UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
75 Hawthorne Street
San Francisco, CA 94105-3901

AUG 2 7 2012

Department of the Interior
Bureau of Land Management
Attn: Ms. Shannon Stewart
BLM Solar PEIS Project Manager
1849 C Street, N.W., Room 2134LM
Washington DC, 20240

Subject: Final Programmatic Environmental Impact Statement for Solar Energy Development in Six Southwestern States [CEQ# 20120240]

Dear Ms. Stewart,

The U.S. Environmental Protection Agency has reviewed the Final Programmatic Environmental Impact Statement for Solar Energy Development in Six Southwestern States including Arizona, California, Colorado, Nevada, New Mexico, and Utah. Our review was conducted pursuant to Section 309 of the Clean Air Act, the National Environmental Policy Act, and the Council on Environmental Quality NEPA implementing regulations (40 CFR Parts 1500-1508).

We appreciate the efforts of the Bureau of Land Management, Department of Energy, and the consultants to discuss and respond to our comments on the Draft PEIS and Supplement. With the publication of the Final PEIS, we are pleased to see further modifications and improvements to the Solar Energy Program. The incorporation of these changes should result in a more robust program that will enable BLM to respond in an efficient, effective and environmentally-responsible manner to the high interest in siting utility-scale solar energy development on public lands.

The Final PEIS presents additional information on many of the topics that we identified previously. It identifies 17 Solar Energy Zones (284,918 acres) and provides incentives for siting utility-scale solar facilities within those zones, while also allowing for solar development within approximately 19 million acres of "variance" lands using a variance process. The BLM identifies a more robust set of exclusion criteria to protect sensitive resources from development. Furthermore, additional exclusion areas have been identified since the publication of the Supplement, based on consultation with cooperating agencies, tribes, and stakeholders. We commend the U.S. Fish and Wildlife and the U.S. National Park Service, in particular, for their hard work and dedication in mapping and identifying sensitive resources and areas of concern. According to the Final PEIS, approximately 515,000 acres of priority desert tortoise connectivity habitat and 821,000 acres of NPS-identified areas of high-potential conflict will be excluded based in large part on their recent efforts.

We are also pleased to see that additional information on surface water features and groundwater is presented in each of the individual SEZ chapters. Stream reaches that provide critical functions to the basins (groundwater recharge, flood conveyance, sediment transport and ecological habitat) were

identified as a result of the intermittent/ephemeral stream evaluations. Based on these evaluations, many SEZs were reconfigured to avoid critical areas. In addition, several critical areas that were located within SEZ boundaries were deemed non-development areas. Of note, more than 19,000 acres of sensitive resources (intermittent/ephemeral streams, washes, wetlands, floodplains, dry lakes, and lake areas) located within the SEZs have now been classified as non-development areas. We applaud the BLM and DOE for conducting these additional analyses and incorporating this information into the Final PEIS. We recommend that the Record of Decision stipulate that such analyses will also be required for any new or expanded SEZ identified in the future.

We appreciate BLM's stated intention to give preference to proposed projects located in, or adjacent to, previously contaminated or disturbed lands. Our recent efforts with the National Renewable Energy Laboratory have identified 132 disturbed sites on California BLM lands that may be appropriate for utility-scale solar energy. We support guiding future projects to sites of this nature and we are committed to helping BLM identify disturbed, degraded, and contaminated sites on public, private, and tribal lands that may offer appropriate alternatives.

EPA continues to have concerns about cumulative air quality impacts to Class I areas and environmental justice communities located in proximity to SEZs. In addition, we have recommendations regarding certain elements of the new Solar Energy Program including: design features, pending applications, and priority processing of certain applications. These issues are discussed in the attached Detailed Comments.

Through review of more than 22 solar energy projects that have undergone the NEPA process in Region 9, we have observed the challenges associated with the development of large-scale solar energy projects on public land, and the difficulties associated with attempting to avoid, minimize, and mitigate adverse impacts on a project-by-project basis. We are optimistic that the new Solar Energy Program will offer developers a more reliable roadmap by proactively identifying those areas best suited for large-scale solar energy production. We commend the BLM and DOE for their hard work, dedication, foresight, and vision exhibited in the Final Solar PEIS, which should result in more appropriate and efficient siting of proposed projects and greater protection of our natural resources.

We appreciate the opportunity to provide comments on the Final PEIS and look forward to working closely with BLM and DOE to resolve the issues that we have identified as we work towards facilitating the nation's much needed shift to renewable energy sources. Please send one hard copy of the ROD to the address above (mail code: CED-2). If you have any questions, please contact me at 415-972-3843, or contact Ann McPherson, the lead reviewer for this project. Ann can be reached at 415-972-3545 or mcpherson.ann@epa.gov.

Sincerely,

Enrique Manzanilla, Director
Communities and Ecosystem Division

Enclosures: Detailed Comments

Cc: James G. Kenna, State Director, Bureau of Land Management, California State Office
Amy Lueders, State Director, Bureau of Land Management, Nevada State Office
Ray Suazo, State Director, Bureau of Land Management, Arizona State Office
Jesse Juen, State Director, Bureau of Land Management, New Mexico State Office
Juan Palma, State Director, Bureau of Land Management, Utah State Office
Helen Hankins, State Director, Bureau of Land Management, Colorado State Office

U.S. EPA DETAILED COMMENTS ON THE FINAL PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT FOR SOLAR ENERGY DEVELOPMENT IN SIX SOUTHWESTERN STATES, AUGUST 27, 2012

Cumulative Air Quality Impacts to Class I Areas

The U.S. Environmental Protection Agency remains concerned about the potential cumulative impacts that fugitive dust may have on Class I areas. Our concern stems from those Solar Energy Zone-specific air quality modeling analyses that show a potential for adverse impacts in several Class I areas based on predicted PM_{10} values well in excess of the Prevention of Significant Deterioration increment. EPA notes that the Final Programmatic Environmental Impact Statement does not analyze the cumulative impacts associated with development from those SEZs in close proximity to each other and which may, therefore, influence each other. EPA therefore recommends that these potential cumulative impacts, not assessed at the programmatic level, be analyzed at the project-specific level.

> *Recommendation:*
> Include in the Record of Decision an additional air quality programmatic design feature that requires future project National Environmental Policy Act analyses to consider the cumulative impacts to air quality and air quality-related values in Class I areas. Such an analysis should include the Reasonably Foreseeable Development Scenario predicted in this programmatic EIS for all SEZs within the region of the proposed project.

Disturbed, Degraded, and Contaminated Lands

Preference for projects located in, or adjacent to, previously contaminated or disturbed lands under the variance process

Within the Response to Comments BLM states that a *preference* under the variance process would be given to proposed projects that are located in, or adjacent to, previously contaminated or disturbed lands (Vol. 7, pg. 209). The EPA supports the concept that preference be given to sites on disturbed, degraded, or contaminated sites and recommends incorporating it within the ROD.

> *Recommendation:*
> Include in the ROD the statement that a preference will be given to proposed projects that are located in, or adjacent to, previously contaminated or disturbed lands under the variance process.

Interagency partnering to screen contaminated sites on BLM land

In our previous comments on the Draft PEIS, EPA elaborated on work that we have done with the Department of Energy's National Renewable Energy Laboratory to develop maps showing contaminated lands and mining sites with renewable energy generation potential through the *RE-Powering America's Land Initiative.* This initiative promotes renewable energy development on current and formerly contaminated lands, landfills, and mining lands when it is aligned with the community's vision for the sites. Targeted sites include both federal and nonfederal contaminated lands, including private, state, local, and/or tribal lands. The Final PEIS mentions the *RE-Powering America's Land Initiative* but

concludes that the types of properties it has identified are not likely to coincide substantially with BLM-administered public lands (pg. 2-71).

Our most recent efforts indicate that there may be more contaminated sites on BLM lands suitable for development than previously recognized. As an expansion of the *RE-Powering America's Land Initiative*, EPA has recently partnered with NREL to identify additional sites with contaminated lands in California, adding more than 12,000 sites to the existing database. [1] After conducting a preliminary assessment of these sites, the EPA has identified 132 contaminated sites – 100 acres or larger – on BLM land that may be suitable for utility-scale solar energy. The EPA would like to partner with BLM to screen these sites for renewable energy potential in the coming months.

> *Recommendation:*
> Partner with EPA to screen newly identified sites on BLM land for renewable energy potential.

Examine the potential for solar development on oil and gas extraction sites and mining sites

EPA believes that there are additional disturbed sites on public lands that may offer significant development opportunities, including BLM-administered oil and gas extraction sites, as well as mining sites (active, recently closed, and abandoned).

> *Recommendation:*
> Work with the Nevada Division of Environmental Protection and other state agencies to examine recently active, but currently closed, mine sites on BLM land suitable for solar energy development.

Presenting this information on the Solar PEIS project website

We suggest that screened sites on or near BLM-administered land be identified on the Solar PEIS project website (http://solareis.anl.gov), thereby offering interested parties easy access to this information. In addition, we suggest that the Solar PEIS project website incorporate web links to both of EPA's RE-Powering Google Earth interactive tools and associated databases.

> *Recommendations:*
> Create a tab on the Solar PEIS project website for newly screened sites on disturbed, degraded, or contaminated land.
>
> Add links to both of EPA's RE-Powering Google Earth interactive tools and associated databases to the Solar PEIS project website. Please provide EPA with the appropriate point of contact to pursue this opportunity for interagency collaboration.

[1] For additional information on EPA Renewable Energy Siting Tool, a mapping resource that maps over 12,000 sites in California, please use the following weblink: http://www.epa.gov/region9/climatechange/renewcontlands.html.

Priority Processing of Applications

Priority processing of applications has most frequently been discussed as an incentive designed to help steer development to SEZs. As presented in the Final PEIS, priority processing is now being proposed in a wider range of applications (pp. ES-11, 1-13, 2-33, 2-40, 2-42, 2-43), with the potential for conflicting priorities. In anticipation of project-level applications that will require NEPA analyses tiered to the PEIS, EPA believes that solar developers would benefit from greater clarity in this area.

Recommendation:
Clarify in the ROD the term "*priority processing*" and how priority processing will be accomplished should there be concurrent processing of projects located in SEZs versus "*priority*" projects located in variance lands or exclusion areas.

Pending Applications

Pending applications represent a substantial amount of solar energy development that could occur in the coming years without being subject to new program elements adopted by the PEIS ROD (pg. 1-13). Some of the projects could change significantly, either by expanding ROW boundaries or switching technologies, and still not be required to comply with the program elements adopted by the PEIS ROD. We understand, based on conversations with BLM staff, that some of the pending applications may propose to site projects in areas now designated as exclusion areas by the Final PEIS. Projects proposed for designated exclusion areas may encounter significant resource conflicts. Through the development of the PEIS, BLM has amassed a significant body of work that was not available at the time the pending applications were submitted. This information may be useful to developers and BLM -- in its application review and project-level NEPA analyses -- for avoiding or minimizing resource conflicts, even for projects not subject to the new Solar Energy Program elements.

Recommendations:
We recommend that pending applications that are subsequently revised, either due to technology changes or ROW boundary changes, be subject to program elements adopted by the PEIS ROD.

Although pending applications will not be required to comply with the program elements adopted by the PEIS ROD, we encourage BLM to expeditiously inform pending applicants of information developed through the PEIS development process and that may affect their proposed projects, particularly those in designated exclusion areas.

Variance Process

According to the Final PEIS, variances may be needed in the near term because the lands identified as SEZs might be insufficient to accommodate demand for utility-scale solar development or may not have access to adequate transmission capacity; however, the variance process is intended to be the exception rather than the rule (pg. 2-43).

Recommendation:
Describe, in the ROD, the criteria that BLM will use to determine when a variance is warranted.

Aquatic Resources

For the Final PEIS, additional studies were conducted using flood hazards mapping, historical peak discharges, and aerial photographs to measure stream channel sensitivity to land disturbance within the vicinity of the SEZs. The intermittent/ephemeral stream evaluation used a scoring index-based approach to evaluate the sensitivity level to disturbance of three integral functions of intermittent and ephemeral streams, resulting in categories of low, medium and high sensitivity. It is unclear whether this analysis considered the cumulative effects of land disturbance within each watershed. For example, although an individual ephemeral stream reach may have moderate sensitivity to land disturbance, the cumulative loss/impact of this stream(s) within a given watershed may result in significant disturbance to hydrological and ecological processes both on site and off site; potentially indicating a greater sensitivity of the hydrologic system, as a whole, than would be reflected by individual stream scores.

> *Recommendation:*
> If cumulative effects of land disturbance were not considered in the sensitivity analyses, EPA recommends that BLM adjust the sensitivity analyses for each of the SEZs to incorporate this issue, in order to determine whether additional non-developable lands should be delineated to minimize the potential for significant cumulative impacts from land disturbance within a given watershed. Updated information should be made available through the Solar PEIS Project website (http://solareis.anl.gov), as noted in the Final PEIS (pg. 2-25).

Design Features

Individual SEZ chapters contain further information on both programmatic and SEZ-specific design features. In some cases, the SEZ chapters present more detailed versions of the programmatic design features than Appendix A.2.2. [See Sections 9.4.10.3 or 9.4.11.2.3, for example.] We believe that developers would benefits from greater clarity regarding whether BLM intends to specify detailed versions of the programmatic design features for each SEZ, and, if so, how this information differs from SEZ-specific design features.

> *Recommendations:*
> The ROD should:
>
> > Clarify any differences between SEZ-specific design features and those that are identified by applying the programmatic design features to a specific SEZ.
> >
> > Commit to compiling specific applications of programmatic design features for individual SEZs within the ROD and including them on the Solar PEIS project website.

Competitive Process to Offer Lands in SEZs

The BLM proposes to offer lands in SEZs through a competitive process. The BLM has initiated a rulemaking to establish a competitive process for offering public lands for solar and wind development within designated leasing areas. According to the Final PEIS, BLM would complete appropriate NEPA analysis prior to issuing a notice of competitive offer. Once BLM has issued the ROW lease

authorization, the holder of the lease would submit a plan of development for authorization prior to the start of any construction. A NEPA review would be required prior to approval of the POD; this NEPA would be tiered to all previous NEPA analyses for the SEZ and parcel offered competitively. The Final PEIS also notes, however, that BLM will complete a site-specific environmental review of all solar energy ROW applications in accordance with NEPA prior to issuing a ROW authorization (pg. 1-18). Developers, regulatory agencies, and the public would all benefit from greater clarity regarding the scope and responsible parties for these various levels of NEPA review.

Recommendations:
The ROD should:

Distinguish between the types of NEPA analyses required for new projects proposed in SEZs via the competitive process, as discussed in Section 2.2.2.2.1, and clarify who is responsible for conducting each of these analyses.

Specify when, through the NEPA process, anticipated impacts to threatened and endangered species, aquatic resources, and cultural resources will be disclosed (and mitigation identified) from projects proposed for each site (including resource impacts from technology choices, site designs, construction requirements, access enhancements, and transmission requirements).

Specify when, and by whom, detailed surveys for threatened and endangered species, aquatic resources, and cultural resources will be completed.

Environmental Justice

EPA understands that the Final Solar PEIS is a programmatic document that provides a broad assessment of the potential for impacts to EJ communities. We further understand that the BLM intends to conduct a more detailed EJ analysis as part of project-specific NEPA analysis (i.e., for future proposed utility scale solar projects within the SEZs or variance lands). With this understanding, we recommend that you take additional steps to identify all EJ communities in proximity to the SEZs in these future NEPA analyses. EPA also encourages the BLM to disclose how resource impacts, such as air quality or water supply impacts, could affect those living near utility-scale solar projects.

Recommendations:
Include in the ROD a commitment to identify all EJ communities in proximity to the SEZs in conjunction with project-specific NEPA analyses.

Please see EPA's comments on the Draft PEIS (May 2, 2011) and Supplement (January 27, 2012) for further recommendations regarding project-specific NEPA analyses for EJ communities.

Publication of Complete Version of Final PEIS

As published, the Final PEIS contains complete chapters (in their revised form) and incomplete chapters

(only the updates are displayed, without the rest of the chapter). Thus, the reader must refer back to both the Draft PEIS (10 volumes) and the Supplement in order to read the full contents of the Final PEIS.

Recommendation:
Given that project-specific NEPA documents are expected to tier from the Final PEIS, we recommend that BLM compile an electronic version of the Final PEIS that contains all the chapters in their complete and updated form, and post it on the PEIS website.

Miscellaneous Edits

In the Final PEIS, the BLM states that there is no clear and well-established definition of what constitutes "previously disturbed public lands" (Vol. 7, pg. 209) nor what constitutes contaminated lands.

Recommendation:
Provide a clear definition of "contaminated lands" within the ROD. For example, we suggest that, for the purposes of the PEIS, "contaminated lands" be defined as all areas to which hazardous substances and/or pollutants or contaminants have been deposited, stored, disposed of, placed, or otherwise come to be located.

Several references to the *RE-Powering America's Land Initiative* may be misinterpreted as limiting sites to those contaminated sites tracked at the federal level, and excluding those tracked at the state, local, and/or tribal level.

Recommendations:
EPA notes the following language that should be corrected in either the ROD, if appropriate, or other electronic documentation such as an integrated Final PEIS (revised text in **bold**).

a. Section A.2.6.3.5, Vol. 6, Part 1, pg. A-127, lines 14-16:

   Brownfields and other contaminated or previously contaminated sites,[1] **such as those** identified by the Environmental Protection Agency's *RE-Powering America's Land Initiative* (http://www.epa.gov/renewableenergyland) **or state, local and/or tribal authorities.**

   Insert footnote [1]: EPA and other parties have or will continue to characterize and cleanup these sites to ensure they are protective for people.

b. Section 2.2.2.2.3, Vol. 1, pg. 2-35, line 19:

   Revise title: Encourage Solar Development on Suitable ~~Nonfederal~~ Lands **adjacent to SEZs**. Note: Similar preference should be given to projects that incorporate contaminated public lands adjacent to the SEZs.

c. Section 2.2.2.2.3, Vol. 1, pg. 2-35, lines 21-27:

For projects located jointly on SEZ lands and suitable adjacent **public,** private, state, tribal, or DoD withdrawn lands (e.g., lands with low resource conflict or degraded, disturbed, ~~or~~ previously disturbed**, or contaminated** areas), DOI's permitting incentives as described for SEZs would apply to the entire project. Note, however, that additional effort may be required to collect necessary data and conduct appropriate environmental analysis for adjoining lands as compared to SEZ lands.

d. Section 2.2.2.2.3, Vol. 1, pg. 2-35, lines 32-34:

The BLM anticipates lower cost recovery for projects in SEZs because of the BLM's extensive up-front data collection and environmental review through the Solar PEIS. **Further, for projects on contaminated lands, the BLM also anticipates lower cost recovery due to the BLM's and EPA's historical data collection and environmental review associated with activities to assess, investigate, and respond to contamination on site.**

e. Section 2.2.2.3.a, Vol. 1, pg. 2-47, lines 12-19:

If applicable, documentation that the proposed project will be located in, or adjacent to, previously contaminated[1] or disturbed lands such as brownfields identified by the EPA's *RE-Powering America's Land Initiative* (http://www.epa.gov/renewableenergyland) **or state, local and/or tribal authorities**; mechanically altered lands such as mine-scarred lands and fallowed agricultural lands; idle or underutilized industrial areas; lands adjacent to urbanized areas and/or load centers; or areas repeatedly burned and invaded by fire-promoting non-native grasses where the probability of restoration is determined to be limited.

Insert footnote [1]: EPA and other parties have or will continue to characterize and cleanup these sites to ensure they are protective for people.