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CENTER *for* BIOLOGICAL DIVERSITY

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May 26, 2010

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Re: Comments on Draft Environmental Impact Statement and Draft California Desert Conservation Area Plan Amendment for the SES Solar Two Project (08-AFC-5), Imperial County

Dear Sirs:

These comments are submitted on behalf of the Center for Biological Diversity's 255,000 staff, members and on-line activists in California and throughout the western states, regarding the Staff Assessment and Draft Environmental Impact Statement And Draft California Desert Conservation Area Plan Amendment - SES Solar Two Project (the "DEIS") for the proposed SES Solar Two Project in Imperial County, California (hereinafter "proposed project" or "SES Solar 2"), issued by the Bureau of Land Management ("BLM").

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 emission reductions set by AB 32 and Executive Orders S-03-05 and S-21-09. The Center for Biological Diversity (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 corridors 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.

As proposed, the proposed project would cover approximately 6,185 acres (approximately 9.7 square miles) of Sonoran desert scrub that is prime habitat for the federally proposed threatened flat-tailed horned lizard ("FTHL") including foraging habitat for the federally and state listed endangered Peninsular bighorn sheep. Unfortunately, the DEIS for the proposed plan amendment and right-of-way application fails to provide adequate identification

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and analysis of the significant impacts to the endangered Peninsular bighorn sheep, the flat-tailed horned lizard, rare plants, and other biological resources, fails to adequately address the significant cumulative and growth inducing impacts of the project, and lacks consideration of a reasonable range of alternatives. In addition, BLM has failed to fully examine the impact of the proposed plan amendment to the California Desert Conservation Act Plan ("CDCA Plan") along with other similar proposed plan amendments that which would result in industrial sites sprawling across the California Desert within habitat that should be protected to achieve the goals of the bioregional plan as a whole.

Nonetheless, even the inadequate information provided in the DEIS shows that the proposed plan amendment and right-of-way application should be denied because the proposed project will result in significant impacts to a breeding population of flat-tailed horned lizards, which are proposed to be listed under the Endangered Species Act ("ESA"). In addition to direct impacts to the flat-tailed horned lizard, the proposed project is in an area that links the northern and southern populations and management areas for this imperiled species – areas which were set aside for the conservation and recovery of the species. Although the DEIS acknowledges that this site includes documented foraging area for the federally and state endangered Peninsular bighorn sheep (DEIS at C.2-39), the DEIS improperly ignored potential impacts to the bighorn from the loss of this foraging area. Alternative siting, which the BLM failed to adequately address in the DEIS, could significantly reduce the impacts to both of these species, their occupied habitat, and other special status species including potentially rare plants. The Center urges the BLM to revise the DEIS to adequately address these and other issues detailed below and re-circulate the DEIS or a supplemental DEIS for public comment.

In the sections that follow, the Center provides detailed comments on the ways in which the DEIS fails to adequately identify and analyze many of the impacts that could result from the proposed project, including but not limited to: impacts to biological resources, growth inducing impacts alternatives and cumulative impacts. In addition, if undertaken as proposed, this industrial project is inconsistent with local planning and zoning laws, the Endangered Species Act ("ESA"), the Federal Land Policy Management Act ("FLPMA"), the California Desert Conservation Act ("CDCA"), and other laws, ordinances, regulations and standards.

Because the project approval process includes a quasi-judicial process in the California Energy Commission, the Center hereby incorporates by reference all of the materials before the California Energy Commission regarding the approval of this project. BLM is a party to the CEC process, which is being conducted in concert with the BLM approval process, and BLM has access to all of the documents (which are also readily accessible on the internet), therefore, BLM should incorporate all of the documents and materials from that process into the administrative record for the BLM decision as well.

I. The BLM's Analysis of the Proposed Plan Amendment and Proposed Project Fail to Comply with FLPMA.

As part of FLPMA, Congress designated 25 million acres of southern California as the California Desert Conservation Area ("CDCA"). 43 U.S.C. § 1781(c). Congress declared in FLPMA that the CDCA is a rich and unique environment teeming with "historical, scenic,

archaeological, environmental, biological, cultural, scientific, educational, recreational, and economic resources." 43 U.S.C. § 1781(a)(2). Congress found that this desert and its resources are "extremely fragile, easily scarred, and slowly healed." *Id.* For the CDCA and other public lands, Congress mandated that the BLM "shall, by regulation or otherwise, take any action necessary to prevent unnecessary or undue degradation of the lands." 43 U.S.C § 1732(b).

The sum total of the plan amendment to the CDCA plan is one sentence: "Permission granted to construct solar energy facility (proposed SES Solar Two Project)." DEIS at A-6. Given the impact of the proposed project on other multiple uses of these public lands at the proposed site as well as other aspects of the bioregional planning, it appears that BLM may also need to amend other parts of the plan as well and should have looked at additional and/or different amendments as part of the alternatives analysis. For example, the project surveys again confirm and provide new information on the biological richness of the area and the relatively robust flat-tailed horned lizard population, the proposed project site as a potential connector between existing Yuha Basin Management Area and the West Mesa Management Area, which were specifically set up for conservation of flat-tailed horned lizard, and also show the utilization of the site by the federally and state endangered Peninsular bighorn sheep. In light of this information, the BLM should consider an alternative plan amendment that would designate this area as an Area of Critical Environmental Concern for habitat conservation or an expansion of the flat-tailed horned lizard management areas in conjunction with improvements to increase wildlife connectivity across Interstate 8. Based on the 2,000 - 5,000 animals (DEIS at C.2-22) that are estimated to be on the proposed project site, the site would serve flat-tailed horned lizard conservation at least as well as the existing Management Areas for the conservation of this species and would also provide connectivity values. This should have been considered as an alternative to the proposed large-scale industrial use, which could instead be sited on previously disturbed areas that provide little habitat values for imperiled wildlife.

As discussed further below regarding FLPMA, and in the section on NEPA and segmentation, the BLM should have taken a more comprehensive look at the plan amendment to determine: 1) whether industrial scale projects are appropriate for any of the public lands in this area; 2) if so, how much of the public lands are suitable for such industrial uses given the need to balance other management goals including flat-tailed horned lizard and Peninsular bighorn sheep conservation and recreational uses; and 3) the location of the public lands suitable for such uses, if any. Rather, BLM appears to have looked at this application and others in the area on BLM managed lands, as well as other proposed projects, in isolation. As a result, this piecemeal approach to project review threatens to undermine the "bioregional" approach in the CDCA Plan as a whole as well as violate the fundamental planning principles of FLPMA.

A. The DEIS Fails to Adequately Address the Plan Amendment in the Context of the CDCA Plan.

Unfortunately, the DEIS fails to adequately consider the impacts of the proposed project and plan amendment and reasonable alternatives in the context of FLPMA and the CDCA Plan. FLPMA requires that in developing and revising land use plans, the BLM consider many factors and "use a systematic interdisciplinary approach to achieve integrated consideration of physical, biological, economic, and other sciences . . . consider the relative scarcity of the values involved

and the availability of alternative means (including recycling) and sites for realization of those values." 43 U.S.C. § 1712(c). As stated clearly in the CDCA Plan:

> The goal of the Plan is to provide for the use of the public lands, and resources of the California Desert Conservation Area, including economic, educational, scientific, and recreational uses, in a manner which enhances wherever possible—and which does not diminish, on balance—the environmental, cultural, and aesthetic values of the Desert and its productivity.

CDCA Plan at 5-6. The CDCA Plan also provides several overarching management principles:

> MANAGEMENT PRINCIPLES
>
> The management principles contained in the law (FLPMA)—*multiple use, sustained yield, and the maintenance of environmental quality*—are not simple guides. Resolution of conflicts in the California Desert Plan requires innovative management approaches for everything from wilderness and wildlife to grazing and mineral development. These approaches include:
>
> —Seeking simplicity for management direction and public understanding, avoiding complication and confusing in detail which would make the Plan in comprehensive and unworkable.
>
> —Development of decision-making processes using appropriate guidelines and criteria which provide for public review and understanding. These processes are designed to help in allowing for the use of desert lands and resources while preventing their undue degradation or impairment.
>
> *—Responding to national priority needs for resource use and development, both today and in the future, including such paramount priorities as energy development and transmission, without compromising the basic desert resources of soil, air, water, and vegetation, or public values such as wildlife, cultural resources, or magnificent desert scenery. This means, in the face of unknowns, erring on the side of conservation in order not to risk today what we cannot replace tomorrow*.
>
> *—Recognizing that the natural patterns of the California Desert, its geological and biological systems, are the basis for planning*, and that human use patterns, from freeways to fence lines, define its boundaries. Only in this way can the public resources can be understood and protected by the Plan that can be publicly comprehended, accepted, and followed.

CDCA Plan 1980 at 6 (first emphasis in original, second emphasis added).

The CDCA Plan anticipated that there would be multiple plan amendments over the life of the plan and provides specific requirements for analysis of Plan amendments. Those requirements include determining "if alternative locations within the CDCA are available which would meet the applicant's needs without requiring a change in the Plan's classification, or an amendment to any Plan element" and evaluating "the effect of the proposed amendment on BLM

management's desert-wide obligation to achieve and maintain a balance between resource use and resource protection." CDCA Plan at 121. Thus, BLM should have, at minimum, analyzed in the DEIS whether alternative locations were available that would not require a plan amendment, and how the proposed amendment would affect desert-wide resource protection—it failed on both counts.

The CDCA Plan includes the Energy Production and Utility Corridors Element which is focused primarily on utility corridors with brief discussion of powerplant siting. Even in 1980 the CDCA Plan contemplated that alternative energy projects would likely be developed in the future but did not expressly provide planning direction for solar energy production. Nonetheless, the overarching principles expressed in the Decision Criteria are also applicable to the proposed project here including minimizing the number of separate rights-of-way, providing alternatives for consideration during the processing of applications, and "avoid[ing] sensitive resources wherever possible." CDCA Plan at 93. Nothing in the DEIS shows that BLM considered the landscape level issues and management objectives or meaningful alternatives to the proposed plan amendment—including an alternative that would designate this area as an ACEC or a Management Area for flat-tailed horned lizard conservation.

In addition, BLM should have considered the impacts to existing land use plans for these public lands across several scales including, for example: in the western Imperial Valley; in the Imperial Valley as a whole; in the Salton Trough; and in the CDCA as a whole.

B. The DEIS Fails to Adequately Address Impacts to Multiple Use Class L Lands and Loss of Multiple Use in Favor of a Single Use for Industrial Purposes.

As FLPMA declares, public lands are to be managed for multiple uses "in a manner that will protect the quality of the scientific, scenic, historical, ecological, environmental, air and atmospheric, water resource, and archeological values." 43 U.S.C.§ 1701(a)(7) & (8). The CDCA Plan as amended provides for four distinct multiple use classes based on the sensitivity of resources in each area. The proposed project site is in MUC class L lands. DEIS at C.13-4. Under the CDCA Plan, Multiple-use Class L (Limited Use) "protects sensitive, natural, scenic, ecological, and cultural resources values. Public lands designated as Class L are managed to provide for generally *lower-intensity, carefully controlled multiple use of resources, while ensuring that sensitive values are not significantly diminished*." CDCA Plan at 13 (emphasis added). The proposed project is a high-intensity, single use of resources that will displace all other uses and that will significantly diminish (indeed, completely destroy) of over 6,000 acres of good-quality occupied flat-tailed horned lizard habitat among other impacts. On this basis as well as others the proposed project is inappropriate for a Limited Use area such as this one and the terms of the proposed plan amendment are inconsistent with the CDCA Plan.

Although solar development is a potentially allowable use in this area, the BLM must take into account all of the relevant multiple uses of the area that could be displaced before making a decision including, for example, the displacement of flat-tailed horned lizards, the displacement of Peninsular bighorn sheep from foraging habitat, destruction and fragmentation

of high quality habitat, and impacts to water quality and groundwater resources, cultural resources, and native American values.

As the DEIS recognizes, the Juan Bautista de Anza National Historic Trail "bisects the western portion of both proposed phases of the project site". DEIS at C.13-5. While the DEIS goes onto state that "the portion of the trail located within the project site is not marked or open for travel, as it is within the Yuha Desert ACEC". DEIS at C.13-5. This last statement is confusing at best and appears to be inaccurate. The map from the Juan Bautista de Anza National Historic Trail clearly shows the trail going through the project site.[1] Additionally, BLM's own route designation maps from the Western Colorado Routes of Travel Designation Plan also show that route as an open route on the proposed project site.[2] The designated route is also accessible by a number of other designated routes that currently occur on the proposed project site, yet the DEIS fails to analyze any alternative routes that might be adopted if these routes are blocked by the proposed project or the impact of such routes on rare species and other resources if the propose project moves forward.

The DEIS acknowledges that "Under the proposed project an area of roughly 10 square miles, including over 5.6 miles of frontage on Highway I-8, would experience a dramatic visual transformation from a predominantly natural desert landscape to one of a highly industrial character." DEIS at C.13-23 (in the context of visual resources). In the DEIS this issue is looked at solely in the context of visual resources, however, and no where in the document does BLM look at the issue of industrialization in the context of biological resources, the CDCA Plan as a whole, or how transformation of this area will affect the overall landscape-wide bioregional planning approach.

The adoption of the proposed plan amendment will change the multiple-use character of these lands which currently provides habitat for imperiled species, recreational uses including a historic trail and other cultural resources, camping and off-road vehicle routes, in favor of a single use that will completely displace other uses on the proposed site. For example, the proposal would require changes in the route network resulting in several routes which would need to be moved—those changes to the route network are simply not addressed in the DEIS (nor are the likely direct, indirect and cumulative impacts of changing those route designations adequately identified or analyzed, as discussed in detail below). Any changes to routes would require BLM to amend the route designations in the area because these routes are part of a network that was adopted through a plan amendment. When BLM does consider these issues, as it must, in a revised or supplemental DEIS, a range of alternatives must be considered in addition to the fact that such changes will undoubtedly change use of the previously existing nearby routes, most likely causing increased use on other nearby routes. Even if BLM attempts to simply reroute along the fenceline for the proposed project a plan amendment would be required and BLM must then consider that new unauthorized routes to provide connections to the other routes, and/or entirely new unauthorized routes may be created by off-road vehicle users *to avoid the industrial site entirely*. There is no evidence that recreational off-road vehicle users will be content to drive for miles along a fence adjoining an industrial site rather than striking off cross-country to connect with more scenic routes. Past experience shows that the latter is quite

[1] http://www.solideas.com/DeAnza/TrailGuide/pdfs/Anza_Trail_Imperial_Guide.pdf
[2] http://www.blm.gov/pgdata/etc/medialib/blm/ca/images/elcentro/weco.Par.65338.Image.-1.-1.1.jpg

understandably a much more likely outcome and BLM should recognize this in analyzing the impacts of this project on the existing route network and any proposal to amend that network.

The DEIS's failure to adequately identify or analyze many of the significant impacts to the flat-tailed horned lizard population in the area from direct impacts (loss of habitat, fragmentation, take due to translocation, etc.) indirect impacts, and cumulative impacts is discussed in detail below. In addition, BLM provides no meaningful analysis of how the actual use of the adjacent areas might change if a large 6,000+ acre fenced industrial project site is constructed, particularly with regards to recreational activities. Nor there any discussion of the impacts of increased and more concentrated off-road recreation at the translocation sites for the flat-tailed horned lizard from those displaced from the project site, or, more to the point, the need to reduce recreation in areas any translocation areas after flat-tailed horned lizard are removed from the project site under a translocation plan.[3] The DEIS for the proposed plan amendment should at minimum have included an alternative that would limit impacts to the lizards from off-road vehicle use in the translocation areas.

C. Fails to Adequately Address Other Ongoing Planning Efforts

The DEIS fails to adequately address the proposed project in the context of other connected projects (including multiple renewable energy projects, substations and additional transmission lines) and the ongoing PEIS planning process for solar development in six western states undertaken by BLM and DOE which does not identify this area as a proposed solar energy study area[4]. Direct, indirect and cumulative impacts of the proposed project in conjunction with others will lead to sprawl development in the area and undermine the *planning* for renewable energy industrial zones that BLM has undertaken.

The cumulative impacts to species in this area from sprawl development, as opposed to well planned and sited development, are not adequately addressed in the planning context. Nor is the conversion of the western Imperial Valley into a highly industrialized area (with additional wind and large scale solar plants, accompanying substations and power lines, and glare and heat islands) adequately addressed in the environmental review. In fact, it is clear that piecemeal project approvals in this area and others may undermine the solar programmatic planning by federal agencies for the western states. This critical issue regarding planning on public lands is not adequately addressed in the DEIS which only mentions the PEIS process particularly with regards to the "south of Highway 98 alternative". DEIS at B.2-74 to 84. The BLM does not analyze how the PEIS could be affected by piecemeal approval of this and other projects. Such analysis *after the fact* is not consistent with the planning requirements of FLPMA or, indeed, any rational land use planning principles.

D. BLM Failed to Inventory the Resources of these Public Lands Before Making a Decision to Allow Destruction of those Resources

[3] This is just one of the many oversights and failing associated with the analysis of the proposed translocation which is discussed in depth below.

[4] http://solareis.anl.gov/documents/maps/studyareas/Solar_Study_Area_CA_Ltt_7-09.pdf

FLPMA states that "[t]he Secretary shall prepare and maintain on a continuing basis an inventory of all public lands and their resource and other values," and this "[t]his inventory shall be kept current so as to reflect changes in conditions and to identify new and emerging resource and other values." 43 U.S.C. § 1711(a). FLPMA also requires that this inventory form the basis of the land use planning process. 43 U.S.C. § 1701(a)(2). *See Center for Biological Diversity v. Bureau of Land Management*, 422 F.Supp.2d 1115, 1166-67 (N.D. Cal. 2006) (discussing need for BLM to take into account known resources in making management decisions); *ONDA v. Rasmussen,* 451 F.Supp. 2d 1202, 1212-13 (D. Or. 2006) (finding that BLM did not take a hard look under NEPA by relying on outdated inventories and such reliance was inconsistent with BLM's statutory obligations to engage in a continuing inventory under FLPMA). It is clear that BLM should not approve a management plan amendment based on outdated and inadequate inventories of affected resources on public lands.

As detailed below in the NEPA sections, here BLM has failed to compile an adequate inventory of the resources of the public lands that could be affected by the proposed project *before* preparing the DEIS (including, e.g., rare plant surveys including late-summer/early-fall flowering plants, Peninsular bighorn sheep movement and use, and other biological resources) which is necessary in order to adequately assess the impacts to resources of these public lands in light of the proposed plan amendment and BLM has also failed to adequately analyze impacts on known resources. Indeed, the project proponent has stated that surveys were ongoing after the DEIS was issued and the water source for the proposed project has changed thereby requiring additional information regarding the water resources as well. Therefore, at minimum, a revised DEIS or supplemental DEIS must be prepared that includes the new information about the resources of the site and potential impacts of the project on resources of our public land, and that document must be circulated for public review and comment.

E. The DEIS Fails to Provide Adequate Information to Ensure that the BLM will Prevent Unnecessary and Undue Degradation of Public lands

FLPMA requires BLM to "take any action necessary to prevent unnecessary or undue degradation of the lands" and "minimize adverse impacts on the natural, environmental, scientific, cultural, and other resources and values (including fish and wildlife habitat) of the public lands involved." 43 U.S.C. §§ 1732(b), 1732(d)(2)(a). Without adequate information and analysis of the current status of the resources of these public lands, BLM cannot fulfill its duty to prevent unnecessary or undue degradation of the public lands and resources. Thus, the failure to provide an adequate current inventory of resources and environmental review undermines BLM's ability to protect and manage these lands in accordance with the statutory directive.

BLM has failed to properly identify and analyze impacts to the resources including the listed and sensitive species in the project area. As detailed below, the BLM's failure in this regard violates the most basic requirements of NEPA and in addition undermines the BLM's ability to ensure that the proposal does not cause unnecessary and undue degradation of public lands. *See Island Mountain Protectors*, 144 IBLA 168, 202 (1998) (holding that "[t]o the extent BLM failed to meet its obligations under NEPA, it also failed to protect public lands from unnecessary or undue degradation."); *National Wildlife Federation*, 140 IBLA 85, 101 (1997)

(holding that "BLM violated FLPMA, because it failed to engage in any reasoned or informed decision-making process" or show that it had "balanced competing resource values").

II. The DEIS Fails to Comply with NEPA.

NEPA is the "basic charter for protection of the environment." 40 C.F.R. § 1500.1(a). In NEPA, Congress declared a national policy of "creat[ing] and maintain[ing] conditions under which man and nature can exist in productive harmony." *Or. Natural Desert Ass'n v. Bureau of Land Mgmt.,* 531 F.3d 1114, 1120 (9th Cir. 2008) (quoting 42 U.S.C. § 4331(a)). NEPA is intended to "ensure that [federal agencies] … will have detailed information concerning significant environmental impacts" and "guarantee[] that the relevant information will be made available to the larger [public] audience." *Blue Mountains Biodiversity Project v. Blackwood,* 161 F.3d 1208, 1212 (9th Cir. 1998).

Under NEPA, before a federal agency takes a "'major [f]ederal action[] significantly affecting the quality' of the environment," the agency must prepare an environmental impact statement (EIS). *Kern v. U.S. Bureau of Land Mgmt.,* 284 F.3d 1062, 1067 (9th Cir. 2002) (quoting 43 U.S.C. § 4332(2)(C)). "An EIS is a thorough analysis of the potential environmental impact that 'provide[s] full and fair discussion of significant environmental impacts and … inform[s] decisionmakers and the public of the reasonable alternatives which would avoid or minimize adverse impacts or enhance the quality of the human environment.'" *Klamath-Siskiyou Wildlands Ctr. v. Bureau of Land Mgmt.,* 387 F.3d 989, 993 (9th Cir. 2004) (citing 40 C.F.R. § 1502.1). An EIS is NEPA's "chief tool" and is "designed as an 'action-forcing device to [e]nsure that the policies and goals defined in the Act are infused into the ongoing programs and actions of the Federal Government.'" *Or. Natural Desert Ass'n,* 531 F.3d at 1121 (quoting 40 C.F.R. § 1502.1).

An EIS must identify and analyze the direct, indirect, and cumulative effects of the proposed action. This requires more than "general statements about possible effects and some risk" or simply conclusory statements regarding the impacts of a project. *Klamath Siskiyou Wildlands Center v. BLM,* 387 F.3d 989, 995 (9th Cir. 2004) (citation omitted); *Oregon Natural Resources Council v. BLM,* 470 F.3d 818, 822-23 (9th Cir. 2006). Conclusory statements alone "do not equip a decisionmaker to make an informed decision about alternative courses of action or a court to review the Secretary's reasoning." *NRDC v. Hodel*, 865 F.2d 288, 298 (D.C. Cir. 1988).

NEPA also requires BLM to ensure the scientific integrity and accuracy of the information used in its decision-making. 40 CFR § 1502.24. The regulations specify that the agency "must insure that environmental information is available to public officials and citizens before decisions are made and before actions are taken. The information must be of high quality. Accurate scientific analysis, expert agency comments, and public scrutiny are essential." 40 C.F.R. § 1500.1(b). Where complete data is unavailable, the EIS also must contain an analysis of the worst-case scenario resulting from the proposed project. *Friends of Endangered Species v. Jantzen*, 760 F.3d 976, 988 (9th Cir. 1985) (NEPA requires a worst case analysis when information relevant to impacts is essential and not known and the costs of obtaining the

information are exorbitant or the means of obtaining it are not known) *citing Save our Ecosystems v. Clark*, 747 F.2d 1240, 1243 (9th Cir. 1984); 40 C.F.R. § 1502.22.

As detailed below, the DEIS fails to comply with NEPA in several key areas. Overall, that the DEIS provides incomplete information and appears to have been prepared in a rush rather than to be the result of adequate analysis and research regarding impacts to the environment. Moreover, the DEIS fails to meet the requirements for sufficient information in many ways and fails to include any explanation for the missing information or analysis of why it could not be obtained. Further, the DEIS assumed that another agency would make a decision that was not in fact yet made regarding the availability of water from the Seeley plant—an error of fact. At minimum, because the DEIS did not accurately address the water issues a revised DEIS or supplemental DEIS must be prepared and circulated for public review and comment.

As BLM is well aware, the notice to the public regarding the availability of the DEIS was confused at best with multiple published notices regarding the availability of the DEIS and a mistaken notice regarding the date that comments would be due. In light of this, the Center urges the BLM to accept comments from the public regarding the DEIS up to and including June 23, 2010 – the date that was published in the federal register notice from the EPA on March 5, 2010. 75 Fed. Reg. 10255. Given that the BLM must prepare a revised DEIS or a supplemental DEIS, it will not cause any additional delay for BLM to consider comments that are submitted up to that date from members of the public who may have been mislead by the incorrect notice.

The DEIS appears to rely heavily on conclusory statements and many critical issues have not been fully identified and analyzed in the DEIS. Moreover not all of the references are readily available and in several instances the DEIS relies on personal communications without any documentation for critical assumptions such as the success of flat-tailed horned lizard translocation, ignoring other data and scientific evidence. For example, the DEIS states:

> "The FTHL would be moved out of harm's way in coordination with the FTHL ICC. The FTHL ICC may choose to relocate the salvaged FTHL from the SES Solar Two project to several suitable sites within protect FTHL habitat or possibly conduct field research on FTHL. Decisions regarding the salvaged FTHL should be determined by the BLM in cooperation with the FTHL ICC prior to publication of the Staff Assessment/Final Environmental Impact Statement (Steward 2010)"

DEIS C.2-21. The reference given is "Steward, D., 2010 – Telephone conversation between Daniel Steward, Acting Field Manager for the Bureau of Land Management, El Centro, California office, and Joy Nishida, California Energy Commission. January 6, 2010." No other references are discussed or provided for this critical issue. No data are provided that relocation of flat-tailed horned lizard has ever proven to be a successful minimization or mitigation measure. It does not appear that the BLM had sufficient time or made sufficient effort to obtain current information or to accurately address the issue of mortality to the flat-tailed horned lizard from relocation as well as many other issues.

Similarly, the DEIS notes that "The USFWS, CDFG, and BLM biologists are in agreement that the siting [sic] of bighorn sheep on the site in spring 2009 was an unusual

occurrence and is unlikely to occur again" (DEIS at C.2-40) yet no citation or reference is included as a basis for this assumption, no independent bighorn biologist was contacted for input, nor is there any other information provided as to the basis of these conclusions are provided. The DEIS does not describe whether any surveys were conducted for bighorn or sign, the methodology and results of such surveys if any, and if no surveys were conducted the reason for that omission. Further, additional sightings of bighorn have been reported on the site of the proposed project, some as recently as this week.

These examples show a lack of attention to detail in preparing the DEIS and in consideration of the proposed project as well. When BLM revises the DEIS, as it must, the Center hopes and expects that BLM will remedy the errors noted as well as provide a more considered analysis of the impacts of the proposed project.

A. Purpose and Need and Project Description are Too Narrowly Construed and Unlawfully Segment the Analysis

1. Purpose and Need:

Agencies cannot narrow the purpose and need statement to fit only the proposed project and then shape their findings to approve that project without a "hard look" at the environmental consequences. To do so would allow an agency to circumvent environmental laws by simply "going-through-the-motions." It is well established that NEPA review cannot be "used to rationalize or justify decisions already made." 40 C.F.R. § 1502.5; *Metcalf v. Daley*, 214 F.3d 1135, 1141-42 (9th Cir. 2000) ("the comprehensive 'hard look' mandated by Congress and required by the statute must be timely, and it must be taken objectively and in good faith, not as an exercise in form over substance, and not as a subterfuge designed to rationalize a decision already made.") As Ninth Circuit noted an "agency cannot define its objectives in unreasonably narrow terms." *City of Carmel-by-the-Sea v. U.S. Dept. of Transportation*, 123 F.3d 1142, 1155 (9th Cir. 1997); *Muckleshot Indian Tribe v. U.S. Forest Service*, 177 F. 3d 900, 812 (9th Cir. 1999). The statement of purpose and alternatives are closely linked since "the stated goal of a project necessarily dictates the range of 'reasonable' alternatives." *City of Carmel*, 123 F.3d at 1155. The Ninth Circuit recently reaffirmed this point in *National Parks Conservation Assn v. BLM*, 586 F.3d 735, 746-48 (9th Cir. 2009) (holding that "[a]s a result of [an] unreasonably narrow purpose and need statement, the BLM necessarily considered an unreasonably narrow range of alternatives" in violation of NEPA).

The purpose behind the requirement that the purpose and need statement not be unreasonably narrow, and NEPA in general is, in large part, to "guarantee[ ] that the relevant information will be made available to the larger audience that may also play a role in both the decision-making process and the implementation of that decision." *Robertson v. Methow Valley Citizens Council*, 490 U.S. 332, 349 (1989). The agency cannot camouflage its analysis or avoid robust public input, because "the very purpose of a draft and the ensuing comment period is to elicit suggestions and criticisms to enhance the proposed project." *City of Carmel-by-the-Sea*, 123 F.3d at 1156. The agency cannot circumvent relevant public input by narrowing the purpose and need so that no alternatives can be meaningfully explored or by failing to review a reasonable range of alternatives.

The BLM's purpose and need for the SES Solar Two Project is "to respond to SES Solar Two, LLC's application under Title V of FLPMA (43 U.S.C. 1761) for a ROW grant to construct, operate, and decommission a solar thermal facility on public lands in compliance with FLPMA, BLM ROW regulations, and other Federal applicable laws", and also states that the "BLM authorities include:

> • Executive order 13212, dated May 18, 2001, which mandates that agencies act expediently and in a manner consistent with applicable laws to increase the "production and transmission of energy in a safe and environmentally sound manner."
> • The EPAct, which requires the Department of the Interior (BLM's parent agency) to approve at least 10,000 MW of renewable energy on public lands by 2015.
> • Secretarial Order 3285, dated March 11, 2009, which "establishes the development of renewable energy as a priority for the Department of the Interior."

DEIS at A-12. The DEIS notes that an amendment to the CDCA Plan is needed in order to approve the project but does not clearly identify the plan amendment as a part of the project being evaluated. Rather, the DEIS states: "The BLM will decide whether to approve, approve with modification, or deny issuance of a ROW grant to SES Solar Two, LLC for the proposed SES Solar Two Project. The BLM's actions will also include consideration of amending the CDCA Plan concurrently." DEIS at A-12. BLM's purpose and need is very narrowly construed to the proposed project itself and an amendment to the Plan *for the project only*. The purpose and need provided in the DEIS is impermissibly narrow under NEPA for several reasons, most importantly because it foreclosed meaningful alternatives review in the DEIS. *See* DEIS at B.2-1 and discussion below regarding alternatives. Because the purpose and need and the alternatives analysis are at the "heart" of NEPA review and affect nearly all other aspects of the EIS, on this basis and others, BLM must revise and re-circulate the DEIS.

> The DOE purpose and need statement provides:
>
> The EPAct of 2005 established a Federal loan guarantee program for eligible energy projects that employ innovative technologies. Title XVII of the EPAct of 2005 authorizes the Secretary of Energy to make loan guarantees for a variety of types of projects, including those that "avoid, reduce, or sequester air pollutants or anthropogenic emissions of greenhouse gases, and employ new or significantly improved technologies as compared to commercial technologies in service in the United States at the time the guarantee is issued".
>
> The two purposes of the loan guarantee program are to encourage commercial use in the United States of new or significantly improved energy-related technologies and to achieve substantial environmental benefits. The purpose and need for action by DOE is to comply with its mandate under EPAct by selecting eligible projects that meet the goals of the Act.

DEIS at A-12. As the applicant admits the proposed project is experimental at the scale proposed: the applicant's objective is states: "To assist in meeting the requirement for additional

generating capacity, the applicant has developed solar technology which requires commercial-scale development to demonstrate its technical and commercial viability" DEIS at A-10. Thus, the proposed project appears to meet the DOE criteria because it is admittedly "new" — indeed, experimental — technology at the proposed scale, and the applicant hopes that it will assist in meeting the renewable generating capacity. However, by that same token, the DEIS fails to address the experimental nature of the proposed project[5] including the likelihood of success (or failure) and the consequences of failure (including technological failures and financial failures) and the full extent of the likely resulting impacts to public lands.

In discussing the cumulative scenario, the DOE loan guarantee program is also described as one of the incentive programs for funding renewable energy projects:

> Example[s] of incentives for developers to propose renewable energy projects on private and public lands in California, Nevada and Arizona, include the following:
>
> ● U.S. Treasury Department's Payments for Specified Energy Property in Lieu of Tax Credits under §1603 of the American Recovery and Reinvestment Act of 2009 (Public Law 1115) - Offers a grant (in lieu of investment tax credit) to receive funding for 30% of their total capital cost at such time as a project achieves commercial operation (currently applies to projects that begin construction by December 31, 2010 and begin commercial operation before January 1, 2017).
>
> ● U.S. Department of Energy (DOE) Loan Guarantee Program pursuant to §1703 of Title XVII of the Energy Policy Act of 2005 - Offers a loan guarantee that is also a low interest loan to finance up to 80% of the capital cost at an interest rate much lower than conventional financing. The lower interest rate can reduce the cost of financing and the gross project cost on the order of several hundred million dollars over the life of the project, depending on the capital cost of the project.

DEIS at B.3-2 to 3.

The Center is well aware that deadlines for funding, particularly for the American Recovery and Reinvestment Act ("ARRA") funds, have driven the pace of the environmental review for this project and, while such funding mechanisms are important, deadlines cannot be used as an excuse for rushed and inadequate NEPA review. The BLM and DOE must be concerned with the adequate NEPA review and even if the agencies can properly have an objective of *timely* approval of projects they cannot properly have as purpose and need of the project a *rushed* inadequate environmental impact review.

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[5] As the BLM is aware, the largest installation of Stirling suncatchers is a 1.5 MW, 60 dish facility in Maricopa County, Arizona installed in January 2010. The proposed project is proposed to install 30,000 suncatchers (DEIS at B.1-20) approximately 500 times larger. http://www.stirlingenergy.com/pdf/2010_01_22.pdf

Moreover, in its discussion of the need for renewable energy production the DEIS fails to address risks associated with global climate change in context of including both the need for climate change mitigation strategies (e.g., reducing greenhouse gas emissions) and the need for climate change adaptation strategies (e.g., conserving intact wild lands and the corridors that connect them). All climate change adaptation strategies underline the importance of protecting intact wild lands and associated wildlife corridors as a priority adaptation strategy measure.

As the DEIS admits, building the proposed project at the proposed location "would permanently eliminate approximately 5,024.4 acres of Sonoran creosote bush scrub and approximately 1,038.7 acres of disturbed/developed Sonoran creosote bush scrub." DEIS p. C.2-29. In addition, "[g]rading would directly affect wildlife and other special status species by removal of shrubs and herbaceous vegetation, resulting in loss and fragmentation of cover, breeding, and foraging habitat." DEIS p. C.2-29.

The habitat fragmentation, loss of connectivity for terrestrial wildlife, and introduction of predators and invasive weed species associated with the proposed project in the proposed location are contrary to an effective climate change adaptation strategy that the agencies also claim to support. Siting the proposed project in the proposed location impacting major washes and occupied habitat of imperiled species could undermine a meaningful climate change adaptation strategy with a poorly executed climate change mitigation strategy. The way to maintain healthy, vibrant ecosystems is not to fragment them and reduce their biodiversity.

2. *Project Description:*

The Project Description is inaccurate in several respects including regarding the water source for the project and the hydrogen supply and extent of hydrogen transport on the site as well as others. For example, the DEIS assumed that water would be available from the Seeley plant that now it is clear will not be—at least not in time for the proposed construction schedule—the proponent now proposes to use groundwater from a sole source aquifer that is already heavily impacted by other uses. The likely impacts from the proposed use of water from alternative sources are not adequately addressed. Similarly, the proponent has revised the plans for hydrogen transport and storage on the site but the new plans were not evaluated in the DEIS, and although there is some discussion of the likelihood of fire, there is no discussion of the impacts of fire on wildlands.

The Project Description may also (perhaps inadvertently) mislead the public by its characterization of the project as a 750 MW "nameplate" or "nominal". The DEIS notes that the project's actual capacity which is much lower—25% was used as an estimate in the DEIS E.4-2 and Appendix for Air Quality, Air-1-6, Greenhouse Gas Table 3, note c. Moreover, the Project Description and the DEIS as a whole fail to account for other power losses including line losses during hot days which can be significant. Because an accurate project description is vital to a fair comparison of alternatives, the DEIS should have more clearly discussed the capacity factor and other potential energy losses so that the actual output of this proposed project could be compared to similar projects.

B. The DEIS Does Not Adequately Describe Environmental Baseline

BLM is required to "describe the environment of the areas to be affected or created by the alternatives under consideration." 40 CFR § 1502.15. The establishment of the baseline conditions of the affected environment is a practical requirement of the NEPA process. In *Half Moon Bay Fisherman's Marketing Ass'n v. Carlucci*, 857 F.2d 505, 510 (9th Cir. 1988), the Ninth Circuit states that "without establishing . . . baseline conditions . . . there is simply no way to determine what effect [an action] will have on the environment, and consequently, no way to comply with NEPA." Similarly, without a clear understanding of the current status of these public lands BLM cannot make a rational decision regarding proposed project. *See Center for Biological Diversity v. U.S. Bureau of Land Management, et al*., 422 F. Supp. 2d 1115, 1166-68 (N.D. Cal. 2006) (holding that it was arbitrary and capricious for BLM to approve a project based on outdated and inaccurate information regarding biological resources found on public lands).

The DEIS fails to provide adequate baseline information and description of the environmental setting in many areas including in particular the status of rare plants, animals and communities.

The flat-tailed horned lizard is currently (once again) being considered for protection under the federal Endangered Species Act and is sorely in need of additional protections to stem population declines due to ongoing threats. These issues should have been fully explored in the baseline discussion. Although the DEIS admits that the "The 6,063-acre plant site and the 92.8-acre off-site transmission line provide suitable habitat and food source to support FTHLs (SES 2008a)." The DEIS briefly mentions the current status of the species but does not clarify the need for additional protective measures to ensure recovery. As detailed below in the section regarding the lizard, the baseline has significantly degraded over the more than 15 years since listing for this species was first proposed and the threats are increasing including the cumulative impacts from this and other renewable energy projects.

The DEIS also uses lack of the land use designation in the FTHL Management Area as a way of minimizing the importance of this area for flat-tailed horned lizard recovery but fails to explain the history of the current designation. The BLM codified a majority of the Management Areas as Areas of Critical Environmental Concern[6]. However, the FTHL Rangewide Management Strategy (2003) failed to include connectivity between the Management Areas, including the proposed project site.

The baseline descriptions in the DEIS are similarly inadequate for other species including PBS. It acknowledges the inadequacy of the botanical surveys and in fact proposes additional seasons surveys (both spring and late summer/fall) in order for more accurately evaluate the baseline for on-site plant resources as the basis for adequate impact analysis.

As discussed below, because of the deficiencies of the baseline data for the proposed project area, the DEIS fails to adequately describe the environmental baseline. Many of the rare and common but essential species and habitats have incomplete and/or vague on-site descriptions

[6] FTHL ICC 2003, BLM 1980

that make determining the proposed project's impacts difficult at best. Some of the rare species/habitats baseline conditions are totally absent, therefore no impact assessment is provided either. A supplemental document is required to fully identify the baseline conditions of the site, and that baseline needs to be used to evaluate the impacts of the proposed project.

C. Failure to Identify and Analyze Direct and Indirect Impacts to Biological Resources

The EIS fails to adequately analyze the direct, indirect, and cumulative impacts of the proposed project on the environment. The Ninth Circuit has made clear that NEPA requires agencies to take a "hard look" at the effects of proposed actions; a cursory review of environmental impacts will not stand. *Idaho Sporting Congress v. Thomas*, 137 F.3d 1146, 1150-52, 1154 (9th Cir. 1998). Where the BLM has incomplete or insufficient information, NEPA requires the agency to do the necessary work to obtain it where possible. 40 C.F.R. §1502.22; *see National Parks & Conservation Ass'n v. Babbitt*, 241 F.3d 722, 733 (9 th Cir. 2001) ("lack of knowledge does not excuse the preparation of an EIS; rather it requires [the agency] to do the necessary work to obtain it.")

Moreover, BLM must look at reasonable mitigation measures to avoid impacts in the DEIS but failed to do so here. Even in those cases where the extent of impacts may be somewhat uncertain due to the complexity of the issues, BLM is not relieved of its responsibility under NEPA to discuss mitigation of reasonably likely impacts at the outset. Even if the discussion may of necessity be tentative or contingent, NEPA requires that the BLM provide some information regarding whether significant impacts could be avoided. *South Fork Band Council of Western Shoshone v. DOI* , 588 F.3d 718 , 727 (9th Cir. 2009).

1. Flat-tailed Horned Lizard

Declines in populations of and habitat for the flat-tailed horned lizard were noted for decades resulting in a proposed listing of the species in 1993. Several legal challenges have resulted in the U.S. Fish and Wildlife Service currently reviewing data to determine if the species needs federal Endangered Species Act protection[7]. Threats to the flat-tailed horned lizard are abundant from its small geographic range, it specialized and highly fragmented habitat, its sensitivity to anthropogenic effects, its narrow breadth of diet (almost exclusively harvester ants), and the lowest rates of reproduction of all known horned lizards[8]. All of these factors highlight the potential risk of local and regional extinctions for this species.

In the more than 15 years since this listing was first proposed in 1993, the threats to the flat-tailed horned lizard have only increased. Clearly the lizard is still in decline, and the Flat-tailed Horned Lizard Management Areas, the voluntary conservation agreement that has been in place since 1997 and the Rangewide Management Strategy (2003) are not sufficient to protect the survival of the species or contribute to its recovery. Moreover, threats to the species are increasing.

[7] 75 FR 9377
[8] Barrows and Allen 2009

Damage to habitat from off-road vehicles has continued in all flat-tailed horned lizard areas, including the Yuha Desert, Coachella Valley, West and East Mesas, near the Algodones Dunes, and near Yuma as well as in other flat-tailed horned lizard habitat. There is increasing ORV use of designated routes as well as increased route proliferation in many areas both within the FTHL Management areas and in lizard habitat outside of these areas. These ongoing and increased impacts remain one of the greatest threats to species survival. Off-road vehicle use and route proliferation both causes direct loss of habitat and increasingly fragments remaining habitats. Habitat fragmentation is a significant factor in decreasing flat-tailed horned lizard survival and may preclude recovery in many areas. A study of flat-tailed horned lizards and other species within a conservation areas found that edge effects from roads had a significant impact on flat-tailed horned lizard populations up to 150 m from roads (as well as impacts from increased predation). Barrows et al. (2006); *see also* Barrows and Allen (2009) (discussion of habitat loss and high degree of fragmentation in remaining habitats).

Several renewable energy projects are proposed within flat-tailed horned lizard habitat including the proposed project here which includes thousands of acres of flat-tailed horned lizard habitat and the Ocotillo Express wind project proposal which would cover over 6,000 acres, including many acres of flat-tailed horned lizard habitat. This project could also further fragment the remaining habitat for the species and could block gene flow between the West Mesa and Yuha Desert area populations. In addition, there are at least another five pending right of way applications for both solar and wind projects covering more than 20,000 acres in areas that may include significant lizard habitat some of them adjacent to the management areas.[9] Each of the proposed energy projects will require a new gen-tie power lines that will likely impact lizard habitat and many may also require new substations and other infrastructure that may directly affect lizard habitat. Moreover, these large-scale, single-use projects will displace other multiple uses on public lands and increase the pressure on the FTHL Management areas and other lizard habitat from ORV use.

Loss of habitat due to urban sprawl development and farming was the largest historic threat to the flat-tailed horned lizard. One new sprawl development proposal that may impact flat-tailed horned lizards and their habitat in Imperial County is the Travertine Point which proposes 12,000 housing units on nearly 5,000 acres adjacent to the Salton Sea.[10] In addition, the renewable energy projects, as discussed above, represent another kind of sprawl development that threatens the survival of the species through direct loss of habitat as well as increasing fragmentation of habitat. For this reason, the Center and other conservation groups have advocated for siting the new renewable energy projects on previously degraded sites in the desert habitats (including fallowed farmlands) and alternative siting should have been more fully considered here.

The flat-tailed horned lizard has largely been extirpated from the Coachella Valley outside of existing conservation areas and the little remaining habitat in Coachella Valley continues to be lost to sprawl development. Problems with small reserve size, invasive weeds, loss of sand sources, and boundary effects suggest the current Coachella Valley reserve will not

[9] *See* maps and data available on BLM website for renewable energy projects at http://www.blm.gov/ca/st/en/fo/cdd/alternative_energy.html

[10] Documents available at http://www.tlma.co.riverside.ca.us/planning/content/temp/sp375.html

ensure the survival of the flat-tailed horned lizard in the Coachella Valley. Barrows et al. (2006) noted the significant "sink" effect along the boundary areas and cautioned "Without immigration from the preserve core, flat-tailed horned lizards may not be able to sustain populations in the boundary region." This same concern regarding boundary effects arises for the management areas where routes already fragment the management areas and where additional development is proposed on the borders. This project could similarly limit the effectiveness of the FTHL Management areas by fragmenting the habitat and cutting off connectivity between areas.

The Sunrise Powerlink powerline project would also directly impact lizard habitat. This project, if built, will also increase the likelihood that other proposed energy projects will be built in areas that will directly affect the lizard including the proposed project and other such as the Ocotillo wind project and the associated gen-tie lines and substations. Powerlines also provide perches for raptors which then prey on the flat-tailed horned lizards, putting further unnatural predation pressures on this declining species (Barrows, pers. communication).

On-going and increasing impacts to flat-tailed horned lizard habitat near the US-Mexican border in CA and AZ are also of concern particularly off-road vehicle use by border patrol agents (and others). Border Patrol 'tire drags' of dirt roads in lizard habitat are also a problem and continue to kill or injure lizards. The spread of non-native mustards and other invasive plants may also threaten flat-tailed horned lizard habitat viability. Even if exotic plant species do not directly change the habitat character or decrease food sources, many of these invasive weed plants can support and spread fire that could kill or injure lizards in an area where fire would naturally be an extremely rare occurrence (Brooks et al. 2004). The proposed project with its large hydrogen reserves and piping system would also greatly increase the likelihood of fire and the impacts to the lizard and other wildland resources should have been considered in the DEIS but were not.

Many of the existing and proposed development projects including the proposed project as well as ORV use will increase the likelihood of predation of flat-tailed horned lizards further diminishing their numbers and ability to survive. Barrows et al. (2006) found a significant increase predation in their study of boundary effects. Increased development provides new roosting and nesting sites for predators including for example shrikes and kestrels which are known predators of the flat-tailed horned lizard. It is well established that increases in subsidies from human activities which provide additional water sources and food/trash also increase other potential predators such as ravens.

The flat-tailed horned lizard as all other species, will be affected by climate change. The Service is well aware of the threats to species due to climate change and in turn the threats to biodiversity across in many diverse ecosystems. In its most recent 2007 report, the Intergovernmental Panel on Climate Change (IPCC) expressed in the strongest language possible its finding that global warming is occurring: "Warming of the climate system is unequivocal, as is now evident from observations of increases in global average air and ocean temperatures, widespread melting of snow and ice, and rising global average sea level" (IPCC 2007: 30). The international scientific consensus of the IPCC is that most of the recent warming observed has been caused by human activities (IPCC 2007). The U.S. Global Change Research Program also stated that "global warming is unequivocal and primarily human-induced" (UCGCRP: 12). One

of the most troubling recent findings is that the concentration of atmospheric carbon dioxide, the biggest contributor to global warming, has been rapidly increasing throughout the 2000s and is generating stronger-than-expected and sooner-than-predicted climate forcing (Raupach et al. 2007).

The global average temperature has risen by approximately 0.74° C ± 0.18° C (1.33° F ± 0.32° F) during the past 100 years (1906-2005) (Trenberth et al. 2007) in response to rapidly increasing greenhouse gas concentrations. Atmospheric concentration of carbon dioxide has increased by 36% since 1750 to a level that has not been exceeded during the past 650,000 years and likely not during the past 20 million years (Denman et al. 2007). The rate of increase in the atmospheric carbon dioxide concentration is accelerating, with especially rapid increases observed in the 2000s. The emissions growth rate rose from 1.1% per year from 1990-1999 to 3.5 % per year from 2000-2007 (McMullen and Jabbour 2009). The emissions growth rate since 2000 has even exceeded that of the most fossil-fuel intensive IPCC SRES emissions scenario, A1FI (McMullen and Jabbour 2009, Richardson et al. 2009). During the past 50 years, carbon dioxide sinks on land and in the oceans have become less efficient in absorbing atmospheric carbon dioxide, which is contributing to the observed rapid rise (Canadell et al. 2007). The atmospheric concentration of methane, another important greenhouse gas, has increased by about 150% since 1750, continues to increase, and has not been exceeded during the past 650,000 years (Forster et al. 2007). Similarly, the atmospheric concentration of nitrous oxide has increased by about 18% since 1750, continues to increase, and has not been exceeded during at least the last 2000 years (Forster et al. 2007). With atmospheric carbon dioxide at ~390 ppm and worldwide emissions continuing to increase, rapid and substantial reductions are clearly needed immediately.

As scientific understanding of global warming has advanced, so too has the urgency of the warnings from scientists about the consequences of our greenhouse gas emissions for biodiversity loss. Significant and wide-ranging ecological impacts of climate change have been well-documented by thousands of peer-reviewed papers. These impacts include changes in distribution, phenology, physiology, demographic rates, abundance, and genetics (see Lovejoy and Hannah (2005), Parmesan (2006), Hartley et al. (2006) for a small sampling of comprehensive reviews). Studies that have forecast species extinction risk under projected climate conditions have predicted catastrophic species losses during this century. Under a mid-level emissions scenario, Thomas et al. (2004) predicted that climate change will commit 15-37% of species to extinction by 2050. The IPCC found that 20 to 30% of plant and animal species will face an increasingly high risk of extinction as global mean temperatures exceed 2 to 3°C above pre-industrial temperatures (Parry et al. 2007). *If current carbon pollution trends continue, the IPCC estimated that climate change will threaten up to 70% of plant and animals with extinction by 2100* (Parry et al. 2007). Therefore, immediate reduction of greenhouse gas pollution is critical to slow global warming and ultimately stabilize the climate system before we commit a significant portion of the world's species to extinction.

Threats to the flat-tailed horned lizard from climate change are significant for several reasons. First, a recent study shows that desert areas may be some of the first affected by increasing temperature and that the changes may be more rapid in these ecosystems making adaptation more difficult. Second, the existing and likely increasing fragmentation of the

lizard's habitat by the proposed project and others will make any adaptation through movement across the landscape far more difficult. Thus, the flat-tailed horned lizard although adapted to hot desert environments may nonetheless be significantly impacted by climate change due to its loss of habitat and the constraints on adaptation.

While the FTHL Rangewide Management Strategy (2003) established Management Areas for the conservation and recovery of the flat-tailed horned lizard, it fails to include connectivity corridors that will help to ensure genetic viability of the core Management Areas. The proposed project site clearly supports significant populations of flat-tailed horned lizard – an estimated 2000 – 5000 animals or 0.32-0.81 lizards/acre which provides an important linkage between the adjacent management areas (Yuha and West Mesa). When last surveyed these two "conserved" areas provided only somewhat higher densities than those estimated at the proposed project site,[11] which also shows the importance of preserving the habitat here.

Impacts to the flat-tailed horned lizards and other affected species must be avoided where possible through a robust alternatives analysis and any remaining impacts should be minimized and mitigated. Unfortunately, the proposal to relocate flat-tailed horned lizards is not part of a comprehensive proposal but appears to be largely an experiment absent any scientific "controls" that may itself have significant impacts to this imperiled species. The DEIS fails to provide a draft of the relocation plan for public review thus undermining NEPA review. Relocation sites are not identified, nor is the impact to resident flat-tailed horned lizards at the relocation sites analyzed. An analysis of likely impacts from the relocation is particularly important based on data that indicates that food resources are a limiting factor in population numbers[12]. Relocating additional flat-tailed horned lizards into a habitat that is already sustaining its carrying capacity will be detrimental to the species.

Furthermore, mechanisms need to be included to assure that any and all mitigation acquisitions will be conserved in perpetuity for the conservation of the flat-tailed horned lizard. If those acquisitions are within existing Management Areas, higher levels of protection than are currently in place for Management Areas need to be put in place. NEPA mandates consideration of the relevant environmental factors and environmental review of "[b]oth *short- and long-term* effects" in order to determine the significance of the project's impacts. 40 C.F.R. § 1508.27(a) (emphasis added). BLM has clearly failed to do so in this instance with respect to the impact to the flat-tailed horned lizard.

2. Peninsular Bighorn Sheep

The DEIS simply fails to assess the impacts of the proposed project on the federally and state endangered peninsular bighorn sheep population. Without basic information about the use of the proposed project site and adjacent areas by bighorn it is impossible to assess the extent of the impacts to the bighorn population in this area from the proposed project.

However, the proposed project will clearly cause the loss of foraging habitat on the project site in washes where at least one Peninsular bighorn sheep ewe group was documented to

[11] 2008 FTHL Monitoring Report
[12] Barrows and Allen 2009.

occur (DEIS at C.2-39) and additional sitings this year show that it was not an anomaly. Even if such habitat may only be used during certain seasons or years it can be critical to survival of bighorn. Without site-specific data on the details of habitat use patterns of the bighorn in the area, the DEIS cannot properly assess the importance of the wash habitat to the bighorn population or the impact of its loss on the population.

The proposed project may affect foraging areas and movement corridors for bighorn, as well as fragmenting currently intact habitat. The DEIS simply dismisses the documented occurrence of bighorn on the site and fails to analyze the impacts to this endangered species. Moreover no mitigation is proposed for the loss of forage and movement areas and fragmentation of habitat by the construction of the proposed solar project on over 6,000 acres.

For other rare species addressed in the document the mitigation involves the purchase and future protection of at minimum an equal amount of acreage or more that is being impacted. No such suggestion is listed for Peninsular bighorn sheep, although even the purchase of lands elsewhere will do nothing to mitigate for the potential movement corridor onsite.

Additional field study needs to be conducted by a knowledgeable researcher on the proposed solar site, to understand how the bighorn use this area. Absence of previous documentation of Peninsular bighorn sheep occurrence on site (or in the general area) does not infer that bighorn were not using the site previously. Indeed, the Center was informed several years ago that the El Centro Office may have lost or misplaced many documents concerning the Peninsular bighorn sheep and earlier sightings in the area. Absent any real information in the field, the dismissal of impacts to this California fully-protected species and federally endangered species is a violation of NEPA as well as the ESA.

3. Rare and Special Status Plants

As noted repeatedly in the DEIS (Biological Resources Table 2), inadequate surveys were done to evaluate the on-site rare and special status plants. As with the bighorn, absent the basic data on on-site resources, impact analysis is impossible, as is appropriate avoidance, minimization and mitigation strategies.

4. Migratory and Other Birds and Burrowing Owls

Birds

As the DEIS notes, the proposed project area is rich in bird resources. The Imperial Valley, which is directly adjacent to the site, is noted as an Important Bird Area[13]. Birds migrate to the Imperial Valley from San Diego County – a route that goes over the project site. The DEIS fails to evaluate the impact to this migratory pathway from the proposed project.

[13] Audubon IBA Imperial Valley http://ca.audubon.org/maps/pdf/Imperial_Valley.pdf

The DEIS fails to address the fatalities that have been documented to occur from birds running into mirrors[14]. Adjacent to the proposed project site are agricultural fields, which also attract birds. The DEIS does not quantify the number of birds (rare, migratory or otherwise) that use/traverse the project site (for example a mean daily count), nor does it evaluate the impact to birds. McCrary[15] estimated 1.7 birds deaths per week on a 32 ha site with mirrors and a power tower configuration. The proposed project site is over 2500 ha (over 78 times larger) and has a different kind of mirror and power plant configuration—the DEIS should have analyzed the likely impacts to birds from the proposed project mirror configuration in the suncatcher design. Lacking baseline data of mean daily count of birds on the project site, analysis of the impacts to birds is impossible. Based on the existing literature, the impact may be significant.

Migratory birds were noted to occur on the proposed site (DEIS at pg. C.2-37). Clearly the site is within a migratory pathway and the migratory elevation is a key issue that needs further analysis. Mirrors within migratory elevations will create impacts to migratory birds. It is possible that these impacts could be avoided or minimized if mirrors are properly sited. These analyses needed to be included in the DEIS and in this instance still need to be done. Detailed surveys must form the basis for the evaluation of impacts to biological resources as required by NEPA. The failure to provide the baseline data from which to make any impact assessment violates NEPA. This failure to analyze impacts is not only a NEPA violation, but for migratory birds, may also lead to a violation of the Migratory Bird Treaty Act, 16 U.S.C. §§ 703 -711, because migratory birds may be "taken" if the proposed project is constructed.

Additionally, two 2,500,000-gallonevaporation ponds are proposed to be constructed on site. While the ponds are proposed to be fenced and netted, they still have the potential to attract birds onto the site – an oasis in the desert - and into the mirrors. DEIS at C.2-29. The DEIS is unclear about the amount of time water may be retained in these basins and no discussion of this infrastructure is identified in the biological section of the DEIS, nor are impacts analyzed or minimization measures identified. Examples of minimization could include requiring covered or contained infrastructure, which would not only eliminate bird (and other wildlife) attraction, but would reduce evaporation and therefore water use in this arid environment. Alternatively, the pools could be required to be emptied in a less than 24 hour period so they would not be an attractant to birds (including ravens).

Burrowing Owls

The DEIS notes that "Three active burrowing owl burrows were located on the project site, one along the transmission line corridor, one near the off-site reclaimed waterline, and four at adjacent off-site locations (SES 2008a)" for a total of nine active burrowing owl burrows. C.2-26. Preliminary results from the 2006-7 statewide census identified that Imperial county was a strong-hold for Western burrowing owls.[16] However, the DEIS fails to evaluate the potential impact of the proposed project on the regional distribution of owls.

[14] McCrary 1986
[15] Ibid
[16] IBP 2008.

While "passive relocation" does minimize immediate direct take of burrowing owls, ultimately the burrowing owls' available habitat is reduced, and "relocated" birds are forced to compete for resources with other resident burrowing owls and may move into less suitable habitat, ultimately resulting in "take".

5. Badger and Desert Kit Foxes

Badgers and desert kit foxes were identified in the project area during surveys. DEIS C.2-38-39. Literature on the highly territorial badger indicates that badger home territories range from 340 to 1,230 hectares[17]. Therefore, the proposed project could displace *at least* one badger territory. While surveys prior to construction are clearly essential, even passive relocation of badgers into suitable habitat may result "take". Excluding badger from the site is likely to cause badgers to move into existing badger's territory. The same scenario of passive relocation for kit fox may also result in take. Studies need to be provided on both on- and off-site badger and kit fox territories if animals are to be passively relocated in order to increase chances of persistence. At a minimum, the revised or supplemental DEIS should identify suitable habitat nearby if the project is relying on passive relocation as a mitigation strategy.

6. Cryptobiotic soil crusts

The proposed project is located in the Imperial County Air Pollution Control District area, and is already in non-attainment for PM-10 particulate matter[18]. The construction of the proposed project further increase 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[19].

The FEIS 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 DEIS 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 cryptobiotic soils will be affected by the project. The DEIS must identify the extent of the cryptobiotic soils on site and analyze the potential impacts to these diminutive, but essential desert ecosystem components as a result of this project.

7. Decommissioning and Reclamation Plan

Desert lands are notoriously hard to revegetate or rehabilitate[20] and revegetation never supports the same diversity that originally occurred in the plant community prior to

[17] Long 1973, Goodrich and Buskirk 1998
[18] http://imperialcounty.net/AirPollution/Web%20Pages/SALTON%20SEA.htm
[19] Belnap 2003, Belnap et al 2003, Belnap 2006, Belnap et al. 2007.
[20] Lovich and Bainbridge 1999

disturbance[21]. The task of revegetating over six square miles will be a Herculean effort that will require significant financial resources. In order to assure that the ambitious goals of the revegetation effort is met post project closure, it will be necessary to bond the project, so that all revegetation obligations will be met and assured. The bond needs to be structured so that it is tied to meeting the specific revegetation criteria.

The project will cause permanent impacts to the on-site plant communities and habitat for wildlife despite "revegetation". Revegetation criteria are lacking in the DEIS. If criteria are based on the agency's regulations identified in any of the bioregional plans for the CDCA (NECO, NEMO, WEMO)[22] those rehabilitation strategies[23] only requires 40% of the original density of the "dominant" perennials and only 30% of the original cover. Dominant perennials are further defined as "any combination of perennial plants that originally accounted cumulatively for at least 80 percent of relative density".[24] These requirements fail to truly "revegetate" the plant communities to their former diversity and cover even over the long term. The Decommissioning and Reclamation Plan is not available for public review, and analysis is the DEIS states "The applicant's data response (2008f)) does not provide sufficient information to guide the decommissioning of the project disturbance area, nor does it provide adequate information regarding the funding needed for those activities". DEIS at C.2-51. This clearly fails to adhere to BLM's own regulations 43 CFR 3809.550 et seq. that require a more detailed reclamation plan and a cost estimate.

8. Fire Plan

Fire in desert ecosystems is well documented to cause catastrophic landscape scale changes[25] and impacts to the local species[26]. The DEIS mentions the impacts of fire via the proliferation of nonnative weeds (DEIS at C.2-32), it fails to analyze the impacts of fire on adjacent natural desert habitat. The DEIS 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. The likelihood of fire is of particular concern for this proposal which includes large amounts of flammable hydrogen manufactured and stored on site and piped throughout the site. The DEIS also fails to address the mitigation of this potential impact. Instead it defers it to the Worker Environmental Awareness Program (WEAP) and only requires "a discussion of fire prevention measures to be implemented by workers during project activities" (DEIS at C.2-77). 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.

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[21] Longcore 1997
[22] http://www.blm.gov/ca/st/en/prog/planning.html
[23] BLM 2002
[24] Ibid
[25] Brown and Minnich 1986, Lovich and Bainbridge 1999, Brooks 2000, Brooks and Draper 2006, Brooks and Minnich 2007
[26] Ducher 2009

9.. Failure to Identify Appropriate Mitigation

Because the DEIS fails to provide adequate identification and analysis of impacts, inevitably, it also fails to identify adequate mitigation measures for the project's environmental impacts. "Implicit in NEPA's demand that an agency prepare a detailed statement on 'any adverse environmental effects which cannot be avoided should the proposal be implemented,' 42 U.S.C. § 4332(C)(ii), is an understanding that an EIS will discuss the extent to which adverse effects can be avoided." *Methow Valley*, 490 U.S. at 351-52. Because the DEIS does not adequately assess the project's direct, indirect, and cumulative impacts, its analysis of mitigation measures for those impacts is necessarily flawed. The DEIS must discuss mitigation in sufficient detail to ensure that environmental consequences have been fairly evaluated." *Methow Valley*, 490 U.S. at 352; *see also Idaho Sporting Congress*, 137 F.3d at 1151 ("[w]ithout analytical detail to support the proposed mitigation measures, we are not persuaded that they amount to anything more than a 'mere listing' of good management practices"). As the Supreme Court clarified in *Robertson*, 490 U.S. at 352, the "requirement that an EIS contain a detailed discussion of possible mitigation measures flows both from the language of [NEPA] and, more expressly, from CEQ's implementing regulations" and the "omission of a reasonably complete discussion of possible mitigation measures would undermine the 'action forcing' function of NEPA."

Although NEPA does not require that the harms identified actually be mitigated, NEPA does require that an EIS discuss mitigation measures, with "sufficient detail to ensure that environmental consequences have been fairly evaluated" and the purpose of the mitigation discussion is to evaluate whether anticipated environmental impacts *can be avoided*. *Methow Valley*, 490 U.S. at 351-52. As the Ninth Circuit recently noted: "[a] mitigation discussion without at least *some* evaluation of effectiveness is useless in making that determination." *South Fork Band Council of Western Shoshone v. DOI* , 588 F.3d 718 , 727 (9th Cir. 2009) (emphasis in original).

Here, the DEIS does not provide a full analysis of possible mitigation measures to avoid or lessen the impacts of the proposed project and therefore the BLM cannot properly assess the likelihood that such measures would actually avoid the impacts of the proposed project.

To the extent the DEIS discusses some mitigation measures, the proposal to "nest" mitigation measures undermines much of that discussion. The DEIS proposes to mitigate impacts for flat-tailed horned lizard by land acquisition and management, however, that same mitigation is proposed to also mitigate for several of the impacts to surface waters (including waters of the State) through "nesting" of mitigation. While the Center urges the BLM ensure that any impacts to Waters of the U.S. will be avoided, to the extent that the DEIS considers alternatives that include impacts to the Waters of the U.S. those impacts must be separately mitigated and the mitigation cannot be "nested" with any other mitigation requirement. On the other hand, some of the mitigation issues may pertain primarily to protections afforded by the State (i.e., for waters of the State), however it is important to carefully analyze whether within that structure the proposed 1:1 mitigation for flat-tailed horned lizard will adequately mitigate for other resources of these public lands that will be lost should the project be approved as proposed. It is possible that once the acquisition lands are identified and surveyed, this strategy could achieve mitigation for some aspects of the various impacts, however, it is unlikely that it will actually adequately

mitigate for impacts to a number of the species, the loss of wash habitat, or all of the losses the waters of the State that will be potentially impacted by the proposed project. For example, if mitigation lands are acquired for conservation and they are good flat-tailed horned lizard habitat, they still may not support the same suite of potential rare plants, or similar wash habitat important to bighorn populations in order to effectively mitigate for the impacts of the proposed project on those resources. Very careful selection of mitigation lands will need to be done, and additional lands over and above the 1:1 ratio now proposed for the flat-tailed horned lizard maybe required in order to properly mitigate for the loss of other resources of these public lands that the proposed project will affect including, as noted above, separate mitigation for any impacts to the Waters of the U.S.

D. Key Plans are Not Included

The DEIS fails to include key plans for public review. Plans relied upon for adequate mitigation but which are unavailable include:

- Noxious Weed Management Plan (DEIS at C.2-32)
- Biological Resources Mitigation Implementation and Monitoring Plan (DEIS at C.2-78)
- Raven Management and Monitoring Plan (DEIS at C.2-44)
- Contingency Plan (for temporary closure) (DEIS at C.2-50)
- Decommissioning and Reclamation Plan (for permanent closure) (DEIS at C.2-50)
- Burrowing Owl Mitigation and Monitoring Plan (DEIS at C.2-78)
- Frac-out Contingency Plan (DEIS at C.2-2) for the horizontal drilling of the reclaimed water-line (which may no longer be part of the project)
- Drainage, Erosion, and Sedimentation Control Plan (DEIS at C.7-1)

Several other key plans are also missing from the DEIS but involve more complicated issues. While the Management Plan for Acquired Lands (DEIS at C.2-35) is a key document that needs to have public review to ascertain if, in fact, acquired lands actually do mitigate for the impacts (see discussion above on "nesting"), the DEIS fails to identify the acquisition lands, or if acquisition lands are actually even available. Clearly, if the proposed project was to move forward, acquired lands are a key component of a mitigation strategy. The supplemental EIS must provide a better evaluation if lands are available, and where those lands are, and how they will fulfill the mitigation scenario.

The Special Status Plant Survey and Protection Plan (DEIS at C.2-97) is also missing. While this plan is proposed as a mitigation requirement, that position is unsupportable because the special status plant surveys need to be done to provide the baseline data from which evaluation for potential project impacts can be analyzed. Surveys are not a mitigation strategy.

Shockingly, no relocation plan for flat-tailed horned lizard is even required in the DEIS, despite the acknowledgement that relocation will be a minimization strategy. The DEIS cannot rely on the FTHL Rangewide Management Strategy because this document does not include any guidance on relocation. Little data is available on the effectiveness of relocating reptiles in general and flat-tailed horned lizards specifically. In fact, a review of the literature concludes that relocation of reptiles (and amphibians) has not been a successful strategy for conservation[27].

[27] Dodd and Seigel 1991

Relocation should be looked on as experimental at best, and scientifically based strategy needs to be developed in a relocation plan including a significant adaptive management component. This strategy needs to be included in the revised or supplemental DEIS and provided for public review and comment.

E. Impacts to Water Resources—Groundwater and Surface Water Impacts

1. Groundwater Impacts:

The DEIS analyzes a water resources scenario that no longer is a valid project description. It is now unclear whether or when reclaimed water will be available for the project from the Seeley facility and although the DEIS states otherwise, the proposed project never actually secured access to reclaimed water from the Seeley Waste Water Treatment Facility. The project proponent now proposes to use groundwater for construction and *initial* operations-- in the hopes that the Seeley water will be available in the future. No analysis of groundwater pumping is provided in the DEIS. As a result, the DEIS is inaccurate. This significant change in the project description requires a supplemental EIS.

This is a major change in the project description and this issue needs to be fully evaluated in a revised or supplemental DEIS. The environmental review must consider the water source for the proposed project *for the life of the project* and must fully analyze the impacts of that water use.

As the BLM is aware, the Ocotillo-Coyote Wells Aquifer was designated as a sole source aquifer by the EPA on September 10, 1996. 61 Fed. Reg. 47752-53. The EPA determined that the aquifer "serves as the 'sole source' of drinking water for the residents of Ocotillo, Coyote Wells, Yuha Estates and Nomirage." *Id.* at 47753. Further, the EPA determined that the aquifer should be protected because "[t]here is no economically feasible alternative drinking water source near the designated area." *Id.* As the EPA noted the boundary of the sole source aquifer area at the Elsinore Fault "separates the sole source aquifer area, which contains high quality, potable water, from high saline, non-potable water to the east of the fault." *Id*. This designation protects this aquifer from contamination by all activities whether by actively polluting the water source or by degradation of water quality due to excessive pumping and overdraft that could draw in non-potable water from adjacent aquifers.

The newly-proposed use of groundwater for both construction and operation of the proposed project (for some unknown length of time) could impact existing uses by local communities for drinking water and domestic use and at the expense of other environmental resources as well. Cumulative impacts of this use along with other proposed groundwater pumping from the aquifer (including by the neighboring Plaster City plant) must be identified and analyzed as well. Impacts of the over-draft of this aquifer and use of groundwater by the proposed project must be fully analyzed. Such impacts include drawdown of springs and creeks in the area and the impacts to the fragile biological resources of the region that could result including resources in the San Sebastian Marsh/San Felipe Creek Areas of Critical

Environmental Concern (ACECs). Any drawdown of the aquifer would have substantial effects on water supply for other existing users. Moreover, issues regarding use of the water in this aquifer by the Plaster City plant have been in litigation for several years, including issues regarding the possibly catastrophic impacts loss of reliable well water would have on existing communities. The BLM cannot ignore the ongoing insecurity and controversy surrounding the proposed alternate water source in the DEIS and must revise or supplement the DEIS to fully disclose and analyze these issues.

2. Surface Water Impacts:

The SA/DEIS identifies impacts to surface drainages and washes on the proposed project site. However, the DEIS is confusing about the actual impact. At C.2-2 the DEIS states that the project impact "would amount to a loss of approximately 165 acres of permanent impacts, 5 acres of temporary impacts, and 13 acres of indirect impacts to Waters of the U.S. and approximately 312 acres of permanent impacts to jurisdictional state waters." However at C.2-56 the SA/DEIS states "Construction of the SES Solar Two would result in permanent impacts to 840 acres of jurisdictional state waters." At C.7-2 the DEIS states that "The U.S. Army Corps of Engineers has determined that 840 acres of the project site are jurisdictional waters of the U.S. under Clean Water Act (CWA) Section 404, all of which would be permanent impacts." The substantial inconsistency in the numbers of acres of impacts to onsite waters in the documents suggests that a comprehensive review of the actual impacts was not completed.

Furthermore, the DEIS notes that "The mitigation requirements for the CWA 404 permit are currently unresolved." DEIS at C.2-2. While it is understandable that the mitigation is unresolved due to the apparent lack of clarity on the actual impacts, the DEIS fails to inform the public and decision makers as to the actual impact and the feasibility of mitigating those impacts. The Army Corps has proposed alternatives that significantly change the impact not only to waters of the U.S., but also the biological resources (DEIS at C.2-2). While the DEIS generally recognizes that either of these alternatives would reduce the impacts to the biological species and on-site drainages, the alternatives analysis does not quantify how much the impacts would be reduced. As stated in the DEIS, "Currently, staff's proposed conditions of certification would not be sufficient to mitigate the potential impacts to biological resources to less than significant levels under CEQA until conditions required by the USACE for a federal Clean Water Act 404(1)(b) Impact Analysis are known." DEIS at C.2-64, C.2-66, C.2-68. Clearly not enough information has been provided to identify impacts, much less appropriate mitigations. On this basis as well the DEIS fails as an informational document.

F. The DEIS Fails to Adequately Identify, Analyze and Off-set Impacts to Air Quality and GHG Emissions.

Federal courts have squarely held that NEPA requires federal agencies to analyze climate change impacts. *Center for Biological Diversity v. National Highway Traffic Safety Administration*, 508 F.3d 508 (9th Cir. 2007). As most relevant here, NEPA requires consideration of greenhouse gas emissions ("GHG emissions") associated with all projects and, in order to fulfill this requirement the agencies should look at all aspects of the project which may create greenhouse gas emissions including operations, construction, and life-cycle emissions

from materials. Where a proposed project will have significant GHG emissions, the agency should identify alternatives and/or mitigation measures that will lessen such effects.

As part of the NEPA analysis federal agencies must assess and, wherever possible, quantify or estimate GHG emissions by type and source by analyzing the direct operational impacts of proposed actions. Assessment of direct emissions of GHG from on-site combustion sources is relatively straightforward. For many projects, as with the proposed project, energy consumption will be the major source of GHGs. The indirect effects of a project may be more far-reaching and will require careful analysis. Within this category, for example, the BLM should evaluate, GHG and GHG-precursor emissions associated with construction, electricity use, fossil fuel use, water consumption, waste disposal, transportation, the manufacture of building materials (lifecycle analysis), and land conversion. Moreover, because many project may undermine or destroy the value of carbon sinks, including desert soils, projects may have additional indirect effects from reduction in carbon sequestration, therefore both the direct and quantifiable GHG emissions as well as the GHG effects of destruction of carbon sinks should be analyzed.

The discussion of greenhouse gas emissions ("GHG") in the DEIS notes that the solar generation itself will produce no GHGs "but there is direct and indirect gasoline and diesel fuel use in the maintenance vehicles, offsite delivery vehicles, staff and employee vehicles, and the two diesel-fueled emergency engines. Another GHG emission source for this proposed project is SF6 from electrical equipment leakage." DEIS, Greenhouse Gas Appendix, A-1-7. There is no discussion of reducing these sources by using alternative fuels or highly efficient vehicles and equipment.

The GHG emissions from the construction phase of the project are stated to be over 31,000 metric tons CO2 equivalent (Greenhouse gas table 2, DEIS A-1-6). Again, there is no discussion of reducing these emissions by using more efficient equipment or vehicles.

Moreover, leakage of SF6 is of particular concern as it is many times more potent greenhouse gas than CO2—indeed, its potential as a GHG has been estimated at 23,900 times that of CO2 (for a 100 year time horizon) and it can persist in the atmosphere far longer than CO2 as well—up to 3,200 years.[28] The DEIS fails to state the actual amount of SF6 that is estimated to leak from equipment and provides only that 271.83 MTCO2E is expected in emissions each year. No information is provided on the calculation. Moreover, the DEIS does not analyze any alternatives to avoid or minimize the long-term emissions of this powerful GHG from operations and no mitigation measures are provided.

The DEIS also fails to adequately address other air quality issues most importantly PM10 both during construction and operation which is of particular concern in this area which is already in serious nonattainment. It is clear that on site grading and roads between the suncatcher components will increase bare soils and increase PM10 may be introduced into the air

[28] P. Forster et al., *Changes in Atmospheric Constituents and in Radiative Forcing, in* CLIMATE CHANGE 2007: THE PHYSICAL SCIENCE BASIS. CONTRIBUTION OF WORKING GROUP I TO THE FOURTH ASSESSMENT REPORT OF THE INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE (Solomon, S., et al. eds., Cambridge University Press 2007) at p. 212, Table 2.14.

by wind and that the use of the roads between the suncatchers will lead to additional PM 10 emissions from the site.

The DEIS also fails to analyze the impacts to air quality and GHG emissions should a fire occur due to the extensive on-site hydrogen system. Of particular concern is that plans to minimize air quality impacts from construction, operations, and decommissioning are all deferred to later development with no clear standards.

BLM fails to identify any significant GHG emissions and therefore does not provide for avoidance, minimization, or mitigation. BLM has also failed to include the loss of carbon sequestration from soils in its calculations or to provide a lifecycle analysis of GHG emissions that include manufacturing and disposal. Moreover, it is undisputed that in the near-term GHG emissions will increase emissions during construction, and in the manufacturing and transportation of the components. BLM fails to consider any alternatives to the project that would minimize such emissions or to require that these near-term emissions be off set in any way.

Although the proposed project may reduce GHG's overall it is admittedly experimental and will cause GHG emissions that are not accounted for or off-set, BLM completely fails to explore this aspect of the impacts of the project in the DEIS in violation of NEPA.

G. The Analysis of Cumulative Impacts in the DEIS Is Inadequate

A cumulative impact is "the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time." 40 C.F.R. § 1508.7. The Ninth Circuit requires federal agencies to "catalogue" and provide useful analysis of past, present, and future projects. *City of Carmel-By-The-Sea v. U.S. Dept. of Transp.*, 123 F.3d 1142, 1160 (9th Cir. 1997); *Muckleshoot Indian Tribe v. U.S. Forest Service*, 177 F.3d 800, 809-810 (9th Cir. 1999).

"In determining whether a proposed action will significantly impact the human environment, the agency must consider '[w]hether the action is related to other actions with individually insignificant but cumulatively significant impacts. Significance exists if it is reasonable to anticipate a cumulatively significant impact on the environment.' 40 C.F.R. § 1508.27(b)(7)." *Oregon Natural Resources Council v. BLM,* 470 F.3d 818, 822-823 (9th Cir. 2006). NEPA requires that cumulative impacts analysis provide "some quantified or detailed information," because "[w]ithout such information, neither courts nor the public . . . can be assured that the Forest Service provided the hard look that it is required to provide." *Neighbors of Cuddy Mountain v. United States Forest Service*, 137 F.3d 1372, 1379 (9th Cir. 1988); *see also id*. ("very general" cumulative impacts information was not hard look required by NEPA). The discussion of future foreseeable actions requires more than a list of the number of acres affected, which is a necessary but not sufficient component of a NEPA analysis; the agency must also consider the actual environmental effects that can be expected from the projects on those acres. *See Klamath-Siskiyou Wildlands Ctr. v. BLM*, 387 F.3d 989, 995-96 (9th Cir. 2004) (finding that

the environmental review documents "do not sufficiently identify or discuss the incremental impact that can be expected from each [project], or how those individual impacts might combine or synergistically interact with each other to affect the [] environment. As a result, they do not satisfy the requirements of the NEPA.") Finally, cumulative analysis must be done as early in the environmental review process as possible, it is not appropriate to "defer consideration of cumulative impacts to a future date. 'NEPA requires consideration of the potential impacts of an action *before* the action takes place.'" *Neighbors*, 137 F.3d at 1380 *quoting City of Tenakee Springs v. Clough*, 915 F.2d 1308, 1313 (9th Cir. 1990) (emphasis in original).

The cumulative scenario in the DEIS fails to adequately identify and analyze the scope of the cumulative impacts to various resources across appropriate scales for each impact. While the DEIS looks at the nearby projects to some extent it ignores other scales of analysis such as across the flat-tailed horned lizard range. For example, the DEIS fails to look at cumulative impacts to the biological resources in the CDCA as a whole from multiple proposed industrial scale projects particularly how sprawling industrial sites could fragment habitats and change the quality of the CDCA overall. In addition, the DEIS should have considered the cumulative impacts to the flat-tailed horned lizard both within Imperial County and the species as a whole including the Coachella Valley and Arizona which are both areas where its habitat has become extremely constricted. Each of these scales of analysis would likely reveal different information about the cumulative impacts of this project. As discussed above, the flat-tailed horned lizard is subject to numerous ongoing and proposed impacts from development including renewable energy development and from off-road vehicle use.

Because the identification of plant communities and species on site is unfinished and incomplete, the cumulative impacts are also therefore inadequate. Similarly, because impacts to the bighorn were ignored, cumulative impacts to this endangered species were also ignored.

The DEIS also fails to consider all reasonably foreseeable impacts in the context of the cumulative impacts analysis. *See Native Ecosystems Council v. Dombek, et al,* 304 F.3d 886 (9th Cir. 2002) (finding future timber sales and related forest road restriction amendments were "reasonably foreseeable cumulative impacts"). The DEIS also fails to provide the needed analysis of how the impacts might combine or synergistically interact to affect the environment in this valley or region. *See Klamath-Siskiyou Wildlands Ctr. v. BLM*, 387 F.3d 989, 995-96 (9th Cir. 2004).

The NEPA regulations also require that indirect effects including changes to land use patterns and induced growth be analyzed. "Indirect effects", include those that "are caused by the action and are later in time or farther removed in distance, but are still reasonably foreseeable. Indirect 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*." 40 C.F.R. s.1508.8(b) (emphasis added). *See TOMAC v. Norton*, 240 F. Supp.2d 45, 50-52 (D.D.C. 2003) (finding NEPA review lacking where the agency failed to address secondary growth as it pertained to impacts to groundwater, prime farmland, floodplains and stormwater run-off, wetlands and wildlife and vegetation); *Friends of the Earth v. United States Army Corps of Eng'rs*, 109 F. Supp.2d 30, 43 (D.D.C. 2000) (finding NEPA required analysis of inevitable secondary

development that would result from casinos, and the agency failed to adequately consider the cumulative impact of casino construction in the area); *see also Mullin v. Skinner*, 756 F. Supp. 904, 925 (E.D.N.C. 1990) (Agency enjoined from proceeding with bridge project which induced growth in island community until it prepared an adequate EIS identifying and discussing in detail the direct, indirect, and cumulative impacts of and alternatives to the proposed Project); *City of Davis v. Coleman*, 521 F.2d 661 (9th Cir. 1975) (requiring agency to prepare an EIS on effects of proposed freeway interchange on a major interstate highway in an agricultural area and to include a full analysis of both the environmental effects of the exchange itself and of the development potential that it would create).

The FSA/DEIS here fails to adequately identify and analyze the potential growth inducing impacts in the area. For example, it is possible that if the Seeley water reclamation project does go forward it could act as a magnet for other industrial development in the area along with the new energy infrastructure for the proposed project.

H. The EIS's Alternatives Analysis is Inadequate

NEPA requires that an EIS contain a discussion of the "alternatives to the proposed action." 42 U.S.C. §§ 4332(C)(iii),(E). The discussion of alternatives is at "the heart" of the NEPA process, and is intended to provide a "clear basis for choice among options by the decisionmaker and the public." 40 C.F.R. §1502.14; *Idaho Sporting Congress*, 222 F.3d at 567 (compliance with NEPA's procedures "is not an end in itself . . . [but] it is through NEPA's action forcing procedures that the sweeping policy goals announced in § 101 of NEPA are realized.") (internal citations omitted). NEPA's regulations and Ninth Circuit caselaw require the agency to "rigorously explore" and objectively evaluate "all reasonable alternatives." 40 C.F.R. § 1502.14(a) (emphasis added); *Envtl. Prot. Info. Ctr. v. U.S. Forest Serv.*, 234 Fed. Appx. 440, 442 (9th Cir. 2007). "The purpose of NEPA's alternatives requirement is to ensure agencies do not undertake projects "without intense consideration of other more ecologically sound courses of action, including shelving the entire project, or of accomplishing the same result by entirely different means." *Envtl. Defense Fund, Inc. v. U.S. Army Corps of Engrs.*, 492 F.2d 1123, 1135 (5th Cir. 1974). An agency will be found in compliance with NEPA only when "all reasonable alternatives have been considered and an appropriate explanation is provided as to why an alternative was eliminated." *Native Ecosystems Council v. U.S. Forest Serv.,* 428 F.3d 1233, 1246 (9th Cir. 2005); *Bob Marshall Alliance v. Hodel*, 852 F.2d 1223, 1228-1229 (9th Cir. 1988). The courts, in the Ninth Circuit as elsewhere, have consistently held that an agency's failure to consider a reasonable alternative is fatal to an agency's NEPA analysis. *See, e.g., Idaho Conserv. League v. Mumma*, 956 F.2d 1508, 1519-20 (9th Cir. 1992) ("The existence of a viable, but unexamined alternative renders an environmental impact statement inadequate.").

If BLM rejects an alternative from consideration, it must explain why a particular option is not feasible and was therefore eliminated from further consideration. 40 C.F.R. § 1502.14(a). The courts will scrutinize this explanation to ensure that the reasons given are adequately supported by the record. *See Muckleshoot Indian Tribe v. U.S. Forest Service*, 177 F.3d 800, 813-15 (9th Cir. 1999); *Idaho Conserv. League*, 956 F.2d at 1522 (while agencies can use criteria to determine which options to fully evaluate, those criteria are subject to judicial review); *Citizens for a Better Henderson*, 768 F.2d at 1057.

Here, BLM so narrowly construed the project purpose and need (and ignored the requirements for NEPA analysis of a plan amendment) that the DEIS did not consider an adequate range of alternatives to the proposed project.

The alternatives analysis is inadequate even with the inclusion of an alternative that would avoid all "primary" streams (Drainage Avoidance #1) and a smaller 300 MW project for which there is existing transmission capacity (Drainage Avoidance #2). At least one alternative should be considered that both avoids all primary streams and is limited to the 300 MW for which there is existing transmission capacity. At least one additional 300 MW alternative should be considered which would both be sized for the existing transmission *and* avoid both "primary" and "secondary" streams on site. This would also allow the project proponent to learn how and whether the technology will perform as expected at this scale.

The inclusion of two "no action" alternatives, while interesting, is also confusing and appears to be based on a misinterpretation of the governing plans. The second no action alternative states that it would not approve the ROW and "make the area unavailable for future solar development." This alternative is not a true "no action" alternative because it would require a CDCA plan amendment.

The document also includes other alternatives that were stated as being "Site Alternatives Evaluated only under CEQA" these include off-site alternatives. The document also eliminated from consideration a distributed renewable energy alternative. The BLM should have also looked alternative siting on previously degraded lands such as nearby farmlands, distributed solar alternatives, and other alternatives that could avoid impacts of the proposed project as well as impacts of the associated transmission lines and substations. In addition, as discussed above, the BLM should have looked at alternatives for construction and operations that would reduce GHG emissions including from SF6 and off-sets for those emissions.

The BLM failed to consider any off-site alternative that would significantly reduce the impacts to water resources and water quality, as well as biological resources including the flat-tailed horned lizard and its occupied habitat, Peninsular bighorn sheep, and other special status species including rare plants. Because such alternatives are feasible, on this basis and other the range of alternatives is inadequate. The Center urges the BLM to revise the DEIS to adequately address a range of feasible alternatives and other issues detailed above and then to re-circulate a revised or supplemental DEIS for public comment.

In addition, in order to meet the DOE's purpose and need states that: "The two principal goals of the loan guarantee program are to encourage commercial use in the United States of new or significantly improved energy-related technologies and to achieve substantial environmental benefits. The purpose and need for action by DOE is to comply with their mandate under EPAct by selecting eligible projects that meet the goals of the Act." Assuming for the sake of argument alone that these are proper project objectives, the DEIS should have considered alternatives that would provide funding to other types of projects. Such alternatives could include, for example, conservation measures that both avoid and reduce energy use within high-energy use load-centers including the Los Angeles and San Diego areas.

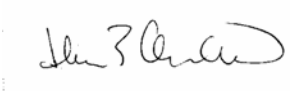
Alternative measures could include funding community projects for training and implementation of conservation measures such as increased insulation, sealing and caulking, and new windows for older buildings and new or improved technologies for accomplishing these important goals. For example, air conditioning creates the largest demand for energy during peak times and there already exist methods to reduce the energy use from air conditioning but implementation has lagged well behind technology. Conservation and efficiency measures are an excellent and quick way of reducing demand in both the short- and long-term and reduce the need for additional power sources. In addition, many of the existing conservation and efficiency measures can provide immediate jobs and training in high population areas with significant unemployment (particularly among low skilled workers and youth).

The existence of these and other feasible but unexplored alternatives shows that the BLM's analysis of alternatives in the DEIS is inadequate.

III. Conclusion

Thank you for your consideration of these comments. In light of the inadequacy of the environmental review to date, we urge the BLM to revise and re-circulate the DEIS or prepare a supplemental DEIS before making any decision regarding the proposed plan amendment and right-of-way application. In the event BLM chooses not to revise the DEIS and provide adequate analysis, the BLM should reject the right-of-way application and the plan amendment. Please feel free to contact us if you have any questions about these comments or the documents provided.

Sincerely,



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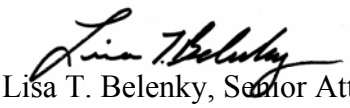

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