

STATE OF CALIFORNIA
**Energy Resources Conservation
and Development Commission**

California Energy Commission

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In the Matter of:

APPLICATION FOR CERTIFICATION
FOR THE HIDDEN HILLS SOLAR
ELECTRIC GENERATING SYSTEM
(SEGS)

DOCKET NO. 11-AFC-2

**INTERVENOR CENTER FOR BIOLOGICAL DIVERSITY'S
COMMENTS ON THE PRELIMINARY STAFF ASSESSMENT MAY 2012
CEC-700-2012-003-PSA
HIDDEN HILLS SOLAR ELECTRIC GENERATING SYSTEM
(HHSEGS)**

July 21, 2012

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FOR THE HIDDEN HILLS SOLAR
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(SEGS)

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The Center for Biological Diversity (“Center”) submits the following comments on the Preliminary Staff Assessment May 2012 CEC-700-2012-003-PSA– Hidden Hills Solar Electric Generating System (HHSEGS).

Dated: July 21, 2012

Respectfully submitted,



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July 21, 2012

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RE: Application For Certification For The Hidden Hills Solar Electric Generating System Docket No. 11-AFC-02: Comments on the Preliminary Staff Assessment May 2012 CEC-700-2012-003-PSA– Hidden Hills Solar Electric Generating System (HHSEGS)

Dear Mr. Monasmith,

The Center for Biological Diversity (“Center”) is a non-profit environmental organization dedicated to the protection of native species and their habitats through science, policy, and environmental law. The Center has over 378,000 members and supporters throughout California, Nevada and the western United States, including members that live nearby the vicinity of the proposed Hidden Hills Solar Electric Generating System (HHSEGS) and recreate in the nearby public lands. On December 22, 2011, the Center was granted leave to intervene in this proceeding. The Center submits these comments regarding the May 2012 Preliminary Staff Assessment (“PSA”) on behalf of our board, staff and members.

I. INTRODUCTION

The development of renewable energy is a critical component of efforts to reduce greenhouse gas emissions, avoid the worst consequences of global warming, and to assist California in meeting its mandated emission reductions. The Center strongly supports the development of renewable energy production, and the generation of electricity from solar power, in particular. However, like any project, proposed solar power projects should be thoughtfully planned to minimize impacts to the environment. In particular, renewable energy projects should avoid impacts to sensitive species and habitat, and should be sited in proximity to the areas of electricity end-use in order to reduce the need for extensive new transmission lines and the efficiency loss associated with extended energy transmission. Only by maintaining the highest environmental standards with regard to local impacts, and effects on species and habitat, can renewable energy production be truly sustainable.

The current site proposed for this project in the Pahrump Valley in Inyo County, California is relatively devoid of human disturbance except for some dirt roads and the abandoned agricultural orchard. We concur with the Preliminary Staff Assessment which states, “The Hidden Hills Solar Electric Generating System project (HHSEGS or project)

would have significant direct and indirect impacts on biological resources.” PSA at pg.4.2-1.

For biological resources and other topics, the PSA is incomplete, making it impossible to assess much less comment on the all of the proposed project impacts. However, based on the information provided in the incomplete PSA, significant impacts have been identified for a suite of species (PSA pg 4.2-63-67) including groundwater dependent vegetation, special status plant species, migratory/special status resident avian species and potentially golden eagle and negative impacts to numerous other rare plants and animals, including the beleaguered desert kit fox and the declining state threatened desert tortoise. Additionally, six “blue line” stream and an unidentified number of ephemeral drainages covering 28.33 acres of waters of the state would be impacted by the HHSEGS on the proposed site. The proposed project intends to pump groundwater from the already overdrafted aquifer further impacting precious desert water resources. The following comments address these issues:

II. COMMENTS ON THE MAY 2012 PSA

A. The Alternatives Analysis Outlined in the PSA Fails to Comply with CEQA

Pursuant to CEQA, the “policy of the state” is that projects with significant environmental impacts may not be approved “if there are feasible alternatives or feasible mitigation measures available which would substantially lessen the significant environmental effects...” Pub. Res. Code § 21002; Guidelines § 15021(a)(2). A Project should not be approved if environmentally superior alternatives exist “even if these alternatives would impede to some degree the attainment of the project objectives, or would be more costly.” Pub. Res. Code §§ 21002; Guidelines §§ 15021(a)(2), 15126.6. The Project must be rejected if an alternative available for consideration would accomplish “most [not all] of the basic objectives of the project and could avoid or substantially lessen one or more of the significant effects.” Guidelines § 15126.6(c).

Accordingly, the environmental review documents must consider a range of alternatives that would achieve the basic objectives of the project while avoiding or substantially lessening significant environmental effects, and it is essential that the “EIR shall include sufficient information about each alternative to allow meaningful evaluation, analysis, and comparison with the proposed project.” CEQA Guidelines § 15126.6. Alternative sites must also be considered where relocating the project would substantially lessen the significant impacts of the project. Guidelines Section 15126.6(f)(2). *See Citizens of Goleta Valley v County of Santa Barbara* (1988) 197 Cal.App.3d 1167; *Save Round Valley Alliance v. County of Inyo* (2007) 157 Cal.App.4th 1437 (whether an alternative site may be feasible even where it requires a change in land use designation; to determine feasibility requires detailed analysis of the alternatives; and even if an alternative is less profitable than the project as proposed it may still be a feasible alternative).

Because the agency is charged with considering alternatives to avoid and minimize impacts, it cannot lawfully fulfill this duty based on the limited alternatives analysis presented in the PSA. Most importantly in this instance, the PSA must look at alternative sites that could avoid impacts to desert including resources where significant unmitigable impacts would occur. Alternatives could minimize or eliminate even supposedly “mitigable” impacts to species and communities such as water dependent vegetation by significantly reducing the need to pump more groundwater out of an already overdrafted groundwater system, or move the tortoises out of their native home ranges – a so-called mitigation measure that in practice has proved to be a disaster for the species. Therefore, the PSA should fully explore other alternatives that would achieve the same level of renewable energy production—the basic objective of the project—but without the significant impacts of the proposed project.

While the PSA provides review of five alternatives, we do not believe that the agency has as yet adequately explored alternative sites. This is evidenced by the fact that only one alternative site was discussed in any detail—Sandy Valley—although it would have substantially fewer impacts to biological resources than the proposed project. PSA at 6.1-24-25. Clearly this alternative is a feasible alternative that achieves the proposed project’s goals while significantly reducing impacts to biological resources.

However, simply looking at one alternative site with fewer impacts as the proposed project does nothing to fulfill the agency’s duty under CEQA. It strains credulity to believe that there are no other sites in California where the valid project objectives could be accomplished while further reducing the impacts (for example from required transmission infrastructure and gas pipeline which are essential infrastructure for this project but are not being analyzed in the PSA – see below discussion). Furthermore, it is unclear if this alternative is actually a currently proposed project, called Sandy Valley SEGs.

The remaining alternatives in the PSA explore different types of technologies on the same site. Several of the alternative technologies appear to be superior to the proposed project both in reaching and surpassing the goals of the proposed project and minimizing environmental impacts. For example, the photovoltaic alternative, based on the MW/acre presented in Alternatives Table 5 (PSA at 6.1-60-61), shows that the proposed project acreage could easily accommodate a 500 MW solar photovoltaic project, which would significantly reduce the need for ground water pumping in the already over-drafted Pahrump aquifer (PSA at 6.1-68), which may very well have hydrologic connection to the Amargosa River. It would also significantly reduce some of the unmitigable visual resources impacts by eliminating the two 750-foot towers, lower fire risks through the elimination of superheated fluids on-site, reduce air quality issues (PSA at 6.1-62), eliminate the need for construction of a gas pipeline, reduce noise and vibration impacts (PSA at 6.1-64), reduce public health impacts (PSA at 6.1-64), reduce glint and glare to adjacent traffic and transportation (PSA at 6.1-65), significantly reduce biological impacts to water dependent vegetation and avian species (PSA at 6.1-63), cultural resources (PSA at 6.1-63), and geology and paleontology (PSA at 6.1-63). With

all of these identified reductions in impacts, clearly a solar photovoltaic project would be a better project choice in avoiding and minimizing impacts.

These alternative-technology alternatives appear to be eliminated not because they are infeasible but because of their “effectiveness” (PSA at 6.1-78), although the PSA does point out that the difference between the “effectiveness” of the proposed technology and single-axis tracking PV panels is “insignificant” (PSA at 6.1-79). The overall analysis of “effectiveness” is unacceptable because it fails to take into consideration flexibility of different technologies in avoiding impacts. The PSA is deficient because it failed to meet the requirements of CEQA as outlined in *Preservation Action Council v City of San Jose* (2006) 141 Cal App 4th 1336. In *Preservation Action Council*, the Respondent lead agency relied heavily on the Real Parties’ project objectives and the EIR rejected a smaller alternative that would have met all project objectives except for size, and would have been environmentally superior. *Id.* at 1355. The Court rejected the EIR finding that it did not meet the information requirements of CEQA because the inadequacies in the EIR’s analysis “meant that the public and the City Council were not properly informed of the requisite facts that would permit them to evaluate the feasibility of this alternative.” *Id.* at 1355. The PSA draft provided to date is similarly deficient.

The PSA provides a basic description of the objectives of the project (PSA at 6.1-3), but it then unreasonably narrows the objectives used to consider the viability of alternatives and unreasonably includes timing of the environmental review as a basic objective of the project and fails to evaluate at all if the proposed project actually will result in competitively priced renewable energy. PSA at 6.1-3. Given that the staff has stated that the applicant has to date failed to complete necessary studies and provide other information needed for the environmental review (*see, e.g.*, PSA at 4.2-62 (applicant has not provided results of all rare plant surveys) and a CEC workshop is currently being scheduled on the impacts of solar flux on avian species), the timing of the environmental review cannot fairly be used as a “basic objective” of the project such that it limits the consideration and evaluation of alternatives that would avoid significant impacts to environmental resources of California. Indeed, to the contrary, it appears from the available documents filed to date that the applicant has thus far been unable to provide the complete surveys and information regarding the impacts to the rare plants, desert kit fox and other resources, which indicates that this site may be inappropriate for such a large-scale industrial development project. This further underscores the need for the agency to comprehensively explore a range of alternative sites that will avoid these and other significant impacts of the project.

The basic objectives of the project are to provide 500-MW of renewable power in California. This goal can be met in a number of ways by feasible alternatives that would avoid impacts to the desert tortoise and intact habitat, rare plants, water resources, and waters of the state. While “high solar” may be necessary for the type of large-scale solar thermal plant that the applicant prefers to build, the added costs and energy losses from transmission, which is not being analyzed as part of this project, although new transmission and a gas pipeline are essential infrastructure for this project, may make it more cost effective to locate a solar power generating facility closer to load centers such

as the cities such as Los Angeles and San Diego which have significant “solarity” even if it is not the very highest amount. In evaluating this factor the agency should assess whether re-use of disturbed sites near existing population centers could both meet the project objectives and avoid many of the significant environmental impacts of the project including impacts to rare species, natural communities and water. Given the economic set-backs in the past year, there are more and more large-scale industrial areas that are under-utilized in many parts of southern and central California. These industrial parks, malls and auto rows long ago replaced native habitat, they are connected to the power grid, and are readily accessible to workers for jobs in California. Converting these areas to solar centers is a feasible alternative that would have many societal benefits (including maintaining robust economic zones and avoiding urban blight) and would avoid nearly all of the environmental impacts of siting this project in ecologically functioning habitat in the Mojave Desert that supports many rare and less common species and communities. Accordingly, the PSA should also explore the use of distributed smaller-scale solar as an alternative.

B. Additional Analysis is Needed to Assess All Impacts that Require Avoidance and Minimization

Even if the Project is eventually approved to go forward at the Hidden Hills site which it should not be based on feasible alternatives, significant impacts must be avoided to the extent feasible and minimized. Some impacts that were not fully analyzed in the PSA that will need to be avoided or minimized and mitigated include growth-inducing impacts and habitat fragmentation.

Growth-Inducing Impacts: CEQA requires environmental analysis to consider the ways in which the proposed project could foster economic, housing, or population growth, whether directly or indirectly in the surrounding environment. Guidelines § 15126.2(d); *see also* 14 Cal. Code Regs § 15358(a)(1) (“Indirect or secondary effects may include growth-inducing effects and other effects related to induced changes in the pattern of land use, population density, or growth rate, and related effects on air and water and other natural systems, including ecosystems.”). The Guidelines specifically require that the EIR should “discuss the characteristics of [] projects which may encourage and facilitate other activities that could significantly affect the environment, either individually or cumulatively.” Guidelines § 15126.2(d). Growth-inducing impacts from the proposed project in the Pahrump Valley include encouraging additional large-scale solar projects to be sited in this same area across the state line in Nevada and making it more likely that additional solar development projects could be approved in this same area. For example, the placement of one industrial project with a new powerline connection, substations, gas pipeline and/or new access roads may make it more likely that a second or third project will be sited in this area. Siting multiple projects in this area could lead to complete collapse of the habitat values in this valley due to habitat loss and fragmentation. This would be a significant change to an area which now contains a significant amount of contiguous, high value, intact habitat for the desert tortoise and other species and exacerbate the groundwater overdraft. The need for additional analysis of the impacts

from multiple solar projects that have pending applications in this area and in the Mojave ecosystem is discussed further below in the section on cumulative impacts.

C. Desert Kit Fox

While the PSA recognizes that the desert kit fox is a protected animal as a furbearing mammal under California Code of Regulations Title 14 Section 460 (PSA at 4.2-11) and recognizes that desert kit fox occurs on site (PSA at 4.2-4), no surveys were done to quantify the density of desert kit fox that will be displaced and “taken” by the proposed project. As the CEC is well aware, the first documentation of a deadly outbreak of canine distemper was confirmed in late 2011 in desert kit fox, when dead kit foxes found on and adjacent to the Genesis industrial solar project during construction were necropsied by state veterinarians.

Kit foxes have great fidelity to their natal burrows and as documented on the Genesis project site are not easily evicted from their burrows and home ranges through “passive relocation” or hazing. The PSA need to require that “take” permits be acquired for desert kit fox, as the California Department of Fish and Game did on Genesis, to allow for accurate tracking and monitoring of desert kit foxes to determine the efficacy of “passive relocation”. Tracking the “passively relocated” kit foxes will enable monitoring of the ultimate outcome of the hazing activities, and should allow for identification of distemper outbreaks earlier on, where the disease may be more easily controlled.

As the CEC is also well aware, despite the efforts of state and federal biologists, who tried to prevent the distemper outbreak from spreading, their efforts have not been successful, and so far the kit fox distemper epidemic has spread at least over eleven miles south of the Genesis project site. Hope has dimmed that the epidemic can now be contained. Additional disruption of native populations of desert kit foxes from hazing them off this proposed project site will result in additional displaced animals wandering the desert and potentially being vectors for spreading the disease farther through the population.

The state wildlife veterinarian for the California Department of Fish and Game isn't certain the distemper outbreak is connected to the construction activities, but has concluded that habitat disturbance causes stress, and when animals succumb to stress they become more susceptible to disease.

The PSA fails to quantify how many kit fox territories overlap the proposed project site, analyze the impacts from the proposed project or provide any avoidance, minimization or mitigation measures regarding this increasingly rare and declining species. Clearly a supplemental SA needs to include a substantial section on the status of the on-site desert kit fox population and strategies to minimize and mitigate impacts to this species.

D. Desert Tortoise: Analysis of Impacts is Inadequate and the Translocation Plan is Missing

The desert tortoise is continuing to decline throughout its range (USFWS 2008) despite being under federal and state Endangered Species Acts protection as threatened for two decades. We submitted the USGS data set that indicates that most of the proposed project site is located within modeled desert tortoise habitat.

Murphy et al. (2007) undertook extensive genetic analysis across the range of the desert tortoise and identified genetically unique populations within the larger listed population. The desert tortoise located on the HHSEGS site represents a unique genetic group – the Eastern Mojave group. Because these animals represent a unique occurrence in California, adequate avoidance, minimization and mitigation must be applied to this project. The uniqueness of this population is also recognized both in the 2011 Desert Tortoise Revised Recovery Plan (USFWS 2011) as the Eastern Mojave Recovery Unit.

Additionally, the Scientific Advisory Committee of the U.S. Fish and Wildlife Service’s Desert Tortoise Recovery Office has concluded that “translocation is fraught with long-term uncertainties, notwithstanding recent research showing short-term successes, and should not be considered lightly as a management option. When considered, translocation should be part of a strategic *population augmentation program*, targeted toward depleted populations in areas containing “good” habitat. [emphasis added]. The SAC recognizes that quantitative measures of habitat quality relative to desert tortoise demographics or population status currently do not exist, and a specific measure of “depleted” (e.g., ratio of dead to live tortoises in surveys of the potential translocation area) was not identified. Augmentations may also be useful to increase less depleted populations if the goal is to obtain a better demographic structure for long-term population persistence. Therefore, any translocations should be accompanied by specific monitoring or research to study the effectiveness or success of the translocation relative to changes in land use, management, or environmental condition.”¹ Translocation should be used as a tool to *augment populations within depleted recovery units*, not as a mitigation strategy to allow for development in desert tortoise habitat.

As the CEC is well aware, the project proponent *significantly* underestimated the number of desert tortoise on the Ivanpah Solar Electric Generating System (ISEGS) site, despite expert testimony and filings from intervenors including the Center that provided compelling evidence that there would be many more desert tortoise on the project site, based on habitat and survey methodology. Unfortunately the intervenors were correct. So many more desert were found on the project site that the “take” limit for desert tortoise was quickly exceeded and the project was forced to cease construction via a stop-work order while subsequent reconsultation with trustee state and federal wildlife agencies was implemented. Based on this disaster, the proposed project should be held to much higher standards of survey data and analysis or an alternative developed and selected that is out of desert tortoise habitat to preclude impacts to this state and federally

¹http://www.fws.gov/nevada/desert_tortoise/documents/sac/20090313_SAC_meeting_summary.pdf

threatened species. Selecting a better site for project implementation that avoids, and minimizes the impacts to the environment is required under CEQA.

Lack of Desert Tortoise Translocation/Relocation Plan: As noted in the PSA, “the legal and practical ramifications of translocation remain unresolved at this time” (PSA at 4.2-74). While the number of desert tortoise that are proposed to be moved are estimated to be between 6 to 33 adult and sub-adult desert tortoises, 3 to 34 juvenile tortoises and approximately 46 to 158 eggs. Due to the lack of a relocation or translocation strategy, it is impossible to evaluate the impact to on-site desert tortoise from the information presented in the PSA.

If translocation is implemented for use on the proposed project, the agency should carefully review the Desert Tortoise Recovery Plan (USFWS 2011) and require incorporation of the U.S. Fish and Wildlife Service’s most recent (2010) guidance on desert tortoise translocation². Additionally the translocation plan should incorporate new information on current translocation implementation successes (if there are any). Information on desert tortoise home ranges, landscape carrying capacity, and other ecological factors need to be included in a revised or supplemental SA, so that the public and decision makers can more accurately evaluate the impacts from the proposed project

We also request that the following recommendations that originate with the Desert Tortoise Recovery Plan are incorporated into the translocation plan:

- Provide monitoring to confirm that desert tortoise “establish home ranges and integrate into any existing social structure”. Note is taken that no translocation studies have been implemented long enough to confirm integration, so moving forward with yet another translocation without the data required to confirm actual integration of the translocated tortoises into the existing population renders the translocation effort experimental. The experimental nature of the action then requires at a minimum a long-term commitment to monitoring and potential adaptive management to ensure that these animals and the unique genotypes that they represent continue to survive.
- Temporary fencing should be included in the relocation areas as well, due to the well documented fact that desert tortoises will try to return to their home range. Additionally, provisions to deal with the fact that desert tortoises will end up along the new tortoise proof fences of the project site, trying to get back to their home territory, should be included because this behavior leaves them vulnerable to predation.
- Determine the translocation site’s carrying capacity. In light of global climate change and the predicted warming of the desert, translocation zones should only be located at *higher* elevations, not lower areas of the Pahrump Valley.
- At least a two-year study should be undertaken on the host population prior to translocation.

²http://www.fws.gov/ventura/species_information/protocols_guidelines/docs/dt/USFWS%20DT%20Translocation%20Guidance.docx

In addition to the avoidance and minimization measures and any translocation effort, adequate mitigation at a rate of at least 5:1 to off-set the impacts to the desert tortoise is required, including acquisition of private lands in nearby desert tortoise habitat to be set aside as tortoise conservation areas in perpetuity so that the mitigation has durability. In order to adequately mitigate for the desert tortoise population that will be affected by the proposed project, the mitigation needs to occur within this same recovery unit, and as close to the proposed project site as possible. Additionally, the proposed mitigation has differing ratios for Mojave Desert scrub (3:1) and Shadscale Scrub (1:1) (PSA at 4.2-86). As we have brought up repeatedly at workshops, Shadscale scrub is a much rare community type than Mojave Desert scrub, therefore the PSA should not treat these different community types differently. A 5:1 ratio of mitigation is required because 1) the desert tortoise population continues to decline³, 2) more of its habitat is being developed, which is a net loss to the species⁴, and 3) fragmentation of the habitat, including this proposed project continues.

E. Bighorn Sheep: Analysis of Impacts is Incomplete

Important native (i.e. not re-introduced) populations of desert bighorn sheep occur in mountain ranges⁵ adjacent to the HHSEGS. Bighorn are a large and wide-ranging species that require connectivity across large landscapes in order to assure persistence. Existing anthropogenic barriers have already eliminated gene flow between certain populations⁶. Elimination of sheep connectivity by HHSEGS could lead to further isolation and inbreeding issues. Additional information on bighorn sheep movement corridors and the impact of development on them needs to be included. Avoidance of these areas needs to be included, or minimization and effective mitigation if the project actually could impact these important linkages. Indeed, public comment at CEC's June 27, 2012 workshop identified that desert bighorn sheep have been documented on the proposed project site.

To date, no studies have been done on the effects that miles of mirrors may have on bighorn sheep movement or effects of their use of historical lambing areas. Data indicate that human caused disturbance negatively affects species fitness and population dynamics via the energetic and lost opportunity costs of risk avoidance⁷. More information about the potential impact from the installation and operation of mirrors on desert bighorn needs to be included.

Desert bighorn rely on springs and seeps, especially during the hot dry summer months for their survival in the ranges adjacent to the proposed project site and while moving across the valley floor. While the goal of the groundwater mitigation and monitoring requirements is to minimize impacts to the groundwater, there is no guarantee that impacts from this activity will not impact, to some extent the springs and seeps, that

³ http://www.fws.gov/nevada/desert_tortoise/dt_reports.html

⁴ Moilenen et al 2009; Norton 2009

⁵ Epps et al. 2004

⁶ Epps et al. 2005

⁷ Frid and Dill 2002

the desert bighorn rely upon. The monitoring plan will only identify water drawdown after it has occurred, and this could be deadly for bighorn and other desert species that depend on the springs and seeps for survival. For that reason, the CEC should consider the requirement of artificial guzzlers at strategic locations to help offset the impacts of the proposed project to bighorn (and other wildlife). Please refer to our water resources section pertaining to impacts to seeps and springs from the groundwater pumping proposed by the project, and please provide an analysis of the potential impacts to bighorn sheep including the potential mitigation of guzzlers in a supplemental SA.

F. Rare Plants: Data and Analysis Incomplete

As noted in the PSA, data is lacking on the spring 2012 surveys for rare plants. As it is, the site appears rich with rare botanical resources (PSA at 4.2-132) based on the reported survey results, and the analysis of impacts to a five of the ten rare plants that occur on the project site are significant and “immitigatable”. What does this term – immitigable - actually mean? While the lack of survey data and analysis makes it impossible to determine the impacts to the species, clearly the proposed project site is poorly sited because of the number of rare plant species that occur on the site. Avoidance is the most preferred method to eliminate impacts to rare plants, many of which appear to be located in the eastern portion of the project area (where other rare biological resources also occur).

If avoidance is not possible, then securing additional sites for conservation in perpetuity will be necessary. Mechanisms must be put in place to secure all areas acquired for mitigation from future impacts such as conservation easements in perpetuity (see discussion below about durability of mitigation).

While transplantation of rare plants has been documented to be mostly unsuccessful⁸, if relocation is to be part of the mitigation effort, then a clear and concise relocation plan should be developed and included as supporting documentation in the Final Staff Assessment for public review. So many times these plans are proposed to be developed in the future, with no public input or review. We believe these plans should be included as part of the CEQA process and that their absence is a violation of CEQA. If plants are to be moved, requirements for interim monitoring during establishment (including triggers for adaptive management to meet the needs of plant survival) need to be put in place. Long-term monitoring for survivorship and successful reproduction and establishment also needs to be included as part of the mitigation requirements if relocation is a chosen strategy.

To assure conservation of the rare plants in addition to avoidance and minimization and mitigation presented above, seed collection and curation into a seed bank should be required, to preclude potential genetic loss of the species if avoidance, minimization and mitigation measures should fail.

⁸ Feidler 1991

G. Western Burrowing Owl

The information in the FSA regarding the status of the burrowing owl on the project site is confusing. It remains unclear how many burrowing owl territories are located in the project area. As with the kit fox, desert tortoise and other species, a plan is to be produced for mitigation and monitoring of burrowing owls, but that plan is not provided in the PSA. It is therefore unclear how the compensation acreage for burrowing owl impacts was calculated (PSA at 4.2-69)

H. Golden Eagles

The PSA recognizes that the proposed project “would remove approximately 3,277 acres of foraging habitat for golden eagle and migratory birds” (PSA at 4.2-4) and that “the USFWS may consider this loss to constitute substantial interference with normal breeding, feeding, or sheltering behavior, which would be considered a “take.”” (Ibid). The PSA fails to present exactly how to mitigate the loss of a substantial amount of foraging habitat for the golden eagle from this project. The fact still remains that significant amounts of foraging habitat will decrease carrying capacity of the landscape and could result in a potential loss of habitat needed to support a nesting pair, which would impact reproductive capacity.

Scientific literature on this subject is clear - the presence of humans detected by a raptor in its nesting or hunting habitat can be a significant habitat-altering disturbance even if the human is far from an active nest⁹. Regardless of distance, a straight-line view of disturbance affects raptors, and an effective approach to mitigate impacts of disturbance for golden eagles involves calculation of viewsheds using a three-dimensional GIS tool and development of buffers based on the modeling¹⁰. Golden eagles have also been documented to avoid industrialized areas that are developed in their territory.¹¹

Furthermore, information on the impacts to avian species from the power tower technology is well documented¹². The PSA fails to analyze impacts to golden eagles from the solar flux and towers. Because the CEC is proposing a workshop on these issues in early August, the PSA once again seems premature, having been issued before data on this key environmental issue is available.

In addition, the construction of the mandatory transmission line, an essential connected project to the HHSEGS, will cause additional direct and indirect impacts to golden eagles, yet these impacts remain unanalyzed in the PSA. Because the transmission line is a connected project that is necessary for the HHSEGS to get the electricity onto the grid, a supplemental SA must include an environmental analysis of this transmission line project.

⁹ Richardson and Miller 1997

¹⁰ Camp et al. 1997; Richardson and Miller 1997

¹¹ Walker et al. 2005

¹² McCrary et al. 1986

Based on the severity of the incomplete impacts identified in the PSA alone, the CEC must consider other alternatives that minimize the impacts to the fully protected golden eagle.

I. Groundwater Dependent Vegetation

As with the rare plants, the impact analysis and mitigation is incomplete, making it impossible to comment on the proposed action. Based on current proposed monitoring scheme, impacts to this rare plant community and vital wildlife resource will still be impacted by the proposed project. Additional off-site impacts to more distant groundwater dependent vegetation communities in the Amargosa Valley do not appear to be included in the analysis either. The supplemental SA needs to clarify the issues associated with the groundwater dependent vegetation.

J. Mitigation, Nesting and Acquisition Ownership

Mitigation acquisitions must mitigate for the impacts of the project. While the project proponent is currently taking advantage of the mitigation opportunities established under SBX8 34 for the impacts to desert tortoise from the ISEGS project, we note that the proposed mitigation does not actually mitigate for the impacts because the land acquired by CDFG are outside of the northeastern recovery unit for the desert tortoise, which is where the impacts from the ISEGS project occurred. The HHSEGS project occurs in the Eastern Mojave Recovery unit, and therefore mitigation for desert tortoise must occur within this desert tortoise recovery unit.

Any “nesting” of mitigation acquisitions must assure that impacted species are actually mitigated by the acquisition property. Therefore species presence at densities found on the proposed project site or greater must be documented through monitoring of the potential mitigation site prior to acquisition in order to adequately fulfill the mitigation requirement.

Mitigation acquisitions must be managed by a land management entity that can assure conservation of those lands in perpetuity. For example, the Bureau of Land Management can not assure conservation of lands donated to it based on its multiple use mandate. Therefore, the PSA should clearly lay out a mitigation strategy to assure land ownership/management that will result in conservation of all mitigation acquisitions in perpetuity.

K. Missing Plans

Numerous plans are relied upon in the PSA to provide adequate avoidance, minimization and mitigation of biological resources. However, these plans are not available for public review, which makes it impossible for the public and decision makers to actually evaluate if these plans do what the PSA intends them to do. Examples of missing plans include:

- Weed Management Plan
- Bird Monitoring Study
- Burrowing Owl Mitigation Plan
- Avian, Bat, and Golden Eagle Protection Plan
- Management plan for desert kit fox and American badger
- Biological Resources Mitigation Implementation and Monitoring Plan
- Desert tortoise translocation plan

These plans should be made available to the public before the FSA in a supplemental SA.

L. Water Resources: Requires Additional Information and Analysis

The PSA indicates that up to 140 AFY of water will be used yearly on the HHSEGS site during normal operations (PSA at 4.15-2), although construction water use could be as high as 288 AFY for up to three years (PSA at 4.15-8). Although no water will leave the site, additional information on the effects of groundwater pumping on nearby seeps and springs in the adjacent mountains is lacking. In fact the seven-day ground water pump test that the CEC required was never completed. We have repeatedly requested that the seven-day ground water pump test be completed and once again ask the CEC to enforce their own requirement. No data is presented that addresses the hydrological connection between these essential wildlife sustaining locations, the Amargosa drainage and the proposed project impacts.

Additionally, because of the substantial evaporation rate at the project site, please provide data on how much pumped ground water will actually be returned to the groundwater basin.

Waters of the State: The PSA indicates that 28.33 acres of Waters of the State (PSA at 4.2-6), which will need to be mitigated. In this arid part of the state, this impact is significant. Again we urge the CEC to look at avoidance and minimization of the impact through alternative siting.

As with the other sensitive resources, securing additional sites for conservation in perpetuity will be necessary, and may be accomplished in conjunction with sensitive species mitigations. Because the proposed project is relying on groundwater pumping as its water source, it is crucial to replicate the existing surface hydrology to enable groundwater replenishment, particularly with regards to the slow pace of groundwater recharge in the desert.

M. Essential Part of the HHSEGS Project Not Analyzed.

As discussed above, the HHSEGS project relies upon an unbuilt transmission and gas pipeline that are currently undergoing National Environmental Policy Act (NEPA) review in Nevada. That NEPA review does not relieve the CEC from including environmental review of those projects which are clearly connected and required by the

HHSEGS project. The transmission lines and gas line do not rely upon the HHSEGS in order to be viable projects, but the HHSEGS relies upon the transmission and gas pipeline in order to be a viable project. Therefore the CEC needs to include the transmission line and gas pipeline as part of the HHSEGS project and must analyze the project and its impacts in a supplemental SA.

N. Cumulative Impacts are Not Fully Disclosed and Analyzed

Even before undertaking a fully adequate analysis of the cumulative impacts as outlined in the Cumulative Scenario, the PSA admits that impacts from this project will be “cumulatively considerable” (PSA at 4.2-172). CEQA requires not only full disclosure of cumulative impacts but a full and fair effort on the part of the agency to first avoid such impacts, and then to ensure any remaining impacts are minimized and mitigated. Until the agency completes an adequate alternatives analysis, the staff conclusions that not all cumulative impacts can be mitigated are premature.

Additionally, the cumulative impacts need to identify the impacts to desert tortoise by translocation and relocation efforts. As the other potential projects get implemented, it will push higher and higher numbers of desert tortoises into smaller and smaller areas. Additional development of other renewable energy projects in the Pahrump valley in Nevada will also further isolate the existing population of resident, relocated and translocated desert tortoise in the Eastern Mojave recovery unit. These same potential isolation issues due to the cumulative impacts of projects proposed in the Pahrump Valley also need to be discussed for desert bighorn sheep and groundwater pumping. All of these cumulative impacts need to be included and analyzed in a supplemental SA.

O. Conformance with the Desert Renewable Energy Conservation Plan

The CEC is signatory to the planning agreement for the Desert Renewable Energy Conservation Plan (DRECP), a proposed conservation plan under the Natural Communities Conservation Plan Act (NCCPA). The NCCP Act 2810 (b)(8) requires that “interim process during plan development for project review wherein discretionary projects within the plan area subject to Division 13 (commencing with Section 21000) of the Public Resources Code that potentially conflict with the preliminary conservation objectives in the planning agreement are reviewed by the department prior to, or as soon as possible after the project application is deemed complete pursuant to Section 65943 of the Government Code and the department recommends mitigation measures or project alternatives that would help achieve the preliminary conservation objectives. As part of this process, information developed pursuant to paragraph (5) of subdivision (b) of Section 2810 shall be taken into consideration by the department and plan participants”. The current preliminary conservation strategy of the DRECP¹³ identifies the proposed project site as moderate biological sensitivity, surrounded by high biological sensitivity area and considers it for conservation purposes, not development purposes.

¹³ <http://www.drecp.org/documents/#conservation>

To that point, the PSA fails to provide an evaluation of the conformance of the HHSEGS with the preliminary conservation objectives of the DRECP as required under the NCCPA. Therefore, we request that the supplemental SA include an analysis of the conformance of this proposed project with the DRECP.

III. CONCLUSION

From a scientific perspective, developing utility scale renewable energy project in the California deserts without comprehensive planning is a huge gamble for wildlife¹⁴. For this and future proposed projects, mechanisms should be put in place that encourage solar facilities to be proposed and sited on disturbed lands instead of in fully ecologically functioning habitat such as is found in the Pahrump Valley at the Hidden Hills proposed project site, which support a variety of rare and threatened species.

We hope and expect that the agency will carefully consider the proposed impact reducing alternatives and others and go beyond the admittedly incomplete and preliminary information provided in the PSA. The CEC should revisit these issues in detail, filling in the missing data gaps and analyses and provide a full range of alternatives, including distributed solar generation, as part of a supplemental SA for public review.

Thank you for the opportunity to submit these comments. Please feel free to contact me for additional information at 535-654-5943 or at ianderson@biologicaldiversity.org

Respectfully submitted,



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¹⁴ Lovich and Ennen 2011

References (Provided on CD to the CEC and parties)

Camp, R.J., D.T. Sinton and R.L. Knight 1997. Viewsheds: a Complementary Management Approach to Buffer Zones. *Wildlife Society Bulletin* 25(3): 612-615.

Epps, C.W., P.J. Palsboll, J.D. Wehausen, G.K. Roderick, R.R. Ramey II, and D.R. McCullough 2005. Highways block gene flow and cause a rapid decline in genetic diversity of desert bighorn sheep. *Ecology Letter* 8: 1029-1038.

Epps, C.W., D. R. McCullough, J.D. Wehausen, V. C. Bleich and J.L. Rechel 2004. Effects of Climate Change on Population Persistence of Desert-Dwelling Mountain Sheep in California. *Conservation Biology* 18 (1): 102-113.

Feidler, P.L. 1991. Mitigation-related transplantation, relocation and reintroduction projects involving endangered and threatened, and rare plant species in California. California Department of Fish and Game Contract No. FG-8611. Pgs. 144

Frid, A. and L. Dill 2002. Human-caused disturbance stimuli as a form of predation risk. *Conservation Ecology* 6(1): 11.

Lovich, J.E. and J.R. Ennen 2011. Wildlife Conservation and Solar Energy Development in the Desert Southwest, United States. *BioScience* 61(12): 982-992

McCrary, M.D. 1986. Avian Mortality at a Solar Energy Power Plant. *Journal of Field Ornithology* 57(2): 135-141

Moilanen, A., A.J.A. van Teeffelen, Y. Ben-Haim and S. Ferrier. 2009. How much compensation is enough? A framework for incorporating uncertainty and time discounting when calculating offset ratios for impacted habitat. *Restoration Ecology* 17(4): 470-478

Murphy, R.W., K.H. Berry, T. Edwards, A.M. McLuckie. (2007) A Genetic Assessment of the Recovery Units for the Mojave Population of the desert tortoise (*Gopherus agassizii*). *Chelonian Conservation and Biology* 6(2): 229-251.

Norton, D.A. 2009. Biodiversity offsets: two New Zealand case studies and an assessment framework. *Environmental Management* 43(4):698-706

Richardson, C.T. and C.K. Miller. 1997. Recommendations for protecting raptors from human disturbance: a review. *Wildlife Society Bulletin* 25(3): 634-638.

Walker, D., M. McGrady, A. McCluskie, M. Madders and D.R.A. McLeod 2005. Resident Golden Eagle Ranging Behaviour Before and After Construction of a Windfarm in Argyll. *Scottish Birds* 25: 24-40.



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**APPLICATION FOR CERTIFICATION
FOR THE *HIDDEN HILLS SOLAR ELECTRIC
GENERATING SYSTEM***

DOCKET NO. 11-AFC-02
PROOF OF SERVICE
(Revised 6/18/2012)

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DECLARATION OF SERVICE

I, Leene Anderson declare that on 7/21/2012, I served and filed copies of the attached BA comments dated 7/21, 2012. This document is accompanied by the most recent Proof of Service list, located on the web page for this project at: www.energy.ca.gov/sitingcases/hiddenhills/index.html.

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I declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct, that I am employed in the county where this mailing occurred, and that I am over the age of 18 years and not a party to the proceeding.

