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Palen Solar Energy Generating System

Please accept the attached comments of the Desert Protective Council on the Palen Solar Energy Generating System. Thank you very much. Terry Weiner

Additional submitted attachment is included below.



The Desert Protective Council, Inc.

P.O. Box 3635, San Diego, California 92163-1635

protectdeserts.org

July 30 2014

To: The California Energy Commission

Re: Palen Solar Energy Generating System

Docket No. 09-AFC-07C

Dear Commissioners,

Thank you for providing the opportunity for the Desert Protective Council (DPC) to submit comments on the Palen Solar Power Tower project. The Desert Protective Council, founded in 1954, is a non-profit 501(c)(3) membership organization with nationwide members.

The mission of the Desert Protective Council is to safeguard for wise and reverent use by this and succeeding generations those desert areas of scenic, scientific, historical, spiritual or recreational value and to educate children and adults to a better understanding of the desert.

1-The Amended Petition for Palen Solar Project, aka the Palen Solar Energy Generating System (PSEGS), fails to acknowledge that in multiple resource categories, the impacts of the PSEGS project are greater than its predecessor the Palen Solar Power Project (PSPP). The current project has comparable terrestrial disturbance acreage to the PSPP, but intrudes more into the sand transport corridor and removes habitat for the Mojave Fringe-Toed Lizard (MFTL), the desert kit fox, the burrowing owl and other terrestrial wildlife. The PSEGS would use power tower technology of unprecedented height, which exponentially increases the visual, cultural and wilderness impacts, and poses a suite of entirely new aerial impacts to aerial habitat for resident and migrating birds and bats. The project site is on the Palen Dry Lake, which is a very important cultural site for Native Americans. Not only will the project disturb the soil of the lake bed and damage archaeological sites, it will degrade the “cultural landscape” which is important to Native American lifestyle and traditions. The proposed power tower technology will create a vast area of concentrated solar heat/energy (flux), which will predictably incinerate or disable protected avian wildlife, including migratory birds, Golden Eagles and bats, not to mention invertebrates upon which birds and bats prey for sustenance. Thus the new project has potential to harm vast numbers of birds, in violation of federal and state laws. The evidence is accumulating that these impacts will occur through agency documentation in and around the Ivanpah Solar Energy Generating System.

2-Further, the purported benefits of the revised project’s power tower technology are no greater, and in certain ways even less, than the predecessor PSPP project. The PSEGS proposal, too, fails to incorporate power storage, but unlike its predecessor, the current power tower project has less thermal inertia. Solar thermal power plants are more expensive to build, operate and maintain, and they burn millions of gallons of natural gas – a potent greenhouse gas. The only strong rationale to build solar thermal is to take advantage of thermal inertia or power storage to avoid intermit power flows. However, in earlier CEC hearings the applicant acknowledged that its power tower technology has

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inherently less thermal inertia than the solar trough technology (proposed by the former PSPP project) and that incorporating thermal storage into the project as designed is infeasible both financially and technically. Please see:

http://docketpublic.energy.ca.gov/PublicDocuments/09-AFC-07C/TN201110_20131104T160438_102913_Transcript_of_the_Palen_Evidentiary_Hearing.pdf

3-There is an apparently unresolved discrepancy between the dimensions cited in the CEC Final Staff Assessment and the Petition for Amendment and the BLM’s calculation. The CEC SRSG (solar receiver) is 130 feet and the BLM uses 68 feet as their calculation. See chart below copied from original BLM and CEC documents. Will the tower rise to 620 feet, as cited in the CEC Petition to Amend or will it be 750 feet, as referenced in the BLM DEIS?

Document	Tower height/feet		SRSG – solar receiver	Total Height	Reference (Date)
CEC Petition to Amend	620	Topped by	130	750	Page 2-8 (12/2012)
CEC-FSA	750	Topped by	130	880	Page 4.12-4 (9/2013)
BLM-DEIS	750	Including	68	750	Page 4.18-7 (7/2013)

CEC Petition to Amend: Docketed 12/2012, page 2-8
all citations copied and pasted from original documents

4-The DEIS has failed to provide a legally sufficient purpose and need statement and project alternatives; failed to consider project modifications, dismissed viable project alternatives that could eliminate adverse impacts of the PSEGS technology; failed to adequately perform baseline data collection for various resources at risk (including but not limited to avian and cultural resources); failed to adequately analyze the impact of the proposed project on resident and migratory birds; relied on uncertain or speculative mitigation measures to avoid or minimize project impacts on avian and other resources; failed to adequately mitigate identified impacts; deferred development of mitigation measures to avoid or minimize impacts on resident and migratory birds (and other resources) until *after* the proposed project’s approval; and failed to identify significant direct, indirect and cumulative impacts of the project. Additionally, the failure to properly analyze and identify project impacts, and potential approval of the project, clearly constitute violations of other laws, regulations and policies by which BLM is bound.

5-BLM has provided no justification or rationale for its decision to consider and analyze only an alternative for a *solar thermal* facility rather than one of a different solar technology. By improperly limiting the range of alternatives, BLM failed to identify alternative(s) specifically designed to maintain the existing sand transport corridor supporting the local population of Mojave Fringe Toed Lizard (MFTL). Sand transport is the key ecosystem process for this species and the local population is genetically adapted to the hotter drier conditions expected with global warming. Thus, impacts to this population would have species-level impacts on retaining a genetic pool essential for adaptation of MFTL populations to the north in the Mojave Desert. BLM acted arbitrarily and capriciously by not

analyzing a stand-alone alternative designating the sand transport portion of the project application area as a right of way exclusion area for conservation of the MFTL and its habitat.

- In also rejecting other locations for the proposed project, BLM has foreclosed opportunities to analyze and ultimately choose sites for the project that would potentially have far fewer and less severe impacts on public land resources. BLM's failure to search for and analyze alternative project locations, technologies and configurations, especially in light of the significant adverse biological impacts is a violation of NEPA, and may also preclude conservation strategies for bighorn sheep, MFTL, desert tortoise and various covered bird species under the Desert Renewable Energy Conservation Plan in which BLM is a cooperator.
- In this regard, BLM has provided no rationale for its failure to solicit public comment on a project using solar photovoltaic (PV) technology, and thereby avoid deploying the large power towers. This failure is especially egregious in light of the U.S. Fish and Wildlife Service (USFWS) concerns expressed in its August 29, 2012 comments on comparable power towers at the proposed Hidden Hills project. Given the known impacts of power towers to resident and migratory protected birds, BLM has acted arbitrarily and capriciously by limiting its consideration solely to No Action or to a solar thermal facility.

6-NEPA requires agencies to “[r]igorously explore and objectively evaluate all reasonable alternatives” 40 C.F.R. § 1502.14. The courts have found that “The existence of a viable but unexamined alternative renders an environmental impact statement inadequate.” And that the “touchstone for our inquiry is whether an EIS’s selection and discussion of alternatives fosters informed decision-making and informed public participation.” BLM has violated NEPA by completely ignoring the alternative of large-scale solar rooftop PV and local distributed generation in the built environment. As the Council on Environmental Quality has stated,

“Section 1502.14 [of the NEPA regulations] requires the EIS to examine all reasonable alternatives to the proposal. In determining the scope of alternatives to be considered, the emphasis is on what is “reasonable” rather than on whether the proponent or applicant likes or is itself capable of carrying out a particular alternative. Reasonable alternatives include those that are practical or feasible from the technical and economic standpoint and using common sense, rather than simply desirable from the standpoint of the applicant.”

- *A 2007 study conducted by Navigant Consulting for the California Energy Commission* estimated the combined solar PV capacity potential of residential and commercial rooftops in California to be 50,255 megawatts in 2010 and 67,889 megawatts in 2016.

7-The BLM DEIS has also completely ignored the alternative of siting this project on the nation’s millions of acres of disturbed, degraded and contaminated lands.

The Environmental Protection Agency (EPA), which is obligated to review all environmental impact statements, stated strongly in scoping comments on the 2009 Solar Programmatic EIS to the Department of Interior that the BLM should include a DG alternative in its analysis. In addition, the EPA “strongly encouraged BLM, DOE, and other interested parties to pursue siting renewable energy projects on disturbed, degraded, and contaminated sites, before considering large tracts of undisturbed public lands.” (Solar Done Right pg.16)

In its original September 2009 scoping letter on the Programmatic EIS, EPA identified hundreds of thousands of acres of contaminated sites around the country. Following the same methods used by the

National Renewable Energy Lab to identify suitable concentrating solar generation sites, EPA identified a “technical potential” of 920,000 MW of solar generation.

The EPA’s Office of Solid Waste and Emergency Response has been identifying abandoned mine lands, brown fields, Resource Conservation and Recovery (RCRA) sites, and federal and non-federal Superfund sites that may be suitable for solar and other non-fossil- fuel energy projects.

Please see also the EPA’s ‘*Repowering America’s Lands Report*’: <http://www.epa.gov/oswercpa/> and http://www.epa.gov/oswercpa/docs/repower_contaminated_land_factsheet.pdf

8-Although the DSEIS acknowledges that there would be unavoidable adverse visual, i.e., aesthetic, impacts to travelers along the Interstate 10 freeway, it goes on to conclude that there are no traffic or transportation hazards presented by the project. The Executive Summary does allude to “impacts to pilots... and drivers along the I-10 due to anticipated glint and glare from facility lighting.” And the Public Health section does analyze reflectivity, stating that concentrated solar power systems tend to be highly reflective, i.e., the percent of sunlight reflected is about 90 percent, translating to 900 W/m² reflected (FAA, 2010a). According to researchers at Sandia National Lab, flash blindness for a period of 4-12 seconds (i.e., time to recovery of vision) occurs when 7-11 W/m² (or 650-1,100 lumens/m²) reaches the eye (FAA, 2010a).

- In spite of the above, the analysis of Public Health and Safety Impacts only opines that there may be impacts to traffic, from the towers. But it fails to provide substantive analysis to quantify the driving hazard created by glint and glare of 170,000 heliostats within one-quarter mile of heavily traveled Interstate 10. In fact, entirely without substantiation the DSEIS dismisses the notion that drivers can be distracted by contending that highway drivers have a “narrower field of view than other users... and are expected to be focused mainly on vehicle operation and road conditions in the immediate foreground.” On the contrary, per the 2013 California Driver Handbook, at p. 69, “Driver distractions” are chief among the most common causes of collisions.
- In this regard, the project proponent has not adequately described the extreme level of brightness of white light radiating from the power-tower-top heat collectors in layman’s terms as compared to the usual spectrum of brightness encountered in daily life. This information is necessary for the reviewer to understand the potential distraction effect on the many tens of thousands of drivers passing the project each day at close proximity. Nor has the proponent presented any analysis of potential deleterious effects to eyesight of those workers, drivers or casual observers in proximity to the site who may look directly at the heat collector’s concentrated light over a period of time.

9-The BLM admits that recreation-related use of lands could be *indirectly* impacted from the cumulative impacts of projects in the area, which could result from the change in the overall character of undeveloped BLM-administered lands from development of the cumulative projects. “*Changes to the visual landscape, impacts on vegetation, closure and development of roads, and related effects on wildlife may alter or reduce the recreational value of these lands for users seeking these attributes. The PSEGS would have a substantial contribution to the cumulative change in character that would result from the cumulative scenario primarily due to its visibility from recreational use areas up to 30 miles away.*” This having been stated, the Cumulative Impacts to Recreation section’s final sentence is: “However, most of the projects in the cumulative scenario are in areas with low recreation use.” The imprecise estimates of historic low recreation use in these surrounding Class 1 and Class 2 areas

(informally gathered by intermittently-present BLM staff, and from a few fees sites in the area) is not a valid reason to give short shrift to the cumulative impacts from these projects. Dismissing in-depth discussion of cumulative impacts because of low recreation use is short-sited at best, given California's predicted population increase in upcoming decades. It completely ignores the potential cumulative loss of wild desert visual landscapes, loss of recreation quality in wilderness and other remote desert areas, impacts on vegetation, wildlife and biodiversity from climate change and from other non-energy development projects in the CDCA, including development of more roads, housing developments, increasing off-road vehicle recreation, and military expansion. The potential cumulative impacts and habitat fragmentation from these non-energy developments in the CDCA should be considered within this Cumulative Impacts section.

10-The impacts of the PSEGS to Native American cultural resources and the cumulative impacts to broad swaths cultural landscapes have not been adequately addressed. The Desert Protective Council incorporates by reference all written and oral comments submitted on the PSEGS by the Native American Tribes, including the oral comments delivered to the CEC at the July 29-31 2014 hearings.

11-Baseline Information for the project continues to be lacking in violation of NEPA. The PSEGS environmental analysis does not provide adequate information upon which to base its analysis. This deficiency is especially aggravated in the issues of impacts to Golden Eagle, migratory birds, bats, visual resources, and cultural resources. For example, in the latter case, with regard to impacts to cultural sites that are eligible for listing on the National Register of Historic Places the DSEIS summarizes that the "number of sites, including how many prehistoric and historical period sites eligible under which criteria, will be disclosed in the Final EIS for the PSEGS based on information and studies that are in progress as of the issuance of the Draft SEIS. Final determinations of the number and types of direct, indirect, and cumulative effects of the PSEGS are not known at this time."

- Moreover, BLM has failed to perform the sub-surface studies that are mandated by NEPA and NHPA for this project that proposes to drill 170,000 heliostat supports 12 feet into the ground with absolutely no mechanism to determine what artifacts are at risk of being damaged or destroyed in the process. This is a very similar issue raised by many public comments with regard to BLM's deficient NEPA review for the nearby Genesis Solar project, and which were disregarded by BLM. Predictably, BLM's failure to perform requisite studies subsequently caused stoppage of the Genesis project when important and irreplaceable cultural resources were uncovered during construction. The distinction here is that because the PSEGS largely avoids major grading, the damage will not likely be discovered, yet any sub-surface resources located under the PSEGS project site will certainly be damaged by the driving of 170,000 heliostats. BLM's treatment of cultural resources is grossly deficient.

12-Additionally, the DSEIS gives short shrift to the analysis of potential impacts to protected birds caused by the project's ultra high power towers with heat collectors, which will radiate 800-plus degree heat and white light with eyesight-damaging intensity. CEC analysis indicates that impacts to both resident birds (which would include Golden Eagles) and migratory birds of all kinds are likely to be adversely impacted with disabling injury or incineration. Yet, as recently as September, 2013 BLM advised CEC that it did not have adequate baseline data on Golden Eagle for the project. (*The entire CEC docket for the project is herein incorporated by reference*). Failure to gather reliable baseline information and to adequately address this issue is a violation of NEPA, and approval of a project with

this known impact to migratory birds is a clear violation of the Migratory Bird Treaty Act, and other Laws and BLM Policies.

13-The mitigation measures proposed to reduce significant project impacts Are speculative, uncertain or delayed. BLM has failed to properly assess project impacts on sensitive biological resources. But, for those impacts which the environmental analysis does recognize, measures purported to mitigate the adverse impacts of the proposed project consist primarily of “nested” habitat compensation at a 1:1 ratio for habitat impacted for a suite of species, many of which have distinct habitat requirements. However, this alleged mitigation assumes: 1) that available private land habitat of the appropriate nutrient constituents and scale is available and suitable of supporting not only desert tortoise, but also wide-ranging species such as kit fox and the American badger; 2) such tracts of land are available; 3) that these tracts are available in the region of impact, and; 4) that these lands will be precluded from the effects of nearby development.

- Experience indicates this may not be the case with mitigation for solar projects. For instance, to date CDFW has been acquiring land in the Chuckwalla Bench area between the Chocolate Mountains Gunnery Range and the Chuckwalla Wilderness to mitigate for solar project impacts to desert tortoise (and other species) from as far away as Ivanpah Valley. Notwithstanding the fact that it is improper to attempt to mitigate for impacts to desert tortoise from the Northern and Eastern Tortoise Recovery Unit by buying habitat in the Sonoran Chuckwalla Recovery Unit, hundreds of miles to the south and in a different desert ecosystem – notwithstanding that fact, even the acquired Chuckwalla Bench mitigation land is evidently subject to development effects. BLM has recently approved testing for wind project development on some 25,000 acres of holdings in and around this alleged “mitigation” area.
- Measures to avoid or minimize adverse impacts on sensitive biological resources are a key component of the NEPA process and also relevant to BLM in meeting its responsibilities under laws, regulations and policies for the protection of public lands and various resources on those lands. In particular, we call attention to BLM’s responsibilities with regard to the ESA, FLPMA, Migratory Bird Treaty Act, Executive Order on Migratory Birds, and BLM Manual 6840 – Special Status Species Management.
- According to the project documents it is BLM’s intent to require certain additional studies and development of mitigation and, or conservation measures for impacted species, including protected birds, *after the DSEIS and/or after the project is approved*. This delay will deprive the public of the opportunity to participate in the review and analysis of these measures and to understand the extent to which they may contribute to avoiding or minimizing certain adverse impacts. The proposed studies are not mitigation measures. The additional studies, mitigation and/or conservation measures proposed-to-be developed without public participation include the Bird and Bat Conservation Strategy, the desert tortoise translocation plan, studies to determine the effect of the project on birds, and the eagle take permit.
- These studies, plans and strategies as well as the additional mitigation measures derived from them, need to be developed as part of the NEPA analysis for the proposed project and the public needs to be provided an opportunity to participate through review, analysis and comment on them at the DSEIS stage. The approach taken by the BLM is far too late, and this delayed

approach precludes full and informed public participation as well as potential opportunities to minimize and mitigate to the greatest extent possible the anticipated impacts of the project.

14-The Draft Environmental Impact Statement lacks an adequate analysis of the effects of the cumulative impacts of development, including renewable energy development, within the East Riverside Solar Energy Zone. The BLM has simply listed projects and their acreages without providing any specific quantitative or qualitative information on the resource impacts of each and how these impacts interact cumulatively. This holds true especially for biology, ecosystem processes, habitat connectivity and the opportunities for climate change adaptation. Simply identifying existing and reasonably foreseeable activities in the local area is not sufficient. The effect of these activities combined with this particular proposal project on the affected habitat and its resources needs to be fully analyzed.

15-The DSEIS Is Inconsistent with the CEC Process. BLM's analysis of impacts is not only internally inconsistent (for instance, declaring that project impacts to MFTL are "minimized" on one hand while acknowledging they are unmitigable on the other) – but also its analysis and conclusions are inconsistent with those presented in the CEC Final Staff Assessment (FSA). This applies to MFTL, avian resources, etc. We hereby incorporate the full FSA by reference.

16-Approval of the Project Would Violate National Historic Preservation Act, the Bald and Golden Eagle Act, the Migratory Bird Treaty Act, and other Laws and BLM Policies.

- As outlined above, BLM's treatment of potential impacts to protected birds caused by the power tower technology is patently inadequate. Moreover, approval of a project with a known predictable impact to migratory birds is a clear violation of the Migratory Bird Treaty Act, and other Laws and BLM Policies.

17-The DSEIS for the Project is Inconsistent and in Violation of BLM Manual 1745 – Introduction, Transplant, Augmentation and Reestablishment of Fish, Wildlife and Plants. BLM Manual 1745 governs the introduction, transplant, augmentation and reestablishment of fish, wildlife and plants on public lands. It contains BLM policy and guidelines and procedures the BLM must follow concerning translocation of desert tortoises from the Project site to other public lands. These policies, guidelines and procedures require among them the preparation and approval of a tortoise relocation plan. *We protest the protest BLM's preferred alternative and all of the project development alternatives because they all rely on translocation of desert tortoises onto public lands in the absence of an approved translocation plan developed according to the requirements in BLM Manual 1745*

In Conclusion:

For the reasons set out above, including discrepancies between the CEC Petition to Amend and the BLM DEIS, and considering the fact that the Environmental Impact Statement and the CDCA Plan Amendments for the proposed Palen SEGS Project violate NEPA, FLPMA and applicable BLM policies, the Desert Protective Council ***respectfully requests that CEC deny approval of this project*** until discrepancies between CEC and BLM documents can be resolved and until BLM takes steps to correct the deficiencies noted in this letter by performing scoping for the project and issuing a revised

DSEIS for full comment before publishing an FSEIS which proactively addresses the range of acute environmental liabilities that have been identified.

Thank you very much for your consideration of our comments.

Sincerely,

Terry Weiner
Imperial County Projects and Conservation Coordinator
(619) 342-5524 cell
(619) 543-0757 office
(858) 273-7801 FAX
terryweiner@sbcglobal.net
www.protectdeserts.org