

Thank you for your comment, Robert Bendick.

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Comment Submitted:

September 14, 2009

Mr. Bob Abbey
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Dear Mr. Abbey:

Thank you for the opportunity to comment on the Solar Energy Study Areas being considered in the context of the Programmatic Environmental Impact Statement for Solar Energy Development (Solar PEIS). The Nature Conservancy strongly supports a strategy that would identify areas for the development of renewable energy that minimize conflicts with other land uses including habitat values and that could serve as a tool to expedite development of solar and wind energy resources.

The Nature Conservancy is an international nonprofit organization dedicated to the conservation of biodiversity. Our mission is to preserve the plants, animals and natural communities that represent the diversity of life on Earth by protecting the lands and waters they need to survive. Our on-the-ground conservation work is carried out in all 50 states and in 30 countries with the support of approximately one million members. To date, we have helped conserve more than 117 million acres and 5,000 river miles around the world. The Conservancy owns and manages approximately 1,400 preserves throughout the United States—the world's largest private system of nature sanctuaries. However, we recognize that our mission cannot be achieved by protected areas alone; thus, our projects increasingly seek to accommodate compatible human uses, especially in the developing world, to assure that protection of nature contributes to human well-being.

The Nature Conservancy supports the development of renewable sources of energy to mitigate the increasing threat of climate change. However, we also recognize that some of these renewable sources will require much larger land areas to produce the same amount of energy as the fossil fuel sources that they replace. Therefore, the Conservancy puts high priority on public policies and land management decisions with respect to the location and operation of renewable energy facilities (and the associated transmission infrastructure) that will protect habitat, ecological processes and biodiversity from adverse effects.

In addition to the general concepts on the renewable energy zone approach set forth below, we are also attaching comments with respect to some of the specific areas that were identified in the maps provided on the Bureau's web site as noticed in the *Federal Register* on June 30, 2009.

Approach. We strongly support the Bureau's decision to identify and study areas that may direct solar energy development to the most appropriate locations on the public lands. We favor this approach because it allows the Bureau to:

- Focus its resources on processing applications for renewable energy facilities in the most appropriate places;
- Meet its multiple-use mission, including natural resource protection, by identifying specific, delineated areas where renewable energy development will be allowed; and
- More accurately predict the cumulative impacts of development because the locations and aerial extent of development can be defined.

In addition to the Solar Energy Study Areas identified for re-scoping in the PEIS, there are a number of other larger areas (meeting the Bureau's own minimum-size criteria for identifying solar energy study areas) which the Bureau has identified and with respect to which the Bureau is processing applications for solar facilities on an expedited basis. These areas may be more important ecologically than the selected study areas. It is, therefore, not appropriate to eliminate focused consideration of development in these larger areas in this PEIS, especially since the cumulative effects of permitting facilities in these locations may overwhelm the effects of facilities within the study areas.

The Bureau's explanation of the proposed status of these areas relative to the solar energy study areas and the other areas under consideration for development in the Solar PEIS is not clear. In particular, it is not clear how the Bureau will treat applications in these other areas, and how it will handle, for example, the analysis of cumulative effects for individual projects outside the study areas. If the Bureau continues to accept and process applications in the "other areas under consideration for development," this will undermine the benefits described above for the low conflict renewable energy zone approach.

Following completion of the PEIS, we would urge that the Bureau direct future applications only to those areas identified as low-conflict Solar Energy Zones in the PEIS. The actual development in those areas should be carefully monitored and studied for impacts. In the future, if additional areas are required for development of solar energy, the increased understanding of impacts of these developed zones should help inform another analysis to determine where additional renewable energy should be located.

Criteria. We appreciate the Bureau's explication of the criteria used to identify the solar energy study areas. We offer the following comments on the criteria used by the Bureau:

Minimum Size. The Bureau should consider reducing the minimum size of 2,000 acres that was considered for solar energy study areas.

- While concentrating solar facilities typically require approximately 2,000 acres in order to be economically viable, our understanding is that utility-scale photovoltaic facilities can be cost effective on much smaller acreage, requiring as little as 160-200 acres for a viable facility.
- In general, the Bureau's scattered and checker-board parcels are challenging to manage and may have lower attractiveness for concentrating solar development than the Bureau's large, contiguous parcels. However, these smaller parcels, especially those near transmission and distribution lines, and within urban and disturbed areas (see below), may provide enhanced

value and expedited siting opportunities, allowing the Bureau to meet its multiple-use mission while contributing to the national goals of greenhouse gas reduction, energy independence and economic recovery.

- If our recommendation for a smaller minimum-size were to be implemented, it should be done as a means to reduce fragmentation of intact landscapes and for the siting of projects on lands of lowest conservation value. It will be important to guard against fragmentation of high conservation value habitats by scattered, small projects.

In addition to the sensitive resources that were removed from consideration, we recommend that the Bureau include in its evaluation the following additional criteria to identify and evaluate proposed solar energy study areas:

Adjacency to degraded and impacted private lands that provide little-to-no conservation value.

- Again, we applaud the Bureau for evaluating where development of renewable energy may be appropriate on the lands under its own jurisdiction. This evaluation would be strengthened by evaluating the most appropriate locations for development in the context of the greater landscape.
- Identification of low-conservation value public lands that are adjacent to low-conservation value private lands would allow for expansion of renewable energy development onto private lands, which might offer tax benefits to local governments.

Proximity of solar energy study areas to urbanized development.

- Recognizing that renewable energy is being proposed, in part, to reduce greenhouse gas emissions in our collective efforts to address threats from climate change, there are benefits from siting facilities in the general vicinity of urbanized areas. In particular, the siting of facilities closer to urbanized areas permits the workforce that will be employed by the facility to reduce its commute, reducing greenhouse gas emissions associated with transportation to work. Said another way, it would allow for economic development to occur in communities where infrastructure already exists, and generates needed jobs in fully built but often distressed communities.
- Siting renewable energy facilities close to urbanized areas would also eliminate the need for the development of new housing and associated infrastructure to accommodate the workforce of a plant that is too remote to permit reasonable commuting.

Avoidance of landscape-level biological linkage areas required for the continued functioning of biological and ecological processes. In addition to avoiding existing known wildlife movement corridors — a criterion we strongly support — the Bureau should also evaluate the risk that solar energy study areas will otherwise adversely affect wildlife migration or sever ecological process corridors (e.g., sand movement, ground-water re-charge zones). In particular, analysis of the Amargosa Valley study area indicates that solar energy development may interrupt sources of sand replenishment for the dune system which is essential habitat for several sensitive and rare plant and animal species that depend upon this physical replenishment process.

Avoidance of native corridors that will allow native species to move in response to climate change. We strongly recommend that the Bureau study and attempt to avert the effects of renewable energy and transmission facility siting on impending changes in wildlife migration and plant and animal habitat adaptation and movement needs driven by climate change.

Water Use. Given the extremely dry conditions in the regions likely to host significant solar energy development, even the modest water requirements of dry-cooled concentrating solar and photovoltaic facilities may represent considerable stress on the limited local water resources. In addition, climate change models project that the desert will become even drier in the future, making water resources in the desert all the more precious and subject to overuse. Wet-cooling of solar-thermal facilities may be incompatible with these dry ecosystems. Therefore, we recommend that the PEIS should include a comprehensive evaluation of available water budgets for each respective basin. In addition we recommend that as a pre-condition of being granted a permit, any developer should be required to submit for approval an evaluation of their water supply needs, a proposal for the source of that water, an assessment of potential impacts of their water use on biodiversity, a comprehensive water monitoring plan to monitor any impacts on the local water resources, and detailed mitigation measures for estimated water resource impacts including contingency measures for unforeseen impacts detected by later monitoring. As a condition for operation, the permitted entity should be required to pay for implementation of the approved water monitoring plan.

The Mojave Desert is the driest desert in North America. Its groundwater resources must be carefully managed and frugally used to avoid overdraft. A drop in the water table can seriously threaten desert biodiversity as the plants, animals, and natural communities of the Mojave are dependent on groundwater and groundwater-fed springs for their survival. For the Amargosa Valley, in particular, the water budget must ensure enough water for the critical breeding habitats of endemic species such as the Amargosa Toad in the Oasis Valley and sufficient supplies for biodiversity protection at the Ash Meadows National Wildlife Refuge, the associated conservation lands and for the Amargosa River itself.

Cumulative Impacts. Prior to finalizing priority renewable energy zones, the Bureau should complete a cumulative impact analysis *by eco-region* for development of solar energy facilities within the proposed solar energy study areas. As noted above, the Bureau should include as part of this cumulative impacts analysis an assessment of the contributing cumulative impacts that would occur from developing any of the permit applications for large solar facilities that the Bureau has identified as appropriate to expedite, including those outside the proposed study zones. In addition, the Bureau needs to consider the potential impacts of water use, especially from wet-cooling, as part of the cumulative impacts analysis. The Bureau should determine if specific development criteria for approving a right-of-way permit (or any alternative mechanism for permitting development of solar facilities as determined by the Solar PEIS Record of Decision) are necessary to ensure the Bureau's ability to continue to meet all aspects of its multiple-use mission; if so, the Bureau should describe new policies for permitting solar facilities as part of this Solar PEIS.

Mitigation. The Bureau has the mission of meeting multiple uses on its lands, including resource conservation. In the case of solar development, public land that has been meeting multiple uses will be converted into a single use. The Nature Conservancy believes it is appropriate and necessary for the Bureau to require mitigation of habitat impacts (in addition to mitigation specific to the Endangered Species Act) to allow the agency to continue to meet its resource protection objective while also fulfilling its objective of supporting renewable energy development. We recommend that the Bureau continue to follow a decision hierarchy that seeks to first avoid, then minimize, and then offset adverse

environmental impacts. “Mitigation” refers to the entire hierarchy as identified by the Council on Environmental Quality (CEQ): avoid, minimize, restore, and offset (40 CFR 1500-1508).

Mitigation investment decisions should be based on scientific analyses of the best sites and management and restoration activities to protect and maintain the long-term viability of specific species (e.g., desert tortoise) and for biological diversity in general. In order to “maximize return on investment of limited mitigation funds” we advocate that mitigation dollars be put to the highest and best use for ecosystem protection, enhancement, restoration and or species recovery. In some cases that may mean acquiring critical private lands, in others it may mean carrying out or supplementing existing management actions to abate other critical threats. This will contribute to the Bureau’s mission of protecting the natural resources and biodiversity of the lands it manages.

We would strongly urge the Bureau to adopt a “no net loss” goal for priority species and vegetation values that would be affected by solar energy development. Such a goal would provide clear sidebars for maintaining or enhancing species and vegetation. These sidebars would in turn make transparent and more easily justifiable agency decisions about areas open and closed to solar energy development on public lands, and what mitigation measures may be appropriate.

Should the Bureau adopt such a goal, the Bureau would need to identify and set quantitative objectives for a suite of priority species and vegetation that would be affected by solar energy development. For example, in the San Luis Valley the Bureau may identify active Gunnison’s prairie dog habitat as a priority vegetation/habitat type. To achieve no net loss, the Bureau would then need to set a goal – working with the Colorado Division of Wildlife and other partners - for the amount of active Gunnison’s prairie dog habitat on Bureau-managed lands that must be maintained at any one point in time. If proposed solar development were to cause the amount of prairie dog habitat to “dip below” this objective, it would be appropriate and clearly justifiable for the Bureau to require mitigation measures of solar energy developers.

In order to meet both the consumptive and intensive use objectives *and* the conservation objectives for its land, the Bureau has established a policy (September 30, 2008) that allows for offsite mitigation. The Bureau’s Offsite Mitigation Policy (IM 2008-204) would support using offsite mitigation for solar energy development. As the policy states, “Offsite mitigation is a supplemental mitigation practice...and must be based on the need to address important resource issues that cannot be acceptably mitigated onsite.” Solar energy infrastructure permanently alters the landscape in which it is installed, and the potential for onsite mitigation will be limited. With each project likely to cover hundreds or even thousands of acres, the impact to species and vegetation is likely to be significant, depending on the type and quality of vegetation to be affected. Clearly stating support for offsite mitigation in the EIS will provide the Bureau with the flexibility to manage for species and vegetation in light of solar energy development, thereby assuring that the Bureau’s multiple use mission is met.

Should the Bureau allow for or require the use of offsite mitigation, we would encourage the Bureau to support mitigation on- or off- Bureau lands as the policy describes. Specifically the policy states, “Offsite mitigation may be performed on Federal lands managed by the Bureau or another Federal agency. Offsite mitigation may also occur on non-Federal lands with the agreement of the surface owner or other land management agency when it provides an alternative site for conserving Bureau-managed resources that have been temporarily impacted while activities are occurring on Bureau-managed lands

One tool the Bureau should employ to maximize the value of mitigation investments is Regional Advance Mitigation Planning. RAMP approaches incorporated into siting and mitigation protocols

minimize costs and transaction inefficiencies thereby better protecting conservation values across entire regions. RAMP incorporates a regional rather than individual project approach to evaluating and mitigating for environmental impacts.

Coordination with Other Planning and Assessment Efforts. The *Federal Register* of June 30 indicates that the Bureau made the initial determinations for these solar energy study areas based in part on work done by California's Renewable Energy Transmission Initiative and by the Western Governors' Association Western Renewable Energy Zones and Transmission Study. We applaud the Bureau for considering these efforts in the design of this proposal and would encourage that the many efforts already underway by other federal and state agencies to facilitate renewable energy development in the Western states be coordinated with these designations and the Solar PEIS.

The Bureau should be highly engaged with California's Desert Renewable Energy Conservation Plan (DRECP) and ensure that the final renewable energy zones (including both the criteria for siting and actual locations) are integrated with and correspond to the results of the DRECP. The state and federal agencies need to be aligned to ensure that the final maps defining renewable energy siting and conservation in the California deserts incorporate all uses, are viable, robust and enduring. In addition, federal and state mitigation policies for the use of desert lands by solar facilities are not yet defined; in the past these state and federal policies have differed significantly. If these policies are not clearly defined and congruent, it will be very difficult to assess the environmental impacts—including cumulative effects—of facility siting. The DRECP offers an appropriate vehicle to resolve mitigation—as well as other differences—between state and federal agency policies and to construct a multi-species habitat conservation plan that will assure broad agreement on appropriate sites as well as compensation requirements for the use of public lands.

We understand that the Bureau is embarking on a series of eco-regional assessments for the eco-regions that are most likely to be the location of significant solar energy development. We strongly support the use of eco-regional analysis in making zone designations and developing mitigation strategies for renewable energy development. We urge the Bureau to complete these assessments as quickly as possible so that they may be of maximum value in these decisions. The Conservancy has already completed eco-regional assessments for the Mojave, Sonoran and Great Basin Deserts and we are in the midst of updating those assessments to ensure that they remain relevant to changing threat scenarios. We note that information available through these assessments (as well as assessments that we have completed for other eco-regions) may be of value to the Bureau to more rapidly complete its own assessments and to tailor mitigation strategies for the development of solar energy in the identified areas.

Thank you again for the opportunity to comment on the solar energy study areas and the important strategic approach that you have identified to minimize the impact of renewable energy resources on important conservation values found on federal lands.

Sincerely,



Robert Bendick
Vice President for External Affairs

Enc. Comments on Specific Study Areas in California, Colorado and Nevada