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Via Facsimile & E-mail

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ATTENTION: Ivanpah SEGS

Dear Mr. Meckfessel:

On behalf of Defenders of Wildlife ("Defenders") and our more than half a million members and supporters in the U.S., 200,000 of which are in California, I am writing to provide comments on the Notice of Intent ("NOI") to prepare an Environmental Impact Statement/Final Staff Assessment ("EIS/FSA") in compliance with the National Environmental Policy Act ("NEPA") and the California Environmental Quality Act ("CEQA") on the impacts of the Ivanpah Solar Electric Generating System ("Ivanpah SEGS").

Defenders is dedicated to protecting all wild animals and plants in their natural communities. To this end, Defenders employs science, public education and participation, media, legislative advocacy, litigation, and proactive on-the-ground solutions in order to impede the accelerating rate of extinction of species, associated loss of biological diversity, and habitat alteration and destruction.

Defenders strongly supports the emission reduction goals found in AB 32, including the development of renewable energy in California. However, we urge that in the quest for renewable power that project proponents design their projects in the most sustainable manner possible. This is essential to ensure that project approval moves forward expeditiously and in a manner that does not sacrifice our fragile desert landscape and wildlife in the rush to meet our renewable energy goals.

The Ivanpah SEGS is a massive project with a 3,400-acre footprint that includes three solar concentrating thermal power plants, associated buildings, roads, a gas and water pipeline, new groundwater pumping, and a reconductored transmission line.

Based on a review of the Ivanpah SEGS Application for Certification ("project application") and associated documents, Defenders has several serious concerns about the potential impacts of this project on a number of rare, declining and listed species and on their associated desert habitat and waters. We also offer a number of recommendations regarding issues that need to be adequately examined in the EIS/FSA.

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I. The EIS/FSA Must Adequately Analyze and Address Impacts to Species and Habitats.

A. Desert Tortoise:

The desert tortoise is a threatened species due largely to habitat destruction, predation, and disease. Despite effort to recover this species, the tortoise continues to decline in the California Desert. While the project site is currently classified as Category III desert tortoise habitat under the Northeast Mojave Plan ("NEMO"), the California Department of Fish and Game ("DFG") continues to maintain that there was no scientific justification for the Bureau of Land Management ("BLM") to downgrade this habitat from Category II to Category III. Further, the surveys by the project proponent's consultants found a high presence of desert tortoise on this property. Finally, given the precarious nature of the tortoise population and the foreseeable impacts to desert tortoise from climate change, this habitat is even more important to the future survival and recovery of this species.

Given the importance of this habitat, the high number of tortoise on this land, and the severe impacts to tortoise from the project, we strongly recommend that the project proponent do all it can to avoid impacts to tortoises first, then minimize those impacts that cannot be avoided, and finally, if all else fails, adequately mitigate for those impacts. To that end, we strongly urge that the project follow the recommendations found the current Desert Tortoise Recovery Plan for avoidance and minimization measures.

In addition, the project appears to propose a mitigation ratio of 1:1 for desert tortoise habitat. We strongly oppose such a mitigation ratio as the recommended ratio for good quality tortoise habitat is 5:1. DFG determines mitigation ratios for desert tortoise based on: (1) presence of the species; (2) habitat quality; (3) disturbance level of habitat; (4) adjacent land uses; (5) connectivity; and (6) projected growth. Defenders of Wildlife would like to see an analysis of mitigation ratios addressing the above 6 parameters.

Other impacts to tortoise must be fully analyzed and addressed such as new water sources that attract predators, impacts to tortoise water sources from proposed groundwater pumping, impacts from roads, and impacts from vegetation management. For example, if additional water sources will be placed on site, it could increase raven populations within the surrounding area. A raven monitoring plan would need to be included, as ravens can have a very detrimental impact on tortoises. In addition, while the project will obviously involve road and a great deal of traffic (particularly during construction), the project application appears to fail to consider the use of fencing to avoid impacts to tortoise.

Roads lead to direct and indirect impacts on desert tortoise including roadkill mortality, destruction of burrows, dispersion of invasive plants, predators, development, recreation, and possibly disease (Boarman 2002). Roads and highways tend to fragment wildlife habitat and reduce the movement of animals through the landscape (Tsunokawa and Hoban 1997, Evink 2002). Road kill is the greatest human-caused source of direct mortality to vertebrate wildlife in the United States with an estimated one million vertebrates killed per day on roads in America (Forman and Alexander 1998, Kline and Swan 1998). The cumulative impact of habitat fragmentation on desert tortoise is exacerbated by roads and the amount of habitat that they degrade (Boarman 2002).

The project mentions the use of translocation of desert tortoises as a part of the mitigation strategy. We do not believe that translocation, in and of itself, provides adequate mitigation. Instead, any translocation must be in conjunction with the preservation of habitat. Further, the Translocation Plan will need to comply with the recommendations of the FWS 1994 Desert Tortoise Recovery Plan, including

- a) No experimental translocations into Desert Wildlife Management Areas ("DWMA's").
- b) Translocations should be made to appropriate habitat; the EIS/FSA will need to define the habitat to be used and justify this selection.
- c) Areas into which desert tortoises are to be relocated should be surrounded by a desert tortoise-proof fence or similar barrier. The fence will contain the desert tortoises while they are establishing home ranges and a social structure.
- d) The best translocations into empty habitat involves desert tortoises in all age classes, in the proportions in which they occur in a stable population. What is the population structure in this area?
- e) The number of desert tortoises introduced should not exceed the pre-decline density.
- f) All potential translocattees should be medically evaluated in terms of general health and indications of disease, using the latest available technology, before they are moved.
- g) If desert tortoises are to be moved into an area that already supports a population—even one that is well below carrying capacity—the recipient population should be monitored for at least 2 years prior to the introduction. Necessary data include the density and age structure of the recipient population, home ranges of resident desert tortoises, and general ecological conditions of the habitat. Any translocation sites should be isolated by a desert tortoise barrier fence or similar barrier next to the highway or road. The purpose of fencing the highway is obvious—to keep translocated animals from being crushed by vehicles on the road. The project application is unclear about the level and extent of fencing.

B. Banded Gila Monster:

Defenders urges that the Banded Gila Monster should be included on the list of species status species to be analyzed and addressed. Recent scientific research has found that Gila monsters appear to use two overwintering sites (rocky hills and surrounding bajadas). D.F. DeNardo, et al., 2007 Desert Tortoise Council Symposium Abstract). Thus, this project could be important habitat for the Gila monster.

C. Bighorn Sheep:

Defenders also urges that the EIS/FSA asses the impacts to bighorn sheep. While the California Natural Diversity Database ("CNDDDB") reports the last occurrence of bighorn sheep in this area to be in 1986, we understand that the Society for Bighorn Sheep have updated information that shows that this project area is a wildlife corridor for bighorn sheep. Therefore, we strongly urge that this project analyze and address impact to bighorn sheep and their ability to move across the Ivanpah Valley. Furthermore, given the proposed pumping of groundwater, we strongly urge that the

impacts of this pumping are analyzed and address with respect to potential impacts on the desert seeps and springs used by bighorn sheep.

D. Burrowing Owl:

The project fails to acknowledge and address any impacts to the burrowing owl. In addition to being a Species of Special Concern, the burrowing owl is also protected under Fish and Game Code Section 3503.5 and the Migratory Bird Treaty Act. Impacts to burrowing owls must be assessed in the EIR. If impacts are found to exist, then the following measures should be adhered to in the document, as found in the DFG's Burrowing Owl Survey Protocol and Mitigation Guidelines:

- a) Occupied burrows should not be disturbed during the nesting season (February 1 through August 31) unless a qualified biologist approved by the Department of Fish and Game determines that the adult birds have not begun egg-laying and the juveniles from the occupied burrows are foraging independently and capable of independent survival
- b) As compensation for the direct loss of burrowing owl nesting and foraging habitat, the project proponent should mitigate by permanently protecting known burrowing owl nesting and foraging habitat.
- c) A Burrowing Owl Mitigation and Monitoring Plan should be submitted to the Department of Fish and Game for review and approval prior to relocation of owls describing the proposed relocation and monitoring plans. The plan shall include the number and location of occupied burrow sites and details on adjacent or nearby suitable habitat available to owls for relocation. If no suitable habitat is available nearby for relocation, details regarding the creation of artificial burrows (numbers, location, and type of burrows) will also need to be included in the plan.

E. Native Desert Vegetation and Special Status Plant Species

The project application details impacts to some plant species, particularly the barrel cactus and Mojave yucca. However, since the original plant surveys were admittedly conducted during a dry year, we strongly urge that additional surveying be conducted this spring in order to better assess impacts to a number of special status plants and to prescribe adequate mitigation. We do not support deferring this analysis to pre-construction surveys. Indeed, given the biodiversity found on the project site during a dry year survey, we believe that this site contains a large number and extent of rare plants.

With respect to mitigation as currently proposed in the application, we also strongly urge that the environmental documents do a much more thorough job of describing adequate mitigation should a rare plant show up on the project. Right now, the project application sets forth a list of potential mitigation strategies, but commits to none and analyzes none.

Finally, we are very concerned about the extent of the impact of the proposed project on the Creosote Bush-White Bursage Barrel Cactus Community Type. With 10,000 acres of this plant community existing in 20 to 30 locations, the project appears to impact more than 1/3 of the community type. Such an impact appears to be very significant and must be fully analyzed and address in the EIS/FSA.

F. Other Species:

The proposed project will reroute and fill in a number of existing ephemeral washes that flow into the Ivanpah Dry Lake. The EIS/FSA must analyze and address impacts to the Dry Lake and fairy shrimp. In addition, the EIS/FSA must analyze and address the impacts of the groundwater pumping on desert species and habitat. Finally, the EIS/FSA must analyze and address impacts to migratory birds from this project, including any potential impacts from the evaporation ponds.

II. The EIS/FSA Must Adequately Analyze Cumulative Impacts.

The need to prepare a comprehensive EIS based on cumulative and regional effects on wildlife has been specifically embraced by the D.C. Circuit. For example, in *Natural Resources Defense Council v. Hodel*, 865 F.2d 288 (D.C. Cir. 1988), conservation organizations alleged that the Department of the Interior failed to adequately consider the cumulative effects of simultaneous offshore oil and gas leasing and development in the Pacific and Atlantic Oceans on migratory species including endangered cetaceans, marine mammals, salmon, and marine and coastal birds. The D.C. Circuit agreed with plaintiffs, finding that the EIS "for the most part considers only the impact within each area" of leasing. *Id.* at 298 (emphasis in original). The Court thus held that the analysis did "not address the issue ... which NEPA requires the Secretary to consider: the cumulative impacts of [oil and gas leasing] development in different areas," and that "allowing the Secretary's 'analysis' to pass muster here would eviscerate NEPA." *Id.* at 298-99 (quotations and emphasis in original).

Further, NEPA requires analysis of significant cumulative impacts of the proposed project when combined with other past, present and reasonably foreseeable future projects. CEQ Regulations for NEPA (Section 1508.27) require that the significance of actions be analyzed in several contexts such as society as a whole, the affected region, the affected interest, and the locality. This section also requires that the severity of impact be considered and evaluated in determining "significantly" using 10 stated criteria (43 FR 56003, Nov. 29, 1978; 44 FR 874, Jan. 3, 1979). The seventh criterion addresses "[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. Significance cannot be avoided by terming an action temporary or by breaking it down into small component parts."

Therefore, the EIS/FSA must analyze the other proposed renewable energy projects in this region, any foreseeable growth in this area, including in Primm, the foreseeable impacts of climate change, and any other reasonably foreseeable future projects. The impacts should include a discussion of the growth due to the workers associated with this project.

III. The EIS/FSA Must Include An Adequate Range of Alternatives and Provide Meaningful Analysis of These Alternatives.

NEPA requires that an EIS contain a discussion of the "alternatives to the proposed action." 42 U.S.C. §§ 4332(C)(iii),(E); see also *Council on Environmental Quality ("CEQ") NEPA Regulations*, 40 C.F.R. 1508.9(b). This alternatives analysis is "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; *Citizens for a Better Henderson v. Hodel*, 768 F.2d 1051, 1057 (9th Cir. 1985) (EIS must

consider "every" reasonable alternative). An agency's failure to consider a reasonable alternative is thus fatal to its NEPA analysis of a proposed action. See *Idaho Conservation 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."); Forty Most Asked Questions Concerning CEQ's NEPA Regulations, 48 Fed. Reg. 18,026 (March 16, 1981) ("In determining the scope of alternatives to be considered, the emphasis is on what is 'reasonable' rather than on whether the proponent or applicant likes or is itself capable of carrying out the particular alternative. Reasonable alternatives include those that are practical or feasible from a technical and economic standpoint and using common sense, rather than simply desirable from the standpoint of the applicant.").

In order to conduct a meaningful alternatives analysis, however, an agency must first "briefly specify the underlying purpose and need to which the agency is responding in proposing the alternatives including the proposed action." 40 C.F.R. § 1502.13. "The stated goal of a project necessarily dictates the range of 'reasonable' alternatives and an agency cannot define its objectives in unreasonably narrow terms." *City of Carmel-by-the-Sea v. DOT*, 95 F.3d 892 (9th Cir. 1996). Consequently, "[l]ogic and law dictate that every time an agency prepares an environmental impact statement, it must answer three questions in order. First, what is the purpose of the proposed project (major federal action)? Second, given that purpose, what are the reasonable alternatives to the project? And third, to what extent should the agency explore each particular reasonable alternative?" *Id.* at 903.

To that end, we strongly advise that the project proponents take care not to unreasonably constrain their range of alternatives in the EIS/FSA by formulating a limited purpose and scope of the project. For example, we would oppose a purpose and need statement that simply describes the project as the goal instead of reflecting the larger goal of generating renewable solar energy. With an adequately designed purpose and need statement, the project's range of alternatives should involve, at a minimum, an environmentally preferred alternative, a no action alternative, and an alternative that provides for power generation closer to the power consumption.

We thank you for the opportunity to provide comments on this project. Please add us to the distribution list for the EIS/FSA and all notices associated with this project. If you have any questions or comments, please do not hesitate to contact us at (916) 313-5800.

Sincerely,



Kim Delfino
California Program Director



Mike Skuja, MSc
California Representative

References:

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