



In Response Reply To:  
Region 8-ES

## United States Department of the Interior

### FISH AND WILDLIFE SERVICE

California and Nevada Region  
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Sacramento, California 95825-1846



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Subject: Notice of Intent to Prepare a Programmatic Environmental Impact Statement to Evaluate Solar Energy Development, Develop and Implement Agency-Specific Programs, Conduct Public Scoping Meetings, Amend Relevant Agency Land Use Plans, and Provide Notice of Proposed Planning Criteria (ER 08/0004)

The California and Nevada Region of the U.S. Fish and Wildlife Service (Service) recently sent you comments on the subject project. Please accept these additional comments.

Through the Programmatic Environmental Impact Statement (PEIS) process, the Bureau of Land Management (BLM) expects to identify BLM-administered lands in the six state study area that may be environmentally suitable for solar energy development and lands that would be excluded from such development. The PEIS will not include solar energy development on lands within the National Landscape Conservation System, such as National Conservation Areas, National Monuments, Wilderness Areas, Wilderness Study Areas, Wild and Scenic Rivers, and National Scenic and Historic Trails. The PEIS also will not include lands that the BLM has previously identified in its land use plans as environmentally sensitive, such as Areas of Critical Environmental Concern or other special management areas that are inappropriate for or inconsistent with extensive, surface-disturbing uses.

The Service appreciates the need for development of renewable energy and the programmatic approach at which BLM intends to address the issues. Our comments below focus primarily on the California Desert Conservation Area (CDCA).

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## **Purpose and Need**

To achieve the stated objectives in the notice of providing solar energy in an environmentally responsible way, the purpose and need of the PEIS should clearly establish an objective to develop and deliver solar energy in the amounts needed to satisfy current and foreseeable demands in the most efficient manner with the least possible adverse environmental effects, including avoidance and minimization of adverse effects to Federal and State listed and sensitive species. The purpose and need should not be so narrowly or broadly defined such that alternatives could be designed in a way that allows development in higher-function habitat areas for listed and sensitive species, while lower function habitats remain undeveloped.

The BLM has a requirement under the Energy Policy Act of 2005 to provide 10,000 megawatts of energy from various renewable energy resources including geothermal and wind energy. Of these renewable energy resources, solar energy requires the largest amount of land surface to generate power; thus, impacts to listed and sensitive wildlife are likely to be the greatest. Accordingly, we recommend inclusion of an alternative for analysis that would set the upper limit power generation to 10,000 megawatts of energy needs. Since the number of existing applications would exceed this limit if many of these projects are approved, an additional alternative for analysis should consider minimizing, consolidating or limiting the number of applications under separate approval processes. Please refer to the related discussion below for including the most environmentally damaging of these applications under the PEIS process.

## **Alternatives**

The Notice of Intent (NOI) aptly points out that, “Environmental protection and energy production are desirable and necessary objectives of sound land management practices and are not to be considered mutually exclusive”. To achieve this objective, and as described in more detail below, an expanded range of alternatives is needed in the PEIS. The PEIS and range of alternatives should assess a variety of strategies and the objectives for achieving the broader goals of environmental protection and production of renewable energy. Encompassed in these strategies and as set forth in the Energy Policy Act of 2005 (Pub. L. 109-058) should be a series of policies and incentives for businesses and homeowners in urbanized areas to retrofit existing and new buildings/ structures to support solar generated power. These types of efforts would reduce impacts to natural landscapes and wildlife, reduce the potential need for additional Federal regulations, and promote the generation of renewable energy where it is needed and transmission/delivery is most economical and efficient. Southern California Edison recently developed an initiative to lease urban facilities on which to install solar equipment. This initiative provides a model for the types of strategies and alternatives that should be considered in the PEIS. Accordingly, we recommend inclusion of a preferred alternative that would allow for development of BLM lands with only relatively low wildlife habitat function in combination with a package of incentives through Department of Energy (DOE) to maximize solar generation in currently urbanized communities.

The array of alternatives identified and selected for analysis in the PEIS should be subjected to a cost:benefit economical analysis. For example, this analysis would illustrate differences between local power generation (in urbanized areas) vs. power generation and delivery from more

distance public lands, in a way that determines net benefit after factoring in losses from electrical transmission, and the various economical costs for mitigating adverse environmental effects, as described in more detail below.

Many of the existing solar applications that have been filed to date have the potential for significant individual and cumulative effects; cumulatively, these applications would cover upwards of 800,000 acres of public lands in the CDCA. Some of these applications are located in core habitat and linkage areas for listed and sensitive wildlife species, and have the potential to fragment important habitat areas. Accordingly, we recommend another alternative for inclusion in the draft PEIS, in which permit processing for any applications proposed in desert wildlife management areas (DWMAs), wildlife habitat management areas (WHMAs), and designated critical habitat, would be deferred to the proposed programmatic process. Thus, projects that are currently in these sensitive wildlife management areas would be evaluated under the PEIS process, rather than allowed to move forward individually. In addition, the impacts of the associated transmission lines and facilities should be identified and analyzed in with each of the alternatives in the PEIS.

### **Exclusion of Special Management Areas**

The NOI stated that the PEIS will not include lands within the National Landscape Conservation System, such as National Conservation Areas, National Monuments, Wilderness Areas, Wilderness Study Areas, Wild and Scenic Rivers, and National Scenic and Historic Trails. The NOI also stated that the PEIS also will not include lands that the BLM has been previously identified in its land use plans as environmentally sensitive, such as Areas of Critical Environmental Concern or other special management areas that are inappropriate for or inconsistent with extensive, surface-disturbing uses. We agree with the above statements and objective to exclude these sensitive areas from solar energy development. We are concerned, though, that it may not be possible to exclude DWMAs and more sensitive portions of wildlife habitat management areas from development without an alternative that contemplates the development of higher function wildlife habitat and then excludes such areas based on the environmental analysis. This concern is based upon discussions at a June 27, 2008, meeting between the staff of the Service's Carlsbad Fish and Wildlife Office and BLM.

Based on staff-level coordination between our agencies, we developed a Priority Special Management Areas map and presented it to BLM representatives at a meeting on June 27, 2008 between BLM and our Carlsbad Fish and Wildlife Office. The map largely depicted lands with various levels of planned conservation per BLM's bioregional management plans [Northern and Eastern Mojave Plan (NEMO), Northern and Eastern Colorado Plan (NECO), Western and Eastern Colorado Plan (WEMO), etc.] and serves as the basis for determining areas that are environmentally sensitive and inappropriate for extensive, surface disturbing uses, such as solar energy development. Special management areas within the CDCA that should not be considered appropriate for solar energy development, include designated critical habitat for listed species, DWMAs, WHMAs, core habitat and linkages for federally listed desert tortoise and desert bighorn sheep, sand dunes and playa habitats, flat-tailed horned lizard (*Phrynosoma mcallii*) management areas, and other special management areas identified in the CDCA Plan. These land allocations were analyzed under the CDCA and found to be areas that were environmentally

sensitive and play an important role in recovery and conservation of listed and sensitive species, and are therefore inappropriate for extensive surface-disturbing uses. All the areas on the Priority Special Management Areas map should be included as environmentally sensitive land for all alternatives in this PEIS and excluded from solar development.

### **Programmatic Planning Process**

The programmatic scale of the proposed planning effort affords an opportunity to identify and select appropriate locations for solar development based on prioritized site selection criteria such as: 1) on previously disturbed public lands and near disturbed private lands; 2) in close proximity to existing infrastructure and roads to minimize new disturbance; 3) close to urban centers to minimize extensive utility lines and energy attenuation; 4) away from core habitats and linkages such as designated critical habitat, DWMA's, WHMA's; and 5) outside other conservation-specific public lands, such as conserved mitigation lands from previously approved projects. We recommend that the NEPA analyses for large-scale projects within the CDCA be undertaken at four different, yet interdependent scales: 1) the CDCA; 2) the desert tortoise recovery unit scale; 3) the hydrologic unit scale; and 4) at the site-specific scale..

### **Environmental Effects**

The utility-scale power generation contemplated by the PEIS has the potential for wide-spread and significant wildlife habitat loss, degradation, and fragmentation from direct, indirect, and cumulative effects, which will affect the conservation of listed and sensitive species. Therefore, we recommend that all direct, indirect, interrelated, interdependent, and cumulative effects be thoroughly analyzed in the PEIS, including projects such as transmission lines and associated infrastructure. Sunrise Powerlink is an example of one of these projects to be analyzed.

Adverse environmental effects likely to result from construction, operation, and maintenance of solar generation and transmission facilities includes: groundwater pumping, water diversion/flood control facilities, access roads, supply and equipment staging areas, and use/transport of hazardous materials. These activities will generate numerous direct and indirect effects, all of which should be thoroughly discussed and mitigated. These potential adverse effects include but are not limited to: 1) direct habitat loss on scale that fragments core habitats and compromises connectivity between core populations, 2) increased surface water exploitation and groundwater depletion; and, 3) introduction and spread of non-native, invasive weeds and associated effects on fire frequency. Changes in plant community composition caused by non-native plants can negatively affect species such as desert tortoise by altering habitat structure and forage availability; 4) enhanced carrying capacity for ravens and other tortoise predators, which decreases survivorship and recruitment into the reproductive population; 5) increased edge effects into wildlife habitat adjoining solar facilities; 6) degradation of microphyll woodlands from upstream water diversions; 7) exclusion of wildlife from food, shelter, and movement corridors within the fenced project perimeter; 8) increased number of hazardous waste disposal locations; and 9) additional mortality impacts from access roads and transmission lines, etc.

The PEIS should analyze the additive environmental effects of large-scale, disjunct projects on the environment, including the effects to listed and sensitive species. The federally listed desert

tortoise is an example of a wide-ranging, long-lived species that can be impacted by multiple, disjunct projects that synergistically threaten the long-term persistence of unfragmented habitat that is essential for the conservation of this species. We again recommend that all areas on the Priority Special Management Areas map, provided to BLM on June 27, 2008 be included as environmentally sensitive land for all alternatives in this PEIS and excluded from solar development.

### **Mitigation/Compensation**

To effectively mitigate/compensate for potentially significant adverse effects, careful planning is needed in the placement and configuration of solar projects. Thoughtful planning for key umbrella species, such as desert tortoise and bighorn sheep that require vast acreages to maintain viable populations would likely confer conservation benefits to less widely distributed species as well. The programmatic scale of the planning effort allows for the application of a consistent set of avoidance/minimization measures at the individual project level; these measures should include: 1) specified areas for mitigation; 2) specific management and restoration activities; 3) habitat compensation ratios based on habitat quality and function; 4) secured funding sources for management of mitigation/compensation lands, such as an endowment; 5) avoiding disturbance during the nesting season for migratory birds; 6) incorporating buffers along the microphyll woodlands and surface waters, 7) design and implementation of long-term monitoring and adaptive management plans for compensation and adjoining “edge effect” lands and other long-term affects; 8) long-term raven monitoring and depredation plans to minimize impacts to desert tortoise; and, 9) formulation of best management practices to minimize the effects of numerous related activities.

Historically, translocation has been used to mitigate project impacts on desert tortoises. However, this is still experimental and should not be considered as a standard operating procedure or best management practice. The efficacy of translocation itself remains unclear and interrelated factors such as disease and genetic variation within and among populations, and behavior, morphology, and ecology within local populations must be taken into account and studied prior to implementing a translocation plan. Large-scale research into translocation effects and effectiveness is being undertaken as part of the expansion of the National Training Center at Fort Irwin, California.

### **Incorporation of Documents by Reference**

At the coordination meeting between BLM and our Carlsbad Fish and Wildlife Office on June 27, 2008, we provided: 1) preliminary comments on the NOI; 2) a list of the federally-listed and candidate species, and taxa covered under final permitted or draft habitat conservation plans that occur in the CDCA boundary that may be impacted by solar development; 3) a compilation of recovery actions and tasks from approved recovery plans of species in the area, and 4) a set of maps depicting Priority Special Management Areas (see above). These materials are intended to assist BLM and DOE in preparation of the draft PEIS and are hereby incorporated by reference.

We appreciate the opportunity to comment on the referenced project and offer our perspective on environmentally responsible policies for solar energy development in the southwest. We look

forward to continuing to work together with the BLM and other agencies and stakeholders through this process. As the PEIS is developed and as project-specific information and analyses become available, we will continue to provide recommendations and input on alternatives to the cooperating agencies. Please do not hesitate to contact me should you have any questions or require any additional information on our trust resources.

If you have any questions regarding this matter, please contact Darrin Thome, U.S. Fish and Wildlife Service, Region 8, Section 7, HC, & EC Program Manager at (916) 414-6533.

Sincerely



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Acting Assistant Regional Director

Enclosures

cc: Solar Energy PEIS Scoping, Argonne National Laboratory  
Field Supervisor, VFWO  
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