**STATE OF CALIFORNIA**

**Energy Resources Conservation and Development Commission**

| In the Matter of: | DOCKET NO. 11-AFC-04 |
|---|---|
| APPLICATION FOR CERTIFICATION FOR THE RIO MESA SOLAR ELECTRIC GENERATING FACILITY (SEGF) | |

# INTERVENOR CENTER FOR BIOLOGICAL DIVERSITY'S COMMENTS ON THE PRELIMINARY STAFF ASSESSMENT-PART A (SEPTEMBER 28, 2012)AND PART B (OCTOBER 15, 2012) CEC-700-2012-006-PSARIO MESA SOLAR ELECTRIC GENERATING FACILITY (RMSEGF)

November 14, 2012

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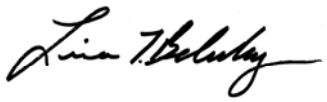
| APPLICATION FOR CERTIFICATION FOR THE RIO MESA SOLAR ELECTRIC GENERATING FACILITY (SEGF) | DOCKET NO. 11-AFC-04 |

Intervenor, the Center for Biological Diversity ("Center") submits the following comments on the Preliminary Staff Assessment Part A (September 28, 2012) and Part B (October 15, 2012) CEC-700-2012-006-PSA– Rio Mesa Solar Electric Generating Facility (RMSEGF) for the docket in this matter.

Dated: November 14, 2012

Respectfully submitted,



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**RE: Application For Certification For The Rio Mesa Solar Electric Generating Facility Docket No. 11-AFC-04: Comments on the Preliminary Staff Assessment – Part A (September 28, 2012) and Part B (October 15, 2012) CEC-700-2012-006-PSA– Rio Mesa Solar Electric Generating System (RMSEGF)**

Dear Mr. Martinez,

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 in the vicinity of the proposed Rio Mesa Solar Electric Generating Facility (RMSEGF) and recreate in the nearby public lands. The Center is an Intervenor party in the proceeding before the California Energy Commission. The Center submits these comments regarding both Part A and Part B of the 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 be sited and designed to 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 and regional impacts, and effects on species and habitat, can renewable energy production be truly sustainable.

The current site proposed for this project in the Colorado River Valley in Riverside County, California is relatively devoid of human disturbance except for some dirt roads and portions of the Bradshaw Trail. As the Preliminary Staff Assessment states the project will cause unmitigable impacts, "In some cases, staff has recommended all

known feasible mitigation, but concludes that certain impacts would not or may not be reduced to a level less than significant even with the recommended conditions of certification." PSA at pg.4.2-1. In addition,, the California Public Utilities Commission recently denied one of the Power Purchase Agreements (PPA) for Rio Mesa and approved another PPA although it found it was "highly uncompetitive" and uneconomic. Even the incomplete and preliminary analysis in the PSA shows that the project as proposed project will have significant unmitigable impacts on environmental resources and a complete analysis including feasible alternatives would show that the benefits of providing renewable energy can be achieved through feasible alternatives with far fewer impacts to the environment and at less cost. Therefore, the Energy Commission will not be able to properly make any override findings and should deny certification for this project as proposed.

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 unavoidable impacts have been identified for a suite of species (PSA pg 4.2-40-44) including common and nesting birds, elf owls and Gila woodpeckers, burrowing owls, small special status raptors, special status desert shrubland passerines, and special status migratory and wintering birds. Native vegetation and wildlife habitat may also sustain significant unavoidable impacts if the 3:1 mitigation ratio for impacts is not feasible. The FSA must evaluate the feasibility of this off-site acquisition mitigation in order to evaluate the on-the-ground impacts of the proposed project. Negative impacts to numerous other rare plants and animals, including the beleaguered desert kit fox and the declining state threatened desert tortoise will also occur due to the proposed project.. Additionally, six "blue line" streams and an unidentified number of ephemeral drainages covering 817.37 acres of waters of the state would be impacted by the proposed project on the proposed site. The proposed project intends to pump groundwater from the Colorado River Basin further impacting rare and increasingly scarce southwestern desert water resources. The following comments address these issues:

## II. COMMENTS ON THE SEPTEMBER 28, 2012 PSA – PART B

### 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 (providing renewable energy to California) 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 technologies as well as alternative sites must be considered where redesigning or relocating the project would substantially lessen the significant impacts to the environment 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 resources because at this site significant unmitigable impacts would occur. Alternatives should also be considered could minimize or eliminate even supposedly "mitigable" impacts to species and communities such as microphyll woodlands by significantly reducing the number of microphyll woodlands and washes impacted. Similarly, alternatives must be considered that would reduce impacts to tortoises from proposed mitigation measures such as translocation, because moving tortoises out or their native home ranges – a so-called mitigation measure-- 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 six alternatives, we do not believe that the agency has as yet adequately explored alternative sites. This is evidenced by the fact that only one off-site alternative site is presented and analyzed, although it is actually a proposed project by Bright Source on BLM lands, and may have ultimately have more environmental impacts than the proposed project—therefore this is not a proper alternative. The remaining four alternatives are all on-site alternatives, and two of them including the Reduced Acreage SPT with or without Energy Storage Alternative and the Photovoltaic Alternative would have substantially fewer impacts to biological resources than the proposed project. PSA at 6.1-51-54 and 6.1-65-67. The clearly an on-site PV alternative is feasible and could achieve the proposed project's goals while significantly reducing impacts to biological resources and an off-site PV alternative should also be considered.

Simply looking at one alternative site with potentially greater 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 gas pipeline which is essential infrastructure for this project but is not being analyzed in the PSA – see below discussion). Furthermore, the one off-site alternative as stated above, is actually a currently proposed project on BLM lands in a site that likely has greater impacts and therefore it does not meet the definition of "alternative" under CEQA.

One 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. The photovoltaic alternative, based on the MW/acre presented in Alternatives Table 4 (PSA at 6.1-62-63) conservatively estimated at 7MW/acres, shows that the proposed project acreage of 3,805 acres could easily accommodate a 500 MW solar photovoltaic project, which would significantly reduce many of the significant unavoidable impacts to avian species including raptors (PSA at 4.2-40-44). It would also significantly reduce some of the unmitigable visual resources impacts by eliminating the two 750-foot towers (PSA at 6.1-66), lower fire risks through the elimination of superheated fluids on-site (PSA at 6.1-65), reduce air quality issues including greenhouse gas emissions (PSA at 6.1-65), eliminate the need for construction of a gas pipeline, reduce noise and vibration impacts (PSA at 6.1-66), reduce public health impacts (PSA at 6.1-66), reduce traffic and transportation impacts (PSA at 6.1-66), reduce water supply impacts (PSA at 6.1-67), and reduce impacts to geology and paleontology (PSA at 6.1-65). With all of these identified reductions in impacts, clearly a solar photovoltaic project would be a better project choice in avoiding and minimizing impacts.

While we appreciate that the Commission staff will produce an FSA and later a Presiding Member's Proposed Decision will be provided, it is instructive to note that the PSA is deficient and fails to meet the requirements that are necessary for an EIR under 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 here is similarly deficient.

The PSA provides a basic description of the objectives of the project (PSA at 6.1-3-4), but it then unreasonably narrows the objectives used to consider the viability of alternatives. 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 4.2-11 (applicant still needs to provide the results of the full year of bird and bat surveys conducted during 2012, the results of late-season botany surveys conducted in 2012, clarification of acreages of permanent and temporary disturbance by vegetation type, the Lake and Streambed Alteration Agreement (LSAA)

Notification and Incidental Take Permit application to be submitted to CDFW, and the draft Facility Closure, Revegetation, and Reclamation Plan and Financial Security)) and two CEC workshops are scheduled (including one held on biological resources the same day these PSA comments are due), the PSA analysis is premature and therefore incomplete. 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 a variety of key biological impacts, 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 threatened and endangered species habitat including desert tortoise and intact habitat, resident and migratory birds, water resources, and waters of the state. While "high solarity" may be necessary for the type of large-scale solar thermal plant that the applicant prefers to build, the added costs of remote generation (including the need for a new gas line here) may make it more cost effective to locate a solar power generating facility closer to existing transmission and load centers in the Inland Empire, Los Angeles, and San Diego which have significant "solarity" even if it is not the very highest amount. Moreover, even in the Blythe area there is a significant amount of land that has been previously disturbed by farming and could be converted to solar power. In evaluating this factor the agency should assess whether re-use of disturbed sites in the desert or 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 near load centers 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 and key migratory pathways. Accordingly, the PSA should also explore the use of mid-scale in-basin solar projects and/or distributed smaller-scale solar projects 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 Rio Mesa site, which the evidence indicates it should not be given that there are 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 causing 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 along the edge between wildlands and the agricultural area of the Colorado River Valley include encouraging additional large-scale solar projects to be sited in this same area causing further encroachment into intact wildlands, specifically, the additional roads, transmission, and a new gas line all make it more likely that additional solar development projects would be proposed 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 further collapse of the habitat values in this valley due to habitat loss and fragmentation between remaining wildlands inland and also the connectivity between inland wildlands and those remaining along the river. This would be a significant change to an area which now contains a significant amount of contiguous, high value, intact habitat for numerous rare species and migratory species. The need for additional analysis of the impacts from growth-inducing projects that have pending applications in this area, in the Riverside East SEZ and in the Colorado desert ecosystem is discussed further below in the section on cumulative impacts.

## C. Biological Resources

### *1. Desert Kit Fox*

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 4.2-13), that desert kit fox occurs on site (PSA at 4.2-24), and that surveys identified 193 burrow/den complexes on site. However, no quantification the density of desert kit fox that will be displaced and "taken" by the proposed project is provided. 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, after many dead kit foxes were found on and adjacent to the Genesis industrial solar project during construction and 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. If the project goes forward at this site, which the Center believe it should not, the environmental analysis needs to consider the need to require that "take" permits be acquired by the applicant for desert kit fox (which the California Department of Fish and Wildlife provided on Genesis), to allow for accurate tracking and

monitoring of desert kit foxes to determine the efficacy of "passive relocation". Tracking any kit foxes allowed to be "passively relocated" will enable monitoring of the ultimate outcome of the hazing activities, and should allow for identification of distemper outbreaks or other disease earlier on, where the disease may be possibly controlled.

Unfortunately, as the CEC is also well aware, despite the efforts of state and federal biologists who tried to prevent the distemper outbreak from spreading from the Genesis solar project site, their efforts have not been successful. The most recent information we have indicates that 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 would result in additional displaced animals wandering the desert and potentially being vectors for contracting and spreading the disease farther through the population.

Although the spread of the distemper outbreak is centered on the Genesis site, the state wildlife veterinarian for the California Department of Fish and Wildlife isn't yet 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 on kit fox individuals or populations, or provide any avoidance, minimization or mitigation measures regarding this increasingly rare and declining species. Clearly a additional environmental review is needed that includes a substantial section on the status of the on-site desert kit fox population and strategies to avoid, minimize and mitigate impacts to this species.

### *2. Desert Tortoise: Analysis of Impacts is Inadequate and the Translocation Plan Not Provided*

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. The USGS data set indicates that most of the proposed project site is located within modeled desert tortoise habitat[1]. The USGS model identifies it as moderate habitat for desert tortoise, and the results of the surveys identify 6-8 desert tortoises occurring on site (PSA at 4.2-95).

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 proposed project site represents a unique genetic group – the Eastern Colorado group. Because these animals represent a unique genetic occurrence in California, adequate avoidance, minimization and mitigation must be applied to this project. The uniqueness of this population is not adequately addressed

[1] http://pubs.usgs.gov/of/2009/1102/

in the 2011 Desert Tortoise Revised Recovery Plan[2] where the Eastern Colorado genetically unique tortoises are lumped in with the Northern Colorado genetically unique tortoises and collectively identified as the Colorado Recovery Unit—therefore, staff should not rely on that recovery unit designation when evaluating impacts to the genetically distinct Eastern Colorado tortoises. Maintaining the unique genetic adaptations of the tortoise population at the proposed site will help to assure persistence of the species in this area.

Regarding translocation of desert tortoises, which is being proposed as part of the "mitigation" for this project (PSA at 4.2-98), 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. 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." [emphasis added]. [3]

Translocation should be used as a tool to *augment populations within depleted recovery units*, not as a mitigation strategy to allow for large-scale industrial development in desert tortoise habitat. Any proposed translocation program should be evaluated in light of recent scientific review (Pérez et al 2012) that shows most projects (1) addressed fewer than half of the basic criteria established for translocations and (2) were either unjustifiable from a conservation perspective or inadequately designed to guarantee success or preclude negative consequences.

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 the there would be many more desert tortoise on the project site, based on habitat and survey methodology. Unfortunately the intervenors were correct but were ignored. So many more desert tortoises were found on the project site that the "take' limit for desert tortoise was quickly exceeded and the project was forced to

[2] www.fws.gov/nevada/**desert_tortoise**/dt_**recovery_plan**.html

[3] http://www.fws.gov/nevada/desert_tortoise/documents/sac/20090313_SAC_meeting_summary.pdf

cease construction via a stop-work order while subsequent reconsultation with trustee state and federal wildlife agencies was implemented. In addition, while full reports have not yet been made available, it is our understanding that the translocations associated with the ISEGS project have not been entirely successful to date. Based on these lessons learned, the proposed project should be held to much higher standards of survey data and analysis and an alternative developed that avoids impacts to desert tortoise and its habitat altogether. Evaluating a site for project implementation that avoids, and minimizes the impacts to the environment is required under CEQA.

The PSA appears to rely upon the applicant's "conservative" estimate of the number of desert tortoises on the project site (PSA at 4.2-96) instead of providing and independent evaluation. Therefore, the PSA is unclear about the range of desert tortoises (adults, sub-adults, juveniles and eggs) that are estimated to occur on the project site. Additional information and analysis is needed on this critical impact.

***Lack of Desert Tortoise Translocation/Relocation Plan***: The PSA does not provide 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 approved implemented for 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 translocation[4]. 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 further environmental review, 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 and any new translocation efforts are also experimental and may not provide the mitigation or minimization assumed by staff. 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.

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

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 the same or *higher* elevations and latitudes.

- At least a two-year study should be undertaken on the host population prior to translocation.

In addition to the avoidance and minimization measures and any translocation effort, adequate mitigation at a rate of at least 3:1 to off-set the impacts to the desert tortoise is required instead of the 1:1 proposed requirement because of the ever dwindling habitat available for this imperiled species. Acquisition of private lands in nearby desert tortoise habitat has to be set aside as tortoise conservation areas in perpetuity so that the mitigation has durability is essential. 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. A 3:1 ratio of mitigation is required because 1) the desert tortoise population continues to decline[5], 2) more of its habitat is being developed, which is a net loss to the species[6], and 3) fragmentation of the habitat, including from this proposed project, continues.

### *3. Microphyll Woodlands (Blue Palo Verde – Ironwood Woodland) Mitigation Infeasibility*

The PSA identifies that 708.9 acres of blue palo verde-ironwood woodland will be impacted by the project, and recommends a 3:1 mitigation for project impacts (PSA at 4.2-3). This plant community is also largely representative of areas identified as the Waters of the State (determined by the applicant to be 817.37 acres) that will be impacted by the proposed project. Yet, the PSA also notes that acquisition of 2,126.7 acres of blue palo verde-ironwood woodlands may not be feasible (PSA at 4.2-3) and thus the project would result in a significant, unmitigable impacts to this increasingly rare habitat type. Indeed the PSA references "identify alternate mitigation" (PSA at 4.2-3) for impacts to microphyll woodlands if adequate off-site acquisition is not feasible, yet no alternative mitigation is presented and the Center questions what alternative mitigation can be found that would even begin to provide the habitat benefits and others that are provided by these woodlands. Given these circumstances, thorough evaluation of alternatives that would avoid impacts to this resource is absolutely critical.

Mitigation for impacts to Gila woodpecker and the elf owl, both State listed endangered species also relies upon adequate mitigation for microphyll woodlands. Mitigation of impacts to sensitive bats also relies on adequate mitigation for impacts to

[5] http://www.fws.gov/nevada/desert_tortoise/dt_reports.html
[6] Moilenen et al 2009; Norton 2009

this habitat type. The PSA is unclear how the fully mitigated standard would be achieved for these species if adequate microphyll woodland cannot be acquired.

Clearly siting and design alternatives must be included that reduce and minimize this impact. These microphyll woodlands are key ecological habitats in the harsh Colorado Desert, and have great habitat benefits to a suite of rare and common species.

### *4. Rare Plants: Data and Analysis Incomplete*

As noted in the PSA, data is lacking on the spring 2012 surveys for rare plants. The lack of survey data and analysis makes it impossible to determine the impacts to the rare plant species. Avoidance is the most preferred method to eliminate impacts to rare plants. 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 unsuccessful[7], 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 additional environmental review that is also circulated for public review. Many times in the past, these plans are proposed to be developed in the future, with no public input or review. We believe these types of plans should be included as part of the CEQA process and that this should have been a "lesson learned" from earlier siting processes— the absence of these plans in the public CEQA review process undermines the informational value of the environmental review and is a violation of law. 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.

### *5. Western Burrowing Owl*

The information in the PSA 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, although three are mentioned to occur on the project site (PSA at 4.2-8). As with the kit fox, desert tortoise and other species, it is stated that a plan is to be produced for mitigation and monitoring of burrowing owls, but that plan is not

[7] Feidler 1991

provided in the PSA. It is therefore unclear how the compensation acreage for burrowing owl impacts was calculated (PSA at 4.2-151)

### *6. Golden Eagles*

The PSA recognizes that "The entire Rio Mesa SEGF project site, including the proposed gen-tie line alignment, provides potential foraging habitat and is within foraging range of known or potential nest sites." (PSA at 4.2-131). The PSA fails to present exactly how the staff proposes to mitigate the loss of a substantial amount of foraging habitat for the golden eagle from this project. The fact is 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 nest[8]. 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 modeling[9]. Golden eagles have also been documented to avoid industrialized areas that are developed in their territory.[10]

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.

Golden eagles, (a state fully-protected species) and other large special status raptors are already thought to be in decline. Mitigation Measure Bio-12 (Mitigating and Monitoring Operational Impacts to Birds and Bats) proposes to "mitigate" this proposed projects impacts by requiring "retrofitting of existing off-site electrical distribution lines to reduce electrocution risk to remediate any take of eagles or other large special status raptors that may exceed the estimated take (even if estimated take is zero)" (PSA at 4.2-6). If eagles or other large special status raptors are being electrocuted, the transmission operator/owner should be responsible for reducing the risk, moreover, even if this were an appropriate mitigation for a new project, sufficient information is not provided to show that there are such mitigation opportunities available in this vicinity that would in fact reduce impacts to the local and regional golden eagle populations from loss of habitat.

The PSA fails to provide an estimate of take of golden eagles (or bald eagles that might use the site) from the proposed project operation. These data should be provided for public review in additional environmental review.

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[8] Richardson and Miller 1997

[9] Camp et al. 1997; Richardson and Miller 1997

[10] Walker et al. 2005

### *7. Groundwater Dependent Vegetation*

The impact analysis and mitigation for groundwater dependent vegetation is incomplete, making it impossible to comment on the proposed action. Based on current proposed monitoring scheme, this rare plant community and vital wildlife resource will still be impacted by the proposed project. Impacts to this habitat type will also affect the Colorado Valley woodrat (PSA at 4.2-10). Additional environmental review needs to clarify the issues associated with the groundwater dependent vegetation and the extent of the impact.

### *8. Fire*

Fire in desert ecosystems is well documented to cause catastrophic landscape scale changes[11] and impacts to the local species[12]. The PSA fails to analyze the impacts of fire on adjacent natural desert habitat. The PSA fails to adequately analyze the impact that an escaped on-site-started fire could have on the natural lands adjacent to the project site if it escaped from the site. It also fails to address the mitigation of this potential impact. A fire prevention and protection plan needs to be developed and required to prevent the escape of fire onto the adjacent landscape (avoidance), lay out clear guidelines for protocols if the fire does spread to adjacent wildlands (minimization) and a revegetation plan if fire does occur on adjacent lands originating from the project site (mitigation) or caused by any activities associated with construction or operation of the site even if the fire originates off of the project site.

### *9. Unmitigatable Avian Impacts*

The PSA more accurately analyzes the likely impacts to avian species based on published peer reviewed science[13]. It is unclear why the PSA was unable to quantify the expected impact to avian species even with an estimate (PSA at 4.2-5), although we concur that the impact is likely to be significant under CEQA. Alternatives to avoid these significant impact are critical to the environmental review for this proposed project but have not yet been fully explored. As noted above, alternative sites, alternative technology and alternative design should all be considered.

The diversity of special status species that could be affected by the proposed project is impressive – from greater sandhill cranes (state fully protected species), bank swallows (state endangered species), willow flycatchers (state endangered species), American white pelicans, Vaux's swifts, and yellow-headed blackbirds (PSA at 4.2-9) to diverse raptors including ospreys, ferruginous hawks, Cooper's hawks, sharp-shinned

[11] Brown and Minnich 1986, Lovich and Bainbridge 1999, Brooks 2000, Brooks and Draper 2006, Brooks and Minnich 2007.
[12] Dutcher 2009
[13] McCrary et al. 1986

hawks, northern harriers, prairie falcons, peregrine falcons, merlins, Harris hawks, short-eared owls, and long-eared owls (PSA at 4.2-8).

### D. Mitigation, Nesting and Acquisition Ownership

Mitigation acquisitions must actually 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 approved there does not appropriately mitigate for the impacts because the land acquired by CDFW are outside of the northeastern recovery unit for the desert tortoise, which is where the impacts from the ISEGS project occurred. The RMSEGF project occurs in the Colorado Recovery unit and impacts the genetically unique Eastern Colorado population, and therefore mitigation for desert tortoise must occur within this desert tortoise recovery unit and this population to truly mitigate the impacts that may occur.

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. If the RMSEGS is approved as proposed, the mitigation lands must also include habitat for the Mojave fringe-toed lizard and Couch's spadefoot toad.

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 has repeatedly made it clear that it can *not* assure conservation of lands donated to it based on its multiple use mandate. Therefore, the environmental review must clearly lay out a long-term mitigation strategy to assure land ownership/management that will result in conservation of all mitigation acquisitions in perpetuity.

### E. Key Plans Not Provided

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:

- Revegetation Plan;
- Integrated Weed Management Plan;
- Desert Dry Wash Woodland Monitoring Plan;
- Long-Term Habitat Management Plan for Off-site Compensation Land;
- appropriate action plan(s) for plant salvage, horticultural propagation and re-introduction, or off-site habitat enhancement for special-status plants;
- Protected Plant Salvage Plan;
- Nesting Bird Management Plan;

- Eagle Protection Plan;
- Bird and Bat Conservation Strategy;
- Bird and Bat Monitoring Study;
- Desert Tortoise Translocation Plan;
- Raven Monitoring, Management, and Control Plan;
- Golden Eagle Monitoring and Management Plan,
- Burrowing Owl Relocation and Mitigation Plan;
- Desert Kit Fox and American Badger Management Plan;
- Drainage Erosion and Sediment Control Plan and
- Closure, Revegetation, and Reclamation Plan.

These plans should be made available to the public in time to be included along with review the future environmental documentation and analysis in the FSA and PMPD .

### F. Water Resources: Requires Additional Information and Analysis

Because ground water is such an important resource in the Colorado desert and because the project site is hydrologically connected to the Colorado River, we support the PSA's request that the a more refined analysis using the MODFLOW computer program, which can take into consideration the effects of recharge from drains, irrigation, and mountain front precipitation, be completed by the applicant (PSA at 4.9-1) especially for the potential impacts to woodlands and wetlands on and adjacent to the project site. The PSA also indicates that due to the hydrological connection with the Colorado River that any groundwater pumping would "would directly affect the volume of flow in the river and require mitigation" (PSA at 4.9-2).

The water resources analysis is lacking in detail. While it does indicate that up to 173 AFY of water will be used yearly on the RMSEGF site during normal operations (PSA at 4.9-34), it does not mention construction water use which will undoubtedly be far higher. The PSA also is unclear if any ground water pump test was required or completed, as has been required for other desert solar projects (ex. HHSEGS). We request that at minimum a seven-day ground water pump test be completed and that these data be used to inform the water analysis by the CEC.

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:*** As stated above, the PSA indicates that 817.37 acres of Waters of the State occur on the project site (PSA at 4.9-39), 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, technology and design.

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.

### G. Soil and Surface Water Analysis Inadequate

The PSA fails to evaluate the flooding potential of the proposed project site especially during monsoonal events. It relies on a Drainage Erosion and Sediment Control Plan (PSA at 4.10-1) that is not provided and apparently has not yet been developed and incorrectly concludes that "the Rio Mesa Solar Electric Generating Facility (Rio Mesa SEGF) would not result in unmitigable project-specific direct, indirect, or cumulative significant impacts to soil or water resources" (PSA at 4.10-1).

A previously permitted solar project – Genesis Solar – sustained significant impacts from summer thunder storms, which caused major flooding events that stopped construction, inundated buildings, caused sheet flow to move across the site and wind-damaged equipment[14]. The destruction on-site is reported to cost 3-5 million dollars and a full evaluation of damage to adjacent lands has not yet been provided. The Genesis Solar site lies within the same geographic area as the proposed RMSEGF site, and the RMSEGF site lies in the extensive wash system that drains the Mule Mountains and Chuckwalla Bench (PSA at Figure 4a- Biological Resources – no page number), yet, the PSA shockingly fails to address any potential on-site flooding issues that caused so much damage at the Genesis solar site or to identify lessons learned from that failure.

*Cryptobiotic soil crusts and Desert Pavement*

The proposed project is located in the Desert Air Quality Management District area, which is already in non-attainment for PM-10 particulate matter[15]. The construction of the proposed project further increases emissions of these types of particles because of the disruption and elimination of potentially thousands of acres of cryptobiotic soil crusts. Cryptobiotic soil crusts are an essential ecological component in arid lands. They are the "glue" that holds surface soil particles together precluding erosion, provide "safe sites" for seed germination, trap and slowly release soil moisture, and provide $CO_2$ uptake through photosynthesis[16].

The PSA does not describe the on-site cryptobiotic soil crusts. The proposed project will disturb an unidentified portion of these soil crusts and cause them to lose their capacity to stabilize soils and trap soil moisture. The PSA fails to provide a map of the soil crusts over the project site, and to present any avoidance or minimization measures. It is unclear how many acres of cryptobiotics soils will be affected by the project. The revised or supplemental SA must identify the extent of the cryptobiotic soils

[14] http://www.energy.ca.gov/sitingcases/genesis_solar/compliance/submittals/July-31-2012_Flood_Event/
[15] http://www.mdaqmd.ca.gov/index.aspx?page=214
[16] Belnap 2003, Belnap et al 2003, Belnap 2006, Belnap et al. 2007

on site and analyze the potential impacts to these diminutive, but essential desert ecosystem components as a result of this project.

It is likely that desert pavements also occur on the proposed project site and quantitative acreage of pavements need to be identified. The impact to air quality from disturbance of desert pavement is not analyzed.

## H. 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 could be cumulatively considerable (PSA at 4.2-11) for biological resources. 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 staff needs to identify and analyze the cumulative 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 Riverside East SEZ and adjacent areas will also further isolate the existing population of resident, relocated and translocated desert tortoise in the Colorado recovery unit. These same potential isolation issues due to the cumulative impacts of projects proposed in the Colorado River Valley also need to be discussed for groundwater pumping and avian species. All of these cumulative impacts need to be included and analyzed in a supplemental SA.

## I. 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 DRECP[17] identifies the proposed

[17] http://www.drecp.org/documents/#conservation

project site as moderate to high biological sensitivity, surrounded by high biological sensitivity area and considers it for conservation purposes, not development purposes.

To that point, the PSA fails to provide an evaluation of the conformance of the RMSEGF 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.

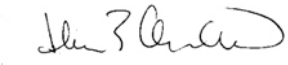
## III. CONCLUSION

From a scientific perspective, developing utility scale renewable energy project in the California deserts without first undertaking comprehensive planning is a huge gamble for wildlife[18]. 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 at the RMSEGF proposed project site, which support a variety of rare and threatened species, high quality wildlife habitat and intact ecosystem functions. An applicant's choice of technology cannot limit the agency's evaluation of impacts nor its assessment of alternatives that would achieve the same goals and objectives of providing renewable energy while avoiding significant impacts to rare and imperiled species, rare habitat types, surface hydrology, water, soils, and other fragile desert resources.

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 the next environmental review document provided for public review.

Thank you for the opportunity to submit these comments. Please feel free to contact me for additional information at 323-654-5943 or at ianderson@biologicaldiversity.org

Respectfully submitted,



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[18] Lovich and Ennen 2011

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**BEFORE THE ENERGY RESOURCES CONSERVATION AND DEVELOPMENT COMMISSION OF THE STATE OF CALIFORNIA**
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***APPLICATION FOR CERTIFICATION FOR THE RIO MESA SOLAR ELECTRIC GENERATING FACILITY***

DOCKET NO. 11-AFC-04
PROOF OF SERVICE
(Revised 11/2/12)

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*indicates change

## DECLARATION OF SERVICE

I, Lisa Belenky, declare that on November 14, 2012, I served and filed a copy of the attached document Comments on PSA, dated November 14, 2012. This document is accompanied by the most recent Proof of Service list, located on the web page for this project at: http://www.energy.ca.gov/sitingcases/riomesa/index.html.

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

(*Check all that Apply*)

For service to all other parties:

__x__ Served electronically to all e-mail addresses on the Proof of Service list (with one hard copy and CD with references to Pierre Martinez, AICP, Senior Project Manager, Siting Unit, California Energy Commission, 1516 Ninth Street, MS 15, Sacramento, CA 95814-5512);

____ Served by delivering on this date, either personally, or for mailing with the U.S. Postal Service with first-class postage thereon fully prepaid, to the name and address of the person served, for mailing that same day in the ordinary course of business; that the envelope was sealed and placed for collection and mailing on that date to those addresses marked *"hard copy required" or where no e-mail address is provided.

*AND*

For filing with the Docket Unit at the Energy Commission:

__x__ by sending electronic copies to the e-mail address below (preferred method); *OR*

____ by depositing an original and 12 paper copies in the mail with the U.S. Postal Service with first class postage thereon fully prepaid, as follows:

CALIFORNIA ENERGY COMMISSION – DOCKET UNIT
Attn: Docket No. 11-AFC-04
1516 Ninth Street, MS-4
Sacramento, CA 95814-5512
docket@energy.ca.gov

*OR, if filing a Petition for Reconsideration of Decision or Order pursuant to Title 20, § 1720:*

____ Served by delivering on this date one electronic copy by e-mail, and an original paper copy to the Chief Counsel at the following address, either personally, or for mailing with the U.S. Postal Service with first class postage thereon fully prepaid:

California Energy Commission
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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.

/s/Lisa Belenky



*indicates change