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**STATE OF CALIFORNIA  
ENERGY RESOURCES CONSERVATION  
AND DEVELOPMENT COMMISSION**

**In the Matter of:**

**Application for Certification for the**

**PALEN SOLAR ELECTRIC GENERATING  
SYSTEM**

**Docket No. 09-AFC-07C**

**STAFF'S RESPONSE TO PETITIONER'S MOTION  
TO REOPEN EVIDENTIARY RECORD**

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**STAFF'S RESPONSE TO PETITIONER'S MOTION  
TO REOPEN EVIDENTIARY RECORD**

PSH has docketed several items in response to the Committee's requests for information at the January 7, 2014 Committee Conference. Other parties, agencies and staff have also docketed materials in response to the Committee's request. Staff has reviewed the information docketed and has conducted two workshops to discuss that information. Staff has fully considered all of the information as explained in the attachments and has concluded that the information does not cause staff to recommend any changes to the significance determinations made in the Final Staff Assessment nor its recommendation that the Commission not adopt a statement of overriding conditions.

PSH has also filed a Motion to Reopen the Evidentiary Record. Given that the information provided does not change staff's previous determinations but is responsive to the Committee's requests for additional information, Staff provides no opinion as to whether the Motion should be granted or denied. Should the Committee choose to reopen the record, Staff will be prepared to discuss the information provided by PSH and will be suggesting changes to Conditions of Certification CUL-1 and BIO-16b pursuant to the Committee's direction provided at the January 7 Committee Conference for the Committee's deliberations on a Revised Presiding Member's Proposed Decision.

- Attachment A – Biological Resources Response to Petitioner's Information
- Attachment B – Staff Response Regarding Storage Proposal
- Attachment C – TN# 201965 - Condition of Certification CUL-1: Staff Response to Committee Direction from the January 7, 2014 Committee Conference

Date: April 23, 2014

Respectfully Submitted,

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Jennifer Martin-Gallardo  
Attorney

**ATTACHMENT "A"**

**Biological Resources Response to Petitioner's Information**

## Staff Response, Biological Resources

Carol Watson, Chris Huntley

### Background

On December 13, 2013 the Presiding Member's Proposed Decision (PMPD) (TN 201434) was issued for the Palen Solar Electric Generating System (PSEGS or project). The PMPD indicated that override issuance for the project was insufficiently supported by the administrative record. Specifically, the PMPD (Page 8-2) states that:

“With respect to the second finding of section 1755 (that the benefits of the project outweigh the unavoidable significant adverse environmental effects), we conclude, in the **BIOLOGICAL RESOURCES** section of this Decision, that currently there is insufficient scientifically deduced information about actual avian impacts from power tower solar flux. However, other evidence in the record about avian species mortality from solar flux, including preliminary compliance monitoring information from the Ivanpah project, convinces us that the benefits of the PSEGS modified project do not outweigh its significant adverse environmental effects. When we compare the PSEGS' entire suite of benefits against its suite of impacts, we find that the impacts outweigh the benefits. Accordingly, the Petition to Amend the Palen Solar Electricity Generating System is **DENIED.**”

On December 23, 2013, the petitioner, Palen Solar Holdings, LLC (PSH), filed a request for a delay in the permitting schedule for the project (TN 201464). The Committee granted this request (TN 201466). Additional clarifying comments were made by Presiding Member Karen Douglas and Associate Member David Hochschild during the January 7, 2014 Committee Conference (TN 201608). The Committee detailed the petitioners' various options moving forward. Staff attended the Committee Conference, has reviewed transcript of the Conference, and believes the following statements made by Commissioner Douglas encapsulate the additional information the Committee was looking for:

1) Avian Impact Comparative Information (technology and location):

“One request I do have is that, as we work with the other REAT agencies, staff also work to put together some of the comparative information that we've asked about because we've asked not only about what we can learn from solar flux from the ISEGS experience, recognizing that the monitoring program is just beginning, and recognizing that really we have a lot to learn, but also what do we know, or what could we know about other technologies, other projects, this location ...” (See page 29, last paragraph)

2) Avian Impact Performance Standards:

“[W]e want to think about performance standards, we want to think about other approaches that might help mitigate risk and might give us a way of addressing some of the scenarios or some of the concerns that staff raised in its assessment. So I'll look forward to seeing what staff is able to think of and come up with, as well.” (See end of page 30, top of 31)

Staff further understands that the Committee has directed parties to file additional information as available and considered responsive to these two questions; and the following information is responsive to that request.

### **Data Submittals & Staff's Position**

Petitioner has subsequently filed information requested by the Commissioners at the Committee Conference. Staff has reviewed and evaluated this information and provides a response to each of the petitioner's filings as directed by the Commissioner's specific questions. Additionally, staff seeks to provide the Commissioners with context when considering the value of the materials provided by the petitioner. Staff further attempts to explain why staff disagrees with contentions made by the Petitioner; specifically the contention that avian mortalities appear to be similar for solar thermal and photovoltaic technologies.

### **Compilation of Avian Data at Various Solar Projects**

The Petitioner provided avian mortality data for the Ivanpah Solar Electric Generating System (ISEGS) a concentrating solar power tower project; the Genesis Solar Energy Project (GSEP); a parabolic trough project; and the Desert Sunlight Solar Farm (DSSF), a photovoltaic plant. GSEP and ISEGS were permitted by the Energy Commission; the DSSF was permitted and operates per BLM and Riverside County permits. This information was submitted as raw data without accompany text or attempts to draw conclusions regarding the data. Staff held a public workshop on April 16, 2014, to discuss the data and how the petitioner believes that the data might change the existing analysis or conditions. At the meeting, the Petitioner agreed with staff that this data would not change the significance conclusions in the FSA. However, the Petitioner did suggest this data demonstrates how avian mortalities appear to be similar for solar thermal and photovoltaic technologies. At the workshop, the Petitioner suggested the mortalities as reported, numbered in the "tens, twenties, and thirties." This indicates the Petitioner misuses the data and has failed to accurately consider how this information must be corrected for scale and survey methodologies.

**Response:** Staff reviewed the Petitioner's filings and regularly reviews reports from which some of this information was gathered as part of our compliance duties. Staff works on siting and compliance cases, and has first-hand knowledge of conditions at GSEP and ISEGS. Staff obtains data for DSSF, which operates under BLM permits, from communication with BLM and USFWS as part of routine lessons learned, and ongoing inter-agency coordination.

Staff strongly disagrees with the Petitioner's contention that avian impacts are similar for all solar thermal and photovoltaic technologies. As stated below and at the workshop the existing data is preliminary, mostly incidental, and does not have the statistical power to support these conclusions. For example incidental data is collected when someone happens to come across a dead or injured bird. Data collected without a standardized or agency-approved method or frequency of monitoring cannot be used to evaluate avian risk in any meaningful way. At ISEGS, protocol surveys are beginning, but a preliminary report will not be available until June of 2014 and will cover only the first quarter of regular

monitoring. Therefore, staff is unable to provide any further analysis of the avian mortalities occurring at a power tower project.

The data provided by the Petitioner does not allow for an accurate comparison, given the lack of monitoring design at GSEP and DSSF. In addition the data has not been scaled up to account for mortality across the entire project site. The ISEGS monitoring protocol covers less than 30 percent of the site. Any mortality estimate must be adjusted to consider 100 percent of the site. Also, the numbers presented in the Petitioner's avian mortality data do not consider two important correction factors that biologists and statisticians apply to mortality estimates: carcass scavenging rate and observer bias rate.

Scavengers such as ravens and coyote are extremely adept at locating sources of prey, and when they eat and remove a carcass, the data must be corrected to account for this loss. The ISEGS project will conduct trials to determine the estimated rate of carcass removal, and this factor will be used to correct raw mortality numbers. Scavenger bias is also used to adjust the frequency of the surveys; higher scavenger rates often require more frequent surveys.

"Observer bias rate" is a term of art that refers to a biologist's ability to detect what they are looking for. Variations in terrain, eye fatigue, lack of concentration, and experience, among other things, factor into this rate. Some people are also inherently better at finding carcasses or other objects. Similar to scavenger rates the ISEGS project will conduct trials to determine the observer bias rate of carcass detection for each person approved to work as a mortality monitor. This data will then be used to correct raw mortality numbers. Observer bias data determines appropriate survey duration and walking speed to ensure the adequate collection of data.

To date staff has not received data on scavenger or observer bias; and until the trials are completed, the survey data must be treated as preliminary. These three factors; percent coverage of site, scavenging rate, and observer bias rate will serve to correct and increase the raw reported mortality rates. However these adjusted numbers still fail to account for injured animals that manage to make it offsite and do not take into account the duration and intensity of flux that is occurring during these survey periods (less flux will result in less mortality, more flux will result in more mortality). Additionally, both CEC staff and ISEGS workers have observed ephemeral smoke plumes originating near the operating boilers, but there is currently no evidence as to what is causing the smoke. Additional monitoring will be needed to understand what is happening in the concentrated flux near the boilers.

Staff noted the tables filed by the Petitioner did not include injured avian species (injured bat species are not tabulated in this discussion due to lack of further information). Under the MBTA, federal Endangered Species Act, and California Endangered Species Act, injuring a bird is still considered a "take", regardless if the bird eventually dies. Staff is unaware of any injured bird from the ISEGS site having survived. Several waterbirds from the GSEP site have been successfully rehabilitated and released after injuries incurred onsite. Staff does not have data on injured species survival rate at the DSSF site, other than information contained in the National Fish and Wildlife Forensics Laboratory report and/or general conversations with agency responsible staff (Renewable Energy Action Team: composed of BLM, USFWS, CEC, and CDFW).

In general, the agencies are still working to establish relationships and reporting measures with rehabilitation facilities that receive injured birds, however, reporting to the CEC or back to project owners is infrequent and casual. Further there appears to be funding constraints for these facilities.

The Center for Biological Diversity docketed a report from the US Fish and Wildlife Service Forensic Laboratory addressing avian mortality at the same locations. (See TN 201977 and 202013). The information was based on the same avian mortality data collected by the petitioner. The report assesses the cause of death to over 200 birds from the ISEGS, GSEP, and DSSF. The salient points of the NFWF forensics report are summarized below.

The avian mortality information provided in the report confirms the analyses presented in the FSA. The report provides preliminary data on the types of birds that are subject to risk at thermal (i.e., parabolic trough and power tower) and photovoltaic systems. The report echoes and validates staff's previously stated assessment that birds exposed to solar flux would be subject to lethal exposure to thermal damage yet remain able to fly off the project site. These birds are not located during on-site carcass searches and may account for a large number of unreported mortalities. Minimal offsite surveys are being conducted at ISEGS to seek out injured birds or bats. The Avian and Bat Monitoring and Management Plan for the ISEGS project requires offsite studies be conducted by inspecting for evidence of avian and bat mortality and injury along two randomly selected 500-foot-long transects, separated by approximately 10 meters extending outward from the perimeter fence and back to the facility at nine locations, including the north, east, south, and west borders of the facility.

At least one fully protected American peregrine falcon has already been taken at ISEGS; it is not known what became of the unidentified falcon species observed damaged on the ISEGS site yet flying offsite (page 19, Kagan et al 2014). But staff had previously stated it was likely the PSEGS project would take listed and rare species.

Staff considers this information helpful but cautions the preliminary data addressing the number of birds detected is based on an extremely small sample size and reporting period, during which much of the data collection at ISEGS was based on incidental finds; the data from GSEP and DSSF is nearly completely incidental, except for routine surveys of evaporation ponds at both those sites, where avian mortalities and/or entrapment are known to occur. Other factors that limit the power of the data to assess risk to birds for power tower technology include: lack of information on duration and intensity of solar flux being generated at the ISEGS facility during the reporting period; the data has not been corrected for searcher efficiency or bias, the rate of scavenger removal, or off-site mortality (i.e., birds that are injured yet able to fly off the site and perish). In addition, the data has not been scaled up to account for the large size of the facility. The report itself suggests that this data is preliminary and may vastly under-represent mortality estimates. The data, if taken at face value, may be misleading if not corrected for these factors.

Staff considered the information submitted by the Petitioner and the report docketed by the Center for Biological Diversity and finds no basis to change the conclusions presented in the FSA or staff's testimony. Several extra months of avian mortality and injury data, collected under various and inconsistent protocols, answers only the Committee's proximate questions on what types of birds are currently subject to risk. The data cannot answer the ultimate question of expected mortality rates at this time. Staff stated in the FSA that only several years of avian monitoring at a fully operational power tower will provide the statistical power to assess risks for avian species at a given location. This data, (i.e., ISEGS) would still need to be adjusted for the site specific location of the PSEGS. Currently staff has no way to do this; but bird use in the vicinity of the PSEGS site has demonstrated to be rather high given proximity to the Colorado River migratory corridor and habitat. Staff considers bird use and risk to be higher in the project area, where large flocks of migratory and resident birds are known to occur, than at ISEGS.

Staff has, however, revisited avian and bat conditions, **BIO-16a** and **BIO-16b** with the intent of strengthening them to be responsive to the information that staff has in hand. Staff maintains that even with these adjusted conditions, that avian impacts would be significant and immitigable.

### **Proposed Revisions to Condition of Certification BIO-16b**

The petitioner submitted proposed revisions to Condition of Certification **BIO-16b** on February 28, 2014 (TN 201809). The revisions include: language addressing performance standards to determine the effectiveness of adaptive management; language that would assist the Technical Advisory Committee (TAC) composed of representatives from the BLM, CDFW, CEC, USFWS, and project owner, and the CPM, in reviewing results of onsite monitoring, developing appropriate mitigation and subsequent distribution of mitigation funding (pursuant to Condition of Certification **BIO-16a**), and setting appropriate performance standards for successful mitigation implementation and adaptive management. The revisions include specific language regarding performance standards that would trigger the implementation of mitigation when avian thresholds are reached.

**Response:** The revisions provided by the Petitioner are more prescriptive regarding the development of thresholds. The revisions augment the existing language in Condition **BIO-16b**; they do not alter the meaning or effectiveness of the condition. The version of Condition of Certification **BIO-16b** identified in the Final Staff Assessment (FSA) currently contains language to ensure additional mitigation could be implemented based on the collection and interpretation of avian mortality data. Through this process the TAC would develop performance standards and or avian thresholds, similar to the revised text added by the Petitioner, based on avian data collected at the project site and additional research of local and regional bird data. At the April 16<sup>th</sup>, 2014 workshop, Petitioner seemed to agree with staff that development of performance standards should be the responsibility of the TAC, and that the proposed language did not appreciably strengthen or inform the ability of the TAC to undertake this effort.

Staff understands the Committee has specifically requested more information regarding setting of performance standards. To be clear, staff applies this term, "performance standard" to mean a standard

to which an action must perform. This term is applicable to the successful implementation of mitigation, and consists of the goals or standards that mitigation must achieve in order to be considered successful.

The suite of mitigation options currently available in Condition **BIO-16b** provides flexibility. The measure was constructed in this way to ensure the TAC was not unnecessarily restricted to particular measures now given the lack of reliable data and uncertainty regarding project impacts. The function of the TAC is to adaptively respond to real-time data because staff currently is unable to predict the scale or scope of avian and bat injury or mortality, nor dictate appropriate thresholds to trigger the best mitigation for unknowable impacts. Fine-tuning modifications to **BIO-16b**, such as project curtailment questioned by the Committee, could be highly effective if feasible. However, staff cannot provide a complete answer to the overall effects of project curtailment with the existing data, and continue to suggest, with the support of REAT technical staff, that at least two years of ISEGS data (when consistently producing at maximum output) should be considered before making such suggestions with confidence.

The proposed revisions to Condition of Certification **BIO-16b** would not alter staff's analysis or conclusions presented in the FSA. The revisions as proposed would not reduce project impacts to less than significant. Staff agrees that thresholds or triggers for requiring additional mitigation based on the collection of additional data would be a component of the Condition and that the implementation of additional mitigation would reduce impacts for some species of birds. However, as described in the FSA the risk to avian species is considered significant and immitigable even with the application of this mitigation

The consideration of developing triggers or thresholds for significance was discussed in the evidentiary hearings. Staff must identify potentially significant impacts to biological resources, including rare native birds, and adopt mitigation as feasible to reduce those impacts below a level of significance. The Migratory Bird Treaty Act (MBTA) sets limits of avian take at one unlisted species, listed or state special status species have a threshold of zero takes, unless a permit is obtained, and state fully protected species (such as American peregrine falcon, burrowing owl, or Yuma clapper rail, only can be taken under a Natural Communities Conservation Plan, administered by the CDFW. The ISEGS project has already taken protected species (Peregrine Falcon) and it would be reasonable to expect more to be taken. The GSEP and DSSF have also taken protected species (California brown pelican and Yuma clapper rail).

Aside from legal thresholds, staff indicated that setting discrete thresholds (i.e., a given number of birds or each species) would be extremely difficult and potentially arbitrary based on the uncertainty of population status and likely effects to the large number of birds that would be expected to be subject to adverse effects from exposure to elevated levels of solar flux.

Another important consideration when applying thresholds is to consider that many birds are expected to fly through the solar flux, be critically injured, yet still able to fly away from the project site. These birds would not be detected and this phenomenon is supported by the recent observations of a bird with a plume of smoke arising from the tail flying off the ISEGS site (Kagan et al, 2014).

Implementing additional mitigation for avian species based on thresholds or triggers would provide a mechanism to further reduce impacts to the guilds of birds most subject to loss (e.g. waterbirds, swifts, and swallows). However, the development of quantitative thresholds or performance standards should be based on a detailed model of each affected species' population biology. Without this data mortality thresholds should consider the abundance, local occurrence, and conservation status of the affected species. Rather than propose a single number for total bird mortality, we suggest categorizing birds according to local occurrence and conservation status, with a separate threshold for each category. Staff's data analysis in the FSA resulted in the determination that implementation of the proposed PSEGS may lead to incidental take of native birds protected under one or more of the statutes. The Commission has no authority to permit such take, or to enforce these statutes.

Mortality thresholds suggested below warrant further discussion and are not intended to represent staff's position. For most categories, the thresholds are intended only for discussion purposes, and these values would be adjusted on further data collection and agency coordination. However, staff is responding to the Commissioner's request to consider thresholds for additional mitigation. The draft thresholds of significance are included as Attachment 1.

### **Fall 2013 Nocturnal Migration Surveys for Palen Solar Electric Generating System and Fall 2013 Avian Field Surveys for Palen Solar Electric Generating System**

The Petitioner submitted a report detailing the results of radar surveys that were conducted onsite during fall of 2013; from August 19- October 31. The Petitioner also filed the results of bird use count, shorebird/waterfowl surveys, and avian mist net surveys conducted from August 19 through December 15, 2013.

**Response:** Staff has reviewed the data, and during the April 16<sup>th</sup> workshop, questioned the methodology and results presented in the report. Given this information, the data does not alter the conclusions or significance determination presented in the FSA, and the Petitioner seemed to agree with this assessment. At the April 16 workshop, the Petitioner indicated the data would not be entered into evidence for the purpose of supporting a change in impact significance determinations, should hearings be reconvened. Staff believes, however, this information is valuable because the Commissioners have requested information on avian risk, which is directly tied to abundance, distribution, and migratory characteristics of birds, information which is in these reports. The Petitioner used radar, a technique that is emerging rapidly with applications in monitoring avian and insect movement, and conducted significant on-the-ground survey efforts.

The report seems to suggest that the area is little used as a migratory corridor. Staff believes this is contradictory to the body of literature already consulted during preparation of the PSA and FSA, which documents the Colorado River Corridor and surrounding environs, and the Petitioner's own data shows flocks of federally endangered Swainson's hawks moving through the area.

The data reveals the presence of previously undocumented rare listed birds such as the listed threatened bank swallow. We also note that the recommendations for minimizing lighting impacts are already codified in staff's conditions developed for the project and contained in the PMPD. Other information contained in this report, such as the mean migrating elevation recorded during fall of 2013 may have application to the use of deterrents or hazing onsite, however, staff still maintains that the TAC would be best authority to evaluate and recommend any adaptive management strategies on the site.

### **Review of Available Avian Hazing and Deterrent Methods (TN )**

The Petitioner submitted a literature review of available Avian Hazing and Deterrent Methods during the evidentiary process. The Petitioner submitted additional information on deterrent methods on February 28, 2014 (TN 201809). The report includes a variety of hazing methods ranging from the use of remote operated aircraft, Mylar tape, balloons, canons, to directed sonic devices.

**Response:** Staff embraces any feasible and effective method that reduces avian mortality and morbidity by deterring birds from flying into the flux field. Staff recommends that the deterrent methods be reviewed by the TAC and implemented where appropriate. However, staff is concerned that many of the methods proposed would be ineffective on a project of this scale (i.e., 750 foot tall towers, large invisible flux field, and scale of the project). Similarly, the use of some technologies may have significant deleterious effects to other species or result in impacts to wildlife in surrounding areas, and more specifically, to overhead and/or adjacent migratory bird routes, and environmental review of such deterrent methods would need to be conducted prior to implementation.

The information presented, until demonstrated to be effective on a facility of this scale, would not alter the analysis or conclusions presented in the FSA.

### **Conclusions**

Staff believes that this information, while interesting and certainly worth adding to the body of known knowledge, is insufficient to change our analysis or conclusions. At this time, as staff and industry knowledge evolves and our experience with avian interactions at a solar power tower increases, as well as at other operating solar farms, staff would suggest general modifications to the existing Condition of Certification BIO-16b should the Committee choose to reopen the record. These suggestions would include more thorough and frequent site monitoring coverage than what is conducted at ISEGS in order to establish mortality rates and determine the suite of species affected. Staff would suggest 100 percent survey coverage at the PSEGS site, on a biweekly basis, and perhaps more frequently during migration season. Conducting more thorough surveys facilitates the identification of rare or unique species that may go undetected when surveys are more spatially separated. For example, birds that have low populations or are infrequent visitors may be missed by surveyors due to scavenger removal rates. Given constraints with detecting carcasses or injured animals on a site that retains so much natural vegetation and topography, it is much more difficult to detect injured birds when compared to a cleared site. Increasing off-site surveys to include larger sample areas would also increase the power of the data to assess impacts to birds that are injured yet able to fly off the project site. Staff would also require that the towers be outfitted with cameras to detect and record any smoke plumes at the vicinity of the

tower, and also would recommend that a series of cameras be placed around the perimeter of the facility to document any injured species that manage to fly offsite. The use of trained dogs to detect birds at the ISEGS site is being investigated and may prove to be appropriate for large solar sites. Additionally, the Petitioner's radar data indicated that on 13 nights, it is possible that insects were so abundant that they "cluttered" or obfuscated results such that data could not be accurately collected. Insect mortalities have been documented; yet are currently not monitored or explored at the ISEGS site. Because agricultural practices and artificial irrigation adjacent the PSEGS site would both subsidize and attract insect populations, staff recommends that insect monitoring be part of **BIO-16**, and that an avenue for insect mitigation be offered as well, should significant impacts occur.

## Citations

Kagan R.A., T.C. Viner, P.W. Trail, and E.O. Espinoza. 2014. Avian Mortality at Solar Energy Facilities in Southern California: A Preliminary Analysis. National Fish and Wildlife Forensics Laboratory, Ashland, Oregon. 28pp.

## Attachment 1

### Preliminary Draft Thresholds of Avian Mortality

Mortality thresholds warrant further discussion and are not intended to represent staffs position; nor have REAT agencies reviewed these thresholds. For most categories of avian species, the thresholds are intended only for discussion purposes, and these values would be adjusted on further data collection and agency coordination. However, staff believes this information may be considered valuable to the Commissioners broader questions regarding project impacts, performance standards, and mitigation for the proposed Palen project. Staff currently uses no similar thresholds in project compliance; and maintains that any unpermitted take violates the MBTA and may also be in violation of state and federal laws.

Listed threatened or endangered species: One dead or injured bird that is a listed species, proposed for state or federal listing, if the mortality or injury is attributable to direct or indirect effects of the project. The rationale for this low threshold is that these species have been identified by the responsible agencies as highest priority for conservation management, based on the best available information.

State designated fully protected species: unless covered under a state NCCP permit, or operating under a scientific research permit, state fully protected species may not be taken at any time.

California Bird Species of Special Concern: Five or more mortalities attributable to direct or indirect effects of the project during a one-year period (i.e., total number projected from the sampling data), for all species combined. There is significant conservation concern for many of these species, but not enough species-specific data to set significance thresholds for each Species of Special Concern.

Other Special-status Birds or locally rare birds: Ten or more mortalities attributable to direct or indirect effects of the project during a one-year period (i.e., total number projected from the sampling data), for all species combined. This category will include any species ranking S1, S2, or S3 or rankings on watch lists or other sources, including (but not limited to) Bureau of Land Management, US Forest Service, National Audubon Society, or American Bird Conservancy, and included in the “Special Animals” compendium (CNDDDB 2011). There is documented conservation concern for each of these species, but not enough species-specific data to set significance thresholds for each one.

Abundant Native Birds and Non-native Birds: For selected species, no thresholds are proposed. These species are either (1) so common in the general area that project-related mortality is unlikely to significantly affect local populations, or (2) non-native or invasive species. There is no documented conservation concern for any of these species. However, setting no limits for apparently common birds may result in long term cumulative impacts depending on the species.

Local resident species (according to season): For bird species regularly observed in the project area (based on project bird count data) during breeding or winter seasons, or both, ten or more of any one

species during a one-year period (i.e., total number projected from the sampling data), or 40 or more for all species combined.

Migratory or non-resident species, including shorebirds and waterfowl: For bird species rarely observed in the project area (based on project bird count data) during breeding or winter seasons, five or more total in any single monitoring event (all species combined), or 20 or more during a one-year period (i.e., total number projected from the sampling data) for all species combined.

The development of thresholds for target avian species would be valuable to assist the TAC in targeting mitigation for specific birds, and this is one of the key functions of the TAC in the existing **BIO-16b**.

## **ATTACHMENT "B"**

### **STAFF RESPONSE REGARDING STORAGE PROPOSAL**

## STAFF RESPONSE REGARDING STORAGE PROPOSAL

At the January 7, 2014 Committee Conference, Presiding Member Commissioner Douglas made the following statement regarding the benefits of storage:

“If the PSEGS project had been proposed with energy storage like the Rice project which the Energy Commission permitted in 2010, the Petitioner would have a powerful argument that their proposed project provided significant benefits to the state and that the No Action Alternative, which [the] solar troughs without storage, and the PV Alternative do not. I don’t know if it’s feasible for the Petitioner to incorporate storage in the project or to construct the project in such a way that storage could be economically incorporated after the fact, but either option would strengthen the proposal greatly in terms of benefits.”  
(TN# 201608, pg. 13.)

The Petitioner provided a response to this comment in its Overriding Considerations Supplemental Testimony (TN# 201704), docketed on February 10, 2014. Staff reviewed the supplemental testimony regarding the feasibility of incorporating thermal energy storage (TES) at the project site. That Supplemental Testimony contains the following new information:

- A very brief description of a hypothetical TES
- 2-hour storage
- Cold and hot storage tanks
- Pumps and 4 heat exchangers
- Unknown size and capacity factor of the Independent Superheater (ISH) boiler
- a very brief statement that it is technically feasible to incorporate TES after the solar tower power blocks have been built and are operational.

But the submittal does not address:

- information on compliance with the RPS;
- information on the duration of any outages that would result from incorporating the construction of the TES described in the Petitioner’s Supplemental Testimony; and,
- information on whether the addition could impact plant reliability and availability during commissioning and operation.

At the April 16, 2014 workshop, staff was able to discuss some questions with the petitioner. The petitioner indicated that the project site can accommodate TES in the future, but the petitioner does not have specific information on which staff could perform thorough reliability, or technical and economic feasibility analyses. The information provided by the petitioner was simply to respond to the Committee’s request for information on the feasibility of incorporating TES on the project.

The petitioner stated that the current layout of the project would allow construction of the TES to occur without shutting down the project and the system would be down for

just a matter of days to “tie-in” which could be done at a previously scheduled maintenance, resulting in no change to reliability or availability. Because adding a new and unproven system could potentially alter the reliability and availability of project and individual components, staff needs information on the system beyond the fact that it is technically feasible.

Lastly, there is no current PPA for TES at this facility and the petitioner has indicated that there is no RFO currently pending at the CPUC that would provide helpful information. The TES described by the Petitioner is only hypothetical. Staff is unable to determine if there is any economic feasibility to modifying an existing solar plant with unproven storage. Staff cannot complete an objective analysis without more detailed technological specifications from the Petitioner. Petitioner has indicated that should TES become more than a hypothetical, an amendment would be filed to add TES to the project site.

Because this hypothetical TES system is not a project feature, Staff does not believe the information provided should support an override as a project benefit.

At the April 16, 2014 workshop, staff was able to discuss some questions with the petitioner. The petitioner indicated that the project site can accommodate TES in the future, but the petitioner does not have specific information on which staff could perform thorough reliability, or technical and economic feasibility analyses. The information provided by the petitioner was simply to respond to the Committee’s request for information on the feasibility of incorporating TES on the project.

The petitioner stated that the current layout of the project would allow construction of the TES to occur without shutting down the project and the system would be down for just a matter of days to “tie-in” which could be done at a previously scheduled maintenance, resulting in no change to reliability or availability. Because adding a new and unproven system could potentially alter the reliability and availability of project and individual components, staff needs information on the system beyond the fact that it is technically feasible.

Lastly, there is no current PPA for TES at this facility and the petitioner has indicated that there is no RFO currently pending at the CPUC that would provide helpful information. The TES described by the Petitioner is only hypothetical. Staff is unable to determine if there is any economic feasibility to modifying an existing solar plant with unproven storage. Staff cannot complete an objective analysis without more detailed technological specifications from the Petitioner. Petitioner has indicated that should TES become more than a hypothetical, an amendment would be filed to add TES to the project site.

Because this hypothetical TES system is not a project feature, Staff does not believe the information provided should support an override as a project benefit.

## **ATTACHMENT "C"**

**TN# 201965 - Condition of Certification CUL-1: Staff Response to Committee  
Direction from the January 7, 2014 Committee Conference**

## DOCKETED

<b>Docket Number:</b>	09-AFC-07C
<b>Project Title:</b>	Palen Solar Power Project - Compliance
<b>TN #:</b>	201965
<b>Document Title:</b>	Condition of Certification CUL-1: Staff Response to Committee Direction from the Jan. 7, 2014 Committee Conference on the PMPD
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# Memorandum

To: **Christine Stora**  
**Compliance Project Manager**  
**California Energy Commission**

Date: April 4, 2014

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California Energy Commission  
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Subject: **Condition of Certification CUL-1: Staff Response to Committee Direction from the January 7, 2014 Committee Conference on the Presiding Member's Proposed Decision, Palen Solar Electric Generating System (09-AFC-7C), Riverside County**

## Introduction

The December 2013 Presiding Member's Proposed Decision (PMPD) for the Palen Solar Electric Generating System (PSEGS) found that the project would have a significant effect on the Chuckwalla Valley portion of the Pacific to Rio Grande Trails Landscape (PRGTL), a significant cultural resource under CEQA, and that the project's effect on that resource would require mitigation. Staff prepared testimony on the potential character of the more specific effects that the construction and operation of PSEGS would have on the Chuckwalla Valley portion of PRGTL and other historical resources on and in the vicinity of the proposed facility site (CEC 2013b). The focus of the cultural resources testimony was the proposed project's potential to damage *places* of historical significance, and how to resolve or mitigate the physical or visual damage to any *place* where project damage could reasonably be anticipated to compromise that place's essential historical significance. Staff was unable to devise the means to avoid or resolve PSEGS significant effect on the Chuckwalla Valley portion of PRGTL, and recommended that the Siting Committee adopt **CUL-1** in the FSA to mitigate, to the extent feasible, PSEGS significant effect on that landscape, that *place*.

## The Regulatory Intent of CUL-1 and the Presiding Member's Direction to Staff

The version of **CUL-1** recommended in staff's original September 2013 testimony addresses very particular regulatory requirements for historical resources under CEQA. CEQA requires the lead agency to condition its approval of a discretionary action in a manner that would avoid, resolve, or mitigate for the loss of historical significance to which an historical resource would be subject, were the action to be approved. Staff came to the conclusion that the Chuckwalla Valley portion of PRGTL is historically significant for specific associative, design, and information values. **CUL-1** of the September 2013 testimony was a revision of the September 2010 **CUL-1** in the original final decision for the original solar trough project. The exclusive purpose of the original **CUL-1** and the September 2013 revision of that condition was to address the significant effect that either project would have on a particular historical *place*, originally referred to as the Prehistoric Trails Network Cultural Landscape and, subsequently, as the Chuckwalla Valley portion of PRGTL. **CUL-1** focuses on *place* because, under CEQA, the scope of a cultural resources analysis is limited exclusively to the consideration of whether and how a project may cause significant damage to historical resources, to *places*, not *people*.

The Presiding Member's direction to staff in the January 7, 2014 committee conference in Sacramento (CEC 2014a), with regard to cultural resources, was to give more attention to the losses that the project would inflict on local Native American tribes, the *people* to whom the Chuckwalla Valley portion of PRGTL has particularly strong cultural significance, relative to the "conservation and documentation ... of the many and varied cultural and historical resources" in the project area of analysis. Staff understands this direction to call for more explicit consideration of the PSEGS's potential effects on local Native American tribes, to the project's effects on *people*, in addition to staff's extant testimony on the project's potential effects on historical resources, on *places*. These latter effects are the exclusive focus of what is referred to in the present revision as **CUL-1A**. Staff believes that the mitigation measures in **CUL-1A** are still appropriate and has adjusted some of the line item budgets for those measures in response to our ongoing coordination with the BLM Palm Springs Field Office. Footnotes in the **CUL-1A** budget table below identify and clarify each adjustment. Staff's analysis of the Presiding Member's January 7 direction may be found below in Attachment 1.

### **Methodology of Revisions to Staff's Recommended Conditions of Certification in the FSA**

Pursuant to the Presiding Member's January 7 direction, staff has drafted revisions to **CUL-1** for the Siting Committee's consideration. The primary focus of these revisions, which were developed in consultation with potentially affected local Native American tribes, is the injury the tribal members would suffer as a result the project's damage to the Chuckwalla Valley portion of the PRGTL, the injury that this damage would inflict on tribal *people*. In order to facilitate the clear distinction between the project's potential effects to historical resources, to *places*, which are the focus of **CUL-1A**, and its potential effects on local Native American tribes, the tribal *people* (Figure 1), staff recommends the Siting Committee's consideration of the adoption of **CUL-1B**, which addresses the tribal interest and cultural perpetuation issues related to these minority populations. **CUL-1A** has been revised to take into account staff's consultation with local Native American tribes and the Palm Springs Field Office of the BLM, and input from the project owner, and **CUL-1B**, which is entirely new, also incorporates the outcomes of recent tribal consultation.

#### *Development of the Baseline Language for the Revision of the Recommended Conditions of Certification*

To initiate the revision process, staff first sought to develop baseline language for staff's revision of the cultural resources conditions of certification for the project. Staff compared the language of **CUL-1** in the September 2013 FSA with the language of **CUL-1** in the PMPD. Staff notes that the PMPD language for **CUL-1** includes 1) various edits of a non-substantive nature, such as stylistic deletion of commas, the correction of capitalization, and corrections of numerations of condition and verification subparts, 2) an increase in the treatment of the project's cumulative effects on the Chuckwalla Valley portion of PRGTL from \$35 per acre to \$70 per acre, and 3) the deletion of the verification for the Treatment for Cumulative Effects. Staff has verified with the Siting Committee that the increase in the per acre cost of the mitigation for the project's cumulative effects was a typographical error, incorporates all of the grammatical corrections, as well as the stylistic edits, and assumes that the lack of a verification for the treatment of cumulative effects is an error of omission and reinserts that verification, as drafted in the September 2013 FSA, back into the revision of **CUL-1** here.

### *Coordination with BLM, Partner Federal Agency*

In February and March 2014, staff met with BLM Palm Springs Field Office staff and management to review and discuss the original version of **CUL-1** and the initial budget for that condition which was published as part of staff's November 26, 2013 opening brief (CEC 2013c:6), and to discuss the **CUL-1B** concept and the project owner's proposed budget for the mitigation of "Native American spiritual interests" (PSH 2014:4). The field office staff and management gave their verbal support for the suite of mitigation measures, provided comment on the scope and costs of particular line items in the initial budget for what is now **CUL-1A**, and made the broader comment that the overall mitigation suite for PSEGS, the mitigation measures for both **CUL-1A** and **CUL-1B**, was underfunded, given the scale of PSEGS's potential effects. The revisions here to **CUL-1A** and the draft of **CUL-1B** reflect, in part, staff's response to particular BLM field office comments.

### *Consultation with Native Americans*

Staff has invited (CEC 2014b) all NAHC- and BLM-listed affected Native American tribes to renew discussion on **CUL-1**. Staff has discussed the various concepts proposed for the revision of what are now **CUL-1A** and the **CUL-1B** concept with those tribes that responded to the invitation. These tribes include the Chemehuevi Tribe, Colorado River Indian Tribes, Fort Mojave Tribe, Fort Yuma Quechan Tribe, Agua Caliente Band of Cahuilla Indians, and the Soboba Band of Luiseno Indians.

### *Consideration of the Project Owner's Perspective*

Staff has also taken into consideration the petitioner's *Proposed Revisions of Staff's Condition of Certification CUL-1* (PSH 2014).

## REFERENCES

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- CEC 2013a. California Energy Commission (tn200442), *Final Staff Assessment for the Palen Solar Electric Generating System, Part A, Amendment to the Palen Solar Power Project* (09-AFC-7C). September 10, 2013.
- CEC 2013b. California Energy Commission (tn200564), *Final Staff Assessment for the Palen Solar Electric Generating System, Part B, Amendment to the Palen Solar Power Project* (09-AFC-7C). September 23, 2013.
- CEC 2013c. California Energy Commission (tn201338), *Energy Commission Staff Opening Brief, Palen Solar Electric Generating System* (09-AFC-7C). November 26, 2013.
- CEC 2013d. California Energy Commission (tn201434), *Presiding Member's Proposed Decision, Palen Solar Electric Generating System* (09-AFC-7C). December 13, 2013.
- CEC 2014a. California Energy Commission (tn201546), *Palen Transcript of the Committee Conference held January 7, 2013, Palen Solar Electric Generating System* (09-AFC-7C). January 10, 2014.
- CEC 2014b. California Energy Commission (tn201619), *Invitations to Tribes and Tribal Leaders to Participate in California Energy Commission/Tribal Consultation, Palen Solar Electric Generating System* (09-AFC-7C). February 3, 2014.
- PSH 2014. Palen Solar Holdings (tn201700), *Palen Solar Holdings, LLC's Proposed Revisions of Staff's Condition of Certification CUL-1, Palen Solar Electric Generating System* (09-AFC-7C). February 10, 2014.

## Revisions to CUL-1

The following revision to what is now **CUL-1A** and the draft language for **CUL-1B** reflects staff's synthesis of all of the above sources of information. Proposed budget matrices are provided at the end of the verifications for each subpart of the condition.

## **CONDITIONS OF CERTIFICATION**

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(Additions in **Bold**, deletions in ~~strikethrough~~)

### **CUL-1A TREATMENT OF THE CHUCKWALLA VALLEY PORTION OF THE PACIFIC TO RIO**

#### **GRANDE TRAILS LANDSCAPE (PRGTL)**

**The project owner shall contribute a total of \$3,068,873.00 to the Energy Commission's PRGTL account. The Energy Commission will create this account to finance the completion of the multiple programs set out in this condition, the collective purposes of which are to mitigate, in part, for the amended project's direct visual effects and cumulative physical and visual effects on the Chuckwalla Valley portion of the PRGTL, and to integrate tribal participation in such programs. The Compliance Project Manager (CPM) will administer the disbursement of these funds and will provide regulatory oversight of the implementation of the multiple programs.**

#### **Treatment for Direct Visual Effects**

##### Field Inventory and Documentation of PRGTL Contributing Elements

The project owner ~~PRGTL account~~ shall **fund the** design and conduct of reconnaissance pedestrian (class II) surveys of the Palen Mountains Resource Area; the Coxcomb Mountains Resource Area; the Eagle, Chuckwalla, and McCoy Mountains Resource Areas, as these areas are depicted in the FSA; the Coxcomb Fringe and Raceway Mesquite Areas, as also depicted in the FSA; ~~and the BLM's Palen Dry Lake ACEC;~~ **and Palen Dunes/Palen Lake, Ford Dry Lake, McCoy Spring, Chuckwalla Spring, Corn Spring, North Chuckwalla Petroglyph District, North Chuckwalla Mountain Quarry District, Long Tank, Alligator Rock, Dragon Wash, and San Pascual Well Traditional Cultural Properties, as depicted in the FSA.**

The scope of the Palen Mountains reconnaissance is limited to the portions of the mountains in Sections 13, and 24–26, T. 4 S., R. 17 E. and east of those sections into the unsectioned areas of T. 4 S., R. 18 E.; in sections 1 and 13, T. 5 S., R. 17 E., and east of those sections into the unsectioned areas of T. 5 S., R. 18 E.; and north of sections 31–33, T. 5 S., R. 18 E. into the unsectioned portions of that township. The scope of the Coxcomb Mountains reconnaissance is limited to the portions of the mountains in sections 11 and 14, T. 4 S., R. 16 E. and northwest of those sections into the unsectioned areas of that township; in section 22, T. 4 S., R. 16 E., and north of that section into the unsectioned areas of that same township; and in section 16, T. 4 S., R. 16 E. and northeast into, again, the unsectioned portions of that

township. The principal purpose of these surveys is to document a statistically valid sample of the archaeological deposits, and the potential prehistoric and ethnographic sources of natural resources in each of the subject areas. The primary, although not exclusive focus of the surveys shall be prehistoric archaeological resources that have the potential to be eligible for listing in the CRHR under Criteria 1 or 3. Resources encountered would typically include, but would not be limited to, rock art, intaglios, caves or other natural features that may evidence ritual use, apparent altars or shrines, cleared circles, rock alignments, rock cairns, caches, and trail segments. One secondary focus of the surveys shall be natural resource locales, places in the mountain and mesquite resource areas which may have been used as water sources, or places where plant, animal, or mineral resources may have been extracted. Such places may include springs, seeps, tanks, or plunge pools; stands of plants which have the potential to have been food sources or sources of medicinal compounds; habitats of high value animal populations; or mineral resource outcrops or deposits where materials such as high quality toolstones, quartz crystals, or turquoise may have been extracted. Another secondary focus of the surveys shall be any source of paleoenvironmental data such as packrat middens or pockets of perennially moist, organic sediments.

The research designs and the methods used for these class II surveys shall reflect the character of the different resource areas and include thorough documentation of each archaeological resource, natural resource extraction locale, and source of paleoenvironmental data. The sample design and the field methods for each mountain and mesquite resource area shall evidence a balanced consideration of local topographic constraints and the requirement to acquire a statistically valid sample of each area. ~~The project owner shall completely document~~ **PRGTL account shall fund the complete documentation of** every archaeological site found on California State Parks DPR 523 Series forms per California State Parks instructions (CA State Parks 1995). The descriptions of resource assemblages and the spatial distribution internal to those assemblages shall be detailed enough on the subject forms to facilitate meaningful archaeological analysis of the surface manifestation of each archaeological resource. Documentation of potential natural resource extraction locales and sources of paleoenvironmental data shall include field notes and photographs of each such locale or source, vicinity and larger-scale location maps, submeter GPS coordinates, and, for rock and mineral sources, hand samples of the rocks or minerals sufficient for formal identification. The research designs for the mountain and mesquite resource areas shall also provide for chronometric, source, and other germane laboratory analyses.

The research design for the BLM's Palen Dry Lake ACEC survey shall include a thorough review of the BLM's extant documentation on the ACEC and any other extant peer-reviewed and proprietary literature to determine whether a statistically valid sample of the archaeological inventory of the area already exists, and, if that sample does not exist, the project owner shall design and conduct a further class II pedestrian survey to acquire the requisite supplementary data to complete that sample.

The project owner shall provide for **PRGTL account shall fund** Native American involvement in the design, **monitoring**, and execution of the fieldwork for these surveys, and in the interpretation and presentation of the results of the surveys. **Eligible participating tribes shall include only those tribes listed with the BLM or the NAHC as affiliated with the Chuckwalla Valley. These tribes are listed after the verification for CUL-1B.**

The project owner **PRGTL account** shall conclude **fund the conclusion of** the efforts to inventory and document the above contributing elements of the PRGTL with the preparation and submission of one or multiple, comprehensive technical report(s).

#### Paleoenvironmental Study

The project owner **PRGTL account** shall develop **fund the development**, conduct, and prepare **preparation of** a report of a paleoenvironmental study germane to the period of significance for the Chuckwalla Valley portion of the PRGTL. The purpose of the study is to provide an updated and more reliably informed paleoenvironmental context to enhance the interpretation of the Chuckwalla Valley portion of the PRGTL. The research design for the study shall make use, at a minimum, of the available peer-reviewed and proprietary Quaternary science literatures, recent Quaternary research conducted in conjunction with the licensing and construction of the Genesis Solar Energy Project, the geoarchaeological research done in conjunction with the licensing and amendment processes for the amended project, new packrat midden analyses, and new Palen Dry Lake sediment core data.

The project owner **PRGTL account** shall provide for **fund** Native American involvement in the design, **monitoring**, and execution of the fieldwork for ~~these surveys~~ **this study**, and in the interpretation and presentation of the results of the ~~surveys~~ study. **Eligible participating tribes shall include only those tribes listed with the BLM or the NAHC as affiliated with the Chuckwalla Valley. These tribes are listed after the verification for CUL-1B.**

The project owner **PRGTL account** shall conclude **fund the conclusion of** the paleoenvironmental study effort with the preparation and submission of a comprehensive technical report.

## Petroglyph Study

The project owner **PRGTL account** shall develop **fund the development**, conduct, and submit **submission of** a technical report of a petroglyph study germane to the period of significance for the Chuckwalla Valley portion of the PRGTL. The purpose of this study is to provide for the integration of the numerous petroglyph sites within the PAA in one comprehensive study. The research design should incorporate recent studies conducted at the behest of Southern California Edison for mitigation related to the siting and construction of the Red Bluff substation's impacts to the North Chuckwalla Mountains Petroglyph District. Complete photo/GIS inventories of individual petroglyph motifs and of articulated motif panels shall be completed for Dragon Wash, Corn Springs, Chuckwalla Springs and McCoy Springs. In addition a reasonable sampling of the various smaller and disparate petroglyph motifs and panels throughout the Valley shall be inventoried. These disparate petroglyph sites can be ascertained from the list of known sites in the PAA that staff has collected as part of their independent analysis and from any newly discovered petroglyph sites located in conducting field inventories required above. Petroglyph data shall then be analyzed spatially to discern trends at a micro-site scale and at a macroscale across the Valley with other petroglyph sites and other cultural resources that contribute to the Chuckwalla portion of the PRGTL. A research design shall also propose targeted dating techniques (e.g., patina analysis), including super-impositioning analysis on a relevant subset of the sites in the Chuckwalla Valley.

The project owner **PRGTL account** shall provide for fund Native American involvement in the design, **monitoring**, and execution of the fieldwork for ~~these surveys~~ **this study**, and in the interpretation and presentation of the results of the surveys **study**. **Eligible participating tribes shall include only those tribes listed with the BLM or the NAHC as affiliated with the Chuckwalla Valley. These tribes are listed after the verification for CUL-1B.**

The project owner **PRGTL account** shall conclude **fund the conclusion of** the efforts to inventory, and document, **and analyze** the above contributing elements of the PRGTL with the preparation and submission of one or multiple, comprehensive technical report(s).

## Revision of Prehistoric Trails Network Cultural Landscape Context (PTNCL) and Field Manual

The project owner **PRGTL account** shall contribute to a special fund set up by the Energy Commission an amount sufficient to finance the revision of the extant draft context for the Prehistoric Trails Network Cultural Landscape (PTNCL) and the PTNCL's draft companion field manual. The revision shall recast the subject context to more explicitly consider the trail routes in Chuckwalla Valley, and the cultural resources which are thematic constituents of those routes, as elements that may contribute to the historical significance of the Pacific to Rio Grande Trails Landscape. The final technical reports for the class II surveys of the mountain and mesquite resource areas, the

paleoenvironmental study, and the petroglyph study shall inform the context revision.

**The PRGTL account shall fund Native American involvement in the design and execution of the revised PTNCL Field Manual. Eligible participating tribes shall include only those tribes listed with the BLM or the NAHC as affiliated with the Chuckwalla Valley. These tribes are listed after the verification for CUL-1B.**

#### Public Outreach

The ~~project owner~~ **PRGTL account** shall fund the production and distribution of video or web-based content the purpose of which is to interpret the Chuckwalla Valley portion of the PRGTL for the general public. The interpretive perspectives that are to inform said content shall derive from academe as well as from the Native American communities who ascribe heritage values to the valley. **Eligible participating tribes shall include only those tribes listed with the BLM or the NAHC as affiliated with the Chuckwalla Valley. These tribes are listed after the verification for CUL-1B.**

The ~~project owner~~ **Tribal Interest account of CUL-1B** shall fund initiatives the purposes of which are to directly, albeit partially, compensate Native American communities who ascribe heritage values to Chuckwalla Valley and, more specifically, to the broader PRGTL for PSEGS' degradation of the associative and emic ethnographic values of their ancestral homelands.

#### Treatment for Cumulative Effects

The project owner shall contribute **\$134,400** to a special fund to be comprised of ~~multiple owners of cumulative project contributors set up the~~ **extant** PTNCL fund set up **previously** by the Energy Commission to help finance the completion of the documentation program for the Chuckwalla Valley portion of the PRGTL.

The amount of the contribution shall be ~~\$70~~**35.00** per acre that the project encloses or otherwise disturbs. Any additional contingency contribution is not to exceed an amount totaling 20 percent of the original contribution. The contribution to the special fund may be made in installments at the approval of the CPM, with the first installment to constitute one-third of the total original contribution amount.

If a project is not certified, or if a project owner does not build the project, or, if for some other reason deemed acceptable by the CPM, a project owner does not participate in funding the PRGTL documentation program, the other project owner(s) may consult with the CPM to adjust the scale of the PRGTL documentation program research activities to match available funding. A project owner that funds the PRGTL documentation program and then withdraws will be able to reclaim their monetary contribution, to be refunded on a prorated basis.

**CUL-1B TREATMENT OF TRIBES AFFECTED BY IMPACTS TO THE CHUCKAWALLA VALLEY PORTION OF THE PACIFIC TO RIO GRANDE TRAILS LANDSCAPE (PRGTL)**

The project owner shall contribute a total of \$2,000,000 to a Tribal Interest account that the Energy Commission will set up to finance the completion of multiple programs set out in this condition, the collective purposes of which are to mitigate, in part, for the amended project's impacts to tribes' abilities to perpetuate their cultures as those abilities will be degraded as a consequence of the project's physical and visual damage to the Chuckwalla Valley portion of the PRGTL. The Compliance Project Manager (CPM) will administer the disbursement of these funds and provide regulatory oversight for the implementation of the multiple programs.

**Native American Advisory Group**

The CPM shall develop and create a Native American Advisory Group that shall meet, deliberate, and recommend to the CPM the use of the funds dedicated to the specific programs of this condition. Each participating affected Tribe (eligible participating tribes shall include only those tribes listed with the BLM or the NAHC as affiliated with the Chuckwalla Valley and as listed at the end of this condition) shall designate one representative and one proxy and determine in writing the extent of representation that has been delegated to the representative. The Native American Advisory Group shall meet no less than every two months on a continuing basis until such time when all special interest tribal funds have been distributed or two years from the time that the special fund has been established by the Energy Commission, whichever comes first. The Native American Advisory Group shall operate informally and by consensus. Meeting minutes shall be kept by the CPM of all Native American Advisory Group attendances and consensus recommendations. Meetings shall be attended by Energy Commission staff for the purposes of documenting recommendations. Advisory group attendance and recommendations will be posted on the Energy Commission website.

Funds shall be used to facilitate the Native American Advisory Group and disbursed by the CPM among all or some of three broad programs for the direct benefit of any or all affected tribes, as those three programs are further specified below.

1) Resource Management Planning

Funds may be used to facilitate representative tribal involvement in resource management planning efforts that may result from approval of a) the Palen Solar Electric Generating System, b) other resource management plans proposed in, or that partially include the Chuckwalla Valley, or c) tribal resource management plans on or near reservations of the representative tribes. Funds could include but are not limited to, employee or consultant costs, including travel and per diem to attend meetings, provide draft language for management plans or to gather pertinent background information that may contribute to a specific planning process.

2) Conservation Easement Funding

Funds may be used to facilitate tribal understanding, identification, negotiation or holding of conservation easements that are intended solely, or in part, to protect cultural resources or natural resources of cultural value to the representative tribe(s). The specific Conservation Easement concepts that appeal to the affected tribe(s) shall be recommended to the CPM by the Native American Advisory Group.

3) Cultural Preservation and Education Grants

Funds may be used to facilitate cultural preservation and education grants as proposed by any or all of the affected tribes. The specific grant themes and per-grant maximum amounts shall be recommended to the CPM by the Native American Advisory Group. Grant themes may include, but not limited to such activities as

- land acquisition for the purposes of tribal historic preservation or tribal cultural education,
- archival or ethnographic research and cultural practice documentation,
- elder youth cultural perpetuation/mentoring opportunities,
- training and workshops concerning aspects of historic preservation, and
- capital improvement and related funding for historic preservation restoration, rehabilitation or interpretation.

**VERIFICATION 1A: Treatment for Direct Visual Effects**

Field Inventory and Documentation of PRGTL Contributing Elements

1. ~~Within 90 days of the start of ground disturbance, the project owner shall submit, for the review and approval of the CPM, separate draft research designs for reconnaissance pedestrian (class II) surveys of the Palen, Coxcomb, Eagle, Chuckwalla, and McCoy Mountains Resource Areas, the Coxcomb Fringe and Raceway Mesquite Areas, and the BLM's Palen Dry Lake ACEC. The research~~

~~designs may be developed as a single document, multiple separate documents, or in any combination convenient to the project owner. Whether prepared separately or as one or several bundles, the research designs shall be explicit about the methods to be used in the survey of each area and the anticipated routes of the pedestrian transects through each area.~~

- ~~2. Prior to the project owner's submission of any one draft technical report of the results of the class II pedestrian survey of any one of the areas in verification 1 above, or of any combination of multiple areas, the project owner shall first submit, for the review and approval of the CPM, California State Parks DPR 523 Series form sets, complete per California State Parks instructions (CA State Parks 1995) and in accordance with the language of this condition of certification.~~
- ~~3. Upon the approval of the CPM, the project owner shall, within 14 days of said approval, formally submit each approved DPR 523 Series form set for each cultural resource to the Eastern Information Center of the California Historical Resources Information System and to the BLM's Palm Springs-South Coast Field Office.~~
- ~~4. Within 120 days of the CPM's approval of any research design for any of the areas in verification 1 above, the project owner shall submit, for the review and approval of the CPM, a draft technical report of the results of the class II pedestrian survey for each such area. Draft technical reports for the subject areas may be developed separately or in any combination convenient to the project owner.~~
- ~~5. Upon the approval of the CPM, the project owner shall, within 14 days of said approval, formally submit each approved technical report of the results of each class II pedestrian survey to the Eastern Information Center of the California Historical Resources Information System and to the BLM's Palm Springs-South Coast Field Office.~~
- ~~6. Should the project owner petition to suspend or terminate the license for the subject facility, subsequent to the execution of any fieldwork that had been done in partial fulfillment of this condition, but prior to the submission of draft DPR 523 Series form sets or draft technical reports, the project owner shall, no later than 90 days prior to filing a petition to suspend or terminate said license, submit complete draft form sets for each field-observed cultural resource to the CPM, the Eastern Information Center of the California Historical Resources Information System, and the BLM's Palm Springs-South Coast Field Office, and further submit to the CPM and the BLM's Palm Springs-South Coast Field Office organized and legible copies of all of the field documentation for the surveys that have been completed by that time and the drafts, however incomplete, of any technical reports in preparation.~~

### Paleoenvironmental Study

- ~~1. Within 90 days of the start of ground disturbance, the project owner shall submit for the review and approval of the CPM and in accordance with CUL-1 a draft research design for a paleoenvironmental study of the Chuckwalla Valley portion of the PRGTL. The draft research design shall be explicit about the sources of the data and the analytic methods that would be used to inform the study.~~
- ~~2. Within 180 days of the CPM's approval of the research design for the subject Chuckwalla Valley paleoenvironmental study, the project owner shall submit, for the review and approval of the CPM, a draft technical report of the results of that study.~~

### Petroglyph Study

- ~~1. Within 90 days of the start of ground disturbance, the project owner shall submit, for the review and approval of the CPM and in accordance with CUL-1, a draft research design for a petroglyph study of the Chuckwalla Valley portion of the PRGTL. The draft research design shall be explicit about the sources of the data and the analytic methods that would be used to inform the study.~~
- ~~2. Within 180 days of the CPM's approval of the research design for the subject Chuckwalla Valley petroglyph study, the project owner shall submit, for the review and approval of the CPM a draft technical report of the results of that study.~~

### Revision of Prehistoric Trails Network Cultural Landscape Context

- ~~1. Within 30 days of the start of ground disturbance, the project owner shall make a contribution to a special fund set up by the Energy Commission the purpose of which would be to completely finance the revision of the extant draft context for the Prehistoric Trails Network Cultural Landscape (PTNCL) and the PTNCL's draft companion field manual.~~

### Public Outreach

- ~~1. Within 180 days of the finalization of all research related to the mitigation of the Palen Solar Energy Generating System project's effects on cultural resources the project owner shall facilitate the convention of a steering committee that shall represent the interests of academe, Native American stakeholders, and state and federal agency regulatory interests in the production and distribution of video or web-based content, the purpose of which is to interpret the Chuckwalla Valley portion of the PRGTL for the general public. Major goals of the steering committee will be to frame the content to be produced, select the medium for the content's distribution, and select a contractor to deliver draft and final products. The steering committee will accomplish this goal through the development and release of a request for proposals, and the review and selection of the actual contractor. The selection of the contractor will occur within 90 days of the date of the convention of the steering committee.~~

- ~~2. The project owner shall bear the complete cost of all expenses associated with the production and distribution of the subject video or web-based content. Such costs shall include, but shall not be limited to, the convention of the steering committee and all subsequent steering committee meetings, the contractor selection process, and all work associated with the production and release of said content. The project owner shall also bear all travel and per diem expenses for steering committee members and for the contractor, as such costs are made part of the project owner's ultimate contract with that party.~~
- ~~3. Within 180 days of the finalization of all research related to the mitigation of the Palen Solar Energy Generating System project's effects on cultural resources, the project owner shall facilitate the convention of a steering committee that shall represent the interests of Native American stakeholders and include the participatory facilitation of state and federal agency staff in the development of compensatory initiatives for Native American communities who ascribe heritage values to Chuckwalla Valley. The major goal of the steering committee will be to develop and select the suite of initiatives to be funded. The selection of the initiatives will occur within 270 days of the date of the convention of the steering committee.~~
- ~~4. The project owner shall bear the complete cost of all expenses associated with the development of compensatory initiatives for Native American communities who ascribe heritage values to Chuckwalla Valley. Such costs shall include, but shall not be limited to, the convention of the steering committee and all subsequent steering committee meetings, and all work associated with the implementation of said initiatives. The project owner shall also bear all travel and per diem expenses for steering committee members and for any contractors, as such costs are made parts of the project owner's ultimate contracts with those parties.~~

- 1. The project owner shall transfer \$3,068,873.00 to the Energy Commission's PRGTL account no later than 90 days prior to the initiation of ground disturbance anywhere on the project site.**
- 2. No later than 10 days after receiving notice of the successful transfer of funds to the Energy Commission's PRGTL account, the project owner shall submit a copy of the notice to the Energy Commission's Compliance Project Manager (CPM).**

#### **Treatment for Cumulative Effects**

- 3. The project owner shall transfer \$134,400.00 to the Energy Commission's previously established PTNCL account no later than 90 days prior to the initiation of ground disturbance anywhere on the project site.**
- 4. No later than 10 days after receiving notice of the successful transfer of funds for any installment to the Energy Commission's and/or BLM's special PTNCL fund PTNCL account, the project owner shall submit a copy of the notice to the Energy Commission's Compliance Project Manager (CPM).**

<b>Proposed Mitigation Budget for CUL-1A</b>			
<b>Programs</b>	<b>Cost</b>	<b>Tribal Integration Percentage and Cost of Study</b>	<b>Total</b>
<b>Program Management</b>	<b>\$185,550</b>	<b>10% or \$18,555</b>	<b>\$204,105</b>
<b>Class II Surveys</b>	<b>\$1,370,640</b>	<b>20% or \$274,128</b>	<b>\$1,644,768</b>
<b>Paleoenvironmental Study</b>	<b>\$300,000<sup>1</sup></b>	<b>15% or \$45,000</b>	<b>\$345,000</b>
<b>Petroglyph Study</b>	<b>\$400,000</b>	<b>40% or \$160,000</b>	<b>\$560,000</b>
<b>PTNCL/PRGTL Context and Field Manual Revision</b>	<b>\$100,000<sup>2</sup></b>	<b>5% or \$5,000</b>	<b>\$105,000</b>
<b>Public Outreach</b>	<b>\$200,000<sup>3</sup></b>	<b>5% or \$10,000</b>	<b>\$210,000</b>
<b>Treatment for Cumulative Effects</b>	<b>\$134,400</b>	<b>0%</b>	<b>\$134,400</b>
<b>TOTAL</b>	<b>\$2,690,590</b>	<b>\$512,683</b>	<b>\$3,203,273</b>

### **VERIFICATION 1B**

- 1. The project owner shall transfer \$2,000,000 to the Energy Commission's Tribal Interest account no later than 90 days prior to the initiation of ground disturbance anywhere on the project site.**

<b>Proposed Mitigation Budget for CUL-1B</b>	
<b>Programs</b>	<b>Costs</b>
<b>Native American Advisory Group</b>	<b>\$150,000</b>
<b>Program Implementation Funds</b>	<b>\$1,850,000</b>
<b>TOTAL</b>	<b>\$2,000,000</b>

<sup>1</sup> This figure is \$100,000 greater than the figure proposed in staff's opening brief (tn201338:6). The increase is responsive to new information from BLM Palm Springs Field Office staff that the costs of paleoenvironmental analyses have been higher on other recent projects in Palm Springs Field Office portion of the California Desert Conservation Area, and also that the costs of the laboratory analysts' field collaboration on the collection of paleoenvironmental samples has been inadvertently left out of recent paleoenvironmental budgets.

<sup>2</sup> This figure is \$17,000 greater than the figure proposed in staff's opening brief (tn201338:6). The increase is responsive to new information from BLM Palm Springs Field Office staff that the costs of the revisions to the PTNCL/PRGTL context and field manual, on the basis of their cost to date under 09-AFC-8C and 09-AFC-6C, would be greater than the initially budgeted amount.

<sup>3</sup> This figure is \$100,000 greater than the figure proposed in staff's opening brief (tn201338:6). The increase is responsive to new information from BLM Palm Springs Field Office staff that the costs of public outreach initiatives have consistently exceeded the minimal budgets afforded them on other recent projects in the jurisdiction of the Palm Springs Field Office.

**Affected Native American Tribes Affiliated with the Chuckwalla Valley and Listed on**

**Either the BLM or NAHC Tribal Consultation Lists**

**Aqua Caliente Band of Cahuilla Indians**

**Augustine Band of Cahuilla Indians**

**Cabazon Band of Mission Indians**

**Cahuilla Band of Mission Indians**

**Chemehuevi Indian Tribe**

**Cocopah Indian Tribe**

**Colorado River Indian Tribes**

**Fort Mojave Indian Tribes**

**Fort Yuma Quechan Tribe**

**Moronggo Band of Mission Indians**

**Ramona Band of Mission Indians**

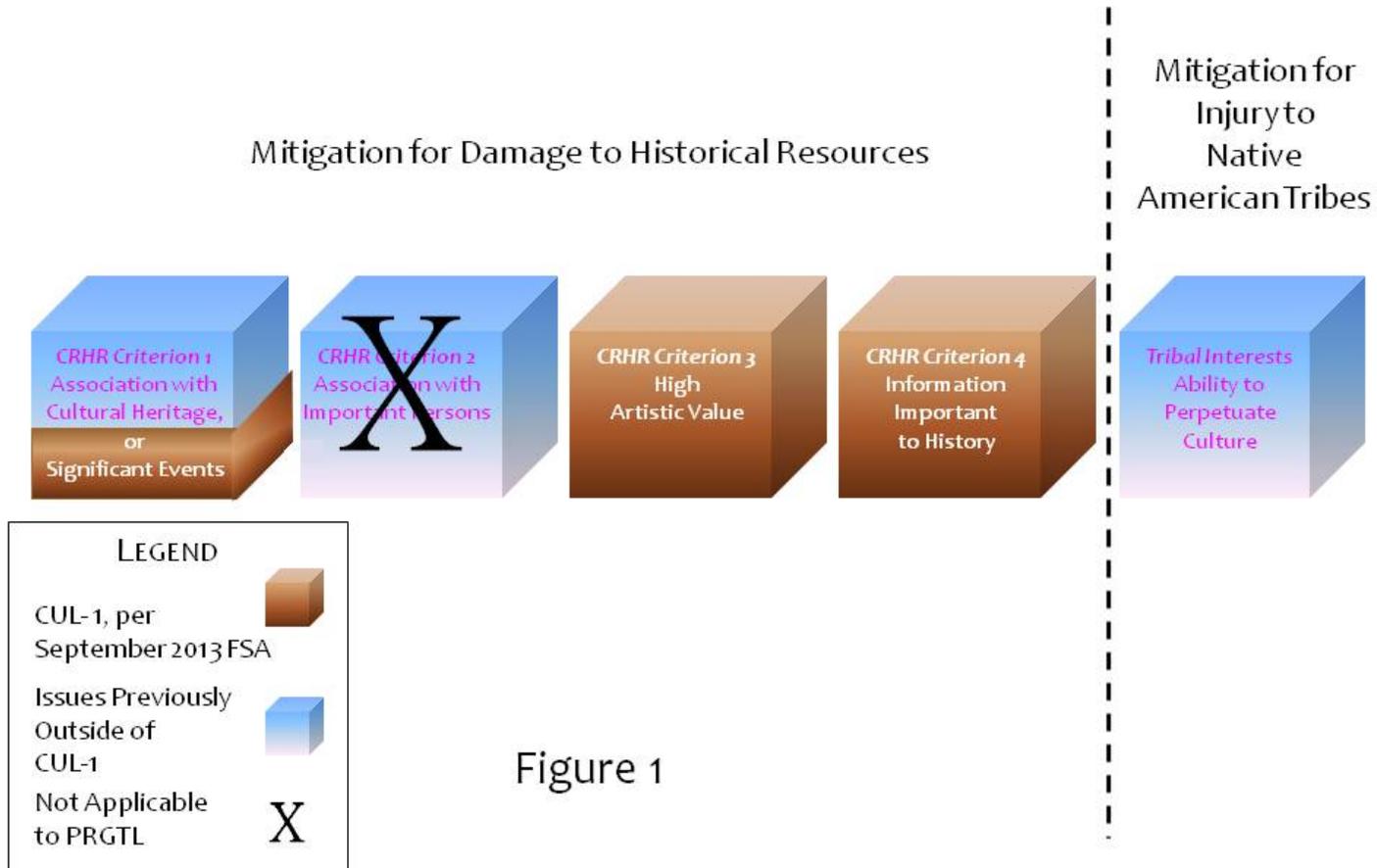
**San Manuel Band of Mission Indians**

**Soboba Band of Luiseno Indians**

**Torres-Martinez Desert Cahuilla Indians**

**Twenty-nine Palms Band of Mission Indians**

# Mitigation for Historical Resources and Native American Tribes, Palen Solar Energy Generating System (09-AFC-7C)



# Attachment 1

## Energy Commission Cultural Resources Unit's Proposal to Address the January 7, 2014 Committee Conference on the Presiding Member's Proposed Decision and the Siting Committee's Thoughts on the Renegotiation of CUL-1, Palen Solar Energy Generating System (09-AFC-7C)

### The Regulatory Context for CUL-1 in Part B of the Final Staff Assessment and What CUL-1

#### Actually Proposes to Do

The proposed revisions to condition of certification **CUL-1** in the Final Staff Assessment (FSA) for the Palen Solar Electric Generating System (PSEGS) amendment have carefully defined objectives, the purposes of which are to ensure that the Energy Commission adequately fulfills the agency's obligations, under CEQA, to protect significant historical resource values. The defined objectives are performance standards under CEQA that staff has developed to address multiple significant adverse effects the amended project would have on the different value sets for particular historical resources the Siting Committee determined to be significant (CEC 2013d:6.3-59 through 6.3-62). Each specific performance standard is a requisite and indispensable element of staff's portion of the FSA.

The revisions to the mitigation measures that staff recommends in the FSA for **CUL-1** implement performance standards to address *some* of the potentially significant adverse effects that the amended project would have on the Chuckwalla Valley portion of the Pacific to Rio Grande Trails Landscape (PRGTL). The revised mitigation measures in **CUL-1** address, more specifically, what would be the amended projects

1. dramatic visual degradation of the PRGTL's ability to convey the values it possesses, under the California Register of Historical Resources' (CRHR) Criterion 1, for its association with events that have made a significant contribution to the broad patterns of regional history, and Criterion 3 for its possession of high artistic value, and
2. cumulatively considerable contribution to the regional loss of the historic information values, under the CRHR's Criterion 4, which the archaeological deposits on the facility site represent.

It is important to the post-PMPD discussions about the revised mitigation measures in **CUL-1** to note what significant project adverse effects the measures do not address. **CUL-1** was not developed to address, nor does it address what would be the amended projects

1. dramatic visual degradation of PRGTL's ability to convey the values it possesses, under the CRHR's Criterion 1, for its association with the cultural heritage of California, more specifically, its association with regional Native American cultural heritages, and

2. effects on the different Native American tribes which have material or ancestral connections to the Chuckwalla Valley.

The intent of staff's proposed inclusion of tribal integration in the initial budget for **CUL-1** mitigation (CEC 2013c) is to increase the success of those programs and is not itself mitigation for significant effects either to the physical resources to which Native American communities ascribe cultural heritage values, or to the communities themselves.

### **Committee Conference's Opening Statement**

The opening statement at the January 7, 2014 Palen Committee conference, regarding **CUL-1** (CEC 2014a), can be summarized as follows:

- PSEGS would result in "significant unmitigable *cultural impacts* affecting Native Americans." [emphasis added]
- "... the approval of the project would be experienced as a cultural loss by Native American tribes."
- "... there are at least two interests that the Committee needs to consider when we look at *cultural resources impacts* ..." [emphasis added]
- [Interest 1] "...generalized state interest in the conservation and documentation and better understanding of the many and varied cultural and historical resources within the State of California." [Historic preservation of historical resources under CEQA—project effects to cultural resources or "cultural resources impacts" referred to above]
- [Interest 2] "...a particularized set of interests and concerns of Native Americans ... in these same resources and landscapes." [Native American issues which fall partly under CEQA and partly under environmental justice orders and guidelines—for the former, project effects to cultural resources or "cultural resources impacts," and for the latter, project effects to Native American culture, to the Native Americans themselves or "cultural impacts" referred to above]
- "**CUL-1** seems too oriented towards the State interests and not as well suited to the Native American concerns that the Committee heard in this proceeding."
- Commissioner Douglas acknowledged the applicant's previously stated belief that **CUL-1** is burdensome and open-ended, and noted staff's proposal of a budget for **CUL-1** in staff's opening brief (CEC 2013c).
- "We heard that that culture and that belief system is inextricably tied to the landscape and that a visual impact from this, or another project, has to them not just a visual implication [effect], but a cultural and a spiritual, even, implication [effect] within the belief system and the traditions, that they are working hard to pass on to future generations. This is a significant impact" (CEC 2013c:18).
- "Ideally, CRIT and other interested Native American tribes could take an opportunity now to work with staff and the Applicant to devise such a mitigation approach [An approach wherein tribes have a "significant voice in developing the mitigation proposal for cultural resources impacts"] (CEC 2013c:19)

- Alternately, Commissioner Douglas suggests that staff and the project owner could redraft the condition to accommodate open and responsive input from tribes subsequent to any approval of the amended project.
- “The PMPD found that the PSEGS project would have a disproportionate impact on Native Americans, therefore, to the extent possible, we think the mitigation should be devised to address the impact of the project on Native Americans” (CEC 2013c:19).

Staff believes the separation and articulation of the different effects that the proposed project would have on *places* and *people* could facilitate constructive and unambiguous negotiations over **CUL-1** that are more in line with the guidance in the opening statement.

The primary purpose of **CUL-1** is to mitigate the significant visual effects that the construction and operation of PSEGS would have on historical resources, the types of old, inanimate material remains and geographic places that are the exclusive focus of cultural resources analyses under CEQA. Considerations of how PSEGS, or any other project would affect *a people* and/or *a culture* are outside of the normal scope of CEQA cultural resources analyses.

For staff to be able to successfully enact the Siting Committee’s recommendation to better address “Native American concerns,” it is useful to identify which CEQA requirements **CUL-1** meets and which ones it does not meet, and what additions can be made to **CUL-1** to fulfill the Committee’s recommendations. **CUL-1** was developed and drafted by staff to mitigate for the fact that the construction and operation of PSEGS would irreparably destroy the ability of the Chuckwalla Valley portion of PRGTL to convey its historical significance under Criterion 1 of the CRHR, because the visual degradation of the project would compromise the integrity of the landscape’s setting, feeling, and association. The primary efforts set out to address the Criterion 1 effects was to better document the damaged landscape with the intent that additional, more in-depth information would inform outreach programs for the general, non-Native American and the Native American public’s. Provisions were set out to provide for the project owner’s production of a video or website for the general public, and to provide for the project owner’s support of unspecified initiatives to be developed and implemented by the broader Native American community. **CUL-1** also sought to mitigate, under CRHR Criterion 3, for the project’s degradation of the visual integrity of rock art panels that are contributing elements of many of the traditional cultural places that were identified in the FSA. A third purpose of **CUL-1** was to mitigate, under CRHR Criterion 4, for the project’s cumulatively considerable effects to the information values of archaeological deposits on the PSEGS facility site. Subsequent to the publication of the FSA and to the evidentiary hearings, staff included a proposal to fund **CUL-1** as part of staff’s opening brief (CEC 2013c). The draft budget in that proposal provides funds for the implementation of a suite of investigations to document the landscape, to address the project’s cumulative effects on onsite archaeological deposits, to develop and implement generally defined public outreach initiatives, and, in order to make these initiatives successful, for integration of tribal involvement in aspects of the investigations. What **CUL-1** does not do is explicitly identify substantive mitigations to compensate the broader Native American community, under Criterion 1, for the loss of their ability to experience the cultural heritage values associated with the Chuckwalla

Valley portion of PRGTL. The net result of **CUL-1** is that it somewhat mitigates for the project's significant environmental effects upon the Chuckwalla Valley portion of the PRGTL, but does not mitigate for the issues are most important to the affected Native American tribes.

### **How the Opening Statement at the Committee Conference Comports with the PMPD on the**

#### **Issue of CUL-1 (CEC 2013d: 6.3-48—6.3-57)**

The Siting Committee statements in the December 13, 2013 PMPD, reinforce staff's recommendation that the Chuckwalla Valley portion of PRGTL is eligible for listing in the CRHR, and thereby establishes a lead agency determination of CRHR eligibility for the full Commission's consideration. The Committee establishes this determination by reiterating how the construction and operation of the amended project would degrade the landscape's ability to convey its historical significance (CEC 2013d:6.3-51). The Committee statement further notes the construction and operation of PSEGS would constitute a significant impact on the environment, an impact which would require mitigation under CEQA (CEC 2013d:6.3-52). The Committee ultimately found that there is a clear nexus between the mitigations set out in **CUL-1** to address the amended project's direct visual effects to the subject landscape, and the character of those effects (CEC 2013d:6.3-54). The Committee found further that **CUL-1** served the public interest to gather information on the landscape and to disseminate it to "both compensate the public for the degradation of the landscape itself, and to foster a more comprehensive appreciation of the potential landscape loss associated with utility-scale renewable energy development" (CEC 2013d:6.3-55). The Committee concludes with the finding that **CUL-1** also constitutes reasonable mitigation for the amended project's cumulative effects (CEC 2013d:6.3-57).

The Siting Committee, in its opening statement at the January 7, 2014 committee conference, expands on its findings in the PMPD. The Committee's opening statement elaborates on the adverse effects of the amended project on the Native Americans experience of the landscape, and the need by the Commission to more fully consider and address the effects of the loss of that experience on the Native Americans' ability to perpetuate their respective cultures.

### **Colorado River Indian Tribe's (CRIT) and Petitioner's Positions on CUL-1 prior to and**

#### **Subsequent to the Publication of the PMPD**

CRIT statements regarding **CUL-1** can be summarized as follows:

- It is extremely difficult to figure out a way to mitigate the loss of an entire cultural landscape that comes close to addressing the tribal losses.

Petitioner's statements regarding **CUL-1** can be summarized as follows:

- **CUL-1** is burdensome, open-ended, and has insufficient nexus to the identified adverse impacts of the amended project (CEC 2014a:17)

- Staff can set workshop dates to start talking about **CUL 1**

### **How, in Theory, the Conference Committee's Thoughts on the Renegotiation of CUL-1 Could**

#### **Be Made to Comport with the Original Regulatory Intent of CUL-1**

In addition to the mitigation measures already proposed, negotiated revisions to **CUL-1** should include more robust provisions to mitigate for the loss of the broader Native American community's ability to experience the cultural heritage values associated with the Chuckwalla Valley portion of PRGTL, and new language developed and drafted to mitigate for the manner in which the loss of that experience significantly interferes with Native Americans' ability to perpetuate their respective cultures. Per the Siting Committee's recommendations, these revisions should reflect substantive input that is the result of intensive consultation with the Native American communities having material or ancestral affiliation to the area.

## REFERENCES

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- CEC 2013a. California Energy Commission (tn200442), *Final Staff Assessment for the Palen Solar Electric Generating System, Part A, Amendment to the Palen Solar Power Project* (09-AFC-7C). September 10, 2013.
- CEC 2013b. California Energy Commission (tn200564), *Final Staff Assessment for the Palen Solar Electric Generating System, Part B, Amendment to the Palen Solar Power Project* (09-AFC-7C). September 23, 2013.
- CEC 2013c. California Energy Commission (tn201338), *Energy Commission Staff Opening Brief*, Palen Solar Electric Generating System (09-AFC-7C). November 26, 2013.
- CEC 2013d. California Energy Commission (tn201434), *Presiding Member's Proposed Decision*, Palen Solar Electric Generating System (09-AFC-7C). December 13, 2013.
- CEC 2014a. California Energy Commission (tn201546), *Palen Transcript of the Committee Conference held January 7, 2013*, Palen Solar Electric Generating System (09-AFC-7C). January 10, 2014.
- CEC 2014b. California Energy Commission (tn201619), *Invitations to Tribes and Tribal Leaders to Participate in California Energy Commission/Tribal Consultation*, Palen Solar Electric Generating System (09-AFC-7C). February 3, 2014.
- PSH 2014. Palen Solar Holdings (tn201700), *Palen Solar Holdings, LLC's Proposed Revisions of Staff's Condition of Certification CUL-1*, Palen Solar Electric Generating System (09-AFC-7C). February 10, 2014.