of the potential issues the Energy Commission staff has identified to date. Readers 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 staff's judgment of whether any of the following circumstances could occur:

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

This report will not limit the scope of staff's analysis throughout this proceeding, but it aids in the analysis of the potentially significant issues that the Palen Solar Power Project proposal poses. The following discussion summarizes the potential issues, identifies the agencies 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.

The table on the following page lists all the subject areas evaluated and notes that Biological, Cultural, Soils and Water, Transmission System Design, and Visual, have been identified as potentially significant issues. In addition, while not a separate technical area, Cumulative Impacts, (the analysis of which is presented in every technical area), is noted as having potential significant issues as well. However, because discovery is not yet complete, it is possible that other significant issues will arise. The table also indicates the subject areas in which staff, at the present time, expects to issue data requests.

Major Issues	DRs	Subject Area	Major Issues	DRs	Subject Area
No	Yes	Air Quality	No	No	Project Overview
No	Yes	Alternatives	No	Yes	Public Health
Yes	Yes	Biological Resources	No	Yes	Reliability
Yes	Yes	Cultural Resources	No	No	Socioeconomics
No	No	Efficiency	Yes	Yes	Soils and Water Resources
No	No	Facility Design	No	No	Traffic and Transportation
No	Yes	Geological Hazards	No	No	Trans. Line Safety & Nuisance
No	No	Hazardous Materials Management	Yes	Yes	Transmission System Design
No	No	Land Use	Yes	Yes	Visual Resources
No	No	Noise	No	Yes	Waste Management
No	No	Paleontological Resources	No	No	Worker Safety

BIOLOGICAL RESOURCES

Staff is working with the California Department of Fish and Game (CDFG) to establish the extent of impacts to waters of the state associated with the applicant's proposal for re-routing the numerous ephemeral drainages on the project site. It has also been coordinating closely with the U.S. Fish and Wildlife Service (USFWS) and the U.S. Bureau of Land Management (BLM) to assess potential project impacts to sensitive habitats and species. Staff is encouraged by the level of participation and cooperation exhibited by all three agencies at this early stage in project review, but nevertheless anticipates significant challenges to integrating all the necessary federal and state permits into the joint California Environmental Quality Act/ National Environmental Policy Act (CEQA/NEPA) environmental document.

Adding to the schedule challenges is the need to integrate results from yet-to-be-completed surveys on portions of the transmission line alignment and proposed substation. Some of the surveys, including those for the federally-listed rare plant, the Coachella Valley milk-vetch, cannot be conducted until spring 2010. The applicant has indicated in their Data Adequacy Supplement that rare plant survey results will be submitted in June or July 2010. Staff cannot prepare a complete analysis until survey results are submitted, but to meet the proposed schedule will need to submit the Staff Assessment before that time.

Staff will continue to work closely with CDFG, USFWS, BLM and the applicant to expedite the completion of the necessary surveys and to compile the information necessary to fold the conditions in CDFG's Streambed Alteration Agreement and Incidental Take Permit into the Energy Commission's comprehensive permit. The survey information and CDFG permit data will also be included in the Federal Section 7 consultation with the United States Fish and Wildlife Service to address potential impacts to listed species. With that goal in mind staff plans to conduct frequent publically-noticed workshops to identify and quickly resolve biological resources issues that might otherwise delay preparation of permits and the Staff Assessment/Draft Environmental Impact Statement. Even with this aggressive approach to issue resolution, and with continued close coordination and communication among the four agencies and the applicant, staff expects that it will be difficult to meet the REAT permitting milestone schedule.

CULTURAL RESOURCES

Staff is working with the U.S. Bureau of Land Management (BLM) to establish the extent of resources of cultural and historical significance, and to assess potential project impacts upon these resources. Given the compressed schedule for the production of a Staff Assessment, and the need for coordination with the BLM, staff is developing two cultural resources review protocols that will enable it to meet its deadline for the Staff Assessment. Another issue is the impact on the schedule that may be caused with cultural resource considerations within the Alternatives analysis. To achieve a

sufficiently robust analysis of project Alternatives, under NEPA, staff must ask the applicant for cultural resources data for alternative project locations, but providing that data will be time-consuming for the applicant and analyzing it will be time-consuming for staff.

SOIL AND WATER

Groundwater Usage

The project proposes to use high quality (TDS<1,000 mg/L) groundwater from the Chuckwalla Valley Groundwater Basin from wells located on the project site for site construction and plant operations. That includes power cycle makeup water, mirror wash water, domestic potable water, dust suppression water and cooling of ancillary equipment. Average water usage is expected to be 390,000 gallons per day during the 39-month construction period consuming approximately 1,560 acre-feet. It is expected that power plant operations will consume approximately 300 acre-feet per year during normal operation. The groundwater sub-basin is located in an area that has springs, seeps and wet playas that may sustain various biotas. In addition, the basin is used by a number of other users including agriculture, aquiculture, municipal and industrial. Staff's preliminary review of data presented by the applicant suggests that the basin is approaching overdraft conditions now, and with all of the proposed solar projects and other development in the basin will likely put the basin in overdraft. In addition, there is a potential that the cumulative effect of all of the solar projects proposed in the eastern Riverside County region may lower groundwater levels such that they are below the proposed Colorado River Accounting Surface established by the U.S. Bureau of Reclamation. That may require the applicant to stop pumping or seek a contract to purchase Colorado River water that most likely will not be available. The Palo Verde Groundwater Basin's hydrologic connection to the Colorado River has triggered involvement by the Colorado River Board of California and the Bureau of Reclamation, which may lengthen the project review process. The applicant's position is that they propose to provide offsets to anticipated water use but the offsets have not been identified, quantified or even researched if they are feasible and available.

Additional analysis is needed to evaluate whether this water use will result in significant adverse direct and/or cumulative environmental impacts and to determine if it is consistent with Energy Commission water policy.

Stormwater Hydrology and Drainage

The project proposes to capture, channelize Corn Springs Wash and adjacent unnamed drainages and convey flows around the property boundary. The applicant has reported that flows as high as 13,800 cubic feet per second are anticipated following a 100 year storm event in a portion of Corn Springs Wash that flows across the northwest corner of the project site. This realignment will be accomplished by constructing three channels configured with 60-90 degree bends. Given the estimated flows, staff anticipates that severe erosion and flooding may occur in these unnaturally configured segments of the realigned drainage. Staff is also concerned that the applicant has not made an adequate attempt at avoiding some of the washes. It appears to staff that some

reasonable modifications to the proposed site plan could eliminate the need to realign over 2 miles of this natural desert wash. Staff has provided a data request seeking further analysis of the site hydrology. Staff is not sure whether the applicant's consideration of staff's concern and resulting data requests will result in significant changes to the drainage collection and conveyance design. If significant redesign is needed, a response may take additional time beyond the allowed 30 days for the applicant's data response and may extend the project's 12-month schedule.

TRANSMISSION SYSTEM ENGINEERING

The complete California Independent System Operator (California ISO) Phase I and/or Phase II Interconnection Studies are not available for staff to review at this time. At a minimum the complete Phase 1 Study is required for staff to determine the potential need for downstream transmission facilities. If the study shows that the Palen Solar would cause significant transmission line overloads which might trigger the need for new transmission facilities, transmission line reconductoring or other significant downstream upgrades, a general analysis sufficient to meet the California Environmental Quality Act (CEQA) requirements for indirect project impact will be required for these downstream upgrades. The CEQA analysis of potential downstream transmission upgrades could cause a delay in the licensing process for Palen Solar.

VISUAL RESOURCES

The Proposed Project will introduce a substantial facility with industrial character into a landscape presently absent such character. This change in landscape character and scenic quality will impact public views from a variety of vantage points. Presently, the AFC does not provide sufficient information to fully assess the visual impact on the variety of public views and viewing perspectives that are available. Staff has submitted data requests in an effort to more fully understand the project's visual implications. The requested information along with additional staff analysis and consultations with the Bureau of Land Management will be necessary to address this issue and determine: (1) the extent of the visual change that would occur, (2) project consistency with BLM land management objectives, and (3) whether or not significant visual impacts would result.

CUMULATIVE IMPACTS

Preparation of a cumulative impact analysis is required under both CEQA and NEPA. "Cumulative impact" is the impact on the environment that results from the incremental impact of the proposed project when considered with other past, present, and reasonably foreseeable future actions regardless of which agency or person undertakes such other actions. Numerous renewable projects have been described in applications to the Energy Commission and BLM along with photovoltaic projects proposed on private land. All are competing for utility Power Purchase Agreements, which will allow utilities to meet the state-required Renewable Portfolio Standard. While not all pending projects will likely be constructed, the potential cumulative impacts of these projects on the desert environment must be evaluated. Alternatives may require additional surveys

to be submitted, reconfiguring the project site, and/or relocating the project site. Providing this data will be time-consuming for the applicant and analyzing it will be time-consuming for staff.

PROJECT SCHEDULE

On the following page is staff's proposed schedule for the key events of the project. Meeting the proposed schedule will depend on: the applicant's timely response to staff's data requests; involvement and timely input by other local, state and federal agencies; the submittal of required applications and approval of permits by federal agencies; and other factors not yet known. The approval of applications and conditions of approval by other agencies will greatly affect the proposed schedule. This is particularly true of the Section 7 consultation by the Bureau of Land Management with the U.S. Fish and Wildlife Service regarding potential impacts to federally listed sensitive species, such as desert tortoise, and related mitigation options.

**STAFF'S PROPOSED SCHEDULE
PALEN SOLAR POWER PROJECT - (09-AFC-7)**

Milestone/Task	Date
Commission's Determination of Data Adequate	November 18
Solar Millennium files Streambed Alteration Agreement	November 25
File Data Requests	December 7
Data Request Workshop	December 9
BLM Scoping Meeting	December 11
File Issue ID	December 17
Solar Millennium files Data Responses	January 6
Data Response Workshop	January 7
Info Hearing/Site Visit	January 25
Publish SA/DEIS	February 18
Note – The Biological Assessment and Biological Opinion dates will be determined by when the applicant provides the complete Spring Survey results for the Proposed Transmission Line	
Local, state and federal agency comments due	March 18
Publish SAE/FEIS	July 30
Prehearing Conference*	TBD
Evidentiary hearings*	TBD
Presiding Members Proposed Decision (PMPD)*	TBD
Committee Hearing on PMPD*	TBD
Addendum/Revised PMPD*	TBD
BLM Record of Decision/Right of Way (ROD/ROW) issued; Energy Commission Decision*	TBD

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



BEFORE THE ENERGY RESOURCES CONSERVATION AND DEVELOPMENT
COMMISSION OF THE STATE OF CALIFORNIA
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APPLICATION FOR CERTIFICATION
FOR THE *PALEN SOLAR POWER*
PLANT PROJECT

Docket No. 09-AFC-7

PROOF OF SERVICE
(Revised 12/15/09)

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DECLARATION OF SERVICE

I, Hilarie Anderson, declare that on December 17, 2009, I served and filed copies of the attached, Issues Identification Report. The original document, filed with the Docket Unit, is accompanied by a copy of the most recent Proof of Service list, located on the web page for this project at:
[\[http://www.energy.ca.gov/sitingcases/solar_millennium_palen\]](http://www.energy.ca.gov/sitingcases/solar_millennium_palen)

The documents have been sent to both the other parties in this proceeding (as shown on the Proof of Service list) and to the Commission's Docket Unit, in the following manner:

(Check all that Apply)

FOR SERVICE TO ALL OTHER PARTIES:

sent electronically to all email addresses on the Proof of Service list;

by personal delivery or by depositing in the United States mail at _____ with first-class postage thereon fully prepaid and addressed as provided on the Proof of Service list above to those addresses **NOT** marked "email preferred."

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FOR FILING WITH THE ENERGY COMMISSION:

sending an original paper copy and one electronic copy, mailed and emailed respectively, to the address below (**preferred method**);

OR

_____ depositing in the mail an original and 12 paper copies, as follows:

CALIFORNIA ENERGY COMMISSION

Attn: Docket No. 09-AFC-7
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I declare under penalty of perjury that the foregoing is true and correct.

Original Signature in Dockets
Hilarie Anderson