

Memorandum

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To: **Commissioner Karen Douglas**, Presiding Member
Chairman Robert B. Weisenmiller, Associate Member
Raoul Renaud, Hearing Officer



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Subject: **PALEN SOLAR PROJECT AMENDMENT (09-AFC-7C)**
ISSUES IDENTIFICATION REPORT

Attached is staff's Issues Identification Report for the Palen Solar Project Amendment. 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 Informational Hearing and Site Visit separately noticed by the assigned Committee for the project for February 20, 2013.

This report also provides staff's proposed schedule for the amendment process.

Attachment

cc: Docket 09-AFC-7C

PALEN SOLAR PROJECT AMENDMENT

(09-AFC-7C)

ISSUES IDENTIFICATION REPORT

CALIFORNIA ENERGY COMMISSION

Siting, Transmission and Environmental Protection Division

**ISSUES IDENTIFICATION REPORT
PALEN SOLAR ELECTRIC GENERATING STATION
AMENDMENT**

(09-AFC-7C)

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ISSUES IDENTIFICATION REPORT

Energy Commission Staff Report

PURPOSE OF THE REPORT

This report has been prepared by the California Energy Commission (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 Petition to Amend filed by Palen Solar Holdings, LLC (PSH) on December 17, 2012.

The Issues Identification Report contains a project description, summary of potentially significant environmental and engineering issues, and a discussion of the proposed project schedule. Energy Commission staff will continue to address the status of issues and progress towards their resolution in periodic reports to the Committee.

AMENDMENT PROCESS

The Palen Solar Electric Generating Station (PSEGS) Amendment will be processed as an amendment to the Palen Solar Project Final Decision that was certified by the Energy Commission on December 15, 2010. The purpose of the Energy Commission's review process is to assess the impacts of this proposal on environmental quality and public health and safety. The review process includes an evaluation of the consistency of the proposed changes with the Energy Commission's Decision and, if the project, as modified, will remain in compliance with applicable laws, ordinances, regulations, and standards (Title 20, Calif. Code of Regulations, section 1769).

PROJECT DESCRIPTION

On December 17, 2012, PSH filed a petition with the Energy Commission requesting to modify the Palen Solar Project. <http://www.energy.ca.gov/sitingcases/palen/compliance/> The project, as licensed on December 15, 2010 by the Energy Commission, is a 500-megawatt (MW) solar thermal power generating facility utilizing parabolic trough technology. The project site is approximately 3,794 acres and is located approximately ¼ mile north of Interstate 10, approximately ten miles east of Desert Center and approximately halfway between the cities of Indio and Blythe, in Riverside County, California.

In the 2012 petition, PSH proposes changes to the approved site layout and technology associated with the approved project. The proposal would use solar tower technology. Heliostats, elevated mirrors mounted on a pylon guided by a tracking system, will be used to focus the sun's rays on a solar receiver steam generator (SRSG) located atop a 750-foot tall solar tower near the center of each solar field, to create steam.

The modified project will be comprised of two adjacent solar fields and associated facilities with a total combined nominal output of approximately 500 MW. PSH proposes

to develop PSEGS in two operational phases: each phase will consist of one solar field and power block with approximately 250 MW of generation capacity. Each solar field will have an array of approximately 85,000 heliostats for a total of 170,000 heliostats for the project. Each phase will also share common facilities, including a common area containing an administration building, warehouse, evaporation ponds, maintenance complex and a meter/valve station for incoming natural gas service to the site, an onsite switchyard, and a single-circuit 230 kV generation tie-line to deliver power to the electricity grid. Other onsite facilities will include access and maintenance roads (either dirt, gravel or paved), perimeter fencing, tortoise fencing and other ancillary security facilities.

The PSEGS Amendment does not propose to change the generating capacity of the Energy Commission-approved project, the site access, or the interconnection point at Red Bluff Substation, although there will be a slight re-routing of the generation tie-line near the western end of the route and around the newly constructed Red Bluff Substation.

PALEN SOLAR PROJECT APPROVED BY THE COMMISSION ON DECEMBER 15, 2010

The 2010 Final Decision for the Palen Solar Project approved a solar thermal generating facility that would consist of two separate units of 250 MW solar parabolic trough technology, with a total nominal capacity of 500 MW. With this technology, arrays of parabolic mirrors focus the sunlight on a receiver tube to create and collect heat energy. The receiver tube is located at the focal point of the trough's parabola shape. A heat transfer fluid (HTF) is heated (750°F) as it circulates through the receiver tubes. The HTF is then piped through a series of heat exchangers to generate high pressure steam. The steam is then fed to a traditional steam turbine generator where electricity is produced. Individual components of the approved project included:

- Graded Solar Field & Power Block #1 (east)
- Graded Solar Field & Power Block #2 (west)
- Access road from Corn Springs Road
- Secondary emergency access road at the southeast corner of the site
- Warehouse/maintenance building, assembly hall and laydown area
- Telecommunications lines
- Liquefied Petroleum Gas (LPG) tank
- Concrete batch plant
- Fuel depot
- Onsite transmission facilities, including central internal switchyard
- 230 kV single circuit transmission line interconnecting to SCE's Red Bluff Substation
- Groundwater wells used for water supply
- Four evaporation ponds for wastewater

- Septic systems for sanitary wastewater
- Land treatment units for handling of spills of Therminol HTF.

During the Energy Commission's licensing process, technical staff concluded that the Palen Solar Project as originally proposed would result in unmitigable significant adverse impacts to biological resources associated with sand transport interference. Two other site configuration alternatives were submitted by the original applicant in an effort to accommodate staff's and other biological agencies' concerns. The alternative configurations (Reconfigured Alternative 2 and 3) moved the project facilities westerly in order to prevent the project footprint from interfering with the area with the greatest sand transport potential. Reconfigured Alternative 2 incorporated into the project boundary 240 acres of private land near the southeast corner of the site that the original owner did not have control of. Reconfigured Alternative 3 did not incorporate private land. Because of the lack of ownership of the private land used in Reconfigured Alternative 2, the Energy Commission approved use of either Reconfigured Alternative 2 or Reconfigured Alternative 3.

PROPOSED MODIFICATION (PSEGS AMENDMENT)

The modified project includes replacing the parabolic trough solar collection system and associated HTF with the solar tower technology. The solar tower technology would use heliostats—elevated mirrors mounted on a pylon guided by a tracking system—to focus the sun's rays on a SRSG located atop a solar tower near the center of each solar field to create steam. Access to the site would use the same primary access road as the approved project, but the secondary emergency access road would be eliminated. The project would continue to interconnect to the regional transmission grid at Southern California Edison's Red Bluff Substation which is currently under construction. The PSEGS would be comprised of two adjacent solar fields and associated facilities with a total combined nominal output of approximately 500 MW. PSH proposes to develop the PSEGS in two operational phases: each phase would consist of one solar field and power block with approximately 250 MW of electricity.

Two natural gas-fired auxiliary boilers are proposed for each power block for a total of four for the project. A startup boiler would be used during the morning start-up cycle to assist the plant in coming up to operating temperature more quickly and for augmenting the solar operation when solar energy diminishes or during transient cloudy conditions. Each solar field also includes a night preservation boiler that would be used to provide steam to the gland systems of the steam turbine and boiler feedwater pump turbine to prevent air ingress overnight and during other shutdown periods when steam is not available from the SRSG. This boiler would also provide pegging steam to the deaerator during these shutdowns.

Each phase will also share common facilities, including a common area containing an administration building, warehouse, evaporation ponds, maintenance complex and a meter/valve station for incoming natural gas service to the site, an onsite switchyard, and a single-circuit 230 kV generation tie-line to deliver power to the electricity grid.

Other onsite facilities would include access and maintenance roads (either dirt, gravel or paved), perimeter fencing, tortoise fencing and other ancillary security facilities.

The proposed modified project will be located on approximately 3,794 acres of public land entirely within BLM right-of-way (ROW) # CACA – 048810. This is a reduction of 572 acres from the original foot print of the approved project. While the approved project also included the use of a private parcel (approximately 40 acres) located in the northeast portion of the site, the proposed modified project will not include any development within this private parcel. The approved project also included the ability to develop the private parcels (approximately 240 acres) located in the southeastern portion of the site if the parcels were acquired. The proposed modified project will not develop these private parcels.

The primary modifications to the approved project are as follows:

- Two 250 MW units each consisting of a 750 foot tall solar tower and receiver, a power block, and a dedicated field of approximately 85,000 heliostats.
- Approximately 15 acre common facilities area located in the southwestern corner of the site with an administrative/warehouse building and two 2-acre evaporation ponds.
- An approximately 203 acre temporary construction laydown area located in the southwestern portion of the site immediately north of the common facilities area.
- Re-routing of the generation tie-line near the western end of the route and around the newly constructed Red Bluff Substation. The purpose of this re-routing is to align the Palen Solar project generation tie-line route immediately adjacent to the NextEra Desert Sunlight generation tie-line to minimize crossings over Interstate 10 and to ensure easy entry into the Red Bluff Substation nearest the Palen Solar project breaker position.
- Elimination of the secondary emergency access road.
- Re-routing of the redundant telecommunication line along the generation tie-line route.
- Natural gas delivery from a new extension of the existing Southern California Gas (SoCal Gas) distribution system to the project boundary.
- Reduce the project footprint from 4,366 acres to 3,794 acres.
- Reduce the amount of grading by 4.3 million cubic yards because the heliostat technology does not require an entirely flat surface.
- Reduce the amount of water use by 99 AFY.
- Increased NOx emissions for the project from the use of the auxiliary boilers.

SUMMARY OF CONSTRUCTION ACTIVITIES AND METHODS OF THE MODIFIED PROJECT

The modified project would have an average construction workforce of 998 and a peak workforce of approximately 2,311. Construction is expected to take a little over 2 years. The modified project would require much less grading because the heliostat technology does not require an entirely flat surface.

Project construction would commence with the building of site roads and the installation of temporary construction facilities including office trailers, parking areas, material laydown areas, a concrete batch plant, and a heliostat assembly facility. The construction of each plant would begin with grading and construction of earthen berms around the power block areas to divert storm water followed by the excavation and placement of foundations and other underground facilities. Superstructures and equipment would then be placed on the foundations. Major items include the 750-foot-tall solar power tower and SRSG construction, the steam turbine generator (STG) pedestal and STG, and construction of the air-cooled condenser. Once the mechanical equipment is in place, construction would continue with the installation of the piping, electrical equipment, and cables necessary to connect and power the equipment. Upon completion of construction, the checkout, testing, startup and commissioning of the various plant systems will begin, resulting in a fully operational solar plant.

After required grading in the heliostat fields, the heliostats would be installed in two steps. Initially, the support pylons would be installed using vibratory technology to insert the pylons into the ground (pre-augering prior to the installation of the pylon may be required). Depths would not be expected to be greater than 12 feet. The heliostat assembly (mirrors, support structure and aiming system) will be mounted on the pylon. Pylons would be delivered to their locations by an all-terrain vehicle. Installation of the heliostat assemblies would be accomplished with a rough terrain crane.

The majority of the project site would maintain the original grades and natural drainage features, therefore, no additional storm drainage control is proposed. The stormwater management design for the I-10 freeway includes three drainage culverts to allow rain to flow from south to north underneath the freeway. To minimize wind and water erosion, open spaces would be preserved and left undisturbed, maintaining existing vegetation to the extent possible with respect to site topography and access requirements. If needed, stone filters and check dams will be strategically placed throughout the project site to provide areas for sediment deposition and to promote the sheet flow of stormwater prior to leaving the project site boundary. During construction, trenches would be excavated for the installation of electrical transmission system conductors and the on-site natural gas system. Typical trench would be 2-3 feet wide at the base and 3-6 feet deep, a few trenches may have widths and/or depths up to 12 feet.

SUMMARY OF MODIFIED PROJECT OPERATIONS

The proposed modified project would employ up to 100 full-time employees: 30 at Solar Plant 1 (including mirror washing machine operators), 30 at Solar Plant 2 (including mirror washing machine operators), and 40 at the administration complex. The facility would operate 7 days a week. Heliostat washing is projected to occur up to 24 hours per day (including nighttime mirror washing), covering the entire solar field weekly.

A detailed operation and maintenance program has not yet been developed. The facility will be operated in one of the following modes:

- The facility will be operated at its maximum continuous output for as many hours per year as solar input allows or as limited by contractual terms and conditions.
- A full shutdown will occur if forced by equipment malfunction, transmission or gas line disconnect, or scheduled maintenance.

COLLABORATION WITH THE BUREAU OF LAND MANAGEMENT

The PSEGS is proposed to be located entirely on land managed by the Bureau of Land Management (BLM) and will require a Right of Way grant from BLM in addition to the certification from the Energy Commission. During the original Palen Solar Project proceeding in 2009 and 2010, Energy Commission staff and BLM staff worked closely together on the review and analysis of the project. The Energy Commission and BLM staff issued a joint Draft Environmental Impact Statement/Staff Assessment (DEIS/SA) for the Palen Solar Project on March 18, 2010. The DEIS/SA contained the Energy Commission staff's and BLM's environmental, public health and engineering evaluation of the proposed Palen Solar Project. On May 13, 2011, the BLM Published a Notice Of Availability (NOA) of the Final EIS for the Palen Solar Project in the Federal Register. BLM has not made a final decision on the project and neither a Record of Decision or a Right of Way (ROW) grant have been issued. The Energy Commission released a Presiding Member's Proposed Decision on November 12, 2010 and approved the Application for Certification on December 15, 2010.

In June of 2012, the Energy Commission received an Application for Change in Ownership and subsequently approved this request on July 11, 2012. Under new ownership the project is now proposed to be amended to utilize solar tower technology.

BLM is awaiting receipt of a revised project application from PSH. Energy Commission staff will continue to work cooperatively with BLM staff to review the revised project and ultimately the Energy Commission and BLM will issue separate final decisions.

PSH must submit the revised Plan of Development to the BLM. Energy Commission staff will continue to work cooperatively with BLM staff to review the revised project, but approvals from both agencies will be required before PSH can start construction.

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 may not include all of the significant issues that may arise during the case, since 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 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; and
- Areas where resolution may be difficult or may affect the schedule.

The following table lists all the subject areas evaluated and notes that Air Quality, Alternatives, Efficiency, Facility Design, Geological Hazards, Hazardous Materials Handling, Land Use, Noise, Paleontological Resources, Project Overview, Public Health, Reliability, Socioeconomics, Waste Management, and Worker Safety and Fire Protection as areas where no potentially significant issues have been identified. Identification of an area as having no potential issues does not mean that an issue will not arise related to the subject area during the course of the amendment review process. The table also notes that Biological Resources, Cultural Resources, Soil and Water Resources, Traffic and Transportation, and Visual Resources have currently identified potentially significant issues. The table also indicates the subject areas in which staff, at the present time, expects to issue Data Requests (DRs). DRs in additional areas may become necessary as the case progresses.

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

DRs – Data Requests

BIOLOGICAL RESOURCES

Staff has not received the results of biological field surveys for the two new proposed linear routes under the modified project. This includes the re-routing of the generation tie-line near the western end of the route and around the newly constructed Red Bluff Substation and a new extension of the existing Southern California Gas (SoCal Gas) distribution system to the project boundary for natural gas delivery under the modified project. The project owner states in the Petition to Amend that the biological resource surveys conducted for the Desert Sunlight Project (currently under construction) and the Eagle Mountain Pumped Storage Project will be sufficient to address surveys required for the area encompassing the re-routing of the generation tie-line. Until relevant survey results are submitted for review for adequacy, staff assumes that no biological field surveys were conducted for these areas. Surveys should include but are not limited to fall plant surveys. Not having biological survey results for these areas would impact staff's ability to analyze the modified project and could delay the schedule.

Staff will need detailed information on direct and indirect impacts to state waters. The Petition to Amend application states that direct and indirect impacts to state waters will be reduced; however, the project owner has not yet provided a wetlands delineation report demonstrating how the impacts to state waters will decrease under the modified project as compared to the approved project. This report should include detailed information on how direct and indirect impacts to state waters were calculated under the modified project and if they represent all potential impacts to jurisdictional features from project construction and operation. The project owner filed supplemental information late in the day on Friday, February 8, 2013.

<http://www.energy.ca.gov/sitingcases/palen/compliance/> However, staff has not had an opportunity to complete its review and determine if it contains the necessary information in time for this report to be published. Additional fieldwork may be required to complete the final impact calculation for state waters from the modified project. Since this work could be performed during any time of the year, the project owner should be able to schedule any needed fieldwork so as to avoid impacting their construction schedule for the fall of 2013.

The Mojave desert tortoise (*Gopherus agassizii*), a species listed as threatened under the Endangered Species Act of 1973, as amended, occurs on the modified project site. Because the desert tortoise is a federally listed species, the US Bureau of Land Management (BLM) is required to consult with the US Fish and Wildlife Service (USFWS) pursuant to section 7(a)(2) of the Endangered Species Act. A Biological Opinion was issued for the approved project; however, the BLM may need to reinitiate consultation with the USFWS for the modified project. The project owner has yet to submit a Revised Biological Assessment (BA) for the modified project to BLM. After the BLM completes its review and makes appropriate revisions to the Revised BA, it would be submitted to the USFWS to reinitiate the formal Section 7 consultation process. The reinitiation of the Section 7 consultation normally takes 135 days, which could impact the proposed project's schedule. However, Energy Commission staff will coordinate closely with the USFWS and BLM on the progress of the consultation process.

Potential Need for Additional Survey Data

Energy Commission staff has conferred with staff from the BLM, U.S. Fish and Wildlife Service (USFWS), and California Department of Fish and Wildlife (CDFW) and has identified several issues that may affect the project schedule or may be difficult to mitigate.

The amendment for the project would incorporate two power towers and associated heliostats into the project design, replacing the previous parabolic trough technology. As evidenced in the recent permitting proceedings for the Hidden Hills Solar Electric Generating System and the Rio Mesa Solar Electric Generating Facility, staff has expressed concern regarding the range of potential adverse effects from exposure to elevated levels of solar flux generated over the heliostat field.

A concentrating solar thermal power plant collects ambient solar radiation (called solar flux, or flux) and then concentrates and focuses the radiation onto a solar receiver contained near the top of the collector tower, thereby generating steam. As a point of reference, the sun generates 1 kW/m^2 of flux. The concentration of the solar radiation creates a range of solar radiation flux densities between the solar receiver steam generator located atop the power tower and the reflecting mirrors arrayed on the ground. At ground level, nominal solar radiation, or solar energy per unit area, is about 1 kilowatt per square meter (kW/m^2). At the solar receiver steam generator, the reflected concentrated solar radiation may reach up to 600 kW/m^2 .

Exposure to elevated levels of flux potentially adversely affect feathers, tissue and eyes of avian species, or any animal exposed to elevated flux. An adequate environmental baseline is necessary to assess impacts of the proposed project. The staff will be reviewing and evaluating the sufficiency of the avian and bat survey data acquired during the original proceeding in order to assess the project's impacts to special-status birds and bats, developing survey methodology for the project owner to implement at the site to supplant gaps in the existing data set and to support analysis relative to installation of a power tower on the project site. Following receipt of all required survey data, staff will review the data to formulate appropriate minimization and avoidance measures as required pursuant to the California Environmental Quality Act.

The Migratory Bird Treaty Act

To achieve compliance with the Migratory Bird Treaty Act, completion of a Bird and Bat Conservation Strategy (BBCS) (formerly Avian and Bat Protection Plan) is necessary prior to construction. The plan should demonstrate how the project owner would avoid and minimize incidental take of resident and migratory avian species to the extent possible. As described above, additional survey data are necessary to support development of this plan and the associated risk analysis to migratory birds.

Development of this plan should be based upon robust, multi-year pre-construction surveys. However, surveys conducted for the previously approved project were performed in spring 2009, and only a month of breeding bird surveys were conducted using the 2009 BLM point count protocol. Because of the change from parabolic trough

to power tower technology, there is a previously un-analyzed risk to birds of exposure to elevated solar flux; therefore, additional data are needed to assess risks year round and additional surveys may be necessary using agency-approved protocols. Additional data collection for migrational species may also be appropriate; and new ornithological study methods that use radar may be useful in this regard. The appropriate survey methodologies and survey timing can be coordinated during the discovery period. Development of the BBCS should be coordinated closely with the USFWS. It should be based on the results of surveys described above and incorporate feasible mitigation, monitoring, and adaptive management strategies. Staff anticipates that the recommended surveys together with development of the plan could result in a delay in the proposed licensing schedule.

The Bald and Golden Eagle Protection Act

Energy Commission staff is concerned that the proposed project could result in take of bald and golden eagles. Robust, multi-year survey data including, but not limited to migration and winter movement, carcass surveys, long-sit point count, and breeding season surveys of available nesting habitat may be required to adequately evaluate direct, indirect, and cumulative effects, as described above. Take, including disturbance of breeding and non-breeding bald and golden eagles is prohibited by the Migratory Bird Treaty Act and the Bald and Golden Eagle Protection Act. The USFWS recommends that an Eagle Conservation Plan be completed. The Eagle Conservation Plan should include project design features and conservation measures to identify and minimize the risk to eagles and eagle productivity and to identify cumulative effects to the regional eagle population. Compensatory mitigation, if determined necessary, would need to be consistent with the draft National Eagle Conservation Plan Guidance for Land-based Wind Energy (or the most current USFWS guidance issued for the project). The Eagle Conservation Plan should be developed in close coordination with the USFWS .

California Endangered Species Act and California Department of Fish and Wildlife Code

Staff is concerned that the proposed project could result in take of state listed avian species, including but not limited to bald and golden eagles, Swainson's hawk, Gila woodpecker, and gilded flicker. Additional survey data beyond that already collected may be necessary to adequately analyze effects, as described above. Incidental take of state listed species may be permitted through the Energy Commission's in-lieu authority. Take of non-listed migratory birds is prohibited under Department of Fish and Wildlife Code (Sections 3511 and 3513) and development of the BBCS will be needed to minimize to the extent feasible impacts to non-listed migratory birds.

CULTURAL RESOURCES

The proposed modifications to the approved project have the potential to reduce the scope of negative effects to cultural resources in the physical footprint of the project and to increase the scope of such effects to cultural resources that may lie beyond the footprint, but within view of the modified project. The applicant's Petition to Amend focuses primarily on how changes in the configuration of the modified project would alter the physical effects of the project on cultural resources in the project footprint,

relative to the project as licensed. Subject to more in-depth review and analysis, staff does not presently foresee the need for further field study in the original project footprint to re-assess the cultural resources that are known there. Staff may request additional field study where modifications to the approved project, such as the proposed installation of a new natural gas pipeline, entail the use of lands not subject to ground survey during the course of the original licensing process.

The Petition to Amend acknowledges that the construction of two, 750-foot tall solar power towers would increase the visual effects of the modified project, but does not articulate whether or which cultural resources would be the subject of such effects. The applicant proposes the use of key observation points (KOPs) to analyze the visual effects of the modified project from known cultural points of interest such as Corn Springs, the nearby Cocomaricopa Trail segment, Alligator Rock, Palen Lake Area of Critical Environmental Concern (ACEC), McCoy Springs, the Chuckwalla Petroglyph site and selected Desert Training Center (DTC) sites. The applicant proposes further to evaluate the potential visual effects of the modified project on other geologic features that may be of interest to local Native American communities.

Staff intends to approach the analysis of what would be the modified project's significantly broader potential visual effect on cultural resources on the local landscape through a program of field study and Native American consultation. There is presently little data on the built-environment, ethnographic, and archaeological resources that may be present within view of the modified project, but beyond the minimum study area set out in the Energy Commission's siting regulations, as they pertain to cultural resources. Staff would require a great deal more information than is presently available to be able to develop recommendations for the Committee. Staff intends to:

1. reinitiate agency consultation with the local Native American communities with which staff engaged during the original licensing for the project,
2. request new ground surveys for built-environment and archaeological resources in areas not subject to such survey during the original licensing process, where modifications to the approved project has the potential to disturb the ground surface,
3. re-scope and direct, if warranted, the execution of additional ethnographic fieldwork to enable the broader visual effects of the modified project to be taken into account, and
4. request reconnaissance-level ground surveys of built-environment and archaeological resources in areas beyond the project footprint where staff believes that such resources may be subject to significant effects due to the increase in the modified project's visual profile.

With the information in hand that would result from the above efforts, staff would be able to conduct a reliable analysis of the modified project's potential effects and develop sound recommendations.

SOILS AND WATER RESOURCES

The modified project proposes substantial changes to the site hydrology compared to the approved project. The modified project removes the three major drainage channels from the Approved Project that was designed to route the water through and around the entire field of solar troughs. Instead, the heliostat technology of the modified project would allow most flows to maintain existing, pre-project natural drainage patterns through the solar fields. In addition, the heliostat technology would not require an entirely flat surface that was needed for solar trough technology, so extensive grading would be avoided.

Although the Modified Project would reduce the impacts of water diversion and grading compared to the Approved Project, the substantial changes in hydrology could potentially create a new set of issues that were not analyzed during assessment of the Approved Project. These impacts are specific to the Modified Project and were not previously analyzed in the Commission Decision. PSH mentions these potential impacts in its Petition, stating that mitigation measures would be identified in the project's Construction Storm Water Pollution Prevention Plan (SWPPP). This document, even in draft, has not yet been submitted to staff and is needed to assess potential impacts of the Modified Project. A delay in receiving this information could result in a delay in completing the Staff Assessment.

The modified project would eliminate the use of heat transfer fluid and reduce the amount of process waste water compared to the approved project. As a result, the modified project would reduce the number of evaporation ponds, from two-4 acre to two-2 acre evaporation ponds. Although this would be a reduction of impacts, it would require revised Waste Discharge Requirements (WDRs) to reflect the modified project. This process must be coordinated with the Colorado River Basin Regional Water Quality Control Board (CRBRWQCB), including formal adoption of the WDRs prior to operations. A delay in this process could result in a delay in the projects operational start date.

TRAFFIC AND TRANSPORTATION

Staff is concerned that glint and glare from the proposed Palen Solar Project could pose safety hazards to users of the nearby traffic and transportation system. The project includes two 750-foot-tall solar towers, each with a solar field comprised of approximately 85,000 heliostats (mirrors). Reflections from the heliostats and solar receiver steam generators located atop the towers could create glint and glare impacts to motorists on Interstate 10, south of and adjacent to the project, and to pilots, including military pilots flying nearby military training routes VR-296, VR-1265, VR-1268, and IR-218. As a result of glint and glare, motorists and pilots could potentially experience retinal burn, flash blindness, veiling reflections, and distracting glare, which could interfere with their abilities to safely operate their vehicles and aircraft, respectively. To explore these potential impacts, staff is requesting that the applicant provide a glint and glare study. Staff will provide details regarding the scope and methodology of the study through the data request process.

Staff also must investigate whether the project's 750-foot-high solar towers would pose obstruction hazards to aircraft. The Department of Defense (DoD) has provided an initial review of the project and concluded that although the towers are proposed for location underneath military training routes VR-296, VR-1265, VR-1268, and IR-218, impacts to the training route can probably be mitigated. Staff will continue to work with DoD in reviewing the project's impacts to their aviation activities. The height of the solar towers also requires the applicant to submit to the Federal Aviation Administration (FAA) Form 7460-1 "Notice of Proposed Construction or Alteration" for each of the two towers. Once the FAA has reviewed the forms and made a determination regarding whether or not the project poses an obstruction hazard, the applicant needs to submit the FAA's findings to staff for consideration in staff's analysis.

Staff also will seek review and comment from the Riverside County Airport Land Use Commission (RCALUC). Riverside County Airport Land Use Compatibility Plan Policy 1.5.2(b)(1) requests RCALUC review of "major land use actions" which includes any proposal for construction of a structure taller than 200 feet above ground level, as defined in Policy 1.5.3(c).

VISUAL RESOURCES

Given the size and location of the project, staff is analyzing several issues related to visual resources. The project envisions the construction of two, 750 foot tall solar towers, 170,000 heliostats (mirrors), the associated facilities, and linears on 3,794 acres of public land administered by the BLM. These would be new intrusions on what is primarily undeveloped desert landscape and will affect the visual quality and character of the area. The Energy Commission staff expressed concerns on the original project's potential visual impacts and has the same concerns for the proposed project. These concerns included visual and glare impacts to recreational visitors in nearby recreational destinations such as the Palen McCoy Wilderness Area, Chuckwalla Mountain Wilderness Area and the Palen Dry Lake. Also travelers on Interstate 10 could be effected by visual and glare impacts.

STATUS REPORTS

Staff recommends that status reports be filed monthly beginning the week of April 1, 2013 to keep the PSEGS Amendment Committee apprised of staff and applicant progress.

ELECTRONIC FILING

Staff requests that the PSEGS Amendment Committee allow the staff documents to be served electronically. Parties also wanting a hard copy may request it in addition to the electronic copy. This is in an effort to expedite the distribution of materials and reduce the amount of paper used and time spent duplicating paper documents in this proceeding.

PROJECT SCHEDULE

Staff has proposed a 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; determinations by other local, state and federal agencies; the submittal of required applications and other factors not yet known.

STAFF'S PROPOSED SCHEDULE

Palen Solar Project Amendment - (09-AFC-7C)

ACTIVITY	DATE
Applicant files Palen Solar Project Amendment	12/17/2012
Staff files Notice of Receipt	12/21/2012
Applicant files Palen Solar Project Supplemental Information	2/8/13
Staff files Issues Identification Report	2/15/13
Informational Hearing and Site Visit	2/20/13
Staff files Data Requests	2/28/13
Data Request and Issue Resolution Workshop	3/6/13
Applicant provides data responses	3/29/13
Data Response and Issue Resolution Workshop	4/8/13
Preliminary Staff Assessment (PSA) published	5/22/13
Staff Assessment Workshop	6/12/13
Staff Assessment (SA) – 30 day comment period ends	6/21/13
Final Staff Assessment (FSA)	7/23/13
* <i>Evidentiary Hearing / Committee Lead Workshop</i>	8/7/13
* <i>Committee Recommendation to Commission</i>	8/29/13
* <i>Commission Business Meeting</i>	10/9/13

+ Significant comments or additional analysis could require a 30 day comment period.

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



**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**

AMENDMENT

**FOR THE PALEN SOLAR ELECTRIC
GENERATING SYSTEM**

**Docket No. 09-AFC-7C
PROOF OF SERVICE
(Revised 2/13/13)**

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COMMISSION DOCKET UNIT

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1516 Ninth Street, MS-4
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**OTHER ENERGY COMMISSION
PARTICIPANTS (LISTED FOR
CONVENIENCE ONLY):**

***After docketing, the Docket Unit
will provide a copy to the persons
listed below. Do not send copies of
documents to these persons
unless specifically directed to do
so.***

KAREN DOUGLAS
Commissioner and Presiding Member

ROBERT B. WEISENMILLER
Chair and Associate Member

Raoul Renaud
Hearing Adviser

Galen Lemei
Adviser to Presiding Member

Jennifer Nelson
Adviser to Presiding Member

Sekita Grant
Adviser to Associate Member

Eileen Allen
Commissioners' Technical
Adviser for Facility Siting

DECLARATION OF SERVICE

I, Christine Stora, declare that on February 15, 2013, I served and filed copies of the attached Palen Solar Project Amendment Issues Identification Report, dated February 15, 2013. This document is accompanied by the most recent Proof of Service, which I copied from the web page for this project at:
<http://www.energy.ca.gov/sitingcases/palen/compliance/>.

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

(Check one)

For service to all other parties and filing with the Docket Unit at the Energy Commission:

I e-mailed the document to all e-mail addresses on the Service List above and personally delivered it or deposited it in the US mail with first class postage to those parties noted above as "hard copy required"; **OR**

Instead of e-mailing the document, I personally delivered it or deposited it in the US mail with first class postage to all of the persons on the Service List for whom a mailing address is given.

I declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct, and that I am over the age of 18 years.

Dated: 2/15/13

Christine Stora