

Thank you for your comment, Michael Mantell.

The comment tracking number that has been assigned to your comment is SEDDSupp20177.

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Supplement to the Draft Solar PEIS  
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Attachment: Joint Comments on the Supplement to the Draft Solar PEIS.pdf

Comment Submitted:

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enXco – an EDF Energies Nouvelles Company • First Solar, Inc. • Iberdrola Renewables, Inc.  
Large-scale Solar Association • Natural Resources Defense Council • NRG Solar LLC  
Pacific Gas and Electric Company • Solar Energy Industries Association • SolarReserve, LLC  
Southern California Edison • SunPower Corporation, Systems • The Nature Conservancy  
The Vote Solar Initiative • The Wilderness Society • Torresol Energy*

January 27, 2012

The Honorable Ken Salazar  
Secretary of the Department of the Interior  
1849 C Street SW  
Washington, DC 20240

**Re: Joint Comments on Supplemental Draft PEIS for Solar Development**

Dear Secretary Salazar:

The signatories to this letter are a group of conservation, utility and solar developer stakeholders who have spent hundreds of hours of time in thinking, writing, and talking about the issues that are central to the Supplement to the Draft PEIS for Solar Energy Development in Six Southwestern States (“PEIS”). This letter states the agreements we have reached with regard to various issues presented in that document. Individual and groups of stakeholders will send their own comments on issues that we have either not addressed as a group or were unable to reach agreement on at this time.

The parties generally agree that (1) solar energy development in the right places on public lands is necessary to achieve our renewable energy goals; protect desert ecosystems, landscapes and species; and fight rapid climate change; and (2) zones are an accepted land use planning tool that can facilitate solar development, especially by clustering projects around transmission, minimizing other infrastructure needs and reducing the footprint of that development.

We further agree the zones proposed thus far are only a starting point in the process and we are recommending initiation of the next steps necessary to create a more robust system of zones. Those steps will ensure the identification of new zones which are adequate in size and location to which transmission can be built and in which clustered large-scale solar development can occur.

We agree that the current PEIS moves us closer to the model described above, and represents an unprecedented effort by the Department of the Interior and Bureau of Land Management, in cooperation with the Department of Energy, to use public lands strategically to produce clean energy. In recognition of these facts, we have come together to develop recommendations to assure that the BLM ROW application process remains flexible to accommodate “smart from the start” near-term development as well as to promote the prompt identification and designation of new zones in accordance with the framework addressed in the PEIS, as modified by these comments. The parties further agree that BLM must complete the Solar PEIS by the end of fiscal year 2012.

**RECOMMENDATIONS**

**1. Pending Applications**

We agree that BLM should scrutinize pending applications to assure that they meet financial and technical qualifications and are proceeding with due diligence. BLM’s recent actions to assure

qualifications and due diligence in California resulted in fewer pending applications. We urge a similar process in Arizona and Nevada.

We agree that the pending applications identified in Appendix A should be processed under current rules, not new rules under the Supplemental Draft PEIS (see box on page 1-9).<sup>1</sup> In addition, the solar industry has identified applications that appear to be pending but are not on the list.<sup>2</sup> These applications should also be processed under current rules, provided that BLM confirms the filing dates for these applications and that it did not deliberately exclude one or more of these applications from Appendix A for failure to comply with diligence or other requirements.

In addition, the reference to denying pending applications because of their location in proposed exclusion areas (page 1-11) should be removed.<sup>3</sup> We urge BLM not to change the deadline for these applications again.

## **2. Variance Process**

We agree that the variance process is intended to be the exception, not the rule, consistent with the framework proposed in the Supplement. We are committed to working together to develop new zones so that use of the variance process can be minimized. Until then, the variance process requires some modification. For example, the Supplement articulates a set of variance factors, and states that they will be considerations in processing variance applications. However, we agree that the first variance factor (demonstration of technical and financial capabilities) should be enforced as a requirement, consistent with existing Instruction Memoranda. As further stated below, we also agree that there should be a requirement regarding Desert Tortoise. We do not yet agree on a recommendation for the contents of a Desert Tortoise requirement, except to say that neither Option 1 nor Option 2 is adequate.

### **a. Low resource value factor**

The variance factor that takes into account “Low resource values and minimal conflict with adjacent lands” (page 2-35, line 8) should be replaced by the following language:

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<sup>1</sup> All page references are to the Supplement to the Draft PEIS.

<sup>2</sup> These applications are the following:

1. Siberia (CACA-049421) filed under Solar Partners V, LLC. Received by BLM 4-27-07. 13,920 acres.
2. Palo Verde II, aka Sonoran West (CACA-051967) filed under BrightSource Energy. Received by BLM 5-12-09. 12,269 acres.
3. Pahrump Valley, aka Sandy Valley (NVN-090476) filed under BrightSource Energy. Received by BLM 1-21-11. 15,190 acres.
4. Rio Mesa Solar (CACA-053138) filed under BrightSource Energy. Received by BLM 2-14-11. 3,054 acres.
5. Mule Mountain III (CACA-50390) filed by SolarReserve on 8-22-08 (second in line application); SolarReserve notified of status as a first in-line application on 5-16-2011. 8,160 acres.
6. Sandy Valley III (NVN-[# TBD]) filed by Sandy Valley Solar III, LLC. Received by BLM 10-21-11. 10,804 acres.
7. NextEra Sandy Valley (NVN-[# TBD]) filed under Boulevard Associates. Accepted by BLM 10-21-11. 3,200 acres.

<sup>3</sup> Pending applications in proposed exclusion areas may qualify as high conflict projects under either Instruction Memorandum 2011-061 (February 7, 2011) or the recommendations dated December 22, 2010 that were previously submitted by some of the signatories to this letter.

Documentation that the proposed project is in an area with low or comparatively low resource conflicts. Examples of such lands and others where development could present comparatively low conflicts if conflicts can be resolved include the following:

- Lands specifically identified for solar or wind energy development in BLM land use plans;
- Previously disturbed sites or areas adjacent to previously disturbed or developed sites;
- Locations that minimize construction of new roads and/or transmission lines;
- Lands adjacent to designated transmission corridors;
- Lands that are not excluded due to their visual resource classification, subject to review and additional mitigation where required;
- Lands identified as suitable for disposal in BLM land use plans;
- Areas repeatedly burned and invaded by fire-promoting non-native grasses, at least in the Sonoran and Mojave deserts;
- Department of Defense operating areas, including areas with significant radar, airspace, or land use conflicts, where conflicts can be resolved;
- Areas where project development may adversely affect lands acquired for conservation purposes, where conflicts can be resolved;
- Areas with low or relatively low conflict characteristics that are adjacent to private lands that might be used for development; and
- Areas where water extraction does not pose a significant threat to species or systems. However, variance applications where groundwater extraction may impact groundwater dependent ecosystems, and especially within groundwater basins that have been over appropriated by state water resource agencies, may qualify where the developer commits to provide mitigation measures that will provide a net benefit to that groundwater resource.

These examples are intended to reinforce the intent of the variance process – i.e., to allow development on sites with low or comparatively low resource conflicts, without undermining the goal of moving toward zone-based development.<sup>4</sup>

**b. Factors with the word “minimize”**

The factors pertaining to “minimizing” certain impacts should be replaced with the following language:

Minimize need to build transmission and infrastructure (page 2-37):

Documentation that the proposed project will minimize the need to build new roads and that it meets one or more of the following transmission sub-criteria: (1) transmission with existing capacity and substations is already available or (2) only incremental transmission

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<sup>4</sup> We agree that variance applications could not be sited on lands previously identified as high conflict such as those in Instruction Memorandum 2011-061. The examples of low and comparatively low resource conflicts are adapted from Instruction Memorandum 2011-061. We also agree that the following are not low impact or comparatively low conflict areas: (1) “[l]ands with wilderness characteristics outside Wilderness and Wilderness Study Areas that have been identified in an updated wilderness characteristics inventory” pursuant to Section 201 of the Federal Land Planning and Management Act, 43 U.S.C. §§ 1701, 1711, and Instruction Memorandum 2011-154 (July 25, 2011), not a Visual Resource Inventory; or (2) “[s]ensitive habitat areas, including important eagle use areas, priority sage grouse habitat, riparian areas, or areas of importance for Federal or state sensitive species.” *Id.*

is needed, e.g. re-conductoring or network upgrades, and development of substations, or (3) new transmission upgrades or additions to serve the area have been permitted or are planned sufficiently to reasonably be expected to be available in time to serve the generation project.

Minimize impact on water (page 2-37):

Documentation that demonstrates that the proposed project is designed to use the best available technology<sup>5</sup> for limiting water use that is applicable to the specific generation technology as well as during construction and operations, subject to review and additional mitigation.

**c. Desert Tortoise**

We are in agreement that protection for desert tortoise habitat and populations in the variance process should be a requirement rather than a factor to be considered. However, we also agree that Options 1 and 2 in the Supplemental Draft PEIS are inadequate. At this time, the signatories to this letter have not reached an agreement on a recommendation as to the specific content of a requirement for diverse geographic areas. We intend to continue to work as a group on the development of appropriate recommendations.

**3. Use of Height and Technology Limitations in Designated SEZs**

We agree that BLM should remove the SEZ height and technology limitations applied to areas described as requiring VRM Class II or III “consistent” mitigation (pages C-58 and C-343, Section C.7.3 and Draft Table A.2.2). These VRM considerations should be dealt with on a case by case basis in the NEPA process.

**4. Slope and Insolation Exclusion Criteria**

Slope and insolation are technical criteria or constraints. They should be listed separately from other exclusion criteria.

We agree that there could be some flexibility to develop on lands with greater than 5% slope.

**a. Slope**

With regard to lands with greater than 5% slope, we propose:

- Allow developers to file a ROW application on variance lands that includes some lands with up to 10% slope to avoid or minimize resource conflicts, provided that the upslope area is proximate to the variance lands in the application, not otherwise excluded from development, and does not create any significant new or additional conflict. The identified conflict lands would be excluded from future development.
- Create a pilot program by which BLM will allow developers to file a ROW application on variance lands that includes lands with up to 10% slope to generate additional solar energy, provided that the upslope area is proximate to the variance lands in the application, does not exceed 33% of the acreage of the proposed project, and is not otherwise excluded. The application must address all variance factors. An equal amount of similar or better quality land would be removed from variance lands in the vicinity of the upslope lands. BLM would allow a maximum use of

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<sup>5</sup> Use of the term “best available technology” is not intended to import the definition of that term from the Clean Water Act, but is instead used in a generic form.

20,000 acres of lands with greater than 5% slope and up to 10% slope in California, Nevada, and Arizona.

**b. Insolation**

- The parties have discussed the issue of insolation, and tried to agree upon a pilot project parallel to that on slope. However, the parties could not agree on the parameters of such a pilot project. We hope to continue to work on this issue and make further recommendations.

In all of these cases a land use plan amendment would have to be adopted to permit the slope exception.

**5. Areas where future applications for large-scale solar development should be prohibited**

We agree that new applications for large-scale solar development in the Ivanpah Valley (CA and NV) and the Pisgah Valley should be prohibited.<sup>6</sup> This prohibition on new applications would not apply to amendments to pending applications, provided that such amendments either (1) do not change the boundaries of the pending ROW application or (2) are related to avoiding resource or land use conflicts, adapting the project to third-party owned infrastructure constraints, or using or designating translocation areas or mitigation lands.

**6. Protocol for New SEZ Identification, Including West Mojave SEZ**

We agree that the identification and designation of new zones is critical to the enduring success of a zone-based solar energy development framework as is the prompt designation of new zones. In general, in designating a new SEZ, BLM should base its decision on NEPA studies which demonstrate that resource conflicts are low or can be addressed and development prospects are high. SEZs should ideally be large enough to allow for siting flexibility and the development of multiple projects (1 GW or more).<sup>7</sup> They must be in areas with access to roads and a suitable workforce. New zones should be located where it is reasonable to anticipate sufficient transmission to serve the quantity of generation planned for the zone can be made available, considering current transmission planning processes and environmental considerations.

The solar industry and environmentalists have previously urged BLM and DOI both individually and collectively to look for new zones in the West Mojave and other areas of the California Desert and to initiate such efforts prior to completion of the Solar PEIS. We intend to continue to work as a group on the development of further recommendations for the designation and processes to be used for adoption of new zones. At this time, we have agreed upon the following recommendations:

- DOI should commit, in the final PEIS and in the ROD, to making a final decision on the designation of new zones, including a potential new zone in the West Mojave, by the end of 2013. Specifically, in the area being addressed in the DRECP planning area, BLM should commit that new zones will be considered in the DRECP.

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<sup>6</sup> Due to the divergent views of the industry and the conservation community on the issue of previously-approved applications, this section of this letter does not address amendments to approved applications in these areas.

<sup>7</sup> We say “ideally” because other than the Riverside East SEZ most or all of the SEZs are too small to accommodate multiple projects. It is possible that SEZs will need to be smaller, but ideally they should be large, so as to facilitate needed transmission.

- DOI and BLM should make this decision-making process their highest priority to ensure that the 2013 deadline is met.
- The Department should actively support and provide strong leadership for planning and related processes currently underway – e.g., DRECP, West Chocolate Mountains and RDEP – to ensure timely zone outcomes as well as consistency between these efforts and national renewable energy programs, policies and implementation.<sup>8</sup>
- In addition to playing a lead role in the identification of new zones in the DRECP, DOI's leadership role in that effort should also encompass transmission planning and permitting.
- The Department should commit to the development of regional mitigation plans for SEZs, including a West Mojave SEZ, if one is designated.
- BLM should encourage developers, utilities and other stakeholders to nominate new zones.

## **7. SEZ Mitigation Plan Recommendations**

We are in agreement that the solar energy program should include the elements of a mitigation program that are transparent, systematic, and based on sound science, require ongoing monitoring, and address clear conservation priorities. Such a program will provide certainty to developers about the requirements and costs of mitigation, and assurances to the conservation community and other stakeholders that conservation priorities can be maintained and preserved in perpetuity. The development of the specifics of this mitigation program must not delay the adoption of the PEIS or review of pending applications. At this time the signatories to this letter have not reached agreement on a recommendation on the specifics of the elements for a mitigation program. We do agree that the mitigation program should follow the mitigation hierarchy of avoid first, then minimize, then restore, then offset. We intend to work as a group on the development of appropriate recommendations.

## **8. Transmission**

We agree that identification of solar energy zones (SEZs) and related transmission network upgrades and additions, through integrated land-use and transmission planning efforts informed by the DRECP, will provide greater certainty, resulting in a more orderly, rational, timely, and cost-effective state and regional transmission planning process.

We agree that coordination of local, state and regional land-use and transmission planning efforts will facilitate cost-effective, environmentally sound planning and permitting for transmission network upgrades and additions and transmission corridors to support SEZs.

We agree that optimizing use of existing transmission and corridors for SEZs, and prioritizing the planning, permitting, and development of new and expanded transmission and corridors for SEZs, is important for both economic and environmental reasons.

We appreciate that BLM submitted on January 20, 2012, a study request to WECC asking TEPPC to perform such analyses for the 17 proposed SEZs. We will support the agency's request at WECC and work with WECC/TEPPC to assure that the studies address the most important cases and critical factors.

We agree that a methodology to identify transmission network upgrades and additions and corridors to support SEZs, and to evaluate the associated costs and environmental impacts, is important. We agree, however, that the methodology utilized in the Transmission Analysis in Appendix D is inadequate and could be misleading.

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<sup>8</sup> In making this recommendation, it is not our intention to discourage or have the BLM discourage novel solutions that might emerge from RDEP or any other process.

We offer the following recommendations to improve coordination, integration of land use and transmission planning, and to improve the transmission analysis methodology:

**a. Coordination**

- For California, enter into a memorandum of agreement (MOA) with CAISO and CPUC to formalize coordination in efforts to provide both the strategic planning and project permitting needs necessary to provide timely transmission network upgrades and additions to support SEZs.
- Coordinate with the CAISO's Transmission Planning Process (TPP) to ensure that transmission upgrades and additions needed to support SEZs are considered for inclusion as "policy driven projects".
- Coordinate with the CPUC Long Term Procurement Process (LTPP), as informed by DRECP, to direct renewable energy development to high resource value, low conflict SEZs.
- Seek similar MOAs with the relevant regulators and transmission planners in the other five states within the PEIS study area that will result in prioritized consideration of transmission network upgrades and additions and transmission corridors to support SEZs.
- Coordinate with the WECC regional transmission planning efforts to ensure consistency and compatibility across the west.

**b. Integration**

- Prioritize the designation of seamless, contiguous, strategically sized transmission corridors on public and private lands to facilitate transmission network upgrades and additions to safely and reliably support SEZs throughout the west.
- Ensure designated corridors include sufficient right-of-way to support network upgrades and additions, over public and private lands. Designated corridors on public lands should be withheld from other uses by DOI consistent with PEIS planning horizons. Designated corridors on private lands should be held for future use consistent with PEIS planning horizons.
- Work with relevant transmission planning entities to ensure that they identify transmission system upgrades and additions to BLM, including collector substations, network upgrades, downstream upgrades, and related infrastructure sufficient to support renewable energy development in the SEZs and to maintain a reliable and safe electrical system.
- Proximity to existing transmission lines does not guarantee availability. Transmission lines located in proximity to SEZs may not necessarily have sufficient capacity to accommodate the anticipated renewable generation in SEZs.
- Encourage the use of existing roads, transmission rights-of-way, and corridors, wherever possible, consistent with all applicable reliability planning criteria required by the North American Electricity Reliability Corporation (NERC), Western Electricity Coordinating Council (WECC), and the California Independent System Operator (CAISO).
- Work to ensure sufficient transmission will be available at the time that generation is anticipated to be placed on line within the zone, by:
  - Working with relevant transmission planning entities to ensure that they identify transmission upgrades, additions, new or expanded corridors, and related infrastructure in sufficient detail so as to facilitate timely permitting by local, state, and federal entities.
  - Working with relevant permitting authorities to prioritize and expedite interagency permit processing for transmission network upgrades and additions in support of SEZs.

- Near-term priority should be given to transmission network upgrades and additions that may be needed to serve geographic areas that have been identified as potential high solar resource value, low environmental/cultural conflict locations such as the Western Mojave and Chocolate Mountains.
- Establish a policy to extend federal jurisdiction for Section 7 consultation to transmission network upgrades and additions and corridors, on federal and non-federal lands, that serve SEZs.
- Coordinate with state and federal permitting agencies to ensure that mitigation requirements for transmission network upgrades and additions and corridors are appropriate, and not redundant.
- Consider incentives to direct investments in high value solar technology to high resource value areas served by transmission.

**c. Transmission Analysis**

The Test Case Transmission Analysis for the Proposed Brenda SEZ is inherently flawed. The analysis was performed without taking into account other SEZs, and may suggest that power can be readily exported from the Brenda SEZ to the Los Angeles load center without downstream upgrades and without accounting for generation projects in the queue.

The final PEIS should instead provide for BLM to work with the relevant transmission planning entities to identify and designate transmission corridors sufficient to support transmission network upgrades and additions needed to deliver power from SEZs to load centers, taking into account all relevant factors, including the potential energy deliveries from a SEZ, optimizing existing infrastructure, and minimizing the need for new corridors and infrastructure.

**CONCLUSION**

The signatories to this letter have worked hard to reach the agreements set forth in this letter. We thank you in advance for your serious consideration of our recommendations.

Sincerely yours,



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Jim Baak  
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/s/

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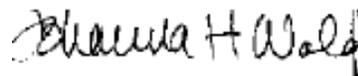
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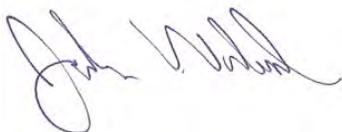
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Thank you for your comment, Jill Yung.

The comment tracking number that has been assigned to your comment is SEDDSupp20178.

Comment Date: January 27, 2012 20:42:04PM

Supplement to the Draft Solar PEIS

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Attachment: Final SEIA-LSA SDPEIS Letter.pdf

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January 27, 2012

76145.00002

**VIA OVERNIGHT USPS & INTERNET**

Solar Energy PEIS  
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Argonne, IL 60439

Re: Comments of the Solar Energy Industries Association and the Large-scale Solar Association on the Supplemental Draft Solar PEIS

When we prepared our comments on the Draft Programmatic Environmental Impact Statement for Solar Energy Development in Six Southwestern States (“Draft PEIS” or “DPEIS”), the fledgling utility-scale solar industry and the Bureau of Land Management (“BLM”) were still celebrating their accomplishments of 2010. With nine projects and an expected 3,671 megawatts (“MW”) approved for development, the immediate future for large-scale solar development on public lands was promising. The prospect of federal loan guarantees, though limited in duration, further shored up confidence that the solar industry could radically change our energy supply chain to fight climate change and maximize the utility of our public lands.

Even at a time when confidence was high, however, our clients, the Solar Energy Industries Association (“SEIA”) and the Large-scale Solar Association (“LSA”), and their member companies (collectively, the “Solar Industry”),<sup>1</sup> had significant concerns that the Draft PEIS, intended to facilitate near-term utility scale solar energy development on public lands, would instead foreclose the possibility of significant new development. Our prior comments noted that the proposed Solar Energy Zone (“SEZ”) approach was underdeveloped and consequently too restrictive. Among our many recommendations, we called for a flexible process for approving applications in areas outside of SEZs (other than in high conflict areas) that would remain in place at least until BLM designated SEZs of sufficient size and number in areas where development would be feasible.

When the Department of the Interior (“DOI”) announced in July, 2011, that BLM and the Department of Energy (“DOE”) would prepare a supplemental draft of the PEIS (“Supplemental Draft PEIS” or “SDPEIS”) to “address key issues . . . including developing well defined criteria for identifying solar energy zones; incentives for encouraging developers to site their projects in the zones and a variance process for those who wish to develop facilities outside such zones; [and] additional surveys of biological and cultural resources in the zones”,<sup>2</sup> the Solar Industry had expectations that the SDPEIS would respond to its

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<sup>1</sup> As noted in our May 2, 2011 comment letter on the Draft PEIS, LSA and SEIA are coalitions of solar companies that seek to promote the environmentally responsible development of solar energy and associated transmission. SEIA and LSA are committed to working with the Department of the Interior (“DOI”), Department of Energy (“DOE”), and other federal agencies, environmental and conservation organizations, Native American tribes, state agencies, and other stakeholders to achieve this goal.

<sup>2</sup> BLM, Salazar Approves Major Renewable Energy Projects, Identifies Next Step in Solar Energy Development (July 14, 2011) (News Release), *available at* [http://www.blm.gov/wo/st/en/info/newsroom/2011/july/NR\\_07\\_14\\_2011A.html](http://www.blm.gov/wo/st/en/info/newsroom/2011/july/NR_07_14_2011A.html).

concerns. We were thus surprised to find in the Supplemental Draft that instead of increasing the number and size of zones, BLM reduced the already limited opportunities for development in SEZs by over 50 percent (in terms of acres); instead of creating a temporary and manageable variance process to bridge the gap between where SEZs were and where they needed to be, BLM adopted demanding new criteria that appear to lack a peer-reviewed scientific basis; and instead of conducting additional surveys to reduce the potential for resource conflicts in the proposed zones, BLM relied on unverified concerns in comment letters to take more land out of development. The end result was a planning document that in many ways poses an even greater threat to the future of solar development than the original draft.

The additional impediments to solar development proposed in the SDPEIS come at a particularly tough time for the Solar Industry. Financing has become increasingly more difficult to secure and rampant underbidding by new speculators in the market has interfered with efforts by more experienced developers to finish what they started and apply the lessons learned from the first round of development to new projects. Now is not the time to put more challenges in front of the Solar Industry if it is to meet the national goals established by and for DOE, BLM, and DOI.

Despite lingering concerns about the current state of the PEIS, we appreciate the significant amount of work that has gone into its development and recognize that BLM has a pressing need to finalize a program that will provide a foundation for a holistic approach to the simultaneous development of multiple utility-scale solar projects on public land. On behalf of the Solar Industry, we have therefore focused our comments on constructive suggestions that BLM and DOE can implement without further delaying the release of the PEIS. From the perspective of the Solar Industry, these changes are essential if the PEIS is to accomplish its primary objective: to facilitate environmentally responsible and technically and economically feasible utility-scale solar siting, permitting, and development over the long-term.

The SDPEIS strongly suggests that BLM is leaning towards the Modified Program Alternative, which in contrast to the Modified SEZ Alternative and the original SEZ Program Alternative, would allow for at least some development outside of SEZs. This development throws the variance process in particular into sharp relief and has also shifted our focus to the exclusion area criteria. As a result, some of our comments here will address material that appeared in both the original Draft and the Supplemental Draft. In sum, those comments are as follows:

1. Pending Applications: Due to some potentially confusing statements in the SDPEIS, the Solar Industry believes that BLM must clarify that pending applications, as that term is defined on page 1-9, will be evaluated under existing policies and not subject to the design requirements, mitigation requirements, or any other criteria that will apply to future applications, as required by the forthcoming Record of Decision ("ROD") for the PEIS and/or the PEIS itself.
2. New Zones: Even with the prospect of approval for pending applications and the 285,000 acres made available for development within the proposed SEZs, BLM should recognize that the SDPEIS does not provide sufficient development opportunities. The SDPEIS took zones that were already too small and too few and whittled them down even further. Subtracting acres in zones that have pending and approved applications, only 223,884 acres are now actually available for new projects and these acres have not been allocated pursuant to a plan to facilitate clustered development. With a median size of only 5,873 acres, most SEZs can support only one or two utility-scale projects. In addition, some potentially useful zones are already full. For example, of the 5,717 developable acres in the Imperial East SEZ, only 1,770 are not subject to

an existing application. The recognition that zones are inadequate should provide a basis for BLM's priorities in implementing the PEIS in the immediate future.

3. Flexible Variance Process: BLM should adopt a workable variance process that will avoid the creation of a de facto moratorium on new solar projects on public lands while BLM locates, studies, and approves much needed new SEZs. The variance process proposed in the SDPEIS, and the lands the SDPEIS would open to variance applications, are not sufficient. Although the SDPEIS makes 20 million acres of land available in variance areas, only 1.2 million acres are in California, near load and transmission. The Final PEIS should relocate a significant amount of the variance acres to areas where renewable energy generation facilities are in demand. In addition, BLM should clarify that the "factors" listed for obtaining a variance are largely just individual considerations for BLM's process when deciding whether to grant a variance.<sup>3</sup> Even with this clarification, certain variance application factors (located in low, not moderate, resource conflict areas, caps on the number of desert tortoise, and requirements to minimize transmission and infrastructure development and water use) should be eliminated or significantly modified. These factors, as drafted, are not essential to ensure smart from the start development across the entire area of the PEIS.
4. Height and Technology Limitations in SEZs: The proposed height and technology limitations are excessive, as they would exclude even efficient alternative photovoltaic ("PV") technologies (e.g., PV with trackers) and thereby provide perverse incentives to increase project footprints. Furthermore, the presumption that taller technologies will have greater impacts on visual resources is questionable. The 10 foot height limit and PV-only limitations on more than 25% of the SEZ acreage should consequently be eliminated, with visual considerations applied only on a case-by-case basis in the National Environmental Policy Act ("NEPA") environmental review process to mitigate actual visual impacts exacerbated by project height.
5. Exclusion Areas: BLM should not identify exclusion areas based on arbitrary, and misguided, assumptions about the technical and economic limits of solar energy generation technologies. Along these lines, BLM should not exclude lands based on technological factors including slope and insolation. In addition, BLM must provide more concrete definitions for exclusion criteria that are currently vague and subjective. Some limits on the currently unbridled discretion of BLM staff to designate exclusion areas are also needed. More generally, as noted in the Solar Industry's comments on the Draft PEIS, BLM needs to provide transparency regarding what lands are excluded and for what reasons.<sup>4</sup> A map depicting the exclusion areas associated with each

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<sup>3</sup> For a few of the variance factors, it would make sense to apply them as requirements. For example, applicants should be required to demonstrate technical and financial capabilities, as is the case under existing BLM policies. A requirement that provides some limitations on development that conflicts with desert tortoise populations should also be imposed, but, as explained in more detail below, Desert Tortoise Variance Requirement Option 2 is not the appropriate solution.

<sup>4</sup> See DPEIS at 2-9 to 2-10 (recognizing that the exclusion areas maps represent an amalgam of the following considerations: slope greater than or equal to 5%; average solar insolation of less than 6.5 kWh/m<sup>2</sup>/day; critical habitat for threatened or endangered species as designated by the USFWS; "and the following areas designated under various BLM programs: Areas of Critical Environmental Concern (ACECs); Desert Wildlife Management Areas (DWMAs); flat-tailed horned lizard habitat, Mohave ground squirrel habitat; ROW exclusion and avoidance areas, No Surface Occupancy (NSO) areas, and Special Recreation Management Areas (SRMAs)"); *id.* at 2-10 (recognizing that "Exclusion areas that could not

exclusion criteria would most effectively convey this information. Finally, BLM should not exclude areas from development based on criteria that it has previously identified as a medium conflict indicator without a transparent and sound scientific basis for determining that such conflicts are too difficult to resolve.

6. The Importance of Transmission in Selection of Zones: BLM should establish a clear process for the expedited selection of new zones that additionally takes into account existing transmission or the prospects for development of new transmission. BLM's current pledges to participate in regional transmission planning efforts do not provide the meaningful commitment that is required. (See, e.g., SDPEIS at p. 2-25.) When it comes to creating much needed new SEZs, BLM cannot wait for other proceedings that might identify one or two additional zones, but are otherwise focused on different purposes and needs. BLM should already be studying the areas surrounding the locations of leading transmission proposals so that it will be in a position to approve the development of projects almost as soon as decisions regarding transmission are made.
7. Transmission Analysis: BLM should expand its transmission analysis to include additional factors. Thermal rating, without a power flow analysis, provides BLM with only a partial picture of what existing variables already constrain transmission. In relying exclusively on this consideration, BLM overlooks "parallel" or loop flow (power from a source to sink will travel multiple paths). The approach taken in the SDPEIS also ignores the required contingency analysis, which will conclude that a line is "full" to cover a contingency even if the line could, under normal conditions, physically carry additional capacity. Finally, the model transmission analysis that BLM proposes to follow does not take into account the massive queue that has built up in California and other western states. Developers have already spoken for significant amounts of hypothetical transmission.

As drafted, the SDPEIS offers (1) inadequate zones, (2) a troubling and uncertain variance process, and (3) arbitrary exclusions. For the reasons given above and below, immediate action is needed to address these issues. If these issues cannot be addressed, the Solar Industry would urge the DOI and the BLM to adopt the No Project Alternative. The following discussion provides guidance on how we believe these issues can and should be addressed in a manner consistent with BLM's other priorities.

## **I. PENDING APPLICATIONS**

The SDPEIS states that pending applications will be subject to "continued processing under existing policies,"<sup>5</sup> including the February 2011 Instruction Memoranda (Nos. 2011-059 to 2011-061) (hereinafter "IM 2011-059" and "IM 2011-061", respectively).<sup>6</sup> The rest of the SDPEIS is consistent with this statement, with the exception of a statement on page 1-11, which says:

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be mapped due to lack of data would be identified during pre-application consultations with local BLM staff or site-specific evaluation of individual ROW applications").

<sup>5</sup> SDPEIS at p. 1-9 (Table 1.7-1).

<sup>6</sup> Available at: [http://www.blm.gov/wo/st/en/info/regulations/Instruction\\_Memos\\_and\\_Bulletins/national\\_instruction/2011/IM\\_2011-59.html](http://www.blm.gov/wo/st/en/info/regulations/Instruction_Memos_and_Bulletins/national_instruction/2011/IM_2011-59.html); [http://www.blm.gov/wo/st/en/info/regulations/Instruction\\_Memos\\_and\\_Bulletins/national\\_instruction/2011/IM\\_2011-061.print.html](http://www.blm.gov/wo/st/en/info/regulations/Instruction_Memos_and_Bulletins/national_instruction/2011/IM_2011-061.print.html).

Pending applications on lands proposed as exclusion areas for utility-scale solar energy development in the Final Solar PEIS are likely candidates for denial.

BLM should delete this sentence. The PEIS otherwise makes clear that *all* applications<sup>7</sup> that qualify as pending applications, as that term is defined on pages 1-9 and 1-10 and in Table 1.7-1, should be subject to existing policies and not subject to the PEIS ROD. In light of the fact that BLM is not making sufficient lands available to support state and federal renewable generation development goals in the near term, it is critical that viable pending applications are treated fairly in the permitting process and not rejected out-of-hand because of lines subsequently drawn in the PEIS. These applications will undergo site-specific review as required by NEPA.<sup>8</sup> They were furthermore considered by BLM and have been consistently exempted from the requirements of the forthcoming PEIS ROD in both drafts of the PEIS. Any retroactive change in the status or approval process applicable to these projects could considerably stall the near-term development of utility-scale solar facilities—a result that could have significant environmental consequences not previously considered in the PEIS. Consistent with applicable legal requirements, BLM must consequently continue to process these applications under the framework in place before they came within the scope of the PEIS.<sup>9</sup>

At the same time, consistent with Instruction Memorandum No. 2011-060,<sup>10</sup> the Solar Industry strongly encourages BLM to seek confirmation of financial and technical capability from applicants for projects in the five states other than California (where such an audit was already performed in 2011) to winnow out speculative applications. (See Attachment B at p. 3 (May 2, 2011 Solar Industry Comment Letter).) This exercise will give BLM a better sense of the amount of land being made available for solar projects under the PEIS—and the generating capacity of the program—and requires a minimal expenditure of resources.

## **II. THE VARIANCE PROCESS MUST BE CLARIFIED AND MADE MORE FLEXIBLE**

The SDPEIS provides a set of Variance Application Factors that will be “considered” by BLM when evaluating variance applications. Certain factors, however, describe “requirements” that applicants would need to satisfy to move an application forward. The Department has indicated that the variance factors will generally be treated as circumstances to be considered when evaluating an application. The Solar Industry views this interpretation as being essential to the success of the Solar Program, and further notes that if the variance factors were instead applied as requirements, virtually none of the 20 million acres classified as variance areas would be available for development. To ensure that variance lands represent a real option for siting projects, something that is critical in light of the limited amount of land

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<sup>7</sup> BLM should clarify that “pending applications” include second and third in line applications filed before the applicable deadlines. BLM should also clarify that amendments to previously approved applications are pending applications for the purposes of the SDPEIS.

<sup>8</sup> The PEIS should make clear that in performing this NEPA review, BLM will not rely on the maps or the resource determinations of the PEIS to inform its pending project NEPA analyses. Those analyses should not, explicitly or implicitly, tier off of the PEIS.

<sup>9</sup> We note that Appendix A does not contain the universe of known pending applications as BLM has defined that term. The Final PEIS should correct Appendix A and present a complete list. For clarity the list should include both “first in line” and later in line applications that qualify as “pending” based on their filing date.

<sup>10</sup> Available at: [http://www.blm.gov/wo/st/en/info/regulations/Instruction\\_Memos\\_and\\_Bulletins/national\\_instruction/2011/IM\\_2011-060.print.html](http://www.blm.gov/wo/st/en/info/regulations/Instruction_Memos_and_Bulletins/national_instruction/2011/IM_2011-060.print.html).

available in SEZs, BLM should further clarify that the factors should be evaluated individually, not cumulatively.

Establishing that the factors are “considerations” and not requirements is, however, only the first step in the process of providing much needed clarity on how the variance factors will operate. Certain factors are somewhat ambiguous or outright inappropriate. We therefore urge the following modifications:

**A. Minimal conflict factors**

The SDPEIS states that BLM will, when evaluating a variance application, consider “Documentation that the proposed project will be located in an area with low resources value and where minimal conflict with adjacent lands is likely (e.g. . . . brownfields . . . ; . . . fallowed agricultural lands; [etc.]).”<sup>11</sup> While these types of “minimal conflict” lands would be ideal sites for development and could be awarded special preference, in practice they generally do not exist on BLM land. Nor do we know of project land potentially “adjacent” to such lands.<sup>12</sup>

The failure to provide a workable variance process would essentially impose a moratorium on new utility-scale solar projects for the foreseeable future. To avoid this bleak future, BLM should ensure that the variance process is not unduly burdensome. Instead of requiring that variance projects be located in minimal conflict areas, BLM should allow the siting of such projects in the designated variance areas (i.e., not exclusion areas) that additionally do not meet any of the “high conflict” criteria set forth in BLM’s Instruction Memorandum on pre-application and screening criteria for solar and wind energy applications (IM 2011-061) (describing characteristics of high, medium, and low conflict lands).

BLM has adopted most of the medium conflict criteria in the Instruction Memorandum as exclusion area criteria. The PEIS would therefore, for the most part, leave only the low conflict lands available for development. Even this approach, however, would be significantly less restrictive compared to the least/minimal conflicts standard in the SDPEIS. Specifically, under the Instruction Memorandum, as modified to account for the exclusion criteria in the SDPEIS, BLM could, and should, allow projects in the following areas:

- Lands specifically identified for solar or wind energy development in BLM land use plans;
- Previously disturbed sites or areas adjacent to previously disturbed or developed sites;
- Locations that minimize construction of new roads and/or transmission lines;
- Lands adjacent to designated transmission corridors;
- Lands that are not excluded due to their visual resource classification, subject to review and additional mitigation where required;
- Lands identified as suitable for disposal in BLM land use plans;
- Lands with wilderness characteristics outside Wilderness and Wilderness Study Areas that have been identified in an updated wilderness characteristics inventory, where conflicts can be resolved;

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<sup>11</sup> SDPEIS at p. 2-35 (lines 8-16).

<sup>12</sup> A group of solar companies and environmental groups previously suggested that a “low conflict” approach would involve certain lands that would be “minimal” conflict and “avoid” certain lands that were high conflict, but no company has ever suggested that “minimal” conflict lands alone would qualify for a variance.

- Department of Defense operating areas, including areas with significant radar, airspace, or land use conflicts, where conflicts can be resolved;
- Areas where project development may adversely affect lands acquired for conservation purposes, where conflicts can be resolved;
- Areas with relatively low conflict characteristics that are adjacent to private lands that might be used for development; or
- Areas within groundwater basins that have been over appropriated by state water resource agencies, where a project proposes small or insignificant groundwater uses or commits to provide mitigation measures that will reduce the project impacts to an insignificant level.

In addition, we discuss below certain exclusion area factors (criteria that are akin to the medium conflict criteria in the Instruction Memorandum) that are inappropriate. To the extent that any of the criteria identified below are removed from the exclusion area criteria list, that change should open up those lands to variance applications, to the extent that those lands do not meet other exclusion area or high conflict area criteria.

If these standards are applied instead of the least/minimal conflict standards, variance projects might have a real chance of being sited and approved in appropriate areas. It is absolutely necessary for Solar Industry to have a real variance development option, at least initially, to compensate for the inadequate size and number of existing zones.

#### **B. Desert Tortoise “Variance Process Requirements”<sup>13</sup>**

The SDPEIS describes two options for “Desert Tortoise Variance Process Requirements.” Option 1 would not impose any special variance requirements and would “consider all variance applications within the range of desert tortoise on a case-by-case basis in coordination with the [United States Fish and Wildlife Service (‘USFWS’)].” (SDPEIS at p. 2-35.) In stark contrast, Option 2 states that applicants for projects within the range of desert tortoise, outside of proposed connectivity areas, “*must provide*” documentation that tortoise density for the proposed project site is less than or equal to five tortoises per square mile, that the number of tortoises that would need to be translocated would be less than or equal to 35, and that the project will maintain at least one three mile wide, minimally disturbed connectivity corridor. (*Id.* at p. 2-35.) Applications within “proposed” connectivity areas will generally be discouraged, unless applicants can, after surveying an area three to four times larger than the proposed project site, identify a location for the project where tortoise density is less than or equal to two tortoises per square mile and native vegetation communities are degraded. (*Id.* at pp. 2-35 to 2-37.) The Solar Industry favors Option 1, because Option 2 has several unsupported, rigid requirements that have no place in the permitting process and no scientific basis.

The Solar Industry understands that the USFWS revised Desert Tortoise Recovery Plan (“DTRP”) issued in May 2011 supports translocation density and movement corridor limitations. However, we have seen *nothing* in the revised DTRP to support the restrictive numerical limits in Option 2. The proposed numbers appear to have been pulled from thin air; no publically available or peer review document

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<sup>13</sup> The title of this subsection on page 2-35 illustrates why the Industry has valid concerns about BLM’s intent with regard to how it will use the variance “factors.”

appears to justify them.<sup>14</sup> The desert tortoise Proposed Connectivity Areas map on page 2-36 similarly lacks a meaningful explanation and/or demonstration of widespread support from the scientific community. Indeed, a recent US Geological Survey (“USGS”) study of the published literature concluded that “[p]ublished scientific information on the effects of any form of renewable energy development . . . is scant,” and the limited research done to date has largely focused on the impacts of wind farms on birds and bats.<sup>15</sup> Neither the DTRP nor the recent USGS article serves as a basis for the lines drawn on the Proposed Connectivity Areas map.<sup>16</sup>

A search of the Mojave Desert Ecosystem Program Voyager GIS database further does not reveal a layer consistent with the Proposed Desert Tortoise Connectivity Areas as mapped in Figure 2.2-2. The reasonableness of the proposed connectivity area boundaries consequently cannot be assessed using publicly available information. It is furthermore impossible to assess the impact of the proposal on specific lands because the map is so small and obscured by certain features, such as highway labels. To ensure that public participants can make thoughtful, informed comments on this map, BLM must provide a description of the base layers and GIS processing techniques.

Given what some SEIA and LSA member companies know from their specific development experiences, the representations made in the Proposed Connectivity Areas map are questionable. BLM must explain the basis for the Proposed Connectivity Areas map (Figure 2.2-2) before drastically departing from its prior determinations. If BLM cannot provide a scientific basis for the map, then it should be removed from the PEIS.

The Solar Industry does not intend to develop solar projects in high-density desert tortoise areas and agrees that such areas should be avoided. However, rigid numerical requirements with no foundation in scientific evidence are improper and unjustified. The USFWS has not hesitated to intervene in specific areas where it has had concerns about connectivity.<sup>17</sup> Similarly, BLM has previously taken movement corridors and the contributions of a project to habitat fragmentation into account. The “new” emphasis on connecting functional habitat in the revised DTRP is not new to these agencies and BLM has provided no

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<sup>14</sup> Indeed, in the Revised Biological Opinion for the Ivanpah Solar Energy Generation System (“ISEGS”), issued *after* the revised DTRP, USFWS explained that linkage areas must be determined on a case-by-case basis and further determined that a 1.4 mile linkage area would be sufficient for that project. (USFWS, Biological Opinion on BrightSource Energy’s Ivanpah Solar Electric Generating System Project at 72 (June 10, 2011), *available at* [http://www.blm.gov/pgdata/etc/medialib/blm/ca/pdf/needles/lands\\_solar.Par.71302.File.dat/ISEGS\\_Reinitiation,%20Final%20BO.pdf](http://www.blm.gov/pgdata/etc/medialib/blm/ca/pdf/needles/lands_solar.Par.71302.File.dat/ISEGS_Reinitiation,%20Final%20BO.pdf).) The Desert Sunlight Biological Opinion also has a narrower requirement.

Three mile-wide connectivity corridors are not present throughout the range of desert tortoise even under natural and historical conditions. The Mojave population of desert tortoise has historically been well connected even in the presence of connectivity corridors much narrower than three miles. Stating that connectivity corridors of this size are *required* for the continued genetic flow of the desert tortoise thus directly contradicts best available science (Murphy et al. 2007; Hagerty and Tracy 2010).

<sup>15</sup> Jeffrey E. Lovich & Joshua R. Ennen, *Wildlife Conservation & Solar Energy Development in the Desert Southwest, United States*, BioScience, Dec. 2011, at 982.

<sup>16</sup> Indeed, the PEIS should not rely on the USGS study at all, given that the study itself relies on the Draft PEIS to support observations about the desert tortoise, such as the observation that the species’ “very presence at a site may be sufficient to exclude [utility-scale solar energy development] in special cases . . .” *Id.* at 984.

<sup>17</sup> Industry remains quite concerned regarding the scientific basis behind the connectivity issue.

explanation for its proposed departure from case-by-case, site specific evaluations in coordination with the USFWS to determine whether desert tortoise considerations, including the feasibility of translocation, should work to prohibit development in a particular area. Again, at this time, the Solar Industry unanimously favors Option 1 over the arbitrary numeric limits that would apply under Option 2. At the very least, procedural safeguards—not numeric criteria—should be used to address potential conflicts between utility-scale solar projects and desert tortoise populations.

**C. Transmission and infrastructure minimization requirements**

The requirement to include a transmission plan (“[d]ocumentation that the proposed project will minimize the need to build new roads and/or transmission infrastructure”)<sup>18</sup> in the Plan of Development (“POD”) (alternatively, the variance application) could significantly and unnecessarily delay the permitting process in states where the transmission planning process is protracted and cumbersome. For example, in California the current wait time for transmission analyses is up to 24 months and utilities only accept applications at certain times of the year.<sup>19</sup> Developers should only be required to include an *estimated schedule for completion* in the POD. Applicants can then be required to submit the transmission analysis when it is available.

Similarly, variances should not be restricted to areas where “minimal” additional infrastructure (transmission, roads) will be needed. This requirement precludes the possibility of expanding existing transmission to new locations and sets up an artificial barrier for variances in areas where solar development would otherwise be allowed and transmission can be built. As BLM recognizes elsewhere in the SDPEIS, “it is likely that most new utility-scale solar energy development will require new transmission capacity . . . .” (*Id.* at p. 2-69.) At the very least, if infrastructure needs are a factor, “minimization” should not be objective. BLM could instead consider whether an applicant can demonstrate that it will optimize the capacity of existing and new infrastructure and avoid duplication in the use of or need for existing and new transmission, transmission interconnect facilities and access infrastructure.

**D. Minimize impacts on water**

The PEIS additionally proposes to require “[d]ocumentation that the proposed project will minimize impacts on water resources.” (SDPEIS at p. 2-37.) Water use and groundwater impacts are site-specific considerations that should be addressed through the NEPA process and other applicable law. Companies should be encouraged to, and in some cases may be required to, optimize their technology’s efficiencies with respect to water impacts. On top of this, mitigation measures may be imposed. A general requirement to “minimize impacts on water resources” (whatever that might mean) is an unworkable standard that is not suited to be a programmatic consideration.

**E. Additional layers of pre-application process**

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<sup>18</sup> SDPEIS at p. 2-37.

<sup>19</sup> The California Independent System Operator Corporation (“CAISO”) interconnection process currently restricts the submission of new applications to an Annual Interconnection Request window that opens and closes every March. CAISO’s interconnection study process starts in June and takes 420 days. These steps must be completed before a developer can sign a Generator Interconnection Agreement.

Although not discussed in the Pre-application Meeting section (SDPEIS at p. 2-33), the Variance Process describes a public outreach requirement that would precede BLM's acceptance of a project for *subsequent* review under NEPA. (SDPEIS at p. 2-40 (describing a "pre-scoping public meeting that falls outside of the NEPA process for variance applications").) The public outreach process should begin with NEPA. The Variance Process should not introduce another layer of public review.

Along these same lines, the SDPEIS should not require Class III cultural resource surveys *before* an applicant may submit an application. (See SDPEIS p. 2-38.) Such surveys are extremely expensive. Applicants thus might waste hundreds of thousands of dollars to survey proposed project sites that BLM could reject from the outset for other reasons. For purposes of evaluating a variance application, BLM should instead require Class I or II cultural surveys, which can be used to identify areas of potential effect ("APEs"). The information obtained from these less rigorous protocols is entirely appropriate, and suitable, for use by BLM when evaluating applications. BLM should avoid expensive, premature survey requirements, as requiring developers to invest in a site early on will only discourage them from considering other locations.

#### **F. General comments on the Variance Process**

The variance areas should not be further reduced in the Final PEIS, as BLM suggests they will be on page 2-33 ("As the BLM continues to refine the list of proposed exclusions under the modified program alternative . . . the amount of land in variance areas will likely be reduced."). The exclusion areas, as explained in more detail below, are already too large. In addition, further restrictions on the development of utility-scale solar energy generation facilities, which could for the most part be permitted today after complying with NEPA, will expand the scope of the federal action being undertaken in the SDPEIS and could affect the environmental effects in a variety of ways. Unlike restoring opportunities for case-by-case evaluations of project applications (i.e., expanding variance areas), which BLM has analyzed as part of the No Action Alternative, significantly expanding the exclusion areas in the ROD for the PEIS could trigger a requirement to perform additional environmental review.

In general, there is obviously a tension between putting restrictions on variances so as to encourage zonal development, and lessening restrictions on variances (still subject to all biological and cultural screens) because the zones at this time are so inadequate. Until zones are adequate, however, BLM must provide a workable variance program, to ensure that development opportunities on public lands are not unduly constrained and to allow the use of public resources to achieve national renewable energy production objectives.

### **III. RESTRICTIONS IN PROPOSED ZONES**

The current height and technology limitations are excessive, as they would exclude even efficient PV technologies (e.g., PV with trackers), as well as taller, more land efficient power towers, and thereby provide perverse incentives to increase project footprints. Furthermore, the presumption that taller technologies will have greater impacts on visual resources is questionable. Any decision to allow solar development will create some visual contrasts from some vantage point. From a distance or from an elevated position, however, the impact of 10 foot panels on visual resources will not be appreciably different from the impact of 20 foot panels, troughs, or in many cases, power towers.

The 10 foot height limit and PV-only limitations on more than 25% of the SEZ acreage<sup>20</sup> should be eliminated, with visual considerations applied only on a case-by-case basis to mitigate actual visual impacts exacerbated by project height. Applied in this way, BLM could take into account whether height restrictions might mitigate impacts on visual resources based on the location of a project, the layout of its major components, and the number and types of viewers. BLM could further take into account the overall public reaction to a particular project. As recognized by BLM in the DPEIS, “[s]urveys have indicated that solar energy is generally viewed favorably by the public, because it is regarded as a nonpolluting, renewable resource, and it may be that, similar to wind energy projects, utility-scale energy development projects would be viewed less negatively or positively in terms of visual impacts as a result . . . .” (DPEIS at p. 5-162 (citations omitted).)

A blanket prohibition based on presumptions about the site-specific impacts of technology height is inappropriate. Visual impacts are but one of several factors that should be weighed in determining where to site a facility. Other factors include the energy production profile, efficiency of land use, and project viability (probability of obtaining Power Purchase Agreement (“PPA”), experience, financial strength, etc.). Unless a project is proposed in an area “*currently designated as Visual Resource Management Class I or Class II*”, visual resource concerns alone should not provide the basis for an effective ban on development. (IM 2011-061 (discussing high conflict criteria; emphasis added).)<sup>21</sup>

#### **IV. EXCLUSION AREAS SHOULD NOT BE BASED ON TECHNICAL CRITERIA OR THE UNBRIDLED DISCRETION OF BLM STAFF**

The SDPEIS proposes to defined right-of-way (“ROW”) exclusion area as “areas which are not available for location of ROWs under any conditions”, a definition taken from BLM Land Use Planning Handbook H-1601-1. (SDPEIS at p. 2-15.) This unforgiving standard must be imposed with caution, particularly in the context of a program that is intended to last for a significant period of time and further intended to address a new and dynamically changing industry. More specifically, the criteria used to identify exclusion areas must include only the elements that are *essential* to preserving environmental values and must further be capable of uniform interpretation. Several of the exclusion criteria do not fit this vision.

##### **A. Technical and Economic Criteria**

Chief among the inappropriate criteria are those based on the presumed capabilities of developers’ technologies: a 5% slope limit and a minimum insolation requirement of 6.5 kWh/m<sup>2</sup>/day. Technology not only exists today, but is being deployed in the market, to make use of both higher slope and lower insolation lands.

As the SDPEIS notes<sup>22</sup>, companies are currently building some parts of projects on slopes of up to 10% and in the future may be able to do more. A slope limitation of 5% is therefore antiquated, and does not have a reasonable basis. In addition, companies are now permitting and constructing projects in areas of

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<sup>20</sup> Approximately 74,000 acres of SEZ land is restricted by the 10 foot height restriction. This height restriction effectively eliminates development in these areas of the SEZs.

<sup>21</sup> In addition, although we hope that BLM will do away with the unsupported and unnecessarily burdensome variance criteria identified in Section II, to the extent that any of these factors remain in effect BLM should clarify that they will not be applied to projects in SEZs.

<sup>22</sup> SDPEIS at p. D-3 (Appendix D).

the southwest with less than 6.5 kWh/m<sup>2</sup>/day (e.g., in the San Joaquin Valley). More broadly, large amounts of solar generation are coming on line in states such as New Jersey, where the insolation is far less than in the Southwest. The assumption that development will be uneconomic in areas with insolation levels of less than 6.5 kWh/m<sup>2</sup>/day is not supported by real world evidence.

One compelling reason to drop technical criteria for exclusions areas is that such requirements might create “edge effects” by limiting the flexibility a developer has to modify its proposed project footprint to use adjacent (higher slope) lands to avoid environmentally sensitive areas. Excluding higher slope lands that could be developed in an environmentally-responsible fashion would increase sprawl, by eliminating the potential to maintain the planned size of a unit in one place and creating additional development pressure to generate the forfeited power at sites located elsewhere. At a minimum, if part of a project area exceeds the SPDEIS technology limits (typically, this would involve areas with higher slopes), then BLM should have the flexibility to approve the project as part of a case-by-case determination.

The exclusion of lands with solar insolation levels of less than 6.5 kWh/m<sup>2</sup>/day is particularly inappropriate. As recognized in the DPEIS, BLM imposed this threshold based on *assumptions* about where utility-scale development is most economically viable.<sup>23</sup> To set the record straight, Direct Normal Irradiation (“DNI”) measurements (represented as kWh/m<sup>2</sup>/day) only assess the amount of solar radiation delivered to a particular area directly from the sun. For technologies that use mirrors or lenses for reflection/refraction (concentrating solar power, or “CSP”), DNI is the appropriate measure of the solar resource. These technologies require direct sunlight for efficient operation. However, conventional PV technologies use direct, diffuse, and even ground-reflected solar radiation (collectively, Global Horizontal Irradiation or “GHI”). DNI measurements consequently provide an incomplete assessment of the solar resource in a particular area as far as PV developers are concerned. Additionally, some CSP developers have determined that they can economically develop projects in areas with insolation levels as low as 5.5 kWh/m<sup>2</sup>/day. Even if it might be appropriate to limit the development of utility-scale solar power plants on public lands based on a single factor in a developer’s complex assessment of a project’s economic viability, the 6.5 kWh/m<sup>2</sup>/day threshold is not an appropriate or justified standard.

In addition, although the SDPEIS includes maps intended to depict the extent of the areas excluded based on insolation levels, the measurements for a given plot of land cannot be known without a site-specific study. The National Renewable Energy Laboratory (“NREL”) solar resource estimates relied on to plot potentially appropriate development are regularly off by as much as 30%. Unlike previously designated Areas of Critical Environmental Concern, Desert Wildlife Management Areas, National Landmarks, etc., BLM cannot plot insolation on a map with certainty. Its usefulness as a screening tool on a programmatic level is consequently very limited.<sup>24</sup>

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<sup>23</sup> DPEIS at p. 2-7 (“That criterion was established on the basis of the *assumption* that at insolation levels below 6.5 kWh/m<sup>2</sup>/day, utility-scale development would be less economically viable given current technologies.” (emphasis added)).

<sup>24</sup> Regarding insolation, BLM should also recognize that the economic viability of a project is not a concern for BLM under NEPA. Consistent with FLPMA, BLM must determine that the approval of a ROW application to develop and operate a utility-scale solar facility represents the highest and best use of the land. Because projects in variance areas will require a site-specific land use plan amendment as part of the ROW grant process, however, this determination is not part of the federal action being contemplated in the PEIS. BLM therefore has the legal authority to do the right thing and remove insolation from the list of exclusion criteria.

The Solar Industry believes that removing the insolation and slope criteria from the exclusion criteria list should not cause any environmental impacts or require further supplementation of the PEIS. Lowering the insolation floor and raising the slope ceiling, or removing these restrictions entirely, will likely increase the number of acres available in the variance area and thereby make additional land available for development after case-by-case NEPA analyses, as discussed below. However, all of the other exclusion criteria in Table 2.2-1 of the SDPEIS would still be in place to protect species, cultural resources and other environmental interests, wherever they are located. In addition, those lands—and much more—would be open to ROW applications for solar power plants under other alternatives considered in the SDPEIS and under existing rules. The proposed changes consequently do not make a decision, irreversible or otherwise, that would open more lands to development; rather, they simply take less land out of the current inventory of potential sites compared to other alternatives considered in the PEIS. The public has had a meaningful opportunity to comment on this and was given notice that the exclusion criteria may be too restrictive to allow sufficient land for solar energy development. (See, e.g., SDPEIS at p. 2-69.) This change would not call into question the SDPEIS' sufficiency as an informational document.

In addition, the impacts assessment that begins on page 2-51 (Table 2.3-2) repeatedly states that although several types of impacts could be significant across the 20 million acres of proposed variance areas, "impacts could be minimized due to the required variance process." In other words, impacts from development in the variance areas are expected to be handled on a case-by-case, site-specific basis. The environmental impacts of moving a project onto higher slope lands and economic impacts of operating a project in an area with a lower insolation rating can be handled through that process.<sup>25</sup> The alternative, arbitrarily imposing technology-based screening criteria to restrict use of the public lands based on assumptions about the technology, would be clearly erroneous—especially in light of the fact that the Solar Industry has demonstrated that the assumptions are wrong.<sup>26</sup>

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<sup>25</sup> To further guard against allegations that removing these exclusion criteria might trigger the need to do a further supplemental review, BLM could instead allow applicants to propose an "override" of the exclusions through the variance process, at least in areas where slope, insolation, and other developer technology constraints are the source of the exclusion. BLM would, of course, still subject these override application to a full site-specific impact review under NEPA. Alternatively, BLM could allow applicants to depart from the slope and insolation exclusion criteria on a case-by-case basis, offsetting any additional land thereby developed by retiring other variance lands in the vicinity of a project that receives insolation or slope exceptions. Either of these options would further reduce the significance of the proposed changes. To be clear, however, the Solar Industry believes that simply deleting slope and insolation exclusion criteria would not "affect the quality of the human environment in a significant manner or to a significant extent not already considered . . ." *Marsh v. Or. Natural Res. Council*, 490 U.S. 360, 374 (1989) (citation and quotation marks omitted) (describing the threshold for requiring a supplemental EIS).

<sup>26</sup> Some stakeholders will undoubtedly suggest that removing the technology-based exclusion criteria would trigger the need for yet another supplemental draft PEIS. Under NEPA, an agency must supplement a draft or final EIS where "[t]he agency makes substantial changes in the proposed action that are relevant to environmental concerns," or where "[t]here are significant new circumstances or information relevant to environmental concerns and bearing on the proposed action or its impacts." 40 C.F.R. § 1502.9(c)(1)(i)-(ii). However, "an agency need not supplement an EIS every time new information comes to light [or a change is made in the project design] . . . . To require otherwise would render agency decision making intractable." *Marsh*, 490 U.S. at 373. Rather, a supplement is required only where new information, or changes in the project, could lead to federal action that will affect the

## B. Transparency

The process for excluding areas also needs more transparency. Most of the criteria on pages 2-16 and 2-17 are biological and cultural, and most are based on previously published data. The SDPEIS, however, does not provide clear references to the sources of these exclusions. The SDPEIS also fails to specify the criteria relied upon for particular exclusion area designations (“pink lands” on the various maps) and does not provide detailed maps that might allow companies to determine the basis for excluding specific acreage. BLM needs to add this detail to the final PEIS to ensure that the public has access to relevant information about the impacts of each exclusion.

## C. Vague and subjective criteria

In addition, certain biological and cultural reasons for excluding lands require further definition and a sound legal or scientific basis for their imposition. Several of the proposed exclusions are vague and destined to be applied inconsistently across different decision makers. For example,

- Exclusion number 8 would prohibit development on lands “where BLM has made a[n unspecified] commitment to take certain actions with respect to sensitive species habitat, including . . . Mohave ground squirrel habitat . . . [and] fringed-toed lizard habitat.” This standard should specifically identify authoritative commitments that could properly prohibit development and how they are established.
- Exclusion number 20 would require the exclusion of “additional lands outside the designated boundaries [of properties listed in the *National Register of Historic Places*] to the extent necessary to protect values where setting and integrity is critical to their designation or eligibility.” The application of this standard, as drafted, could result in the exclusion of land based purely on individual staff members’ sense of what is “necessary”, which would not be a proper basis to prohibit development.
- Exclusion number 21 would preclude development in “areas with important cultural and archeological resources”, leaving it to BLM field officers to determine, in their unbridled discretion, whether particular resources meet an undefined notion of “important.” Again, this would not provide a proper basis to prohibit development.
- Exclusion numbers 25 (“lands within a solar energy development application found to be inappropriate for solar energy development”) and 26 (lands previously proposed for inclusion in a SEZ and later (in the Supplemental Draft) deemed to be inappropriate) should only be excluded if they have been carefully studied in a manner that is equivalent to the detailed study of a project study area *and the study results indicate that the area would have high, if not insurmountable, resource conflicts*; exclusions should not be based on presumptions or unsubstantiated concerns

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quality of the human environment in a significant manner or to a significant extent *not already considered . . .*” *Id.* at 374 (citation and quotation marks omitted, emphasis added). The impact of not imposing slope and insolation screening criteria was considered in the draft documents as part of the No Action Alternative. In addition, the SDPEIS relies on site-specific mitigation to check the impacts of any projects approved in variance areas, so total acreage is arguably not relevant. Preserving the status quo (case-by-case evaluations) should not have any greater environmental impacts not previously considered.

that development in neighboring areas would cause additional impacts.<sup>27</sup> In some of the applications referenced in footnote e, expanding on exclusion number 25, land was actually dropped for business reasons, not in response to biological, cultural, or other environmental concerns.

- Exclusion number 29, the most unrestrained of them all, could be read to allow BLM state or field offices to require exclusions based simply on ecological or cultural *concerns*, regardless of whether those concerns were substantiated at all. Such unbridled discretion would open the variance process to being controlled by individual preferences and undermines the certainty and consistency that the PEIS is supposed to provide, and that is required of BLM under its statutory authorities.

The listing of an area as being excluded has real and practically permanent consequences for the use of public lands for renewable energy generation projects. Consequently, the decision to exclude land must be based on clearly defined authority that ensures that the PEIS only imposes an absolute ban on development in mapped areas where impacts are truly unmitigatable. All other development decisions should be made on a case-by-case basis as part of BLM's conflicts analysis (see IM 2011-061), the NEPA process and any Section 106 consultation process.

#### **D. Medium conflict criteria serving as exclusion criteria**

As noted above, in Instruction Memorandum 2011-061, BLM proposed three categories of criteria that would be used to “to assist in prioritizing the processing of solar . . . energy development right-of-way applications.” Projects with low potential for conflict would be processed in a timely, or possibly expedited, manner. Projects with a medium potential for conflict included those with resource conflicts that could potentially be resolved. Projects with a high potential for conflict might not be authorized.

The exclusion area criteria in the draft PEIS included all of the high conflict area criteria (or substantially similar criteria).<sup>28</sup> In addition, however, they also included most of the medium conflict area criteria—without providing any explanation of this significant change in policy: i.e., why conflicts in these areas

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<sup>27</sup> In addition, this exclusion requires further definition to clarify what projects are included. The language of the exclusion itself states that it would apply only to projects where development was determined to be inappropriate “through an environmental review process that occurred prior to finalization of the Draft Solar PEIS.” (SDPEIS at p. 2-17.) Read in isolation, this language would seem to refer to the Draft Solar PEIS published in 2010. However, since Desert Sunlight, approved in mid-2011, is among the projects covered by this exclusion, it may be that BLM intends for it to cover projects that had a complete environmental review before either (1) the publication of the Supplemental Draft or (2) the Final Solar PEIS.

<sup>28</sup> The Draft PEIS did not include exclusion criteria identifying “Lands near or adjacent to lands designated by Congress, the President, or the Secretary for the protection of sensitive viewsheds, resources, and values (e.g., units of the National Park System, Fish and Wildlife Service Refuge System, National Forest System, and the BLM National Landscape Conservation System), which may be adversely affected by development.” DOE's portion of the SDPEIS only includes as guidance a recommendation to “[a]void impacts on special use lands such as NPS lands, Wilderness Areas, National Wildlife Refuge System lands, ACECs, Wildlife Management Areas, traditional cultural properties and other culturally sensitive sites, critical habitat for special status species, and military operations areas and other regulated military lands.”

could potentially be resolved before the solar development ROD becomes final, but not afterwards. To ensure that the PEIS serves its purpose as an informational document describing the rationale for BLM's decisions, it must include some explanation of the reasoning behind banning development on most of the medium conflict lands, especially (1) "Right-of-way avoidance areas;" (2) "Areas where project development may adversely affect National Historic and Scenic Trails and National Recreation Trails;" and (3) "Developed recreation sites and/or facilities . . . ." (See SDPEIS at p. 2-16 to 2-17 (exclusion criteria 7, 10, and 18).) We do not contend that all such applications should be granted, for there could be some applications on medium conflict lands where the conflict proves insurmountable and significant. But the very notion of an "Exclusion Area" is that the applicant does not even get to try to resolve these medium conflicts. More explanation for this more drastic and permanent exclusion is necessary.

Finally, just as the SEZs can be reduced over time after a periodic assessment of needs related to SEZs, exclusion areas should also be revisited on a regular basis.

#### **V. A CLEAR AND EXPEDITED PROCESS FOR ADOPTING NEW ZONES MUST BE ESTABLISHED**

Regarding the future evolution of the PEIS, BLM should provide developers, local governments, and other interested parties with a clear and expedited process to nominate new zones, particularly until such time as sufficient zones near load and with transmission access have been established to meet federal and state policy objectives. An "open season" for nominating and evaluating new zones should follow the publication of the Final PEIS, with at least biannual open seasons established thereafter. In addition, developers should be allowed to file applications for areas outside of current zones that could be treated as "anchors" for new zones or as independent projects, depending on BLM's assessment of the potential of the area, and without any delay of review or development.

This matter is of critical importance to the success of a zone-based program, and to solar developers. The supplement drastically reduced (by over 50%) the amount of land in SEZs. Of the land that remains, significant portions are taken up by existing applications, proposed height restrictions that would preclude several technologies, and conflicts with Section 368 transmission corridors. The proposed SEZs are additionally too small, with a median size of only 5,873 acres—barely enough for two projects (approximate 683 MW total in each). Six SEZs contain under 5,000 acres and the De Tilla Gulch SEZ contains just 1,064 acres. These SEZs are simply not adequately sized for purposes of facilitating clustered development.

Developers need a process that will allow BLM to quickly add new zones, which in turn is necessary to ensure that sufficient lands will be available to meet Renewable Portfolio Standards ("RPS") goals and provide developers with the flexibility they need to work with the Balancing Area Authorities, the utilities, other transmission owners, and the market to come up with new clusters *that can be built*.

In the near term, BLM needs to diligently pursue the development of new SEZs. Review of the sufficiency of SEZs at least every five years is not enough, and will cause the program to fail to achieve its goals. For the next five years or until the land available for development in SEZs can meet the demand of state RPS and climate change policies, the BLM should instead commit to study potential new zones every year in states with significant renewable energy needs and/or transmission to bring renewable energy to load. In selecting these "SEZ exploration zones", BLM should prioritize the study of lands that have

already been partially studied (e.g., Renewable Energy Development Areas (“REDAs”) in Arizona), so that the designation of additional SEZs can be further expedited.<sup>29</sup>

In addition, BLM should clarify that parallel regional planning efforts need not conform to the exact structure of the PEIS. Regional and sub-regional efforts to conduct limited studies of siting options, like the Restoration Design Energy Project (“RDEP”) in Arizona, should be allowed to move forward with new innovations. For example, the RDEP intends to undertake studies that might not be sufficient for purposes of establishing SEZs, but will nevertheless provide significantly more information compared to what BLM has collected on the average variance area. These studies could be useful in efforts to identify some of the better variance areas (in other words, they have the potential to create “super variance” areas where BLM might focus developers’ or its own efforts to identify new development opportunities outside of SEZs, or areas that might serve as precursors to new SEZs). The objectives and possible outcomes of the RDEP process and similar proceedings that might be undertaken in the future are not incompatible with the PEIS and BLM should make clear that such proceedings are not limited to establishing SEZs, generic variance areas, and exclusion areas as has been done in the SDPEIS. (See SDPEIS at p. 2-31.)

BLM should also be looking at developing a zone in the West Mojave *today*. The West Mojave is the area with the best general insolation in the United States, and remarkable proximity to one of the nation’s largest load centers. As noted in the Solar Industry’s comments on the original DPEIS, with its higher elevation and clearer skies, the solar radiation levels in the West Mojave are, in some locations, more than 10% higher than in the Eastern Mojave. As a result, the amount of land needed to generate the same amount of electricity is 10% less. The quality and nature of the radiation in the West Mojave also make it the single best area for development of concentrating solar power plants within the state of California. Moreover, the area is located in between two large military installations, Edwards Air Force Base and China Lake Naval Air Weapons Station, and much of the land is disturbed and made up of many small, private parcels. The lands in the West Mojave thus offer conditions that make siting solar energy generation projects there attractive for both developers and environmental stakeholders, as evidenced by the fact that many in the conservation community have joined with us in calling for the BLM to include the West Mojave as one of the first additional SEZs. Finally, the West Mojave has transmission potential, as Southern California Edison’s Tehachapi transmission line and the Los Angeles Department of Water and Power Barron Ridge line are both located in the area. In addition, projects in a West Mojave SEZ could potentially access the grid through the planned South of Kramer line, which will serve Abengoa Solar’s permitted Mojave project.

Overall, in designating a new SEZ, BLM should base its decision on NEPA studies which demonstrate that resource conflicts are low or can be addressed and development prospects are high. SEZs should ideally be large enough to allow for siting flexibility and the development of multiple projects (ideally 1 GW

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<sup>29</sup> In making this recommendation, the Industry does not mean to encourage exclusive reliance on other regional planning processes, such as the Desert Renewable Energy Conservation Plan (“DRECP”) process, to designate new SEZs. These processes, at the least the DRECP in its current form, are not focused on creating zones; the DRECP is intended to develop a habitat conservation plan (“HCP”), not a plan for development. In addition, the DRECP will not provide the necessary relief in a timely manner (current expected completion date is 2014, and even that may be ambitious). A PEIS can be prepared (or supplemented) faster than a HCP, which is designed to tackle different issues.

or more).<sup>30</sup> They must be in areas with access to roads and a suitable workforce. They further must be sufficiently close to load or in areas where transmission can be reasonably expected to be available in time to serve the quantity of generation planned for the zone, considering current transmission planning processes and environmental considerations. Many of the current SEZs fail to meet several of these criteria,<sup>31</sup> and they should consequently not serve as models for the development of new zones.

**VI. ASSUMPTIONS ABOUT TRANSMISSION THAT WILL BE USED TO JUSTIFY CURRENT AND FUTURE SEZ LOCATIONS ARE INCOMPLETE AND OVERLOOK LOCATIONS WITH GOOD TRANSMISSION OPTIONS**

Sound, coordinated planning of transmission for zones is a critical component of smart from the start development. The process for planning construction and use of new transmission is, however, a complicated beast under the best of circumstances. The attempts by BLM and DOE to wade into these issues in the SDPEIS are admirable, but the analysis in the SPDEIS makes several missteps that must be corrected in the Final PEIS.

To start, the NERC data referenced in the Draft PEIS has not been updated since 2009 and is now outdated. BLM should revise this information to reflect the latest developments. In addition, the “hidden capacity” on existing transmission lines that the SDPEIS assumes will be available, if it truly exists, is, in practice, not actually of use to utility-scale projects because such projects cannot secure financing unless and until they have secured firm transmission capacity that will allow them to reliably transmit all of their generation to load centers.

Moreover, the capacity analysis proposed in the SDPEIS and applied to the Brenda SEZ presents, on its own, a misleading view of transmission availability. Thermal rating, without a power flow analysis, provides only a partial picture of the actual availability of transmission capacity as compared to the results one obtains when accepted transmission planning methodologies are applied. Such methodologies incorporate contingency analysis, which look at the complex, system-wide impacts of adding a generation facility to large alternating current grids given stringent regulatory requirements to maintain the integrity of the system even if multiple faults and line failures occur. Generally speaking, contingency analyses typically reveal additional limitations on the ability to add generation that are not apparent from a first-cut thermal analysis. Finally, the model transmission analysis that BLM proposes to follow does not take into account the massive queue that has built up in California and other western states. Developers, both conventional and renewable, have already spoken for significant amounts of hypothetical transmission.

Any analysis that is conducted without power flow modeling and standard contingency analysis will be flawed and counterproductive to facilitating rational development of high quality solar resources in an environmentally responsible manner. Proper analyses of transmission capacity are complex and resource-intensive, and are best undertaken by the responsible transmission planning entities. BLM and

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<sup>30</sup> We say “ideally” because other than the Riverside East SEZ most or all of the SEZs are too small to accommodate multiple projects. It is possible that SEZs will need to be smaller, but ideally they should be large, so as to facilitate needed transmission.

<sup>31</sup> Indeed, in addition to the inadequate size of the SEZ, which is addressed throughout this comment letter, there are no available high-voltage power lines less than 25 miles from proposed SEZs. This is a critical oversight that will impact the feasibility of future development in the proposed zones.

DOE should work hand-in-hand with those entities to obtain the information they need to make proper decisions, rather than attempt to undertake this work on their own.

Additionally, at least while pending projects are still in the pipeline and companies are relying on the variance process while they wait for suitable zones for development, BLM has to consider how to facilitate transmission to these projects as well as zones. BLM further should be aware of projects planned on private land that are located near permitted and pending BLM projects. These private land projects could be used to support new transmission to projects on BLM land, but also may be competing with projects on public land for interconnection points and capacity. The transmission analysis needs to take these circumstances into account.

Overall, we recognize that BLM is not in the business of planning transmission. BLM might be able to impact planning processes by developing a relative ranking of zones and some meaningful development portfolios. BLM could then share these portfolios with Western Electricity Coordinating Council ("WECC")/Transmission Expansion Planning Policy Committee ("TEPPC") and other regional planning entities (e.g., Southwest Area Transmission ("SWAT"), California Transmission Planning Group ("CTPG"), and CAISO) and encourage these organizations to consider BLM's plans in their regular planning proceedings.<sup>32</sup>

BLM's ability to influence these proceedings is uncertain. Notwithstanding that fact, transmission considerations will need to be addressed through coordinated inter-agency efforts. Unilateral solutions, such as dedicated transmission lines to SEZs, as proposed in the PEIS, are not generally financially feasible from the perspective of the private sector, and cannot reasonably be expected to occur absent exceptional circumstances.

BLM can and must work to make transmission availability a central element of the solar program. It can make the most significant contributions by facilitating the construction of planned transmission, and by closely coordinating with transmission planning entities to better understand the transmission will likely be made available and its likely timeframe. BLM should coordinate with transmission planning agencies to identify how it can expedite permitting for transmission projects that will serve renewable energy on public and private lands. In addition, BLM should be targeting areas where transmission projects are most likely to be built in the near term (e.g., areas along the SunZia and Transwest lines) for the development of new SEZs.

## **VII. COMPETITIVE BIDDING AND LENGTH OF ROW TERMS**

### **A. Competitive Bidding**

As stated in the Solar Industry's comment letter on May 2, 2011, competitive bidding would most likely increase the costs of developing utility-scale solar projects on public lands, and thereby decrease opportunities for innovation that will help make the most of the public lands that are used for renewable

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<sup>32</sup> Such proceedings include regional planning efforts required by the Federal Energy Regulatory Commission's ("FERC") Order No. 1000, the DOE-funded Regional Transmission Expansion Plan ("RTEP"). Other federal, state, and regional proceedings may also be informative, such as Western Area Power Administration planning efforts, National Interest Electric Transmission Corridor designations, and the Western Governors' Association's Western Renewable Energy Zones Phases III and IV.

energy. Combined with high rental rates, bonds, and other costs, some developers that might have pursued projects on public lands will pursue projects on private lands or not at all. The Solar Industry strongly opposes BLM's proposal to establish a competitive bidding process for solar ROW applications. Individual companies will be submitting comments consistent with this position in response to BLM's advanced notice of proposed rulemaking on this issue. See 76 Fed. Reg. 81,906 (Dec. 29, 2011).

#### **B. Term for ROWs**

BLM has determined, by policy (WO IB No. 2006-006), that the initial term of a ROW grant issued under the Federal Land Policy and Management Act of 1976 ("FLPMA") generally should not exceed 30 years. However, the 30 year cap is only a policy. The regulations require only that a ROW grant be limited to a "reasonable term" as established by BLM after considering "(i) The public purpose served; (ii) Cost and useful life of the facility; (iii) Time limitations imposed by licenses or permits required by other Federal agencies and state, tribal, or local governments; and (iv) The time necessary to accomplish the purpose of the grant", 43 C.F.R. § 2805.11(b)(1). BLM has stated in guidance documents that it will consider terms greater than 30 years based on the factors set forth in 43 C.F.R. § 2805.11(b)(1) and whether "the applicant/holder can demonstrate the 30 year term and provision for renewal is not sufficient." BLM Policy and Procedures for Issuance of "Long Term" Right-of-Way Grants and Easements Over Public Lands To Be Transferred Out of Federal Ownership 8 (June 2007).

The PEIS alludes to plans to limit the term of a solar ROW grant to 30 years. (SDPEIS at p. 2-2.) BLM's advanced notice of proposed rulemaking to establish a competitive bidding process and other policies confirm that BLM intends to establish such a rule. 76 Fed. Reg. 81,906 (Dec. 29, 2011). Although BLM is correct in observing, in support of the proposed rule, that Power Purchase Agreements tend to be 25-30 years, this timeframe does not take into account the construction or the decommissioning period for a project. An addition buffer of five to seven years should be built into the ROW grant period to account for these activities.

#### **VIII. DOE REQUIREMENTS**

The Programmatic Guidance in DOE's portion of the SDPEIS, similar to BLM's variance process, reads like a set of requirements—not guidance. Requirements to avoid de-shrubbing, avoid siting projects on prime or unique farmland, use technology that will minimize land disturbance, and avoid locations that would involve impacts on surface water bodies, ephemeral washes, playas and natural drainage areas are neither realistic nor required, and may be inconsistent with BLM practices. The Final PEIS should make clear that these components of the Guidance are intended to be just that—guidance, not rules.

#### **IX. MISCELLANEOUS ISSUES**

The following miscellaneous issues also warrant comment:

- As noted in the introduction to this letter, BLM appears to have abandoned the possibility that the PEIS would result in a zones-only development program. To the extent that a SEZ-only option is still a possibility, the Solar Industry strongly objects for all of the reasons given in its May 2, 2011 comment letter.

- The Pending Projects list in Appendix A is under- and potentially over-inclusive. As noted above, we strongly recommend that BLM winnow out speculative applications filed by companies that do not intend to develop facilities. In addition, however, we have identified several projects that meet BLM's definition of "pending project" that are missing from the list. Applications that need to be added to Appendix A include:
  1. CACA-049421 (Customer: Solar Partners V, LLC; received by BLM April 27, 2002; acres: 13,920)
  2. CACA-051967 (Customer: BrightSource Energy; received by BLM May 12, 2009; acres: 12,269)
  3. NVN-090476 (Customer: BrightSource Energy; received by BLM January 21, 2011; acres: 15,190)
  4. CACA-053138 (Customer: BrightSource Energy; received by BLM February 14, 2011; acres: 3,054)
  5. CACA-50390 (Customer: SolarReserve; filed August 22, 2008 [second in line application]; SolarReserve notified of status as a first in-line application on May 16, 2011; acres: 8,160)
  6. Sandy Valley III (NVN-[# TBD]) (Customer: Sandy Valley Solar III, LLC; received by BLM October 21, 2011; acres: 10,804)
  7. NextEra Sandy Valley (NVN-[# TBD]) (Customer: Boulevard Associates; received by BLM October 21, 2011; acres: 3,200)

In addition to the applications identified above, BLM should review its records and update Appendix A to include all of the projects that meet the definition of "pending project" provided on pages 1-9 and 1-10. BLM should also review the information provided for applications on the list, as some solar companies identified discrepancies between the information in Appendix A and what they know to be true.

- Significant data gaps remain in the SDPEIS; BLM has stated that these gaps will be filled in the Final PEIS. This approach will deny public participants the opportunity to comment on significant matters where developer input in particular would be useful.<sup>33</sup> Assuming that a Final PEIS is the next step in this process, we strongly urge BLM to allow a minimum 60-day comment period on

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<sup>33</sup> See SDPEIS at p. 2-19 ("A final proposal for SEZ-specific design features will be presented in the Final Solar PEIS."); *id* at p. 2-24 ("[I]nitial regional mitigation plans", which "will consider the cumulative impacts of development within a SEZ as well as ongoing conservation planning priorities", "will be presented in the Final Solar PEIS."), *id* at p. C-1 (recognizing that "[s]ome of the items identified in the action plans" ["plans that describe data gaps for individual SEZs and propose data sources and methods for the collection of additional data"] "will be completed by the BLM and presented in the Final Solar PEIS."); *id* at p. C-339 ("The planning-level inventory of water resources will be presented in the Final Solar PEIS."); *id* at p. C-44 (additional inventory and mitigation for vegetation resources); *id* at p. C-49 (additional inventory, avoidance, and mitigation requirements); *id* at p. C-49 (additional Key Observation Points ("KOPs")).

the final document, which would be consistent with the extra FEIS comment periods that BLM has allowed on project-specific EISs.

- On page 2-13, the SDPEIS states that “Transfers other than assignments must be approved by the BLM and may result in requirements for submittal of a new application or a Notice of Termination.” BLM should provide clarity regarding the types of transfers, other than an assignment, to which this restriction is intended to apply. In particular, it is unclear whether BLM intends to impose an approval requirement when a new parent company purchases a subsidiary grant holder. Once rights are vested in a granted ROW, BLM should not interfere.
- The analysis of several SEZs concludes that a disproportionate impact on minority and low-income populations could occur whenever such populations are within 50 miles of a SEZ boundary. (See, e.g., SDPEIS at p. C-22.) However, the SDPEIS does not explain the basis for or the relevance of this radius, or the relevant resources (air, visual, traffic) that might be involved in these impacts. This information should be included in the Final PEIS.
- Section C.2.2.4 places a new “Wilderness Characteristic” designation on approximately 11,925 acres in the heart of the Riverside East SEZ based on a 2011 update of the inventory of wilderness characteristics in the areas of the McCoy Mountains. (SDPEIS at p. C-60 (figure C.2.2-3).) On page C-76, the SDPEIS states that as a consequence of this new designation, “additional analysis of the visual values of these areas may be needed to determine if adjustments to the SEZ-specific mitigation identified in the Draft Solar PEIS are warranted.” If the additional visual analysis results in a conclusion that the areas should be designated as Visual Resource Management (“VRM”) Class II or III consistent (a conclusion that we would strongly disagree with), stringent and prohibitively costly visual resource mitigation requirements could apply to this area (in general and pursuant to the terms of the SDPEIS).

The Solar Industry does not believe that the 2011 inventory that caused this new designation was conducted or interpreted properly.<sup>34</sup> Specifically, the wilderness characteristic designation is suspect in light of its apparent departure, without explanation, from the 2010 Visual Resources Inventory (“VRI”) in the same area, which concluded that the area had VRM Class III characteristics. Even with this information in hand, the DPEIS declined to recommend that VRM classes be assigned to any of the lands within the Riverside East SEZ. (DPEIS at pp. 9.4-220 to 9.4-221.) When one considers the proximity of the area to the Blythe Airport, the recently approved Blythe Solar Power Project,<sup>35</sup> and the Town of Blythe, whether the lands can be deemed to embody the “naturalness[] and outstanding opportunities for either solitude or primitive

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<sup>34</sup> There is, admittedly, no way to know for sure if the inventory was appropriate. The SDPEIS does not include the 2011 wilderness inventory or identify where it can be found. To comply with NEPA, BLM should make this document available.

<sup>35</sup> Currently, construction of this project is on hold while the developer attempts to re-permit the project to accommodate a change in technology. However, the developer undertook construction activities (development of roads, installation of fencing, grading, and clearance surveys) from late 2010 to mid-2011.

and unconfined recreation” seems highly unlikely.<sup>36</sup> The SDPEIS does little to allay these suspicions, giving the reader very little information about the 2011 wilderness characteristics inventory and observing only that the 2011 inventory and a 2010 VRI “reached somewhat different conclusions concerning visual resource values on the eastern side of the McCoy Mountains and the western face of the Big Maria Mountains.” (SDPEIS at C-76.) This vague statement does not demonstrate to the public that BLM has fully considered its decision on this issue, nor does it provide the public with the necessary information to understand the wilderness characteristics decision.<sup>37</sup>

Significantly, even if BLM has properly characterized the area as having wilderness characteristics, BLM’s policy documents require further analysis before it can consider the wilderness characteristics in a land use plan decision. Specifically, BLM must “[c]onsider and document the extent to which other resource values and uses of lands with wilderness characteristics would be forgone or adversely affected if the wilderness characteristics are protected.”<sup>38</sup> Given the significant solar resources in the East Riverside SEZ, the national commitment to the development of solar energy on public lands, and the environmental benefits of clean solar energy, it seems likely that the calculus would favor solar development in this particular area.

- Certain design requirements are based on outdated and incorrect assumptions about technologies. Rather than impose hard and fast rules, the PEIS should simply require that the NEPA process take into account the following requirements:
  - Height Restrictions. Rather than a 100 foot limit in areas listed for meeting VRM Class II and III-consistent management objectives, or prohibiting power towers specifically (De Tilla Gulch, Fourmile East, and Gillespie), visual impacts should be assessed on a case-by-case basis. (See Attachment A, Item No. 16.)
  - Water Monitoring Requirements. Rather than require “less detailed analyses . . . for photovoltaic [PV] facilities and more detailed analysis for higher water use parabolic trough facilities”, additional monitoring requirements should be imposed only on wet cooling projects or not at all. (See SDPEIS at p. C-343.)

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<sup>36</sup> BLM Instruction Memorandum No. 2011-154 (July 25, 2011) (Attach. 1 at pp. 4-8, available at [http://www.blm.gov/pgdata/etc/medialib/blm/wo/Information\\_Resources\\_Management/policy/im\\_attachments/2011.Par.27443.File.dat/IM2011-154\\_att1.pdf](http://www.blm.gov/pgdata/etc/medialib/blm/wo/Information_Resources_Management/policy/im_attachments/2011.Par.27443.File.dat/IM2011-154_att1.pdf)).

<sup>37</sup> In addition, BLM has not explained the impact of the heavily mined McCoy Mountains, which were identified as Class IV lands in the 2010 VRI. This area borders the proposed wilderness characteristics area, not far from the western boarder of the SEZ in the area impacted by the proposed wilderness characteristics designation.

<sup>38</sup> BLM Instruction Memorandum No. 2011-154 (July 25, 2011) (Attach. 2 at p. 2, available at [http://www.blm.gov/pgdata/etc/medialib/blm/wo/Information\\_Resources\\_Management/policy/im\\_attachments/2011.Par.28612.File.dat/IM2011-154\\_att2.pdf](http://www.blm.gov/pgdata/etc/medialib/blm/wo/Information_Resources_Management/policy/im_attachments/2011.Par.28612.File.dat/IM2011-154_att2.pdf)).

- Footnote 1 on page 1-5 cites BLM's Land Use Planning Handbook, H-1601-1 (2005)<sup>39</sup> for the proposition that "A variance area is an area to be avoided that may be available for a solar energy right-of-way (ROW) with special stipulations or considerations . . . ." While the Solar Industry would agree that a variance area is an area that may be available for development, it cannot be, and is not, simultaneously an area to be avoided. Indeed, the language in the BLM Handbook actually states that "Right-of-way avoidance areas" are "areas to be avoided but may be available for location of right-of-ways with special stipulations" and distinguishes these areas from exclusion areas, which are "areas which are not available for location of right-of-ways under any conditions . . . ." (*Id.* at App. C, p. 21.) The SDPEIS simply uses the wrong construct to describe variance areas.

## **X. CONCLUSION**

In his State of the Union address, President Obama recognized that while the differences in Congress "may be too deep right now to pass a comprehensive plan to fight climate change", the Administration still has powerful tools of its own for addressing this all-important issue; specifically, its authority to manage the nation's public lands. President Obama announced his intent to direct his Administration to make public lands available for the development of clean energy and more generally spoke of his aspirations for "a future where we're in control of our own energy." SEIA and LSA believe that DOI, BLM, and DOE have already done great work in furtherance of the President's agenda and hope that the President's words provide encouragement to the Departments to continue to devote resources to this lengthy, but extremely worthwhile, planning process.

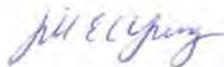
However, the PEIS still requires work to get to a point where it will provide developers with meaningful and viable development opportunities in the short and long term. As part of this work, we urge the Departments to implement the changes described in this letter. These changes are critical if we are to ensure that the PEIS is more defensible and better designed to accomplish its purposes, and further ensure that it will not arrest the progress of the Solar Industry, which plays a crucial role in the Administration's plan to use public lands to generate clean energy.

Thank you for your time and consideration.

Sincerely,



Peter H. Weiner  
of PAUL HASTINGS LLP  
on behalf of the SOLAR ENERGY INDUSTRIES ASSOCIATION  
and the LARGE-SCALE SOLAR ASSOCIATION



Jill E.C. Yung  
of PAUL HASTINGS LLP

Attachment A: Supplemental Draft Solar PEIS – Comments on Appendix C  
Attachment B: May 2, 2011 Industry Comment Letter on the DPEIS

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<sup>39</sup> Available at [http://www.blm.gov/pgdata/etc/medialib/blm/ak/aktest/planning/planning\\_general.Par.65225.File.dat/blm\\_lup\\_handbook.pdf](http://www.blm.gov/pgdata/etc/medialib/blm/ak/aktest/planning/planning_general.Par.65225.File.dat/blm_lup_handbook.pdf).

# **Attachment A**

Supplemental Draft Solar PEIS –  
Comments on Appendix C

**Supplemental Draft Solar PEIS – Comments on Appendix C  
(Action Plans for Solar Energy Zones to Be Carried Forward)**

Ref. #	Page	Text	Comment
1	General Comment	Various text throughout Appendix C.	The lists of “Potential adverse impacts identified in the Draft Solar PEIS” for each SEZ include many of the same elements found under the same heading in the discussions in Appendix B of areas that will be dropped from further consideration for SEZ designation. In light of this overlap, the line between potential impacts that warrant dropping or restricting development within a SEZ is not clear.
2	General Comment	The potential impacts section for several SEZs notes that “Minority populations occur within a 50-mi (80-km) radius of the proposed SEZ boundary; thus adverse impacts of solar development could disproportionately affect minority and low-income populations.” (See, e.g. C-22; C-169.)	Stated in this way, the observations about potential impacts on minority populations are unhelpful. The PEIS fails to identify what resources (air, visual, transportation) might be impacted by solar development in a way that could have consequences for neighboring minority communities. The PEIS also does not explain the significance of the radius considered or conclude that the same radius is relevant regardless of the resource impacted. The Final PEIS should clarify these matters and identify the size of the population that might be impacted.
3	General Comment	Section 368 energy corridors might interfere with development in SEZs. (See, e.g., C-37 (Imperial East; “A designated Section 368 energy corridor covers about 80% of the SEZ, potentially leaving less than 1,000 acres (4 km <sup>2</sup> ) available for solar development.”); C-57 (Riverside East; same); C-98 (De Tilla Gulch; “A U.S. Department of the Interior Bureau of Land Management (BLM)-designated transmission corridor covers about two-thirds of the SEZ and could limit development in the SEZ because solar facilities cannot be constructed under transmission lines.”); C-113 (Fourmile East; same).)	The impacts of Section 368 energy corridors on the total acreage in SEZs needs to be taken into account and transparently presented to the public. BLM should comment on the likelihood of approval for the development of generation facilities in these areas.
4	General Comment	Significant data gaps remain in the SDPEIS and BLM has stated that these gaps will be filled in the FPEIS. (See C-1 (recognizing that “[s]ome of the items identified in the action plans” [“plans that describe data gaps for individual SEZs and propose data sources and methods for the collection of additional data”] “will be completed by the BLM and presented in the Final Solar PEIS.”); C-339 (“The planning-level inventory of water resources will be presented in the Final Solar PEIS.”); C-44 (additional	This approach will deny public participants the opportunity to comment on significant matters where developer input in particular would be useful. To the extent that BLM intends to impose further restrictions on SEZs or new design criteria, BLM should provide a comment period on the FPEIS to ensure that stakeholders have an opportunity to correct any mistaken assumptions and conclusions.

Ref. #	Page	Text	Comment
		inventory and mitigation for vegetation resources); C-49 (additional inventory, avoidance, and mitigation requirements); C-49 (additional KOPs))	
5	C-22 to C-23 Gillespie SEZ	To reduce the visual resource impacts on this area and on Agua Caliente Road from solar development within the SEZ, allowable solar technologies within the SEZ will be limited to photovoltaic systems with height of panels no greater than 10 ft (3.3 m), or technologies with comparable or lower heights and reflectivity.	The SDPEIS imposes this condition despite the fact that “the SEZ is in an area of low scenic quality . . . .” The conclusion in the SDPEIS that “weak to strong visual contrasts could be observed by visitors to Signal Peak WA, Woolsey Peak 25 WA, and Saddle Mountain SRMA, and travelers on the Agua Caliente Road, 26 Salome Highway and Old U.S. 80” is unhelpful, as it obscures the actual conditions of concern. Are the visual contrasts strong or weak? The evaluation of the resource should be made more internally consistent. (Please see the body of the comment letter for recommendations regarding the height restrictions proposed in the SDPEIS.)
6	C-22 Gillespie SEZ	The SDPEIS concludes that “The potential for impacts on significant paleontological and cultural resources is unknown. Impacts on cultural resources are also possible in areas related to the assumed access road.”	Where impacts are possible simply because they are unknown, the PEIS should state only that they are unknown. The conclusion that impacts “are possible” suggests that some evidence points to this possibility.
7	C-53 Riverside East SEZ	“Solar development in the western portion of the SEZ would likely create conflict with existing residential use near Desert Center, Lake Tamarisk Resort, and scattered private residences.”	The final Solar PEIS should address the number of residences that might be affected so that developers can use this information to better assess potential impacts of development.
8	C-56 Riverside East SEZ	“Concerns have been expressed in the past over the Salt Song Trail, and solar development within the SEZ is likely to be visible from the trail. Additional features of potential concern include Big Maria, Coxcomb, and Eagle Mountains, Alligator Rock, Black Rock, and McCoy Springs. The Soboba Band of Luiseno Indians and the Quechan have expressed concern over highly sensitive areas within their Tribal Traditional Use Areas.”	While these concerns have been raised, the Salt Song Trail, to our knowledge, has not been definitively mapped and current uses have not been documented. To the extent that BLM intends to require developers to take the existence of the trail into account, developers must, at a minimum, know where it is. More generally, BLM should provide some guidance for how it intends to handle incidental impacts on the experience of those utilizing tribal resources near (visible from) potential sites for solar generation facilities.
9	C-58 Riverside East SEZ	“All forms of development within the area identified as needing to meet Visual Resource Management (VRM) Class II-consistent objectives in the Draft Solar PEIS will be limited to 10 ft (3.3 m) or under, and technology will be restricted to either photovoltaic technologies of less than 10 ft (3.3 m), or technologies with comparable or lower height and reflectivity. Within the area of the SEZ that was identified as needing to meet VRM Class III-consistent objectives in the Draft Solar PEIS, the solar development	The current height and technology limitations are excessive, as they would exclude even efficient PV technologies (e.g., PV with trackers) and thereby provide perverse incentives to increase project footprints. Furthermore, the presumption that taller technologies will have greater impacts on visual resources is questionable. Any decision to allow solar development will create some visual contrasts from some vantage point. From a distance or from an elevated position, however, the impact of 10 ft panels on visual resources will not be appreciably different from the

Ref. #	Page	Text	Comment
		will be restricted to either PV technologies of less than 10 ft (3.3 m), or technologies with comparable or lower heights and reflectivity.”	impacts of 20 ft panels or troughs.  The 10 ft height limit and PV-only limitations on more than 25% of the SEZ acreage should be eliminated, with visual considerations applied only on a case-by-case basis to mitigate actual visual impacts exacerbated by project height.
10	C-83 Antonio Southeast SEZ	“On the western side of the SEZ that was labeled to meet VRM Class II-consistent objectives in the Draft Solar PEIS, all forms of development will be limited to 10 ft (3.3 m) or under, and the technology will be restricted to either photovoltaic technologies of less than 10 ft (3.3 m), or technologies with comparable or lower height and reflectivity. Within the area of the SEZ that was labeled to meet VRM Class III-consistent objectives in the Draft Solar PEIS, the solar development will be restricted to either PV technologies of less than 10 ft (3.3 m) or technologies with comparable or lower height and reflectivity.”	See comment no. 9.
11	C-102 De Tilla Gulch SEZ	“The . . . SEZ area is 1,064 acres (4.3 km <sup>2</sup> ).”	This area is not nearly large enough to constitute a SEZ. Whether this area could support more than one project is questionable. Each project would need to be well under 100MW. Although we do not want to discourage BLM from making appropriate lands available for solar development, we would like to encourage BLM to focus the resources available for future SEZ development projects on options that create more substantial opportunities for development.
12	C-151 Amargosa Valley SEZ	“On the basis of the water impact analysis provided in the Draft Solar PEIS, development within the remaining area of the SEZ may need to be restricted to PV technology or a technology with equivalent or lower water use. Updated analyses taking the revised SEZ boundaries into consideration will be included in the Final Solar PEIS.”	Technology limitations are inappropriate. To the extent that water impacts are a concern, the PEIS should place limits on the amount of water that can be used and leave it to the developers to determine whether they can construct or operate within those limits (or, alternatively, secure replacement water).
13	C-243 Afton SEZ	“On the basis of the water impact analysis provided in the Draft Solar PEIS, development within the remaining area of the SEZ may need to be restricted to PV technology or a technology with equivalent or lower water use. Updated analyses taking the revised SEZ boundaries into consideration will be included in the Final Solar PEIS.”	See comment no. 12.
14	C-339 Transmission	“An important finding from the SLT analysis is that there appears to be spare capacity available in the existing 500-	This assertion is not true. The error appears to be the result of the omission of a power flow analysis. The most recent, definitive analysis of

Ref. #	Page	Text	Comment
	Analysis	kV network linking the proposed Brenda SEZ to major load areas and potential solar energy markets.”	<p>solar renewable development in Arizona showed the need for major upgrades. (See, e.g., Arizona Corporation Commission’s recently sponsored study on Renewable Energy Export, 11/1/2011, which concluded that Palo Verde (Delaney) to Colorado River and North Gila to Imperial Valley 500 kV lines were both needed to accommodate increase renewable generation in the state.)</p> <p>The model should be modified to consider “parallel” or loop flow (power from a source to sink will travel on multiple paths); include contingency considerations (contingency coverage requirements that give the appearance that a line has room because that is the case under normal conditions); and account for queue considerations and how to reserve transmission for projects in zones. Alternatively, BLM could turn over its priority projects to WECC/TEPCC and other regional planning entities (e.g., SWAT, CTPG, and CAISO) for analysis in annual planning proceedings.</p>
15	C-343 Groundwater Analysis	The SDPEIS proposes to require “less detailed analyses . . . for photovoltaic [PV] facilities and more detailed analysis for higher water use parabolic trough facilities . . . .”	Additional monitoring requirements should be imposed only on wet cooling projects or not at all. There is no reason to require that certain CSP projects increase their monitoring above the requirements applicable to PV projects. Even presuming that all PV projects will use less water than all CSP projects, more water use does not make a project more likely to violate water use restrictions imposed by the ROW grant and NEPA documents.
16	C-344 Visual Resource Design Features	“No vertical development over 100 ft (30.5 m), including transmission towers and other structures.”	Along the same lines as the comments on 10 foot height restrictions and PV only areas, BLM should consider on a case-by-case basis the impact of facility height on visual resources. Actual visual impacts can be significantly affected by site-specific considerations. While it is appropriate for the PEIS to offer a tool box of solutions for mitigating visual impacts (e.g., color treatments), it is not appropriate to bar the use of particular technologies across large areas.

# **Attachment B**

May 2, 2011  
Industry Comment Letter  
on the DPEIS

Atlanta  
Beijing  
Brussels  
Chicago  
Frankfurt  
Hong Kong  
London  
Los Angeles  
Milan  
New York  
Orange County  
Palo Alto  
Paris  
San Diego  
San Francisco  
Shanghai  
Tokyo  
Washington, DC

(415) 856-7010  
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May 2, 2011

76145.00002

**VIA OVERNIGHT UPS & INTERNET**

Solar Energy PEIS  
Argonne National Laboratory  
9700 S. Cass Avenue, EVS/900  
Argonne, IL 60439

**Re: Comments of LSA, CEERT and SEIA on Draft Solar PEIS**

To whom it may concern:

We live at a time of unique opportunity. Solar energy developers, conservation organizations, utilities, and all levels of Federal and State governments have united as never before to address our need for environmentally responsible clean energy. That need must be met in part through the development of utility-scale solar energy, and reasonable standards must be put into place to encourage that development. Every step we take will be watched by those who come after us.

In that spirit of urgent necessity and collaborative problem-solving, we offer the following comments on behalf of the Large-scale Solar Association (LSA), the Center for Energy Efficiency and Renewable Technologies (CEERT), and the Solar Energy Industries Association (SEIA) on the Draft Programmatic Environmental Impact Statement for Solar Energy Development in Six Southwestern States (Draft PEIS), published by the Bureau of Land Management (BLM) and the U.S. Department of Energy (DOE) on December 17, 2010. These comments have been submitted via overnight UPS and the form at <http://solareis.anl.gov/involve/comments/index.cfm>.

LSA and SEIA are coalitions of solar companies. CEERT is a coalition of renewable energy companies and environmental organizations. All three seek to promote the environmentally responsible development of solar energy and associated transmission. LSA, CEERT, and SEIA are committed to working with the Departments of the Interior (DOI), Energy (DOE), and other federal agencies, environmental and conservation organizations, Native American tribes, state agencies, and other stakeholders to achieve this goal.

The PEIS represents an unprecedented and commendable effort to promote the responsible development of utility-scale solar energy, which will be key to securing our nation's energy independence and reducing greenhouse gas emissions. In particular, the PEIS will guide the development of utility-scale solar projects on BLM-managed lands for

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May 2, 2011

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the foreseeable future, as well as establish programmatic environmental guidance for evaluating utility-scale solar projects for DOE's financing decisions. However, unlike some other planning efforts, because BLM and DOE are preparing the PEIS at a time when solar power projects on public lands are being (and must be) developed, the PEIS must adapt to and account for these existing realities. Planning for the future without supporting current efforts could result in a net loss of solar energy development.

As we explain further below, the goals of the PEIS are salutary. BLM's recent Instruction Memoranda regarding screening criteria, due diligence, and NEPA review<sup>1</sup> also further the universal goal of providing direction and clarity to developers trying to site utility-scale solar projects on public lands, such as by identifying high-conflict areas and eliminating speculative applications.

However, the Draft PEIS needs much more work to make it a useful tool that (a) ensures that developers are able to maintain their forward momentum with existing applications, and (b) establishes a roadmap for environmentally responsible and technically and economically feasible utility-scale solar siting and permitting over the long-term. That program should facilitate environmentally-responsible permitting.

Our comments can be summarized very briefly as follows:

1. BLM should continue to process existing applications. BLM should reject applications that are in high-conflict areas (as defined below in Section II.A) *and* do not have a Notice of Intent when BLM and DOE issue a Record of Decision (ROD) for the Final PEIS. (Applications already far along in the NEPA process will be resolved through that process.) BLM should process the remaining applications according to the criteria set forth in BLM's February 7, 2011 Instruction Memorandum.<sup>2</sup> These combined criteria are sufficient to prioritize and reject projects, as appropriate.
2. BLM should not adopt the Solar Energy Zone (SEZ)-only alternative analyzed in the Draft PEIS. The SEZs suffer from the problems identified above and below, fail to sufficiently address the nation's urgent need to reduce greenhouse gas emissions, and provide little or no added environmental benefit over alternatives that provide more flexibility. Because the SEZ-only alternative does not fulfill the purpose and need of the PEIS, comply with applicable laws and mandates, and has not been adequately analyzed, it is not legally defensible.

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<sup>1</sup> See IM No. 2011-059, National Environmental Policy Act Compliance for Utility-Scale Renewable Energy Right-of-Way Authorizations (Feb. 7, 2011); IM No. 2011-060, Solar and Wind Energy Applications – Due Diligence (Feb. 7, 2011); IM No. 2011-061, Solar and Wind Energy Applications - Pre-Application and Screening (Feb. 7, 2011).

<sup>2</sup> IM No. 2011-061, Solar and Wind Energy Applications - Pre-Application and Screening (Feb. 7, 2011).

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May 2, 2011

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3. BLM should take action to eliminate speculative applications. Specifically, BLM should subject all existing applications, as of the date of the Final PEIS, to the technical and financial screening criteria in BLM's February 7, 2011 Instruction Memorandum.<sup>3</sup> This will ensure that all viable projects can proceed to a Notice of Intent within a reasonable period of time and that any non-viable projects will be eliminated.
4. Limiting applications to the currently proposed SEZs after a certain date does not make sense because they are already insufficient and will be subject to additional culling in the next phase of environmental review. The currently proposed SEZs will be reduced in number and acreage in the Final PEIS for a variety of reasons (e.g. visual impacts and wildlife corridors). The SEZs that are near load and transmission already are full with applications; there is little or no space for new applications. A date cutoff would serve as a two- to three-year moratorium while BLM identifies, studies, and designates new areas for development. Although utility-scale solar development is also occurring on private lands where available, the utility-scale solar industry will fail if there is a moratorium on new development on public lands. There must be some acceptance of new applications (other than in high conflict areas) outside of the currently proposed SEZs.
5. The proposed SEZs in the Draft PEISs are inadequate. The SEZs are not sufficiently close to load or transmission; they have not been studied to assure that conflicts are low and development prospects are high; they are too few and too small; and they do not provide real incentives for development within their boundaries. Stated positively, BLM should propose and designate SEZs based on technical criteria (insolation, slope); known, low conflicts with biological, cultural, and other resources; and known access to transmission and proximity to load. SEZs would provide real incentives for development within their boundaries, such as project-specific Environmental Assessments (EAs) instead of EISs and assurance of transmission interconnection. BLM should also work with the Federal Energy Regulatory Commission (FERC) to encourage expedited deployment of new or upgraded transmission facilities serving SEZs. SEZs also would be large enough to allow for siting flexibility, and BLM would establish a clear process for expanding SEZs and adding new ones.
6. BLM should not adopt its proposed non-environmental exclusions as currently mapped. The excluded areas (in pink on maps provided in the PEIS) are overly broad, include some existing viable applications, do not have an evidentiary basis for their exclusion, and are not explained transparently in the document. Further work is necessary to understand and discuss which lands should be excluded. Specifically, the non-environmental exclusion criteria need to be modified.

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<sup>3</sup> *Id.*

7. BLM should subject new project applications (i.e., those filed after BLM and DOE issue the PEIS ROD) to the agreed upon screening criteria that BLM adopts in the ROD.
8. BLM should determine the criteria for additional SEZs, and specify conditions under which it would restrict new applications outside of SEZs. There are a number of circumstances under which extra-SEZ applications will make sense. These include applications where adjacent private land, combined with non-SEZ federal land, provides sufficient acreage for a project, where the inclusion of federal land adjacent to a SEZ would avoid unacceptable impacts in the SEZ or where the land outside the SEZ is determined to have fewer conflicts. When BLM provides well-crafted incentives for well-sited SEZs, these incentives will steer most development within the SEZs. All new applications that are not in high conflict areas should be timely processed.

In setting forth our recommendations for improvements to the PEIS, we are cognizant of BLM's and DOE's staffing and resource constraints. The industry is ready to assist BLM and DOE with ensuring that they have the resources they need to effectively perform the many tasks before them. However, we urge the agencies to ensure that no resources are re-allocated away from the processing of existing solar energy development applications. Such action would strain existing investments and likely would cause capital currently devoted to solar energy projects to be shifted into other investments. This shift would adversely affect the solar energy industry and undermine critical efforts to meet renewable energy goals and mandates.

## I. Background

On May 29, 2008, DOE and BLM published in the Federal Register a Notice of Intent to prepare the Solar Energy PEIS to develop and implement agency-specific solar energy development programs and to evaluate solar energy development on BLM-administered public lands. *See* 73 Fed. Reg. 30,908 (May 29, 2008); *see also* 74 Fed. Reg. 31,307 (June 30, 2009) (announcing BLM's intention to designate SEZs as part of PEIS process).

The goals of the PEIS are to “create a more efficient process for authorizing solar energy development on public lands.” 74 Fed. Reg. at 31,308. This process also is intended to:

- *Facilitate* near-term utility-scale solar energy development on public lands;
- *Minimize* potential environmental, social, and economic impacts;
- Provide the solar industry *flexibility* in proposing and developing solar energy projects (location, facility size, technology, etc.);
- Optimize existing *transmission* infrastructure and corridors; and

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- *Standardize* the authorization process for solar energy development on BLM-administered lands.

Draft PEIS at ES-3; 74 Fed. Reg. at 31,308. As stated in more detail in our comments below, we are concerned that the Draft PEIS does not meet these intended goals because it:

- Does not *facilitate* development due to its failure to propose sufficient SEZs near load and transmission and its failure to sufficiently analyze biological and cultural constraints within the proposed SEZs;
- Does not avoid or *minimize* environmental and cultural impacts due to its failure to analyze these impacts prior to determining SEZ boundaries and locations;
- Would not provide *flexibility* under the SEZ-only alternative and would appear to constrain flexibility arbitrarily under some of the Preferred Alternative maps, unless further explanations are forthcoming;
- Does not optimize existing *transmission* infrastructure because of inadequate study of transmission as related to SEZs and to projected development on private lands; and
- Does not *standardize* the authorization process or streamline the environmental review process for projects on public lands because so much analysis is left for individual projects.

We appreciate the monumental efforts that have gone into preparing the Draft PEIS. However, these and the other issues we discuss below must be addressed if the Final PEIS is to be as useful as it can and needs to be.

Finally, we recognize the difficulty of writing a long-term planning document at the same time that the agency and all stakeholders are engaged in intensive short-term decision-making regarding the same lands, technologies, and resources that are addressed in the PEIS. In some states, such as California, other long-term planning activities such as the Desert Renewable Energy Conservation Plan (DRECP) should further inform BLM's planning. The solar industry would be severely handicapped to the detriment of the public and all stakeholders if these current activities are not accounted for and prioritized. Our comments and suggestions are designed to provide a roadmap for developing a long-term and sustainable siting and permitting program while giving due attention to existing project applications.

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May 2, 2011

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## II. Comments on the Draft PEIS (BLM)

### A. BLM should commit to the timely processing of existing applications.

The Draft PEIS states that pending “applications are being processed in accordance with the BLM’s current Solar Energy Policies (BLM 2007, 2010a,b).” The PEIS also cites BLM’s June 30, 2009 Federal Register notice (74 Fed. Reg. 31,307), in which BLM stated that:

- Any entity with an existing application for lands within the [proposed SEZs] received by the BLM prior to June 30, 2009 will continue to be processed under the BLM’s current procedures.
- Applications received after June 30, 2009 for lands inside the [SEZs] will be subject to the [ROD] for the Solar PEIS and any alternative procedures developed by BLM for non-competitive and competitive processes.
- All applications received for lands outside of the [SEZs] will be processed under the BLM’s current procedures.
- Any right-of-way (ROW) grant for a solar energy application issued after the BLM’s ROD for the Solar PEIS may be issued subject to the requirements adopted in the ROD.

BLM should commit to processing existing applications under existing procedures and guidance (including BLM’s February 7, 2011 Instruction Memoranda) in a timely manner, regardless of where the applications are located. To adequately protect biological, cultural, recreational, visual, and other resources, BLM should reject applications<sup>4</sup> that do not have a Notice of Intent as of the date that BLM and DOE issue the ROD for the Final PEIS, and that are in high-conflict areas, which we would define as:

- Designated critical habitat for federally threatened and/or endangered species, in accordance with the language of IM 2011-061.
- Areas of Critical Environmental Concern (ACECs) and Desert Wildlife Habitat Management Areas (DWMAs).

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<sup>4</sup> By “applications” we refer to applications for utility-scale solar projects, not applications for associated transmission infrastructure and linear facilities. BLM should not automatically exclude such infrastructure and facilities from areas that present high conflicts for projects, and should review and permit applications for such facilities according to standard procedures.

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- Lands that have been formally proposed by federal agencies for designation as wilderness, or proposed for a national monument or wilderness designation in S.2921 (111th Congress).
- Lands that were originally part of a renewable energy ROW application and were eliminated from that application by BLM or the applicant due to resource conflicts. For example, where the final project represents a smaller or different footprint to avoid wildlife habitat, rare vegetation or desert washes, the excluded portion of the ROW should no longer be available for development. This category includes projects that BLM rejected because they were located within areas subject to a 1% development cap in applicable land use plans.
- Lands that have conservation value and were purchased with federal, state, or private funds, and donated or transferred to the BLM for conservation purposes.
- Lands purchased with federal, state or private funds, and donated or transferred to BLM expressly as mitigation for project impacts.

We raise the need to process existing applications first because it applies regardless of what the Final PEIS says. Many pending applications are far along in the environmental review and permitting process, and already have PPAs and priority in the transmission interconnection process. These projects are the most viable given their commercial value and investment, and are necessary to maintain the utility-scale solar industry's forward momentum. Those applications that are not as far along still represent substantial investment by developers and should also be processed. In addition, we urge BLM to avoid delaying or imposing new requirements on any project that is well into the NEPA process but does not have a ROD by the time BLM adopts a ROD for the Final PEIS. The critical point is that failing to timely process existing applications is the same as denying them. Put another way, the PEIS not only must provide an improved program for siting and permitting utility-scale solar projects on public lands, it must provide an immediate and reasonable path forward for the existing projects that are crucial to the industry's continued viability.

Finally, new project applications filed after BLM and DOE issue the ROD for the PEIS should be subject to the screening criteria BLM adopts in the ROD and processed according to queue position. As with existing applications, new high conflict applications outside well-sited and adequate SEZs should be rejected.

**B. The proposed SEZs need substantial work if they are to be a useful component of a solar energy program for public lands.**

BLM should focus on facilitating rather than restricting solar development on public lands. By carefully studying and designating SEZs, BLM can provide real incentives for developers to locate their projects within SEZs and away from areas with high conflicts.

## 1. Characteristics of useful SEZs

BLM would propose and designate SEZs based on the following criteria:

- *Adequate insolation and maximum slope.* In the Draft PEIS, BLM excluded lands with greater than 5% slope and/or solar insolation levels below 6.5 kWh/m<sup>2</sup>/day. These are suitable initial thresholds, but the lands they exclude may become more attractive over the 20-year life of the PEIS.<sup>5</sup> BLM should allow for the designation of SEZs that include lands that do not meet these thresholds.
- *Minimal species or cultural resource conflicts.* SEZs can and should be chosen only after detailed studies indicate good places for development. Identifying SEZs before these studies are complete does not assist solar development or environmental or cultural resources; instead of creating “go” zones, BLM risks creating “we don’t know” zones that are not effective in meeting the goals BLM has set for the PEIS. If SEZs have resource conflicts that have not been analyzed, they create the false perception that sufficient land is being provided when it is not. Based on the collective experiences of developers, we estimate that 60-90% of the proposed SEZs will turn out to be unavailable for development due to (as-yet) unknown conflicts.
- *Close to load and transmission infrastructure and capacity.* Many of the proposed SEZs face severe transmission constraints, and those that do not already are full of applications. Again, if SEZs are located far from load and transmission, they create the false perception that there is sufficient land for development.
- *Large and numerous enough to allow for flexibility and industry growth.* The Draft PEIS contemplates that additional or expanded SEZs can be proposed, evaluated, and designated, but there is no concrete process for doing that on a timeframe that is meaningful. Initial SEZs will be necessary but not sufficient, especially since many lands (especially in California) already are the subject of applications. In the Final PEIS, BLM must have a workable process in place and underway for expanding and adding SEZs.<sup>6</sup> We provide specific suggestions for new SEZs below.
- *Ability to support real incentives for development.* The Draft PEIS identifies potentially helpful but vague incentives to develop in SEZs. These incentives are key to

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<sup>5</sup> In just a few short years, many photovoltaic (PV) systems have evolved and can now utilize slopes in the 8-10% range.

<sup>6</sup> BLM should allow for increases in renewable portfolio standards, at least for the six states covered by the PEIS. As renewables become more prevalent, there will be incentives to export the power they generate to other states where solar resources are not as abundant.

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the word “facilitated” in “Area for Facilitated Development,” and they must be more concrete. For example, BLM should provide for streamlined environmental review in the form of EAs instead of EISs; provide concrete assurances that projects in SEZs will be able to connect to the grid;<sup>7</sup> and withdraw SEZs from other uses including mining and oil and gas development (or at least prioritize solar over those uses).<sup>8</sup>

Below we discuss a few of these criteria in more detail, focusing on where the proposed SEZs fall short so that BLM can develop better ones.<sup>9</sup>

**2. The proposed SEZs require substantial additional analysis and thought if they are to be useful.**

Areas in which BLM chooses to promote solar development can and should be chosen only *after* detailed biological, cultural, and transmission studies indicate that they are good places for development. Identifying SEZs before these studies are complete does not assist solar development or protect environmental or cultural resources; instead of creating “go” zones, BLM risks creating “we don’t know” zones that are not effective in meeting the goals BLM has set for the PEIS. In addition, if SEZs are located far from load and transmission, or have resource conflicts that have not been analyzed, they create the false perception that sufficient land is being provided when it is not. Finally, the SEZs also need to be larger and more numerous. Much of the area of the proposed SEZs already is covered by existing applications, particularly in California, and there are no SEZs proposed in the West Mojave, Chocolate Mountains, or other high-value areas.

**a. The SEZs are not informed by ground-level biological surveys or analysis or allow for the future incorporation of the DRECP.**

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<sup>7</sup> For example, BLM could work with FERC, Independent System Operators, Public Utility Commissions (PUCs), and utilities on joint transmission planning to accomplish these results.

<sup>8</sup> For this reason, we support BLM’s recent interim and proposed final rules to segregate lands for utility-scale solar development to prevent conflicts with new mining claims. *See* 76 Fed. Reg. 23,198 (Apr. 26, 2011) (codified at 43 C.F.R. § 2091.3-1(e); 43 C.F.R. § 2804.25(e)); 76 Fed. Reg. 23,230 (Apr. 26, 2011).

<sup>9</sup> Our aspiration is that BLM develops SEZs that are, in fact, areas of *facilitated* development (AFDs), with an emphasis on incentives to develop projects within zones rather than on restrictions on projects outside of zones. The characteristics we describe above—thorough biological and cultural studies, access to adequate transmission infrastructure and load, and direct development incentives—would underscore this carrot-based approach. A stick-based approach would impede solar development with little environmental benefit. *See* Section II.C below.

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Key to siting utility-scale solar projects is the relative presence of sensitive species and their habitats. If the SEZs are to minimize the impacts of solar projects on these species and habitats, including habitat connectivity, and provide incentives for development within their boundaries, they must be located in areas with (a) known and (b) relatively few biological resource conflicts. BLM also must know that the ecosystems within SEZs are capable of accommodating a certain level of development (i.e., that they have adequate carrying capacity), and establish workable mitigation measures to avoid, minimize, and mitigate the impacts of that development.

BLM has not undertaken the “in-depth environmental analyses” that underlie such informed decisionmaking, and that BLM promised when it announced the solar zone concept. *See* 74 Fed. Reg. 31,307, 31,308 (June 30, 2009). Specifically, BLM has not conducted detailed, ground-level biological surveys or engaged in a detailed consultation with the U.S. Fish & Wildlife Agency (FWS) under Section 7(a)(2) of the Endangered Species Act (ESA), 16 U.S.C. §§ 1531-1544. Instead, it appears that BLM relied on existing, gross data and undertook a much less detailed consultation under Section 7(a)(1) of the ESA to generalize about biological resources, decide where to locate SEZs, and develop mitigation measures. As a result, developers still must conduct protocol-level surveys of sites proposed for development within SEZs and engage in first-in-time Section 7(a)(2) consultation with FWS—the opposite of the “streamlined environmental process” and “very limited additional environmental analysis” that the Draft PEIS promises. *See* Draft PEIS at 2-11, 6-33. Moreover, we fully expect that detailed biological surveys will reveal significant biological resources (and therefore conflicts) within much of the proposed SEZs, making that area unavailable for development. This is not a useful outcome.

Aside from biological considerations, the PEIS fails to quantify indirect impacts to lands in the SEZs, except in specifically designated areas. The PEIS does not analyze National Heritage Areas, scenic byways, un-inventoried portions of historic trails, state parks and wildlife areas, and other locally significant areas or attractions. Without this analysis, it is difficult to determine whether the SEZs will be viable since impacts to these areas could require significant mitigation.

In addition, BLM did not base its SEZ designations or energy policies and design features on the California Desert Renewable Energy Conservation Plan (DRECP). The DRECP, which is still under development, will be a Habitat Conservation Plan under the ESA and a National Communities Conservation Plan under the California Endangered Species Act (CESA), Cal. Fish & Game Code § 2050 *et seq.*, and is being developed by the Renewable Energy Action Team, of which BLM is a member. Once it is complete, the DRECP will: (a) identify and map areas for renewable energy development; (b) identify and map areas intended for long-term natural resource conservation; and (c) establish best management practices and guidance. Unless the PEIS accounts for the DRECP’s final recommendations (or provides for their incorporation) regarding areas for development and conservation, as well as design features, the PEIS may not cohere with those well-

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studied recommendations. *See* LSA/SEIA/CEERT SESA Comments, at 13 (Sept. 14, 2009). This is not a useful outcome.

Solution: The Final PEIS, including the designation of any SEZs, should incorporate a mechanism for adjustment of SEZ boundaries in light of the final DRECP. BLM can bolster both the DRECP and the SEZs by engaging in full Section 7(a)(2) consultation with FWS and gathering (or have FWS gather) detailed biological resource information on the acreage within designated SEZs.<sup>10</sup> The SEZs then can become truly noncontroversial “go” areas for solar energy projects.

If BLM cannot perform these tasks prior to finalizing the PEIS, it should expressly recognize that the designated SEZs are shells or outlines of possible development zones to be studied further, not actual development areas themselves, and should not claim that the entire area (or any percentage of it) is available for development until there is more information about these issues.<sup>11</sup>

**b. The SEZs are not informed by ground-level cultural surveys or analysis or even landscape-level consultation under Section 106.**

Equally key to siting utility-scale solar energy projects is the relative presence of cultural resources, including resources that are or may be sacred to Native American tribes. Section 106 of the National Historic Preservation Act (NHPA), 16 U.S.C. § 370f, requires agencies to evaluate the potential impacts of their decisions on certain eligible cultural and historic resources before making those decisions.

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<sup>10</sup> The Draft PEIS states that, “for all proposed SEZs, government-to-government consultation and inter-agency consultation are still ongoing and could result in the identification of additional concerns.” Draft PEIS at 6-33 n.7; *see also* Draft PEIS at 6-100. We are hopeful that this consultation includes ESA Section 7(a)(2) consultation with FWS.

<sup>11</sup> By way of further example, the Draft PEIS states that BLM used the following tools to evaluate areas for designation as SEZs: site-specific GIS; Google Earth; BLM GeoCommunicator website (BLM and USFA 2010); BLM LR 2000 system (BLM2010b); local BLM staff; BLM’s 1:100,000 Surface Management Status maps; visits by assessment teams; and BLM Rangeland Administration System web site. Draft PEIS App. M at M-4 to M-7. A typical developer will usually conduct a far more in-depth investigation of a prospective site, relying on protocol-level biological and cultural surveys and detailed record reviews, investigations of onsite and offsite rainfall and natural drainage conveyances, preliminary evaluations of soil characteristics, and analyses of proximity to existing pipelines, rail unloading facilities, access roads, telephones and cell towers, industrial services, fire districts, and, of course, transmission infrastructure.

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Recognizing this obligation, BLM has undertaken Section 106 consultations for individual solar energy projects. Yet BLM has not done so for the Draft PEIS.<sup>12</sup> A programmatic Section 106 consultation would assist BLM in evaluating the potential impacts of the PEIS on cultural resources, and in avoiding or minimizing those impacts. BLM cannot designate SEZs or develop programmatic mitigation measures without the information that such consultation would generate.

Similarly, BLM did not perform detailed surveys of cultural resources before designating SEZs, so that developers could avoid conducting, or at least minimize, such surveys.

Solution: BLM should gather detailed information about cultural resources before designating SEZs. At a minimum, BLM should conduct a programmatic Section 106 consultation for the PEIS and conduct detailed cultural resource surveys of proposed SEZs. As with biological resource studies, if BLM cannot perform these tasks prior to finalizing the PEIS, it should expressly recognize that the designated SEZs are shells or outlines of possible development zones to be studied further, not actual development areas themselves, and should not claim that the entire area (or any percentage of it) is available for development until there is more information about these issues.

**c. The proposed SEZs do not facilitate development on already-disturbed private lands because BLM failed to designate SEZs near such private lands.**

The Draft PEIS states that BLM tried to integrate information about private lands into the Draft but was unable to do so due to time constraints. *See* Draft PEIS at 1-14. Appendix E, for example, assumes that much, if not the majority, of near-term utility-scale solar energy development will be on private lands, but the PEIS does not locate zones to achieve synchronicity with opportunities for development on private lands. These opportunities are publicly identified through filed permit applications or designated through a state and local land use and transmission planning processes, and the PEIS must undertake this effort or refrain from drawing conclusions in the PEIS based on incomplete assessments..

The assumptions in the PEIS, which are based on the absence of critical information about, and consideration of, private lands, have three consequences. First, future transmission likely will not be planned based on the availability of and constraints associated with public *and* private lands. Federal efforts to site future transmission may be particularly susceptible to this oversight by focusing only on public lands. Second, the

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<sup>12</sup> The Draft PEIS states that, “for all proposed SEZs, government-to-government consultation and inter-agency consultation are still ongoing and could result in the identification of additional concerns.” Draft PEIS at 6-33 n.7. We are hopeful that this consultation includes Section 106 consultation with federally-recognized tribes, their designated representatives, and any other appropriate stakeholders.

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SEZs are not planned to capitalize on private land opportunities, and do not optimize land use and environmental planning benefits by mixing and matching public and private lands or by being adjacent to what may become disturbed private lands as a result of solar projects located on public lands. Third, environmental impact assessment on both the public and private side of the review will not take the sum of public and private lands into account and there likely will be little effort to coordinate using public and private lands for compensatory mitigation. Many nongovernmental organizations (NGOs) and local governments favor such coordination.

Solution: Consider the addition of SEZs with these private land considerations in mind. Utility-scale solar projects proposed on private lands should be easy to identify based on pending conditional use permit applications. Specifically, if BLM previously rejected certain public lands near degraded private lands for SEZ designation because of small size, BLM should reconsider that decision in issuing the Final PEIS.

- d. Many of the SEZs are in areas where utility-scale solar projects are less likely to be built because transmission access and/or proximity to load are absent.**

A SEZ that lacks adequate access to existing or planned transmission is a cemetery for utility-scale solar projects. Similarly, a SEZ that is located too far from where electricity is needed may never be developed because the cost of transporting electricity to the load centers is too high. Many of the proposed SEZs suffer from one or both of these problems.

Consider the following factors, which dictate where solar developers will site their projects. First, the target development for SEZs is large projects (likely 50 MW or greater), and the market for large projects is in California (an overwhelming majority of the RPS requirement in the Western Interconnection is in California). This fact favors larger or more (or both) SEZs in California and Arizona.

Second, in areas with very large wind energy potential, the market for solar energy is constrained because of economics. Thus, for the eastern front of the Rocky Mountains (Wyoming, Colorado, New Mexico), wind projects will be favored in certain RPS markets, with minimal set asides for solar projects. California, Arizona, and Nevada may provide better markets for solar power, at least as compared to certain areas in other states.

Third, large interregional transmission lines in the West primarily were built to move baseload resources from east to west. The existing interstate transmission grid was developed and sized according to these baseload resources (usually coal-based electricity but also some nuclear and hydropower) in the east, and was designed to move this energy to the load centers in California and, to a lesser extent, Phoenix and Tucson. There may be some small spare capacity on these lines during certain times of the day and year, but

little of the firm capacity needed to service a solar facility with predictable and daily output.

Fourth, it is difficult for utility-scale solar projects to competitively support large transmission costs. A transmission system wheel<sup>13</sup> creates a major obstacle to a solar project's economics, and two wheels destroy it. In addition, it is difficult to economically carry large transmission costs on a resource with a 25-30% capacity factor (it is difficult enough for a baseload resource with a 90-100% capacity factor), and many power purchase agreements with the major California utilities do not allow wheeling over multiple transmission systems, thus creating an insurmountable hurdle. Finally, many existing and proposed transmission lines have capacity divided or reserved by several utilities. Some of the capacity is reserved for specific use by a utility. In the majority of cases, a project must tie into a California Independent System Operator (CAISO) interconnection point to qualify for inclusion in the California RPS. This restriction eliminates the use of many existing or proposed transmission lines for delivery of power into California.

As a result of these factors, and as developers understand, solar power is best generated as close as possible to its retail market and in areas with ready access to existing or planned transmission with adequate capacity. With the exception of the Riverside East and Imperial East SEZs in California, and in general the Arizona SEZs, BLM did not adequately account for this calculus in designating the proposed SEZs.<sup>14</sup>

As the table below discusses in more detail, too much total area of the proposed SEZs is too far from load, and many SEZs lack adequate transmission access. Indeed, of the 18 proposed SEZs, 5 (comprising 112,955 acres) are more than 20 miles from existing transmission, a distance past which it is often economically infeasible to build interconnection lines. Although some SEZs are in areas where new transmission capacity is proposed, developers have no certainty about when transmission lines will be built in

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<sup>13</sup> A transmission "wheel" is transmission service over a single transmission provider's system. To move power to a distant location, a project may need to piece together several transmission wheels, or segments. For example, a project may need to deliver electricity over a transmission line to get the terminus of a proposed major inter-regional transmission line, then over the inter-regional transmission line, then over a line from a distant terminus of the inter-regional line to a distribution station. If a single transmission provider owns all three lines, there is only one wheel; if two or three providers own those lines, there are two or three wheels.

<sup>14</sup> The Draft PEIS admits that, in evaluating whether to designate additional transmission corridors, BLM "only considered the locations of existing transmission lines and designated corridors and did not look at the available capacity on existing lines." Draft PEIS at 1-14. We submit that BLM did not adequately consider the locations or capacity of existing or planned transmission lines in proposing SEZs.

those corridors.<sup>15</sup> As for the remaining 13 SEZs, BLM has not performed any type of impact study to determine whether or not there will be capacity available on these lines.<sup>16</sup>

State	SEZ / BLM Field/District Office	Acres	% of Total SEZ Acres
<b>Colorado</b>	Antonito Southeast (La Jara/Conejos)	9,729	
	De Tilla Gulch (Saguache/Saguache)	1,522	
	Fourmile East (La Jara/Alamosa)	3,882	
	Los Mogotes East (La Jara/Conejos)	5,918	
	<b>Total :</b>	<b>21,051</b>	<b>3.1%</b>
<b>New Mexico</b>	Afton (Las Cruces/Dona Ana)	77,623	
	Mason Draw (Las Cruces/Dona Ana)	12,909	
	Red Sands (Las Cruces/Otero)	22,520	
	<b>Total:</b>	<b>113,052</b>	<b>16.7%</b>
<b>Utah</b>	Escalante Valley (Cedar City/Iron)	6,614	
	Milford Flats South (Cedar City/Beaver)	6,480	
	Wah Wah Valley (Cedar City/Beaver)	6,097	
	<b>Total:</b>	<b>19,191</b>	<b>2.8%</b>
The SEZs designated in Colorado, New Mexico, and Utah collectively comprise 21.9% of the total SEZ acreage. We are skeptical that much of this land will be developed with solar energy.			
<b>Arizona</b>	Brenda (Lake Havasu/La Paz)	3,878	
	Bullard Wash (Hassayampa/Yavapai)	7,239	
	Gillespie (Lower Sonoran/Maricopa)	2,618	
	<b>Total:</b>	<b>13,735</b>	<b>2.0%</b>

<sup>15</sup> This concern is heightened by the recent vacatur and remand of DOE's National Interest Electric Transmission (NIETC) Corridors and associated NEPA review. See *Cal. Wilderness Coal. v. DOE*, 631 F.3d 1072 (9th Cir. 2011).

<sup>16</sup> We are happy to provide more detail about these constraints by meeting with BLM.

State	SEZ / BLM Field/District Office	Acres	% of Total SEZ Acres
	<p>It is unclear why such a solar resource-rich state has the smallest percentage of SEZ-designated acres. The solar market in Arizona is emerging and there is much more potential in that state than the Draft PEIS recognizes. (Indeed, BLM recognizes that “development could be constrained in Arizona and Colorado by the amount of land available under the SEZ program alternative.” Draft PEIS at 2-23.)</p> <p>Indeed, the Draft PEIS has just touched the surface of suitable sites in Arizona. For example, Arlington West, Dendora, Hassayampa, Harquahala, Yuma, La Paz, and sites near Palo Verde are not included. Moreover, the limited amount of reconnaissance performed for the existing recommended sites on biological and cultural resources will leave the proposed SEZs open to duplicative and costly analysis. Supplemental locations, along with the existing locations, should be studied more carefully. In addition, the selection of SEZs should reflect the existing lines that will interface with known reconductoring for increased capacity.</p>		
<b>Nevada</b>	Amargosa Valley (Southern Nevada/Nye)	31,625	
	Delamar Valley (Ely/Lincoln)	16,552	
	Dry Lake (Southern Nevada/Clark)	15,649	
	Dry Lake Valley North (Ely/Lincoln)	76,874	
	East Mormon Mountain (Ely/Lincoln)	8,968	
	Gold Point (Battle Mountain/Esmeralda)	4,810	
	Millers (Battle Mountain/Esmeralda)	16,787	
	<b>Total:</b>	<b>171,265</b>	<b>25.3%</b>
	<p>Nevada is a relatively small market, but it has significant potential. BLM manages roughly 68% of the land within Nevada’s boundaries and yet the Draft PEIS proposes to make very little of that land available for solar development under the Preferred Alternative (only a miniscule amount would be available under the SEZ Alternative), including areas in Clarke and Nye Counties. In addition, there is a disconnect between new generation capacity and transmission projects proposed for southern Nevada and the destination for the electricity those projects would generate and carry. Additional SEZs would address these two concerns.</p>		
<b>California</b>	Imperial East (El Centro/Imperial)	5,722	
	Iron Mountain (Needles/San Bernardino)	106,522	

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State	SEZ / BLM Field/District Office	Acres	% of Total SEZ Acres
	Pisgah (Barstow/San Bernardino)	23,950	
	Riverside East (Palm Springs/Riverside)	202,896	
<b>Total:</b>		<b>339,090</b>	<b>50.1%</b>

The most promising proposed SEZ is the Riverside East SEZ, which already has seen significant development interest. However, we understand that BLM will sharply reduce the developable acreage in this SEZ because of visual and wildlife corridor concerns. Iron Mountain is remote from any significant transmission. Iron Mountain also is of concern to the conservation community. The Pisgah SEZ has suitable planned transmission access but portions of the SEZ have biological resources which create high litigation risk, limiting the prospects for development that could utilize the planned transmission. As a practical matter, we believe that Iron Mountain should be removed from the SEZ list, not count toward needed acreage, and be replaced by other SEZs in California.

In sum, too few of the proposed SEZs are in California and Arizona, where the load centers are. In addition, many of the proposed SEZs lack adequate access to transmission and/or have other constraints that would threaten their utility as useful development zones. See Section II.B.6 below (recommending that additional zones be developed in promising areas).

Solution: Re-evaluate potential SEZs to better account for proximity to load centers and transmission access. BLM should consult with the CAISO, as well as other transmission authorities, to generate better assessments of transmission proximity and capacity, and factor those assessments into any SEZ designations. Again, BLM should also work with the FERC to encourage expedited deployment of new or upgraded transmission facilities to serve SEZs.

**e. A significant portion of the total zoned acreage within California is in areas that are controversial.**

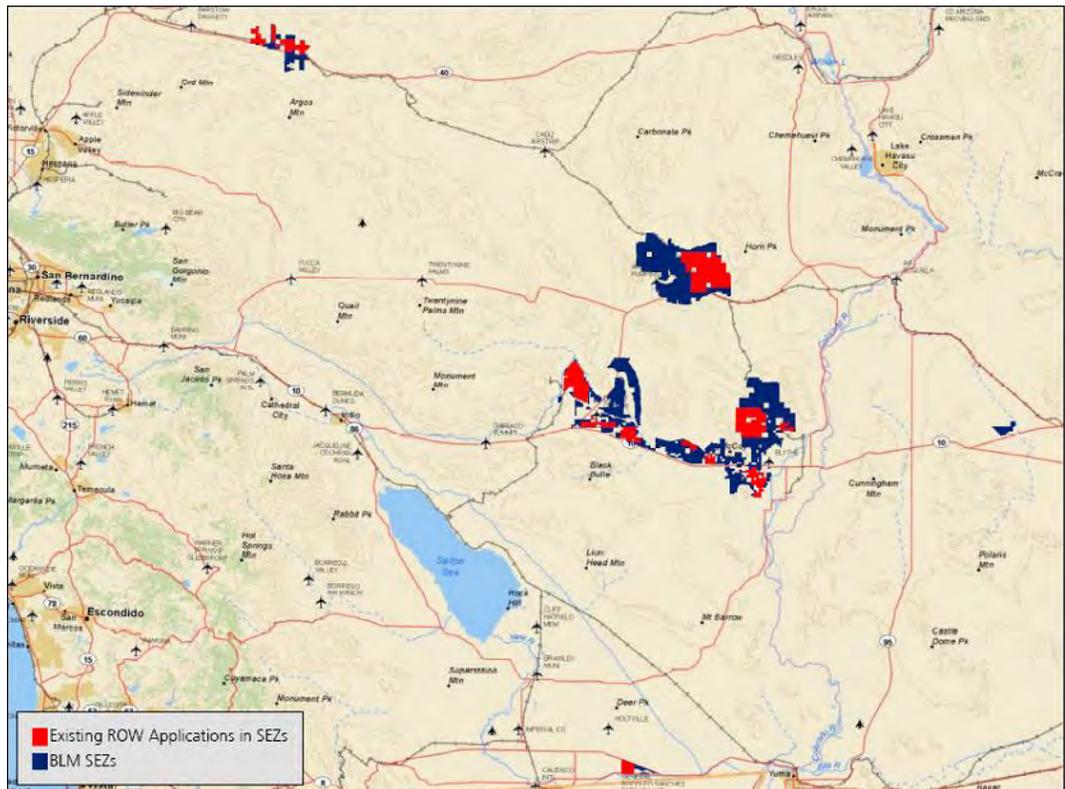
As the table above makes clear, nearly 130,000 acres (20%) of the proposed California SEZs are in two SEZs (Iron Mountain and Pisgah), portions of which have important biological resources. Conservation organizations have sharply opposed Iron Mountain and some have also opposed Pisgah. As a practical matter, we believe that the Iron Mountain SEZ should be eliminated given its distance from transmission and resource conflicts. For these reasons, it is imperative that other California SEZs be studied and designated in the very near term. Our concern with the PEIS is that BLM may “declare victory and leave” the field, leaving inadequate SEZs and a perception that siting issues have been resolved.

Solution: Remove Iron Mountain from the SEZ list and designate new SEZs in California to replace it. See Section II.B.6 below (proposing specific areas for further study as SEZs).

**f. The SEZs need to be larger and more numerous.**

**(i) Many of the proposed SEZs, particularly in California, already are the subject of pending applications.**

According to data obtained from BLM public database for California,<sup>17</sup> of the 339,090 acres currently proposed as SEZs, pending ROW applications already cover 108,864 acres. These applications reduce the supposed 677,384 acres available under the SEZs by 16% overall and by 32% in California. *See* Figure 1 and Table 1 below.



**Figure 1. Existing ROW applications in proposed California SEZs.**

<sup>17</sup> BLM, RenewEnergyROW (shape file) (available at [ftp://ftp.blm.gov/pub/CA/gis/ca\\_sync/geodatabasesZIP](ftp://ftp.blm.gov/pub/CA/gis/ca_sync/geodatabasesZIP) (last visited Mar. 10, 2011)).

Proposed SEZ	Acreage of SEZ	Existing ROW Acreage	Proposed SEZ	Acreage of SEZ	Existing ROW Acreage
Imperial East			Riverside East		
SolarReserve		3,822	Cuckwalla Solar 1		4,090
Total	5,722	3,822	Palen Solar I, LLC		5,080
Iron Mountain			Desert Sunlight Holdings, LLC		14,800
Leopold Companies- Ward Valley		35,304	Ridgeline Energy, LLC		1,820
Total	106,522	35,304	enXco-M oCoy		12,830
Pisgah			enXco-Eagle Mountain Soleil		1,055
enXco TroyLake Solar		3,532	FPL Energy-M oCoy		7,040
enXco Caboose		3,518	enXco-Mule Mountain		1,990
Calico Solar, LLC-Calico		4,488	Genesis Solar, LLC-Genesis Solar		1,950
Total	23,950	11,538	First Solar-Desert Quartzite		7,290
			Ridgeline Energy-Desert Center II		255
			Total	202,896	58,200
			Total	339,090	108,864

**Table 1. Acreages of proposed SEZs in California vs. Acreage of existing ROW applications in SEZs.**

- (ii) **BLM should evaluate and propose SEZs within the West Mojave and the Chocolate Mountains of California, and additional SEZs in Nevada and/or Arizona.**

The Draft PEIS does not propose designating any SEZs in the West Mojave and/or the Chocolate Mountains. Yet the West Mojave region in Eastern Kern County and West San Bernardino County, along with parts of the counties of Inyo and Los Angeles, is considered by many to be the most important and valuable solar resource area in California—and for good reason. This area is strategically located near two electric transmission corridors owned by Southern California Edison and the Los Angeles Department of Water and Power. It is also adjacent to the Tehachapi Wind resource area, which would allow complimentary development of wind and solar resources, significantly reducing integration costs.

The West Mojave region additionally offers some of the world’s highest quality solar radiation levels. Because of higher elevation and clearer skies, the solar radiation levels in the West Mojave are, in some locations, more than 10% higher than in the Eastern Mojave. As a result, the amount of land needed to generate the same amount of electricity is 10% less. The quality and nature of the radiation in the West Mojave also make it the single best area for development of concentrating solar power plants within the state of California. Moreover, the area is located in between two large military installations, Edwards Air Force Base and China Lake Naval Air Weapons Station, and much of the land is disturbed and made up of many small, private parcels. The lands in the West Mojave thus offer conditions that make siting solar energy generation projects there attractive for both developers *and* environmental stakeholders, as evidence by the fact

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that many in the conservation community have joined with us in calling for the BLM to include the West Mojave as one of the first additional SEZs.

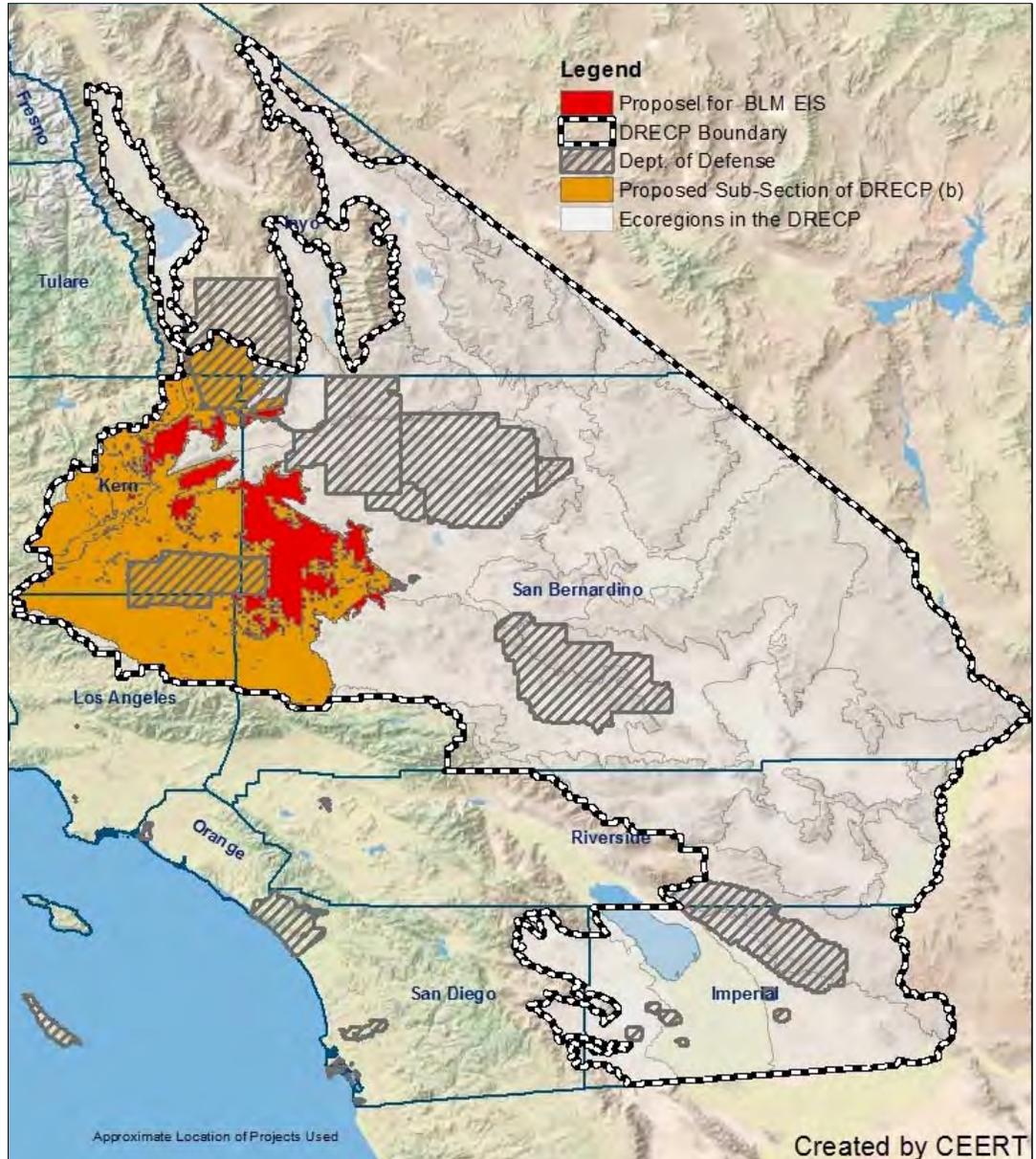
This area may have been excluded from the initial list of SEZs because it is already subject to a Habitat Conservation Plan and federal land use plan amendment known as the West Mojave (“WEMO”) Plan. Finalized in 2005, the WEMO Plan presents a comprehensive strategy to conserve and protect the desert tortoise, the Mohave ground squirrel, and nearly 100 other sensitive plants and animals and the natural communities of which they are a part. The Plan set aside 1.5 million acres of prime solar development land for a state protected species (the Mohave ground squirrel), lands for expansion of military reservations, as well as tens of thousands of acres for off road vehicle use. Unfortunately, the Plan failed to take account of the region’s extraordinary solar resources and did not identify any land for renewable energy development. The Plan generically designated 1% of the certain restricted areas for all remaining uses, including renewable energy, but even this carve-out is unhelpful because BLM failed to include a process for identifying which lands would be acceptable for solar development.

Although the WEMO Plan aims to provide a comprehensive strategy to conserve and protect sensitive wildlife and their natural communities, the underlying science upon which vast amounts of land were set aside was not robust. For example, in the case of the Mohave ground squirrel, the available biological data was extremely weak, and relied upon outdated research from a single investigator. Based on this questionable evidence, the Plan reserved 1.5 million acres to protect core and non- core habitat (the Plan does not distinguish between the two) for a single state-only listed species.

Whether or not intentional, BLM’s refusal to plan for renewable energy development in the WEMO Plan area has encouraged, and will continue to encourage, solar developers to seek to develop projects in less advantageous areas. In some instances, projects have been and will be sited in areas with significantly greater potential for environmental conflict because developers cannot overcome the severe restrictions of the WEMO Plan. In light of these circumstances, and questions surrounding the development of the WEMO Plan noted above, we suggest that BLM revisit the Plan as part of these PEIS proceedings to consider the creation of one or more SEZs in the West Mojave.

Admittedly, BLM’s planning and review of the West Mojave will require significant resources. Efforts being undertaken in other contexts may be leveraged to save some time. For example, the State of California, through the California Energy Commission, has recently launched an extensive vegetation mapping exercise, the results of which should provide important and timely information for the BLM’s review of the WEMO Plan, and for the California DRECP. In addition, CEERT, as part of its coordination of California’s Renewable Energy Transmission Initiative (RETI) planning effort, has developed a map of the West Mojave which identifies the recommended areas which should be evaluated by BLM as part of its analysis of the West Mojave as a new SEZ. Even with these resources, there is still much work to be done to identify SEZs, but it will

be worthwhile to provide for development opportunities in this region with unparalleled solar resources.



**Figure 2. Suggested zone for studying the possibility of SEZs in the West Mojave.**

Regarding the Chocolate Mountains, BLM has already indicated some intention to designate a SEZ in that area. We think it wise for BLM to consider SEZs in the

Chocolate Mountains and the area of the WEMO Plan. BLM should act with alacrity if these are new areas that it believes would accommodate significant solar development.

Consistent with the comments above, BLM should also consider designating more lands in Nevada and Arizona for solar development. In Arizona, we are informed that the BLM State Director excluded any acreage from SEZ consideration that is subject to a pending application. As a result, there were no applications in the areas that BLM identified as proposed SEZs, but many applications in other areas—thereby producing the opposite outcome intended for the PEIS; BLM should consider including those other areas. It is unclear how the proposed SEZs in Nevada were identified, or why there are not more SEZs in a state in which BLM manages 67% of the available land. These states have more and better areas with regard to insolation, load, and transmission, and the Draft PEIS unfairly ignores or minimizes the viability of their promising areas.

Solution: As stated above, BLM should establish a consistent process for identifying and approving new SEZs or SEZ expansions (assuming, of course, that those SEZs follow the recommendations we have laid out above). Such process will be important if BLM designates SEZs, and BLM should identify that process in the Final PEIS. BLM also should begin evaluating new potential SEZs in the West Mojave, Chocolate Mountains, lands identified in the Arizona Restoration Design Energy Project, and other areas. Figure 3 below depicts one possible area for West Mojave utility-scale solar development.

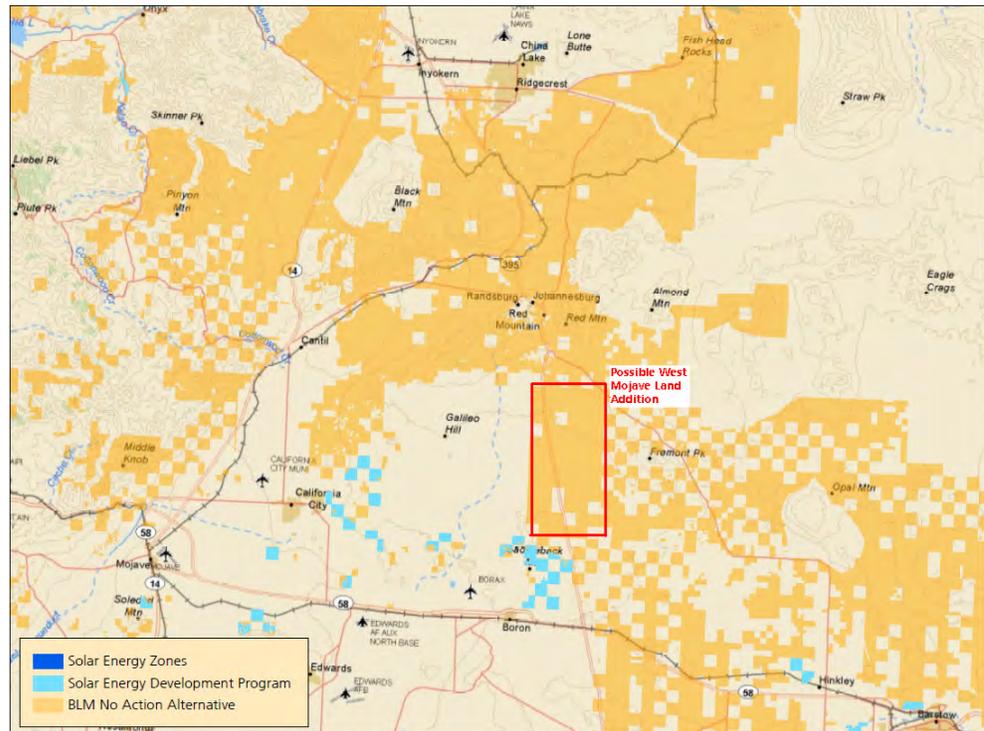


Figure 3. Proposed starting point for SEZ evaluations in the West Mojave.

**3. The proposed SEZs do not adequately account for aviation, seismic, and state and local government considerations.**

**a. Aviation**

The Draft PEIS notes that the locations of the proposed SEZs were developed considering all military and civilian airfields within five miles of the SEZ boundary. The Draft PEIS notes that the military also provided information that was used to identify potential area-wide impacts. In many instances, the military identified specific potential issues and concerns with SEZs that have been incorporated into the analysis. Because of the potential for differential impacts caused by different solar technologies and the various types of military uses, specific impact analysis and definition of impacts were not possible. Where military or civilian airfields are within 25 mi (40 km) of a SEZ, this was noted as a potential conflict.

The Draft PEIS states, however, that since FAA regulations would control activities near these facilities, no additional analysis was performed. Because of the site-specific nature of the potential impact on military airspace, no assessments of the potential level of impact could be made.

At least four of the SEZs are in known Special Use Airspace (SUA) zones: Bullard Wash in Arizona; Iron Mountain and Riverside East in California; and Red Sands in New Mexico. While SUA-related height restrictions are not likely to cause an impact to trough, PV or dish technologies, they could serve as a constraint on power tower technology. The lengthy FAA process for removing height restrictions could take up to one year to complete. In addition, determining the impact of FAA and military altitude restrictions must be done in the initial stages of a project, and obtaining an official position from the military on its aviation concerns can take up to one year from the time the request is made.

**b. Seismic considerations**

Seismic information for the Draft PEIS was determined from the USGS, state of California and literature reviews. Data included USGS Quaternary Fault and Fold database of the USA class A fault search, National Earthquake Information Center Database. This information was reviewed within a 100 km radius of the center of each SEZ. While these are excellent sources of information, project seismic requirements are defined by local or state codes and are usually subject to the International Building Code (IBC). The seismic investigation used for the Draft PEIS apparently did not consider the IBC, which is the defining requirement for projects.

**c. Water resources**

Regardless of whether a plant employs dry or air cooling, PV or dish technology, a small amount of water may be required for potable, sanitary, mirror cleaning, and other routine

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maintenance activities. The Draft PEIS does not provide sufficient analysis of water resources. Determination of the adequacy of water resources is typically performed by a hydrology study, evaluation of nearby wells or by drilling test wells and having consultations with state or local water agencies. At this point, there is no way to determine if the proposed SEZs can provide enough water for the potential projects that could be placed in that SEZ.

If the PEIS requires multiple projects to be situated on a given site, then there is a high likelihood that a number of projects could exceed the ability of the underground reservoir and associated recharge system to provide water over the lifetime of the project or projects. Only a detailed assessment prior to designating a SEZ would provide enough information to make the determination of adequate water resources.

**d. State and local considerations**

In the selection of the SEZs, BLM staff was asked to identify areas near existing transmission or designated corridors. These areas also needed to be near existing roads, have slope of 1 to 2% or less with 5% slope as the maximum slope considered feasible, and contain a minimum of 2500 acres. Additionally, the preliminary results from the Western Governors Association Western Renewable Energy Zone Initiative were taken into consideration. Draft PEIS at App. D-1. Criteria from the Arizona Renewable Resource and Transmission Identification subcommittee also were used. Draft PEIS at App. D-21. BLM then selected the potential SEZs as being areas of low sensitivity.

In addition, BLM has not consulted with state or local authorities to determine significant issues that may arise in those arenas. BLM should engage state and local authorities to identify any potential issues in advance.

Solution: BLM should account for potential aviation, seismic, and water resources considerations when designating, or adjusting the boundaries of, SEZs. BLM also should engage in interagency cooperation with state and local governments to identify and mitigate any concerns, as well as with the FAA and the Department of Defense to identify and mitigate any concerns. *See also* Section II.F (“Miscellaneous issues”).

**4. BLM should prescribe a process for applying for land within designated SEZs, and only after it provides for public comment on that process.**

The Draft PEIS does not specify a process for developers to apply for and secure parcels within designated SEZs, other than to suggest that BLM might use competitive bidding. As we explain below in Section II.F, we do not support a competitive bidding system because of the added costs such a system would impose on projects.

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Whatever process BLM develops, BLM should not adopt that process without providing for public review and comment, including hearings. To be specific, BLM should not adopt a SEZ application process in the Final PEIS (unless BLM provides another public comment period, including on the proposed process) or in an Instruction Memorandum or other document that is not accompanied by a public comment period. The manner in which any SEZs will be made available for development will be vitally important to many developers and they should be given the opportunity to submit their views.

**C. BLM should select the Solar Energy Development Program (Preferred) Alternative over the SEZ Alternative, but the Preferred Alternative also needs clarification and modification.**

BLM should select the alternative that strikes the best balance between promoting utility-scale solar energy development and avoiding and minimizing the impacts of such development. The Solar Energy Development Program Alternative achieves that goal so long as BLM (a) *is able to designate SEZs in accordance with our comments above*, and (b) *modifies or clarifies the lands it would exclude from development* under the Preferred Alternative.

If BLM is unable to evaluate and designate SEZs that meet the criteria we have set forth above, we respectfully request that BLM evaluate and consider selecting a fourth alternative. Under this alternative, BLM would (1) finalize siting criteria and “comprehensive program administration and authorization policies and design features” (*see* Section II.D & Attachment A (discussing necessary modifications to policies and design features)); (2) clarify that the SEZs are interim pending further work and that they do not indicate that the entire acreage will be available or suitable for development; (3) conduct the additional work required to make the SEZs useful and publish a supplemental EIS and ROD once that work is complete.

However, we believe that BLM is capable of taking the actions we have recommended and issuing a Final PEIS in a timely manner. Whatever alternative BLM adopts, BLM must provide a clear and timely path forward for existing applications.

Among the two action alternatives considered, BLM is right to identify the Solar Energy Development Program Alternative as the agency’s Preferred Alternative. As BLM explains, the Preferred Alternative “would likely result in the highest pace of development at lowest cost to the government, developers, and stakeholders,” in part by providing the greatest siting flexibility. At the same time, the Preferred Alternative would “provide a comprehensive approach for ensuring the potential adverse impacts would be minimized to the greatest extent possible.” Draft PEIS at ES-29. The Preferred Alternative would exclude solar development in the most sensitive areas, encourage development within the SEZs, and provide the greatest degree of flexibility in siting and designing projects—flexibility that is crucial to the long-term success of the utility-scale solar industry. *See*

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*generally* Draft PEIS at 6-31 to 6-40, 6-48 to 6-53 (discussing benefits of Preferred Alternative).<sup>18</sup>

Our support of the Preferred Alternative—and in particular truly useful SEZs—is subject to several important caveats, discussed in Sections II.C.1 and II.C.2 immediately below.

### **1. Designation and incentives for SEZs**

As we discuss above in Section II.B, the SEZs need substantial additional work if they are to be useful SEZs.

Policies to encourage development in fully-vetted SEZs make sense—indeed, they are crucial if SEZs are to have any value. These include, among other things, providing for streamlined environmental review in the form of EAs, providing expedited transmission interconnection assurances, and withdrawing SEZs from other uses including mining, oil and gas development, and grazing.<sup>19</sup> However, these incentives should not result in unreasonable delays in the processing of applications for projects outside SEZs. Such a result would yield a de facto SEZ-only alternative, which is untenable for the reasons we discuss below.

### **2. Modification of excluded lands criteria**

In calculating which lands to exclude from solar development under the Preferred Alternative, BLM excluded lands that failed to meet basic criteria (greater than 5% slope and/or solar insolation levels below 6.5 kWh/m<sup>2</sup>/day) or that fell within a special designation or contained special characteristics (e.g., ACECs, designated critical habitat, wilderness characteristics). The result is the exclusion of roughly 70 million acres of BLM-managed lands, as shown in pink on the state-by-state maps reproduced in the Executive Summary and throughout the PEIS. It is difficult to tell which screen or screens—slope, insolation, ACEC, etc.—was or were used to exclude any given acre. BLM should provide easy access to GIS data and shape files to make this screening process more transparent.<sup>20</sup> This is of particular concern to developers with existing projects located within the pink (excluded) areas—not only do they want to know what

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<sup>18</sup> We note below that no other energy industry is limited to zones, whether in addition to other development or solely in zones.

<sup>19</sup> We urge BLM to describe with particularity the incentives for development within SEZs, which the Draft PEIS describes only generally.

<sup>20</sup> In addition, BLM should not adopt blanket exclusions based on assumed conflicts with preexisting, approved human uses. Solar development is not inherently incompatible with all other uses and, through negotiations with preexisting users of a site, developers may be able to design facilities that allow for multiple uses to coexist. This is particularly true in instances where a proposed solar facility might conflict with existing recreational uses.

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screen or screens BLM has applied to the lands that are the subject of their ROW applications, they want to work with BLM to address any concerns that those screens raise.<sup>21</sup> In accordance with our comments in Section II.A above, BLM should commit to timely processing these existing applications during the preparation of the Final PEIS and regardless of what the PEIS says.

Finally, certain of BLM's screening criteria for the Preferred Alternative are overly restrictive. Subject to the third caveat immediately above, we refer not to areas with special designations or certain sensitive resources (e.g., wilderness characteristics) but to basic land characteristics, including lands that have greater than 5% slope and/or solar insolation levels below 6.5 kWh/m<sup>2</sup>/day, or which are located in special recreation areas. While these lands are unlikely to be the subject of initial development potential and interest, they may become more attractive over the 20-year life of the PEIS.<sup>22</sup> Certainly some of the private lands which solar companies are being urged to develop have lower insolation or greater slope, and as technologies progress, there may be projects that can utilize much steeper slopes. Moreover, while the bulk of an application may be in an area with 5% slope or less, some arrays may be moved up a hillside to an 8-10% slope (where current technology may be slightly less efficient) for purposes of avoiding resource conflicts. The exclusions, therefore, must be subject to a rule of reason. Categorically eliminating these lands from development does not account for this fact and serves little purpose.<sup>23</sup> The PEIS should recognize that these non-environmental factors currently limit development interest and feasibility but may not do so in the future, and allow for development in areas with those characteristics (assuming that other siting criteria are met).<sup>24</sup>

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<sup>21</sup> An example of such a constructive program is occurring in the Ivanpah Valley watershed in California and Nevada, where multiple stakeholders have agreed to study the biological characteristics and constraints of that area. Collaborative studies of this sort are preferable for the purpose of assessing where development should and should not take place, and under what conditions.

<sup>22</sup> In just a few short years, many photovoltaic (PV) systems have evolved and can now utilize slopes in the 8-10% range.

<sup>23</sup> The Draft PEIS recognizes that “concerns exist that by excluding [these] lands . . . , the BLM could be removing lands that some developers may find both technically and economically feasible to pursue in the future.” Draft PEIS at 6-38. Indeed, almost the entire State of Nevada, 67% of whose lands BLM manages, is neither pink nor blue, but white—unavailable for development under any proposed alternative—in the Draft PEIS's maps. Moreover, the immense amount of land in pink, without explanation, leaves little of Nevada available for development. We strongly urge BLM to reconsider this determination, especially where not based on species concerns. *See* Section II.B.4-.6 (advocating for additional SEZs in Nevada).

<sup>24</sup> In any event we support BLM's decision to allow excluded areas to remain open to development of supporting infrastructure such as access roads and transmission lines. *See* Draft PEIS at ES-7 n.4 & 2-7.

**3. The SEZ Alternative would significantly stymie utility-scale solar development with no added benefit.**

Compared to the Preferred Alternative, the SEZ Alternative likely would slow the pace of development without offering any appreciable environmental protection advantage. Specifically, the SEZ Alternative likely would forestall many projects from being built, and force others on to private land.<sup>25</sup> This shift would drastically increase the cost of private land for development and compensatory mitigation, in turn further curbing solar development generally, including on already-disturbed lands.<sup>26</sup> Such a result would fail to meet BLM's goal of locating 10,000 MW of renewable energy on public lands.

In addition, utility-scale solar facilities seek to produce energy at a price that approaches grid parity, a critical achievement that will be arrested if developers face severe restrictions on their ability to develop economically feasible projects. Economic feasibility requires not only reasonable land valuations but flexibility in siting and the ability to develop in close proximity to load centers and with adequate access to the electricity market (i.e., transmission). The SEZ Alternative would eliminate this flexibility<sup>27</sup> and, given that many of the proposed SEZs are not close to load or transmission, leave developers stranded in remote areas with little market or transmission access. *See* Section II.B.4 (discussing market and transmission access problems with SEZs). The Draft PEIS does not fully evaluate these and other impacts associated with the SEZ Alternative.

What is worse, the SEZ Alternative would create these adverse impacts without offering any appreciable environmental protection benefit. While the SEZ Alternative could reduce or eliminate some of the impacts that might come from potentially dispersed development under the Preferred Alternative, the SEZ Alternative could “result in greater concentrations of impacts in the vicinity of the SEZs,” Draft PEIS at ES-29, as well as in the SEZs themselves, Draft PEIS at 6-53. This is a real risk considering that BLM lacks

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<sup>25</sup> *See* Draft PEIS at 6-53 (stating assumption that “development that does not occur on BLM-administered lands was assumed to be made up for by development on non-BLM-administered lands”). This statement, however, does not account for the fact that private land cannot accommodate all (or even most) of the projects that otherwise would be built on public lands; there simply are not enough private lands that are commercially viable for this shift to occur.

<sup>26</sup> A zones-only approach on BLM-managed land could more directly discourage development on private lands adjacent to restricted (i.e., “no go”) areas. State and local permitting authorities might be disinclined to permit projects on lands near areas that BLM has categorically excluded from development. While this outcome is possible under the Preferred Alternative, as well, far more private lands could suffer from this problem under the SEZ Alternative.

<sup>27</sup> Developers require and ask for a *reasonable* degree of flexibility. The SEZ Alternative would allow development on approximately 0.15% of BLM-managed lands in the six southwestern states covered by the PEIS. The Preferred Alternative would allow development on 4.9% of such lands. This is a critical difference but one that, even under the Preferred Alternative, would leave the overwhelming majority of BLM-managed lands off-limits to solar development.

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the information it needs to accurately assess the SEZs' potential resource conflicts and carrying capacity. *See* Section II.B.

The SEZ alternative would not yield any net benefits to environmental protection over an alternative (like the Preferred Alternative) that provides more flexibility but imposes appropriate restrictions to ensure responsible development. As the Draft PEIS recognizes, the SEZ Alternative would (the Draft PEIS says “might” but that is far too optimistic) “reduce the flexibility of both the agency and developers in terms of identifying appropriate locations for utility-scale development. *There are likely to be economically attractive sites for solar energy development outside of the SEZs that can meet the environmental protection measures outlined in the PEIS.*” Draft PEIS at 6-43 (emphasis added). Siting criteria that restrict development in high-conflict areas (*see* Attachment A and BLM's recent interim guidance<sup>28</sup>), combined with well-considered design policies and mitigation measures, can effectively promote solar development, preserve siting flexibility, and minimize adverse impacts; the SEZ Alternative cannot. The Preferred Alternative (with the modifications we propose) strikes an appropriate balance between promoting solar development and restricting it; the SEZ Alternative does not. No other industry that extracts energy resources or develops energy on BLM-managed lands is limited to zones, and there is no reason why the utility-scale solar industry, which is actively committed to responsible development and which supports significant restrictions to achieve that end, should be treated differently.

There are two more points. First, the SEZs would be inadequate even though they total 677,000 acres—463,000 acres more than the total acreage BLM estimates will be needed to produce 24,000 MW of solar-generated energy on BLM-managed lands over the 20-year life of the PEIS. As we discussed in detail in Section II.B above, many of the SEZs lack adequate access to existing or planned transmission, are located too far from load centers, already are the subject of applications, and/or raise concerns about sensitive resources. In addition, BLM lacks adequate detailed biological and cultural information about the SEZs to know whether additional problems will arise when developers try to site specific projects within the SEZ boundaries. It is highly likely that these known and potential conflicts will significantly reduce the amount of available or suitable acreage within the proposed SEZs for utility-scale solar development.<sup>29</sup> *See* Draft PEIS at 6-35

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<sup>28</sup> BLM, Instruction Memorandum No. 2011-061, *Solar and Wind Energy Applications - Pre-Application and Screening* (Feb. 7, 2011), available at [http://www.blm.gov/pgdata/etc/medialib/blm/wo/Communications\\_Directorate/public\\_affairs/news\\_release\\_attachments.Par.79538.File.tmp/IM2011.61.Prescreening.pdf](http://www.blm.gov/pgdata/etc/medialib/blm/wo/Communications_Directorate/public_affairs/news_release_attachments.Par.79538.File.tmp/IM2011.61.Prescreening.pdf).

<sup>29</sup> BLM recognizes that not all of the land within the SEZs will be developable, although it optimistically assumes that 80% will be developable. Draft PEIS at 2-23. As discussed above and in Section II.B, this figure does not adequately account for the known and potential constraints associated with the proposed SEZs. *See also* Draft PEIS at 6-33 (recognizing that areas within the 22 million acres identified as available for development under the Preferred Alternative likely would not be “suitable for development because of as yet unidentified conflicts with other

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(“Based on the potential conflicts identified, some of the proposed SEZ areas may be reduced in size or eliminated entirely when the final SEZs are identified in the ROD for this PEIS.”). The Draft PEIS appropriately recognizes this fact and concludes that, as a result, “it is possible that the amount of lands that would be available under the SEZ program alternative might not be enough to support full development of the RFDS in states other than Arizona and Colorado.” Draft PEIS at 6-44; *see also* Draft PEIS at 6-40 to 6-45, 6-48 to 6-53 (discussing limitations of SEZ Alternative); Draft PEIS at 6-52.

Second, the SEZs would be inadequate even though BLM could expand or add new SEZs in the future. As BLM recognizes, BLM would need to propose a land use plan amendment and subject any proposed expanded or new SEZ to environmental review under NEPA. *See* Draft PEIS at ES-7, ES-12, 6-31 n.5. That is a multi-year process that cannot respond nimbly to developers’ needs and market dynamics.<sup>30</sup> In addition, if development is restricted to SEZs, adequate SEZs are needed now, not in the future. The proposed SEZs are far from adequate for the reasons discussed above; developers will not build many of their projects and shift the remainder to private lands unless and until these inadequacies are addressed. BLM’s ability to expand or add new SEZs cannot save the SEZ Alternative from its own problems.<sup>31</sup>

To be clear, in addition to believing that the SEZ Alternative would make bad policy, we believe that BLM cannot legally choose the SEZ Alternative. As discussed above, the SEZ Alternative does not fulfill the purpose and need of the PEIS or comply with applicable laws and mandates, and its impacts have not been adequately analyzed.

#### **D. Energy policies and design features (Appendix A)**

Many of the energy policies and design features proposed in Appendix A to the Draft PEIS are reasonable and necessary to protect natural resources. However, certain policies and features are unnecessarily restrictive because they are costly to solar development and

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resources”); Draft PEIS at 6-39 (same); Draft PEIS at 6-33 n.7 (“[G]overnment-to-government consultation and inter-agency consultation are still ongoing and could result in the identification of additional concerns” in the proposed SEZs). Our member companies’ experiences over the last few years suggest that far less of the proposed SEZs—perhaps as low as 10-40%—will be developable.

<sup>30</sup> In fact, BLM considered suggestions to include additional SEZs in the Draft PEIS but could not because “the site-specific evaluation of SEZs requires a large amount of data and lengthy evaluation time.” Draft PEIS at 2-29. Such process will be even longer if BLM gathers the information and conducts the analysis that we think is necessary for useful SEZs.

<sup>31</sup> This is not to say that BLM should not establish a process for identifying and approving new SEZs. *See* Section II.B.6. Such a process will be important if BLM designates SEZs, and BLM should identify that process in the Final PEIS. The point here is that that process cannot sufficiently ease, on a meaningful timeframe, the unreasonable constraints the SEZ Alternative would impose.

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yet provide little benefit to the environment. The preference to avoid, then minimize, then mitigate adverse impacts is generally sound, but in some instances unnecessarily sacrifices development where mitigation can be truly effective, or where the impact at issue is not significant in the first place. As a result, a requirement to avoid and/or minimize impacts can unintentionally and unnecessarily add costs to a project.

We appreciate BLM's effort to provide specificity in the PEIS, but the agency must be careful to avoid broad brush strokes where small ones are needed. That is, some policies and design features may not apply to all projects. BLM should take care to craft the policies and features to avoid unintended or unnecessary constraints to solar development, and should allow for varying site conditions and solar field design.

Specific comments on the proposed policies and design features in Appendix A are provided in Attachment A to this document.

#### **E. Rental and bonding policies**

The Draft PEIS states that “elements of [BLM's] existing policies addressing rental fees, terms of authorization, due diligence, bonding requirements, and BLM access to records would remain in effect.” Draft PEIS at ES-6 n.3. BLM should modify these policies to be less expensive and less restrictive for solar developers.

##### **1. Rental policy**

On June 10, 2010, BLM issued Instruction Memorandum No. 2010-141, *Solar Energy Interim Rental Policy* (“2010 Rental Policy”). The policy expires on September 30, 2011. Under the methodology reflected in the 2010 Rental Policy, the annual rent for a solar project located on BLM-managed lands depends on the project's acreage, power capacity, and type of solar technology. Although the rental policy helpfully provides a greater level of certainty for developers (which is helpful in negotiating PPAs and other contracts), the rents it establishes are too high. BLM should use the Final PEIS to establish a new policy that takes the following considerations and points into account:

- Most BLM lands that are desirable for solar development are located in arid regions where public land value is based on grazing, recreational or open public use. As such, rents—particularly acreage-based fees—should not be very high given the nature of the BLM lands proposed for use. BLM must remember that solar developers do not acquire BLM's mineral rights when they receive a ROW grant.
- Utility-scale solar companies have begun securing similar or comparable private lands for project development and/or mitigation. These land values are typically in the range of \$900-\$2,500 per acre, excluding mineral and water rights. These lands generally do not have agricultural, industrial, or other development value, other than the proposed solar use.

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- Using standard industry MAI appraisal methods, and also using Uniform Appraisal Standards for Federal Land Acquisitions (Yellow Book standards), annual rental values should be in the range of \$72-\$200 per acre per year, given a capitalization rate of 8%. When acreage- and capacity-based fees are combined, BLM's 2010 Rental Policy establishes much higher values, particularly for Riverside County in California, with little explanation. BLM's rents also appear to be based largely on the value of irrigated agricultural land, which have a higher value than the non-irrigated lands on which most projects are proposed.
- Rental fees are self-reinforcing in that they are to be used to set the "highest and best" use of BLM-managed lands (i.e., BLM may determine that the alternative highest and best use for a given parcel is another large-scale solar facility, rather than grazing, recreation, etc.). For this reason, BLM must be especially careful in its calculations.
- According to the Draft PEIS, BLM typically uses a 50% encumbrance factor when setting acreage-based rents. However, for utility-scale solar projects, BLM uses a 100% encumbrance factor "to reflect the high density land use common to solar energy projects." Draft PEIS App. A at A-11. Yet the Draft PEIS also states that the capacity-based fee is necessary to "capture the increased industrial use value of the authorization, above the limited rural/agricultural land value captured by the base rent." Draft PEIS App. A at A-12. Because BLM already has doubled the base rent encumbrance factor it normally uses, it is unclear how BLM can justify an additional capacity-based fee can be justified.

The rents established by the 2010 Rental Policy impose a significant burden on the economic feasibility of many projects, at a time when solar energy is not yet cost-competitive with other sources of electricity.<sup>32</sup> Moreover, high rental rates on public lands lead to higher purchase prices for private lands, making it ever more difficult to develop projects and purchase lands for compensatory mitigation. BLM should reduce the acreage- and/or capacity-based fees to arrive at more reasonable rental rates.

If BLM insists on charging the high rates set forth in the 2010 Rental Policy, it should adjust the number of acres deemed to be occupied by a solar facility. For example, rather

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<sup>32</sup> Per the 2010 Rental Policy, base rent for a 250-MW, 1,950-acre project in Riverside County will be \$313.88 per acre per year, or \$17.8 million over the project's estimated 30-year life (assuming a 20-year PPA with no extension). A net present value calculation using the Rental Policy's assumed federal discount rate of 5% yields \$4,825 per acre per year. If the capacity-based rent factor is added (assuming that the project begins operation within 3 years), total rent over 30 years increases by \$17.7 million, with a total net present value of \$7,951 per acre per year. This value far exceeds the market price of similarly-situated lands.

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than calculating the number of acres occupied based simply on the ROW grant, BLM should calculate that number based on the number of acres that project facilities physically occupy. Such calculation would be a better measure of a project's impact and provide for a more reasonable rent schedule. Alternatively, BLM could reduce the encumbrance factor to 50% for that land that does not actually house the facilities associated with a project.

## 2. Bonding policy

On October 13, 2010, BLM issued Instruction Memorandum No. 2011-003, *Solar Energy Development Policy* ("2010 Solar Policy"). The policy expires on September 30, 2011. Among other things, the Policy requires developers to post a performance and reclamation bond for each project. Acceptable bond instruments are cash, cashier's or certified checks, certificate or book entry deposits, negotiable U.S. Treasury securities, surety bonds, irrevocable letters of credit, and an insurance policy that identifies BLM as the beneficiary. A bond must cover liabilities associated with hazardous materials, decommissioning, and reclamation. In calculating bond amounts, BLM will look to the bonding requirements applicable to mining operations under 43 C.F.R. Subpart 3809.

BLM should use the Final PEIS to revise the bonding requirements set forth in the 2010 Solar Policy. We understand and support the important obligation to decommission solar projects and reclaim BLM-managed lands when those projects reach the end of their useful economic lives. We also appreciate that BLM allows bond amounts to be increased on a graduated basis during construction. However, the bond instruments that BLM will accept are too narrow and the bond amounts that BLM is requiring are too high.

### a. **The bonding requirements for surface mining operations do not and should not apply to utility-scale solar projects.**

The 2010 Solar Policy indicates that BLM calculates bonds for utility-scale solar projects in part by using the surface mining requirements set forth in 43 C.F.R. Subpart 3809, §§ 3809.500-.599. This approach is misplaced, imposes onerous and unnecessary costs on the solar industry, and provides no additional public land protection.

BLM promulgated surface mining financial assurance regulations in response to the "inability or unwillingness of some operators to meet their reclamation obligations" as mine operators simply abandoned mines. 65 Fed. Reg. 69,998, 70,002 (Nov. 21, 2000). To avoid, or at least limit, taxpayer liability for unsecured or undersecured surface disturbances caused by mining, BLM now requires a project developer to provide financial assurance that it will be able to cover all costs of reclamation. 43 C.F.R. §§ 3809.500-.599. Reclamation concerns identified in the surface mining context include: (1) isolation, control, or removal of acid-forming, toxic, or deleterious substances; (2) re-grading and reshaping to conform with adjacent landforms, facilitate revegetation, control drainage,

and minimize erosion; (3) rehabilitation of fisheries and wildlife habitat; (4) placing growth medium and establishing self-sustaining vegetation; (5) removal or stabilization of buildings, structures, or other support facilities; (6) plugging of drill holes and closure of underground workings; and (7) providing for post-mining monitoring, maintenance, or treatment. 43 C.F.R. § 3809.5 (“Reclamation”).

In contrast to surface mining operations, there is little risk that solar projects will be abandoned and BLM left with significant reclamation liability. A mine can become unprofitable due to unexpected and sudden swings in commodity prices. The decision to shut down a mine is driven by the need to eliminate the ongoing cash drain which occurs when operating costs exceed revenue during low price periods, even for mines with substantial remaining deposits. (As commodity prices swing, that portion of the deposit that is economic to mine (“reserves”) also changes.) In contrast, a typical utility-scale solar power plant can require well over \$1 billion in capital investment, in effect representing a pre-payment of “fuel cost”, and before it can be built, must be first be secured by a long-term power contract (called a power purchase agreement, or PPA) with a utility customer at a fixed price for the power it generates. The project is either project-financed or balance sheet-financed by an owner with the financial resources to fund the significant capital investment required to build or acquire the solar facility.<sup>33</sup> In addition, the closest point in time at which a solar power plant is to be decommissioned is predictable—i.e., tied to the term of the PPA, which typically lasts 25 years with the possibility of extensions. Finally, a solar power plant has very low operating costs (since the “fuel” is “pre-paid”), providing healthy cash margins from fixed revenues. For all these reasons, it is extremely unlikely that the owner of a solar project or its lenders would walk away from a project. For these reasons, BLM’s surface mining requirements are inapplicable to solar projects.

The 2010 Solar Policy also does not establish a transparent process for calculating the amounts of performance and reclamation bonds. Under the Policy, a developer must submit a Reclamation Cost Estimate to the BLM authorized officer, who sets the bond amount in coordination with the Solar Energy Bond Review Team. While we appreciate the good relationships developers share with BLM authorized officers, and the effort to ensure that bonds are consistent, developers have little input beyond the RCE into the bonds that are required for their projects.

**b. Acceptable bonding instruments should include corporate guarantees backed by financial tests.**

The 2010 Solar Policy states that “BLM will not accept a corporate guarantee as an acceptable form of bond.” This is unnecessarily restrictive. BLM’s requirements and

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<sup>33</sup> Indeed, BLM makes a showing of such financial feasibility a requirement for securing a ROW. 43 C.F.R. §§ 2804.12(a)(5), 2804.26(a)(5); *see also id.* § 2884.11(c)(9), 2884.23(a)(5) (imposing same requirement for ROW grants under Mineral Leasing Act).

goals could be satisfied by a corporate guarantee backed by a demonstration of adequate financial capacity to cover project reclamation and decommissioning costs. BLM has discretion to accept corporate guarantees as financial assurance. *See* 43 U.S.C. § 1764(i) (“*Where he deems it appropriate, the Secretary concerned may require a holder of a right-of-way to furnish a bond, or other security, satisfactory to him to secure all or any of the obligations imposed by the terms and conditions of the right-of-way or by any rule or regulation of the Secretary concerned.*”) (emphasis added); *see also* 43 C.F.R. § 2805.12(g) (providing that, “[i]f BLM requires,” a ROW grant holder must obtain “a surety bond *or other acceptable security*”) (emphasis added).

Other federal and state agencies rely on a broad range of financial assurance instruments, including corporate guarantees. For example, the U.S. Environmental Protection Agency and the Nuclear Regulatory Commission accept a financial test (based on a company’s year-end audited financials) and a parent company guarantee that demonstrate sufficient financial viability for addressing the decommissioning and cleanup costs associated with hazardous waste handling, storage and treatment and/or radioactive isotope handling.<sup>34</sup> 40 C.F.R. Parts 264, Subpart H; 40 C.F.R. Part 265, Subpart H; and 10 C.F.R. Parts 30. Similarly, the California Department of Toxic Substances Control accepts a financial test or corporate guarantee, trust fund, letter of credit, and/or insurance in lieu of a surety bond for securing the decommissioning and cleanup costs associated with hazardous waste handling, storage and treatment. *See* 22 C.C.R. §§ 66264.143(f), .145. Under the financial test option, an applicant must provide, on an annual basis, externally-audited financial statements and must maintain certain debt-to-asset/income ratios. *Id.* § 66264.143(f). Under the corporate guarantee option, a parent, grandparent, or sibling company may provide financial assurance in place of the applicant by providing essentially the same information required under the financial test. *Id.* § 66264.143(f). Given this governmental precedent for allowing other financial instruments—particularly in the hazardous waste context, where negative environmental impacts are likely more serious, and reclamation costs likely much higher, than in the solar context—BLM should provide similar flexibility here.

Moreover, the point of financial assurance is not that *BLM* must have adequate funds to cover reclamation costs at the moment when decommissioning and reclamation are required, but rather that there must be *someone* who has those funds and is legally obligated to provide them at that moment. As discussed above, the owner of a solar power plant is uniquely positioned to provide assurance through a financial test/corporate guarantee

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<sup>34</sup> These financial assurance mechanisms are part of the requirements set forth in the Resource Conservation and Recovery Act (RCRA), 42 U.S.C. § 6901 et seq. and the Atomic Energy Act of 1954, as amended (68 Stat. 919) and under title II of the Energy Reorganization Act of 1974 (88 Stat. 1242).

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because the owner will have a PPA and on-going obligations that disincentivize and even preclude easy abandonment of its project.<sup>35</sup>

We also are aware that BLM Manual MS-2805, which states that “bonds are normally required” for ROW grants, reflects BLM’s typical practice. *See* BLM Manual MS-2805, Terms and Conditions for FLPMA Grants, § .12D. However, as BLM is aware, solar power plants are not like most uses that BLM approves by ROW grant. BLM typically uses ROW grants to permit smaller, less intensive facilities (including linear facilities), which have correspondingly lower reclamation costs. For those projects, a surety bond may make sense. But for more capital-intensive uses covering larger areas, like solar power plants, the value of the solar plant far exceeds any reasonable estimate of the reclamation and decommissioning costs that will be incurred at the end of the plant’s economic life.

Requiring a surety bond or similar instrument can impose millions of dollars of additional annual cost, in some cases nearly doubling annual operating costs. By way of example, if BLM requires a reclamation bond of \$10 million, a letter of credit or surety bond with a rate as high as 6% would impose \$600,000 in additional annual operating costs. These added costs would jump to \$2.1 million for a \$50 million reclamation bond. These excessive costs are particularly problematic for projects that already have signed PPAs, since the costs cannot be passed on to customers. The added costs go to financial institutions as profit, not to BLM (or even the United States Treasury) as cost recovery or program support funds, and are not covered by DOE loan guarantees. The added costs impede the solar industry’s effort to provide electricity at competitive prices, and provide no additional protection of public lands.

Finally, BLM imposes mandatory minimum bonding requirements in the oil and gas leasing context. *See* 43 C.F.R. subpt. 3401 (“Bonds”). While restrictive, mandatory, and minimum bonding requirements are appropriate in the oil and gas context due to the real and catastrophic potential for natural resource damages, as evidenced by the recent oil spill in the Gulf of Mexico, solar projects present significantly fewer and less severe potential harms, for the reasons outlined above. Accordingly, use of more expansive financial assurance instruments is appropriate in the utility-scale solar context.

**c. Bond amounts should be reduced, including to reflect a reclamation credit.**

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<sup>35</sup> With solar projects, most of the investment is in the ground. There are no variable fuel costs that could cause a plant to shut down in the middle of extreme volatility. A developer with a PPA has more incentive to maintain the plant and continue operations because most of its costs are already sunk. The developer will only need to cover its going-forward costs (e.g., insurance, rent, operations and maintenance) even in the worst case scenario where a lender foreclosed on a loan.

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Regardless of whether BLM allows a financial test/corporate guarantee as a form of security, BLM should reduce the bond amounts it requires through operation of the 2010 Solar Policy. As discussed above, letters of credit and surety bonds impose excessive operating costs on projects. Also as discussed above, the risk of abandonment of a project is minimal, and the value of a solar project high, factors BLM should include in its bond calculations. Because BLM conducts periodic review of bond amounts, it can adjust the amount of a required bond closer to the time that decommissioning actually will occur. One option that would capture these factors and set more appropriate bond amounts would be to maintain a portion of the reclamation bond in the form of security, to be increased each year throughout the term of a project's PPA. The total bond amount would be achieved a few years prior to expiration of the agreement. If the agreement is extended, BLM and the project developer could modify the amount of required security.

In Instruction Memorandum No. 2011-003 and in Draft PEIS Appendix A, BLM elected not to follow standard energy industry practice and recognize a reclamation credit at the decommissioning stage that could help to offset the size of reclamation bond required. We disagree with a decision by BLM to rely on mining reclamation guidance to establish requirements for this phase due to resource impacts that are very different than those of a solar power plant. The concrete, glass, metal, and other infrastructure used to construct a solar facility have a recognized value in the marketplace of recycled products and BLM's standards should reflect that fact.

#### **F. Miscellaneous issues**

The following miscellaneous issues also bear comment:

- The nature and extent of BLM's cooperation with the California Energy Commission is crucial to the siting of future solar thermal projects in California. The permitting of several initial projects revealed both benefits and problems with the agencies' coordination efforts. We urge BLM to consider how those problems might be overcome for future projects.
- We urge BLM to develop policies for fostering more and better interagency coordination generally. The MOU in California among BLM, FWS, the California Energy Commission, and the California Department of Fish and Game is an example of how an MOU can improve interagency coordination. There may be other tools, such as inter-agency working groups, that can foster coordination.
- Coordination among the Departments of the Interior, Defense, Agriculture, and Transportation, and the Federal Energy Regulatory Commission, to improve the identification and resolution of conflicts in the development of solar projects and transmission could ensure greater consistency and predictability in conflict resolution. Coordination among agencies with resource management responsibilities could similarly establish uniform

mitigation requirements applicable in areas with certain characteristics and thereby ensure that developers are not required to mitigate the same impacts in more than one way.

- The Final PEIS should contain more specific guidance on coordination with military and civilian aviation and radar concerns. BLM entered into an MOU with the Defense Department concerning aviation issues associated with wind energy projects—similar MOUs with the Defense Department and the Federal Aviation Administration would more efficiently resolve similar issues associated with utility-scale solar projects.
- The Final PEIS should consider how the federal policies will coordinate with the mitigation measures that will be developed as part of the California DRECP, and those in the recently issued FWS guidance on the Bald and Golden Eagle and Migratory Bird Treaty Act, Executive Order 13186, regarding migratory birds and renewable energy projects. This recommendation also relates to the suggestion above that BLM coordinate with other agencies with resource management responsibilities to ensure that developers are not subject to multiple mitigation standards.
- Competitive bidding likely will increase the costs of developing utility-scale solar projects on public lands. Combined with high rental rates, bonds, and other costs, some developers that might have pursued projects on public lands will pursue projects on private lands or not at all.

### III. Comments on the Draft PEIS (DOE)

DOE has evaluated two alternatives in the Draft PEIS: a no action alternative and an action alternative (the preferred alternative) under which DOE would “develop programmatic guidance to further integrate environmental considerations into [DOE’s] analysis and selection of solar projects that [DOE] will support.” PEIS at 7-1; 75 Fed. Reg. 78,980, 78,983 (Dec. 17, 2010). In other words, DOE would develop criteria it would use to decide which projects to invest in and to streamline the NEPA reviews DOE conducts for those investment decisions. DOE states that this guidance would apply to “all lands,” not just those that BLM manages. Draft PEIS at ES-36 to ES-38. DOE correctly concludes that the preferred alternative would reduce adverse impacts of utility-scale solar development, increase the pace and decrease the costs of that development, and accelerate the greenhouse gas-reducing and economic benefits that are expected from that development. Draft PEIS at ES-38 to ES-39. We support DOE’s preferred alternative, though we would like clarification on exactly which “lands” the criteria would apply to.

Although not part of the Draft PEIS, DOE may elect to establish guidance for “previously disturbed lands” (the definition of which is unclear) and similarly, DOE may also elect to promote guidelines for locations near populated areas. Most industrial

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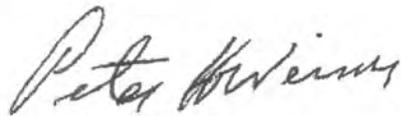
facilities prefer to locate away from populated areas. While this may sound good from a land-use perspective, locating sites near populated areas will raise concerns from the local populace and may result in additional cost impacts to the projects.

#### IV. Conclusion

LSA, CEERT, and SEIA sincerely appreciate BLM's efforts to promote responsible solar energy development of public lands through the preparation of the Solar PEIS. With the important additional work and modifications we have discussed above, the PEIS can serve a critically useful role in promoting and guiding the development of solar energy while protecting our natural environment.

Thank you for your time and consideration.

Sincerely,



Peter H. Weiner

Matthew J. Sanders

Jill E.C. Yung

PAUL, HASTINGS, JANOFSKY & WALKER LLP

on behalf of

the LARGE-SCALE SOLAR ASSOCIATION, the CENTER FOR ENERGY EFFICIENCY AND RENEWABLE TECHNOLOGIES, and the SOLAR ENERGY INDUSTRIES ASSOCIATION

Attachment A: Comments on Appendix A (proposed policies and design features)

# Attachment A

**Draft Solar PEIS – Comments on Appendix A  
(Proposed Energy Policies and Design Features)**

Page	Text	Comment
General Comment	Various text throughout Appendix A.	Use of the term “avoid” should be limited to situations where absolute prohibition of an activity is necessary. “Avoid” is used extensively throughout Appendix A, but often in situations where avoidance is not necessary or the impacts can be otherwise mitigated without prohibiting the activity.
General Comment	Various text throughout Appendix A.	Design features and mitigation should be intended to mitigate a potentially significant impact, not to always eliminate or minimize the potential for impacts, regardless of their significance. Cumulatively, these requirements can become very expensive and may be unnecessary. These types of requirements should be addressed at the project level, not the programmatic level.
General Comment	Various text throughout Appendix A.	The proposed design features seem to be primarily directed at limiting available land, but do not in turn provide specifics about what land will be left after all the limitations are imposed.
General Comment	Proposed addition to Appendix A.	The final Solar PEIS should address and clarify how its provisions will or will not modify the several solar-related BLM Instruction Memorandums that were released over the past few years: <ul style="list-style-type: none"> <li>• IM-2007-097- Solar Energy Policy (4/4/07)</li> <li>• IM-2009-167- Application of Visual Resource Management to Renewable Energy (7/7/2009)</li> <li>• IM-2010-141- Solar Interim Rental Policy (6/10/10)</li> <li>• IM-2011-003- Solar Energy Development Policy (10/13/10)</li> <li>• Solar Plan of Development (1/31/2011)</li> <li>• IM-2011-059- NEPA Compliance for Utility Scale (2/08/11)</li> <li>• IM-2011-060- Solar and Wind Due Diligence (2/08/11)</li> <li>• IM-2011-061- Solar and Wind Pre-Application and Screening (2/08/11)</li> </ul>
A-13 “Megawatt	The MW capacity fee established by this IM is: \$5,256 per MW for photovoltaic (PV) solar projects; \$6,570 per MW	How are these fees applied if a facility is down for routine or major maintenance? How are these fees applied if a facility is down due to loss

Page	Text	Comment
Capacity Fee” Para. 4	for concentrated PV and concentrated solar power (parabolic trough, power tower and solar dish/engine) projects without storage capacity; and \$7,884 per MW for concentrated solar power projects with storage capacity of 3 hours or more.	of a major generating component?
A-17 “Term of Authorization” Para. 2	The BLM will therefore issue all solar energy right-of-way authorizations for a term not to exceed 30 years.	There should be flexibility when it comes to determining the term of a solar right-of-way because the expected life of many solar facilities is well beyond 30 years.
A-19 “Diligent Development” Para. 5	The BLM authorized officer may suspend or terminate the authorization when the holder fails to comply with the diligent development terms and conditions of the authorization (43 CFR 2807.17).	This provision would provide for exclusions if the BLM or other agencies do not accomplish their obligations in an agreed-upon time, or impede financing. It should be made clear that only affirmative failures on the part of the holder warrant suspension or termination.
A-19 “Diligent Development” Para. 8	In addition, the grant will specify that any idle, improperly functioning, or abandoned equipment or facilities that have been inoperative for any continuous period of 3 months must be repaired, placed into service, or removed from the site within 30 days from receipt of a written Notice of Failure to Ensure Diligent Development, unless the holder is provided an extension of time by the BLM authorized officer.	The time period provided for in this provision must be flexible, as equipment failure – of a main step-up transformer, for example – can result in extensive repair times.
A-20 “Performance and Reclamation Bond” Para. 3	The BLM authorized officer may increase or decrease the bond amount at any time during the term of the right-of-way authorization, consistent with the regulations (43 CFR 2805.12(g)).	Most financial institutions view unfavorably the ability of a bond amount to fluctuate, absent some type of cap.
A-20 “Performance and Reclamation Bond”	If a holder uses herbicides extensively, this component of the bond amount may be significant.	“Extensive use” is too general and subjective.

Page	Text	Comment
Para. 5		
A-26 Lines 12-14	The BLM may offer lands within solar energy zones (SEZs) for competitive ROW authorizations on its own motion or as a result of nominations by the public.	Existing applications within SEZs should be given an opportunity to complete the application process before sites are competitively bid.
A-26 Lines 16-18	If lands within SEZs are not offered competitively, solar energy development applications for such lands will receive priority processing over other solar energy development applications.	This would have an adverse impact on existing applications outside of SEZs and could delay advanced solar projects due to lack of committed BLM resources.
A-26 Lines 20-22	The BLM will discourage applicants from filing ROW applications for the purpose of speculating, controlling, or hindering development of solar energy on public lands.	How would this be implemented? Timeframes for advancement of permitting? Demonstration of financial capability? We agree that there should be mechanisms to prevent speculative applications and the PEIS should provide guidance that a field office can use to identify speculators, but existing applications should be given a reasonable opportunity to complete the ROW process.
A-27 Lines 9-13	The BLM will review applications for land use plan conformance (43 CFR 1610.5-3). To be considered further, applications must conform to the existing land use plan as amended by the Solar Programmatic Environmental Impact Statement (PEIS), including all solar ROW exclusions identified in Table 2.2-2.	Projects should be allowed to show compatibility with existing land use plans on a site-specific basis. It may be feasible to design projects to be compatible in areas that would otherwise preclude solar development. Given the complexity of BLM land management programs, it is likely that some amendment to an existing RMP will be required. To condition applications on a requirement that no RMP amendment be necessary would exclude many otherwise viable and environmentally compatible solar projects.
A-27 Lines 40-44	Entities seeking to develop a solar energy project on BLM-administered lands shall contact any potentially affected grazing permittee/lessee, in conjunction with BLM staff, to discuss potential impacts of the proposal, possible alternatives that could be addressed in scoping for the National Environmental Policy Act (NEPA), and potential mitigation and compensation strategies.	Situations where there are prior claims to the land can be problematic to solar development, since proposed mitigation measures may be too expensive to justify development. The BLM should make every effort to identify areas of potential overlap.
A-28 Lines 1-5	Entities seeking to develop a solar energy project on BLM-administered lands shall contact the owner of any federal mining claim located with the boundaries of the proposed	Same comment as above.

Page	Text	Comment
	solar energy project, in conjunction with BLM staff, to ensure that there is a potential for resolving any conflicts with federal mining claims.	
A-30 Lines 40-43	Management goals and objectives for special status species (such as the sage grouse and desert tortoise) that the BLM has identified in land use plans or goals and objectives substantiated by best available information or science shall be incorporated into the POD for proposed solar energy projects.	T&E species will be subject to Section 7 review and Biological Opinion conditions – this should not reach beyond these requirements.
A-34 Lines 24-25	The solar ROW authorization may be assigned consistent with the regulations, but all assignments are subject to approval by the BLM authorized officer.	There should be criteria for denial of assignment. It should be based on factors like the assignee’s financial ability to perform and not on arbitrary factors.
A-34 Lines 46-47 A-35 Lines 1-3	....[Design features and exceptions].... authorizations. It is anticipated that variations in the design features presented will be approved in very limited circumstances. Those design features that do not apply to a given project will need to be described as part of the project file along with an appropriate rationale. Additional mitigation measures may be identified and required during individual project development and environmental review.	This highlights the need for the design features to be very carefully crafted so that they are applicable to all projects and situations, and exclude requirements that may not apply or that could unnecessarily constrain development. Detailed requirements should be left to the project ROW approval.
A-35 Lines 12-13	Many of the proposed design features indicate the need for project-specific mitigation plans (see Table A.2-1 [which includes, among others: Glint and Glare Assessment, Mitigation, and Monitoring Plan; Heliostat Positioning Plan; and Unanticipated Burial Contingency Plan]).	Implementation of a glint and glare plan is not practical because glint and glare are dependent on mirror positions, sunlight angles, and viewer angles, all of which are changing constantly during the day. Existing solar facilities have operated for years with no reported glint and glare problems.  It is not clear what a “Heliostat Positioning Plan” would require, but this type of information is proprietary and should not be required in any document that may become public.
A-36 Lines 39-42	Consolidation of access and other supporting infrastructure shall be required for single projects and for cases in which there is more than one project in close proximity to another	This should be qualified that consolidation will be required where feasible and safe, and where such consolidation is necessary to reduce environmental and land use impacts to less than significant.

Page	Text	Comment
A-37 Lines 35-38	<p>in order to maximize the efficient use of public land.</p> <p>Any lands that have not been recently inventoried for wilderness characteristics or any lands that have been identified in any citizen’s wilderness proposal shall be inventoried for wilderness characteristics prior to any solar development action being approved within these areas.</p>	<p>What would be the timing for this requirement and what kind of study would it involve? This seems to have serious schedule and cost implications for the project. The requirement that “any citizen’s wilderness proposal” be evaluated in a ROW application creates an opportunity for nuisance filings that would be expensive and could delay otherwise viable solar development. Citizens’ wilderness proposals should be vetted by BLM for merit before burdening solar projects with inventorying these proposals.</p>
A-38 Lines 19-24	<p>Activities of project developers shall be coordinated with the BLM and other stakeholders to ensure that impacts on wild horses and burros and their management areas are minimized. Issues to be addressed could include the installation of fencing and access control, provision for movement corridors, delineation of open range, traffic management (e.g., vehicle speeds), and access to water sources.</p>	<p>Implementation of wild horse and burro movement corridors could affect plant operations and introduce the potential for injuries to horses or burros where operating personnel cross such a corridor.</p>
A-38 Lines 44-46	<p>The ROWs for solar facilities shall be large enough to ensure there is a sufficient fire break inside the ROW so there would be no threat to facilities from either a wildland fire approaching from outside the ROW or a fire ....</p>	<p>Achieving "no threat" may not be feasible. The requirement should be to mitigate risk to less than significant.</p>
A-39 Lines 13-14	<p>Public access through or around solar facilities shall be retained to permit continued use of public lands and non-BLM administered lands.</p>	<p>“Through” facilities is likely problematic from a liability and security standpoint, and access around facilities may require action by BLM with regard to designation of new roads/trails. Applicants may have limited ability to comply with “around solar facility” access.</p>
A-39 Lines 16-17	<p>Solar facilities shall not be placed in areas of unique or important recreation resources.</p>	<p>This requirement should be evaluated on a case-by-case basis. Some solar development in these areas may be feasible without adversely impacting recreational use.</p>
A-39 Lines 34-37	<p>The FAA shall be contacted early in the process of considering a solar energy project application to determine if there might be any potential impacts on aviation and if any mitigation might be required to protect military or civilian</p>	<p>The FAA process is fairly well defined and it may not allow for routinely reviewing projects early in the process. Proposed projects will file for any necessary FAA review as required by FAA regulations.</p>

Page	Text	Comment
	aviation use.	
A-41 Lines 5-10	Land disturbance (including crossings) in natural drainage systems and groundwater recharge zones, specifically ephemeral washes and dry lake beds, are to be avoided. Any structures crossing drainages must be located and constructed so that they do not decrease channel stability or increase water volume or velocity. Developers shall obtain all applicable federal and state permits.	"Avoided" is too restrictive. Disturbance in these areas should be allowed, provided impacts are adequately mitigated to less than significant. Ephemeral washes can be very small and mitigation of impacts to these features may often be feasible. Because of the land use requirements for solar project, some drainage crossing may be necessary. This requirement should be revised to "minimize," not "avoid."
A-41 Lines 12-13	Solar facilities or components (e.g., heliostats, panels, dishes, and troughs) shall not be placed in natural drainage ways.	"Shall not be placed" is too restrictive. Placement in these areas should be allowed, provided impacts are adequately mitigated to less than significant.
A-41 Lines 26-29	New roads shall be designed to follow natural land contours and avoid or minimize hill cuts in the project area and avoid existing desert washes. Siting of new roads and walking trails (if any) is to be consistent with the designation criteria specified by the BLM in 43 CFR 8342.1.	This is too restrictive. Following contours to the extent feasible should be required (otherwise you cannot gain or lose elevation; flat roads only); avoiding washes completely is too restrictive. Again, it should be tied to impacts and subject to mitigating impacts to less than significant.
A-41 Lines 41-43	Areas with unstable slopes shall be avoided, and local factors that can cause slope instability (e.g., groundwater conditions, precipitation, earthquake activity, slope angles, and the dip angles of geologic strata) shall be identified.	Avoiding unstable slopes is too restrictive; can often mitigate unstable conditions.
A-42 Line 25	Originally excavated materials shall be used for backfill.	Excavated materials should be used to the extent they provide suitable backfill.
A-42 Lines 34-35	Drainage crossings shall be stabilized as quickly as possible, and channel erosion from runoff caused by the project shall be prevented.	Preventing erosion from runoff is not always practical; should be "mitigated."
A-43 Lines 21-22	Construction traffic shall avoid unpaved surfaces (to reduce the risk of compaction) and reduce speed to lessen fugitive dust emissions.	"Avoid" is too restrictive. Not all roads should be paved, and dust emissions can be mitigated.
A-44 Line 30	Construction on wet soils shall be avoided.	Avoiding wet soils to too restrictive. This could unnecessarily preclude winter construction activities.

Page	Text	Comment
A-44 Lines 35-36	All design features developed for the construction phase shall be applied to similar activities during the operations phase.	Not all construction phase design features may apply to operations. This should say "all applicable" design features shall be applied.
A-48 Lines 15-16	Natural drainages and a pre-project hydrograph shall be maintained for the area.	May not be feasible or necessary to maintain all minor drainages. This design feature should require that the project design should maintain downstream hydrographs and provide for protection of onsite improvements.
A-48 Lines 23-24	Siting in identified 100-year floodplains shall not be allowed within the development.	Minor construction, such as transmission poles should be allowable. This can be accomplished without significant impact to flood plain.
A-51 Lines 40-43	Construction activities shall avoid land disturbance in ephemeral washes and dry lakebeds; any unavoidable disturbance would be minimized. Stormwater facilities shall be designed to route flow around the facility and maintain pre-project hydrographs.	May not be feasible or necessary to avoid all drainages. Mitigation could accomodate development in certain drainages.
A-53 Lines 22-23	If chemical dust palliatives (suppressants) are used, they shall be selected and applied in accordance with the facilities Dust Abatement Plan.	BLM should standardize the acceptability of palliatives – allowed by some BLM offices but not others.
A-54 Lines 13-14	Water use shall be minimized by implementing conservation practices, such as treating spent wash water and storing it for reuse.	Capturing and storing wash water from a solar facility may have unacceptable cost and environmental consequences. Recovering spent wash water from a PV facility would not be feasible.
A-54 Line 40	Topsoil removed during construction shall be reused during reclamation.	This should be worded to make it clear that storage of topsoil is for reclamation following construction and not reclamation following decommissioning. It would not be practical to store topsoil for the life of the project.
A-55 Lines 11-13	To the extent practicable, projects shall be sited on previously disturbed lands in close proximity to energy load centers to avoid and minimize impacts on remote, undisturbed lands.	Sites that meet these criteria are likely very limited. Perhaps this design feature should simply say that sites that meet these criteria are desirable.
A-56 Lines 5-15	Projects shall be sited and designed to avoid direct and indirect impacts on important, sensitive, or unique habitats	Fully avoiding <b>any</b> direct and indirect impacts is usually not feasible. Feature should say that impacts will be avoided where feasible or

Page	Text	Comment
	<p>in the project vicinity, including, but not limited to, waters of the United States, wetlands (both jurisdictional and nonjurisdictional), springs, seeps, streams (ephemeral, intermittent, and perennial), 100-year floodplains, ponds and other aquatic habitats, riparian habitat, remnant vegetation associations, rare or unique biological communities, crucial wildlife habitats, and habitats supporting special status species populations (including designated and proposed critical habitat). For cases in which impacts cannot be avoided, they shall be minimized and mitigated appropriately. Project planning shall be coordinated with the appropriate federal and state resource management agencies.</p>	<p>practical, and will otherwise be mitigated to less than significant, as necessary.</p>
<p>A-57 Lines 17-18</p>	<p>Fences shall be built (as practicable) to exclude livestock and wildlife from all project facilities, including all water sites.</p>	<p>This could conflict with biological interests, in some cases, where it may be desirable to allow wildlife access to the site (wildlife permeable fencing). Fencing to exclude wildlife should be on a case-by-case basis depending on the site and wildlife characteristics.</p>
<p>A-57 Lines 24-25</p>	<p>Developers shall avoid the placement of facilities or roads in drainages and make necessary accommodations for the disruption of runoff.</p>	<p>Avoiding drainages completely is too restrictive; requirement for avoidance should depend on the drainage feature and the potential impact.</p>
<p>A-57 Lines 33-38</p>	<p>Projects shall avoid surface water or groundwater withdrawals that affect sensitive habitats (e.g., aquatic, wetland, and riparian habitats) and any habitats occupied by special status species. Applicants shall demonstrate, through hydrologic modeling, that the withdrawals required for their project are not going to affect groundwater discharges that support special status species or their habitats.</p>	<p>Requirement should not necessarily be to avoid if it can be shown that the impact is less than significant.</p>
<p>A-57 Lines 42-44</p>	<p>The capability of local surface water or groundwater supplies to provide adequate water for the operation of proposed solar facilities shall be considered early in the project siting and design. Technologies that would result in large withdrawals that would affect water bodies that support special status species shall not be considered.</p>	<p>"Large withdrawal" is too general and subjective. Requirement should be site-specific and consider the amount of the withdrawal compared to the water supply available.</p>

Page	Text	Comment
A-59 Lines 16-18	Activities shall be timed to avoid, minimize, or mitigate impacts on wildlife. For example, crucial winter ranges for elk, deer, pronghorn, and other species should be avoided, especially during their periods of use.	Should allow for possibility to mitigate rather than avoid.
A-60 Lines 10-11	Project activities shall not be located in or near occupied habitats of special status animal species. Buffer zones shall be established around these areas.	“Occupied habitat” is too restrictive. Habitat could include foraging habitat, which should not necessarily be precluded from project activities, particularly if the species is not a federal or state threatened or endangered species.
A-65 Lines 7-13	Prior to any ground-disturbing activity, seasonally appropriate walkthroughs shall be conducted by a qualified biologist or team of biologists to ensure that important or sensitive species or habitats are not present in or near project areas. Attendees at the walkthrough shall include appropriate federal agency representatives, state natural resource agencies, and construction contractors, as appropriate. Habitats or locations to be avoided (with appropriately sized buffers) shall be clearly marked.	The purpose and timing of any walkthroughs or surveys is project specific. Protocols and attendance would be determined based on resources present and the project schedule. Agency involvement in any walkthrough would have to be at the agency’s discretion, not a requirement of a Design Feature.
A-66 Lines 6-12	Meteorological towers, soil borings, wells, and travel routes shall be located to avoid important, sensitive, or unique habitats, including, but not limited to, wetlands, springs, seeps, ephemeral streams, intermittent streams, 100-year floodplains, ponds and other aquatic habitats, riparian habitat, remnant vegetation associations, rare natural communities, and habitats supporting special status species populations as identified in applicable land use plans or best available information and science.	Avoiding these features is too restrictive and may not be necessary in all situations. Site characterization activities should be conducted in accordance with site conditions and local BLM office guidance.
A-67 Lines 24-26	Open trenches could also entrap smaller animals; therefore, escape ramps shall be installed along open trench segments at distances identified in the applicable land use plan or best available information and science.	The requirement for escape ramps should only apply to sensitive species.
A-67	As directed by the local BLM field office, Joshua trees ( <i>Yucca</i>	To require salvage of these species, it should be certain that there is a

Page	Text	Comment
Lines 40-44	<i>brevifolia</i> ), other <i>Yucca</i> species, and most cactus species shall be salvaged prior to land clearing, and they shall be transplanted, held for use to revegetate temporarily disturbed areas, or otherwise protected as prescribed by state or local BLM requirements.	demand or need for these species, otherwise there may be no place to relocate these plants.
A-68 Lines 6-7	Reestablishment of vegetation within temporarily disturbed areas shall be done immediately following the completion of construction activities, provided such revegetation will not compromise the function of the buried utilities ....	Revegetation should occur at a seasonably appropriate time to maximize success. "Immediately" following construction may not be optimal if it would occur during the dry season in a desert environment. Best timing for revegetation is likely fall or spring.
A-69 Lines 7-9	The lower 18 in. (46 cm) of the fencing shall be a solid barrier that would exclude entrance by amphibians and other small animals.	Excluding amphibians and other small animals should be determined on a project-by-project basis. It may not always be beneficial to exclude these species.
A-71 Lines 42-45	Habitat disturbance shall be minimized by using helicopters for construction to lessen the need for access roads, and by locating transmission facilities in previously disturbed areas. Existing utility corridors and other support structures shall be used to the maximum extent feasible.	Use of helicopters should not be mandatory in all cases. If there are existing access roads or if roads can be constructed without significantly affecting habitat, surface installation should be allowed.
A-74 Lines 1-2	Newer and cleaner equipment that meets more stringent emission controls shall be leased or purchased.	This needs to be more specific as to what is required. Newest and cleanest may not be necessary in all locations and may not be available. This could unnecessarily add significant costs to a project. This BACT-related requirement necessarily is addressed in project permitting.
A-74 Lines 16-22	All unpaved roads, disturbed areas (e.g., areas of scraping, excavation, backfilling, grading, and compacting), and loose materials generated during project activities shall be watered as frequently as necessary to minimize fugitive dust generation. In water-deprived locations, water spraying shall be limited to active disturbance areas only, and non-water-based dust control measures shall be implemented in areas with intermittent use or use that is not heavy, such as stockpiles or access roads.	Dust palliatives are not allowed by all BLM field offices – non water-based dust control measures shall be implemented – under current practices this may not be allowed.
A-75 Lines 1-2	Wind fences shall be installed around disturbed areas that could affect the area beyond the site boundaries (e.g., nearby	This should only be applicable to significant effects. Mitigating any effect is too costly and unnecessary.

Page	Text	Comment
A-75 Lines 4-8	residences). All soil disturbance activities and travel on unpaved roads shall be suspended during periods of high winds. A critical site-specific wind speed shall be determined on the basis of soil properties determined during site characterization, and monitoring of the wind speed shall be required at the site during construction, operation, and reclamation.	Suspension of activities should be based on inability to mitigate dust, not just because of high winds. High winds during rain or wet soil conditions may not be a problem.
A-76 Lines 9-14	Because of low winds and stable atmospheric conditions occurring in the early morning from late fall to early spring, the highest 24-hour concentrations of particulate matter during construction would be attributable to activities occurring during those hours. Thus, soil disturbance activities should be eliminated or minimized under these atmospheric conditions, particularly for construction activities occurring near facility boundaries.	This is overly restrictive. If dust can be mitigated, construction activities should not be constrained.
A-76 Lines 34-35	Alternative-fuel, electric, or latest-model-year vehicles shall be used, when available, as facility service vehicles.	If the facility has few emissions, as stated above, it is not necessary to restrict vehicle type, particularly in attainment areas.
A-78 Lines 16-20	A qualified and licensed professional landscape architect with demonstrated experience with the BLM’s VRM policies and procedures shall be a part of the developer’s and the BLM’s respective planning teams, evaluating visual resource issues as project siting options are considered. The visual issues shall be addressed throughout the planning and design process, and the final project plans shall reflect intended methods for mitigating visual impacts.	Should allow for visual design specialist without being a licensed landscape architect. This requirement could unnecessarily eliminate qualified individuals or firms.
A-80 Lines 30-33	Project developers shall exhaust opportunities to minimize visual dominance of projects by siting projects outside the viewsheds of KOPs or by siting them as far away as possible, diminishing dominance by maximizing visible separation with distance.	Having to “exhaust opportunities” is not appropriate for a programmatic document. Requirements should be tied to the visual impacts, and should not have to be exhaustive in all situations. Not all KOPs are equally sensitive to visual impacts, and requirements should be evaluated on a project-by-project basis.
A-81 Lines 1-2	Locating facilities near visually prominent landscape features (e.g., knobs and waterfalls) that naturally draw an observer’s	Prohibiting placement of facilities near any knob or waterfall, regardless of size or significance is overly restrictive. Small, insignificant features

Page	Text	Comment
	attention shall be avoided.	could unnecessarily preclude development of a project in the area.
A-81 Lines 18-21	Linear developments (e.g., transmission lines, pipelines, roads) shall follow the edges of natural clearings or natural lines of transition between vegetation type, topography, etc. (where they would be less conspicuous) rather than pass through the center of clearings.	Requirements under this design feature should be to the extent practical. Depending on the site characteristics, these requirements could render a project infeasible.
A-81 Lines 26-29	In visually sensitive areas, air transport capability shall be used to mobilize equipment and materials for clearing, grading, and erecting transmission towers, thereby preserving the natural landscape conditions between tower locations and reducing the need for permanent and/or temporary access roads.	Air transport should be used to the extent necessary to reduce visual impacts to less than significant; it may not be necessary in all situations. Construction access would not necessarily require establishment of permanent roads. However, if permanent surface access is required, the use of air transport during construction would not reduce visual impacts.
A-82 Lines 10-15	Where screening topography and vegetation are absent or minimal, natural looking earthwork landforms, vegetative, or architectural screening shall be used to minimize visual impacts. The shape and height of earthwork landforms must be adapted to the surrounding landscape, and must consider the distance and viewing angle from KOPs in order to ensure that the earthworks are visually unobtrusive.	This should be addressed on a project-by-project basis. Screening, particularly with earthwork landforms, may not be practical or necessary in many situations, and the screening itself could have adverse environmental impacts.
A-83 Lines 9-10	Solar panel backs shall be color-treated to reduce visual contrast with the landscape setting.	Requirement should be project- and technology-specific, otherwise it could be adding unnecessary cost to projects.
A-84 Lines 21-22	.... shall not cause excessive reflected glare. Low-pressure sodium light sources shall be used to reduce light pollution. Full cut-off luminaires shall be used to ....	Should not specify a particular type of light (low-pressure sodium) in a programmatic document. Over the life of the document, other lights may be developed that are more appropriate.
A-85 Lines 4-5	Commercial symbols or signs and associated lighting on buildings or other structures shall be prohibited.	Would this mean no project name, company name or logo on buildings or entrance signs? That would seem unnecessarily restrictive.
A-86 Lines 25-26	The visual color contrast of graveled surfaces shall be reduced with approved color treatment practices.	It would seem that color treatment of gravel could be expensive and may need environmental review to determine the impact of the treatment on the environment. Again, this should be considered on a project-by-project basis; it may be unnecessary where gravel surfaces are not visible from sensitive visual locations.

Page	Text	Comment
A-87 Lines 31-33	The project developer shall maintain revegetated surfaces until a self-sustaining stand of vegetation is reestablished and visually adapted to the undisturbed surrounding vegetation.	It is unclear when re-vegetation is expected to occur. Re-establishing vegetation inside of an operating solar power plant can cause problems with facility operations by hampering access to equipment during operations and maintenance.
A-91 Lines 4-5	If residences or sensitive receptors are nearby, noisy equipment, such as turbines and motors, shall be placed in enclosures.	This requirement should be tied to an impact and not just if receptor is "nearby." Impacts on nearby receptors will be dependent on distance, natural noise screening, and ambient conditions.
A-92 Lines 3-8	If a noise from a transformer becomes an issue, a new transformer with reduced flux density, which generates noise levels as much as 10 to 20 dB lower than National Electrical Manufacturers Association (NEMA) standard values, could be installed. Alternatively, barrier walls, partial enclosures, or full enclosures could be adopted to shield or contain the transformer noise, depending on the degree of noise control needed.	"Becomes an issue" needs to be defined. Change out of transformers is a very costly requirement and transformer design should be determined at the permitting stage, not after the fact. If the transformers meet the design criteria, replacement should not be required.
A-95 Lines 16-17	Project developers shall conduct a records search of published and unpublished literature for past cultural resource finds in the area ...	How does the BLM propose that a developer conduct a records search of "unpublished" literature? Does this require investigations of oral records with the people of the area? There should be some objective criteria.
A-103 Lines 38-40	Project developers shall survey project sites for unexploded ordnance, especially if projects are within 20 mi (32 km) of a current DoD installation or formally used defense site.	Surveys for unexploded ordnance should only be required in areas where there is evidence of, or a high probability, of occurrence.
A-108 Lines 18-20	Because of the high global warming potential of sulfur hexafluoride (SF <sub>6</sub> ), the use of alternative dielectric fluids that do not have a high global warming potential shall be required.	If an alternative to SF <sub>6</sub> is required, that alternative should be identified. Additionally, any alternative identified should be demonstrated to be viable through consultation with the electrical industry.
A-126 Table A.2-2 (Cont.)	<i>Water Resources:</i> ... Land disturbance activities should avoid impacts to the extent possible near the regions surrounding Palen Lake, Ford Dry Lake, and McCoy Wash.	The reference to the term "regions" is extremely broad and could imply that activities that would have no impact on these features should be avoided. In addition, the reference should be to "Palen <i>Dry</i> Lake," as it is not an active waterbody.
A-126 Table A.2-2 (Cont.)	<i>Vegetation:</i> ... All wetland, riparian, playa, dry wash (including dry wash microphyll woodland), sand dune and sand transport areas, and chenopod scrub habitats within	The reference to the maintenance of a "buffer area" is not defined and could be interpreted more broadly than required under applicable federal and state requirements. This reference should be qualified to state that a

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	the SEZ should be avoided to the extent practicable, and any impacts minimized and mitigated. A buffer area should be maintained around wetland, riparian, playa, and dry wash communities to reduce the potential for impacts on these communities on or near the SEZ.	buffer area if required by ACOE/EPA Clean Water Act jurisdiction or CDFG SAA jurisdiction should be maintained.
A-127 Table A.2-2 (Cont.)	<i>Wildlife (All)</i> : To the extent practicable, avoid ephemeral drainages, Palen Lake and Ford Dry Lake, wetlands, McCoy Wash, and the Colorado River Aqueduct.	While the language is qualified with reference “[t]o the extent practicable,” there should be some recognition that ephemeral drainages are ubiquitous throughout the desert environment of the SEZ and avoidance will be nearly impossible for any site of significant size. As noted previously, the reference should be to “Palen <i>Dry</i> Lake.”
A-127 Table A.2-2 (Cont.)	<i>Special Status Species</i> : Disturbance of desert playa and wash habitats within the SEZ should be avoided or minimized to the extent practicable. In particular, development should be avoided in and near Ford Dry Lake, Palen Lake, and McCoy Wash within the SEZ.	Same comments as previously regarding the practical inability to avoid impacts to “desert playa and wash habitats,” ambiguity regarding “in and near” referenced features, and the reference to “Palen <i>Dry</i> Lake.”
A-128 Table A.2-2 (Cont.)	<i>Visual Resources</i> : Within the SEZ, in areas west of the northwest corner of Section 6 of Township 006S Range 017E, and in areas north and west of the northwest corner of Section 30 of Township 005S Range 018E, visual impacts associated with solar energy development in the SEZ should be consistent with VRM Class II management objectives, as determined from KOPs to be selected by the BLM within Joshua Tree NP and the Palen-McCoy WA.	The reference to visual resource impacts associated with Joshua Tree National Park is of concern. The principal problem with the proposed BMP is that it seeks to amend existing designations solely for solar projects when the Visual Resource Inventory (VRI) determination should be based on the resources as opposed to a proposed project. The BMP may be inconsistent with BLM’s site-specific VRI findings and therefore not supported by any factual basis. In addition, the KOPs for Joshua Tree NP should be identified in the Solar PEIS, and not left to subsequent BLM “to be determined” discretion.
A-128 Table A.2-2 (Cont.)	<i>Cultural Resources</i> : Significant resources clustered in specific areas, such as those in the vicinity of Palen and Ford Dry Lakes, focused DTC/C-AMA activity areas that retain sufficient integrity, and Native American trails evident in the desert pavement should be avoided.	In light of the widespread presence of DTC/C-AMA-associated historic resources (many of which are of marginal historic value), the reference to “avoided” impacts should be qualified by reference to “to the extent practicable.” Recovery may be more appropriate in some circumstances.

Thank you for your comment, Katie Umekubo.

The comment tracking number that has been assigned to your comment is SEDDSupp20179.

Comment Date: January 27, 2012 20:49:14PM

Supplement to the Draft Solar PEIS

Comment ID: SEDDSupp20179

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Attachment: BLMSolarPEIS\_NRDC Supp cmts\_FINAL.pdf

Comment Submitted:



NATURAL RESOURCES DEFENSE COUNCIL

January 27, 2012

Solar Energy Draft PEIS  
Argonne National Laboratory  
9700 S. Cass Avenue  
EVS/240  
Argonne, Illinois 60439

Delivered via web form and US Postal

**Re: Comments on the Supplement to the Draft Programmatic Environmental Impact Statement for Solar Energy Development in Six Southwestern States, 76 Fed. Reg. 66958-66960 (October 28, 2011)**

Dear Director Abbey:

The Natural Resources Defense Council (NRDC) appreciates the opportunity to submit these comments in response to the Supplement to the Draft Programmatic Environmental Impact Statement (PEIS) for Solar Energy Development in Six Southwestern States, released on October 28, 2011. NRDC is a national, nonprofit organization of scientists, lawyers and environmental specialists dedicated to protecting public health and the environment. Founded in 1970, NRDC has more than 1.3 million members and online activists nationwide, served from offices in New York, Washington, D.C., Chicago, Los Angeles, San Francisco and Beijing. These comments are intended to supplement the broader sets of comments already submitted by NRDC and our partners.

For more than three decades, NRDC has been deeply engaged in efforts to protect the publicly-owned lands and resources under the jurisdiction of the Bureau of Land Management (BLM). More recently we have been intensively involved in the efforts of the BLM and the Department of the Interior to process and review proposals to construct and operate utility-scale solar energy power plants on public lands, particularly in California, and to develop a sound environmentally responsible program for managing the solar resources found on those lands. We appreciate the decision to modify the preferred solar energy development program alternative that was described in the Draft PEIS in response to public comment and especially the commitment to zone-based development, both of which are reflected in the Supplement to that draft. We firmly believe that, given the impacts of utility-scale solar development, an approach that guides such development to the most appropriate places is essential to increasing access to and use of solar energy while protecting the unique and sensitive resources of our public lands.

While the preferred program alternative that is presented in the Supplement is much improved over the alternative in the Draft, several issues require additional attention, as detailed in these comments.

**1. Measures should be adopted to better include and inform the public in managing BLM's solar resources.**

With the release of the Supplement, NRDC greatly appreciates the time and investment that the BLM made in providing additional details regarding the composition of the revised solar energy zones (SEZs). This was evident on the day the Supplement was released, when BLM established on its website a document bank that provided opportunities for the public to download key geospatial information datasets along with a suite of additional maps depicting the revised SEZs. It cannot be overly stressed how important it is to provide stakeholders these types of data, particularly given the challenges that stakeholders encounter in relation to the process of evaluating the suitability and veracity of proposed programmatic measures as incorporated within the Supplement. Such data are instrumental in being able to fully evaluate the scope of a proposal, and can often lead to greater consensus driven outcomes given that the full range of stakeholders are properly informed.

To ensure that stakeholders are fully engaged, we believe that there are a few instrumental measures that the BLM should implement as the agency adopts a programmatic framework to site and permit solar projects:

- a. *A full commitment to transparency calls for the BLM, at minimum, to develop and maintain one authoritative, publicly available list of active solar project right-of-way (ROW) applications—including notice of any change in pending, closed, and approved ROW application status.* While we commend the BLM for attempting to publish an authoritative list of active ROW applications in the Supplement,<sup>1</sup> the BLM still does not maintain a centrally-hosted, authoritative list of all ROW applications—active or not. The lack of such a list is a severe impediment to public engagement in the management of our public lands.
- b. *The BLM should centrally provide and host up-to-date Geographic Information Systems (GIS) boundaries of all pending ROW applications.* In NRDC's attempt to evaluate the revised SEZs, conservation areas, and developable areas, we attempted to analyze how these changes comported with active ROW applications and with the reconstituted SEZs. But since the February 2011 termination of public access to BLM's Legacy Rehost 2000 System (LR2000) GIS server, it was fundamentally impossible to form empirically sound conclusions about the footprint of ROW applications given that publicly available ROW

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<sup>1</sup> Per a joint comment letter that NRDC has signed with members of the solar industry and other stakeholders, we understand that some applications that appear to be pending have been omitted from this list. Those applications are detailed in that letter.

data was invariably obsolete.<sup>2</sup> The lack of definitively sanctioned and accurate GIS ROW data forces stakeholders to, at best, make educated suppositions regarding how ROW applications fit into the programmatic proposals that are put forward in the Supplement. More problematically, the lack of accurate and publicly available ROW data undermines the tenets of a comprehensive solar program, by creating potentially false conclusions about the suitability of individual ROW applications.

- c. *The BLM should provide data to stakeholders that fully encapsulate the range of electrical transmission lines, existing and prospective, which intersect with the SEZs, pending projects and the developable area.* The analysis provided in the PEIS and the Supplement is not adequate in illustrating this essential component. Without transmission data, the current Supplement and draft PEIS provide a theoretical notion of how development might arise, but it is an incomplete picture that in many cases imparts developmental scenarios that are simply improbable. By demonstrating the transmission interconnections that exist, or may exist in the future, within prospective areas for solar development,<sup>3</sup> stakeholders will be provided one of the more fundamentally important pieces necessary to assess the suitability of prospective development while ensuring that investments are made where there is the greatest chance for success based upon the availability of transmission capacity.<sup>4</sup>

## **2. The Modified Program Alternative would provide ample room for solar to grow responsibly and thrive sustainably on our public lands.**

The BLM, the Interior Department, and the Energy Department are to be commended for including a Reasonably Foreseeable Development Scenario (RFDS) in the draft Solar Energy Development PEIS, thereby providing a reasonable basis for projecting the *maximum* development that might occur for the purpose of projecting impacts at the programmatic level—while also demonstrating that the RFDS was sufficient to meet BLM’s goals for the production of solar energy from public lands. Our previously submitted joint comments on the PEIS included an independent review of the RFDS analysis. That analysis demonstrated that the PEIS’ RFDS was overly aggressive both in terms of amount of renewable energy needed in the study area through 2030, and in terms of the amount of solar energy the public lands might provide to meet that need.<sup>5</sup> At that time, we concluded that precisely because the RFDS is so aggressive, it clearly documents that the SEZ alternative—supplemented by a system for

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<sup>2</sup> As expressed in our previous PEIS comments, NRDC encountered a series of significant inconsistencies in the agency’s data regarding ROW applications. The lack of timely hosted data is perpetuated within the Supplement.

<sup>3</sup> *Appendix 1* includes maps that depict current and prospective transmission lines within the key SEZs and developable area.

<sup>4</sup> Further in *Appendix 2* are specific recommendations and conclusions regarding how additional transmission analysis should be incorporated within the PEIS.

<sup>5</sup> See *Appendix I, Response to the Draft Programmatic Environmental Impact Statement for Solar Energy Development*, submitted on May 1, 2011 by The Wilderness Society, Natural Resources Defense Council, et al.

designating additional zones as needed, as we previously advocated for—would allow more than enough acreage for solar to be sited on federal lands managed by the BLM.

BLM’s release of a modified program alternative in the Supplement precisely underscores this ample availability of acres available to meet projected demand for solar energy development on our public lands. In Section 2.3.1.7, the Supplement references the RFDS’ estimation of 24,000 MW of solar energy generation over the 20-year study period, along with a corresponding allocation of approximately 214,000 acres (866 km<sup>2</sup>) of BLM-administered lands in order to meet such a generation target. Such demand is met by both action alternatives as outlined in the Supplement—the land area needed to meet the estimated RFDS for solar development accounts for roughly 1% of the land area available for application under the modified program alternative, and 75% of the land area available for development within SEZs alone. Thus, there can be little doubt that the modified program alternative would meet projected demand for solar energy development within the given timeframe established by the draft PEIS.

### **3. The technical criteria provided for slope and insolation exclusion areas are reasonable parameters for the highest and best use of our public lands.**

We support the technical criteria relating to slope and insolation that were applied by the BLM. We also are supportive of the biological and cultural criteria that were used to identify high solar value lands that may be appropriate for utility-scale development—i.e. the variance lands. Changes to the technical criteria should only be made, if at all, *in very limited circumstances* to avoid or minimize resource conflicts in order to preserve the architecture and goals of the program proposed in the Supplement.<sup>6</sup>

In PEIS Sections 2.2.2.2 and 6.1, BLM explained that the technical criteria—limiting lands available for utility-scale to those with slopes of less than 5% and those with a minimum solar insolation level threshold of 6.5 kWh/m<sup>2</sup>/day—were based on the characteristics of the solar energy technologies evaluated along with assumptions regarding the economic viability of such development. Such criteria are a key element of our shared goal of “screening for success,” which is meant to allow time and resources to be directed to those projects that have the greatest chance of success. In addition, it should be noted that, under the program proposed in the Supplement, BLM would entertain requests to reconsider both the slope and the insolation criteria in connection with proposals for new solar energy zones (SEZs).

Adherence to the stated criteria will help maximize the efficient use of BLM-administered lands and meet the multiple use mandate of the Federal Land Policy and Management Act of 1976 (FLPMA)—by reserving for other uses public lands that are not well-suited for solar energy development. In addition, retaining those criteria for variance lands will avoid triggering the

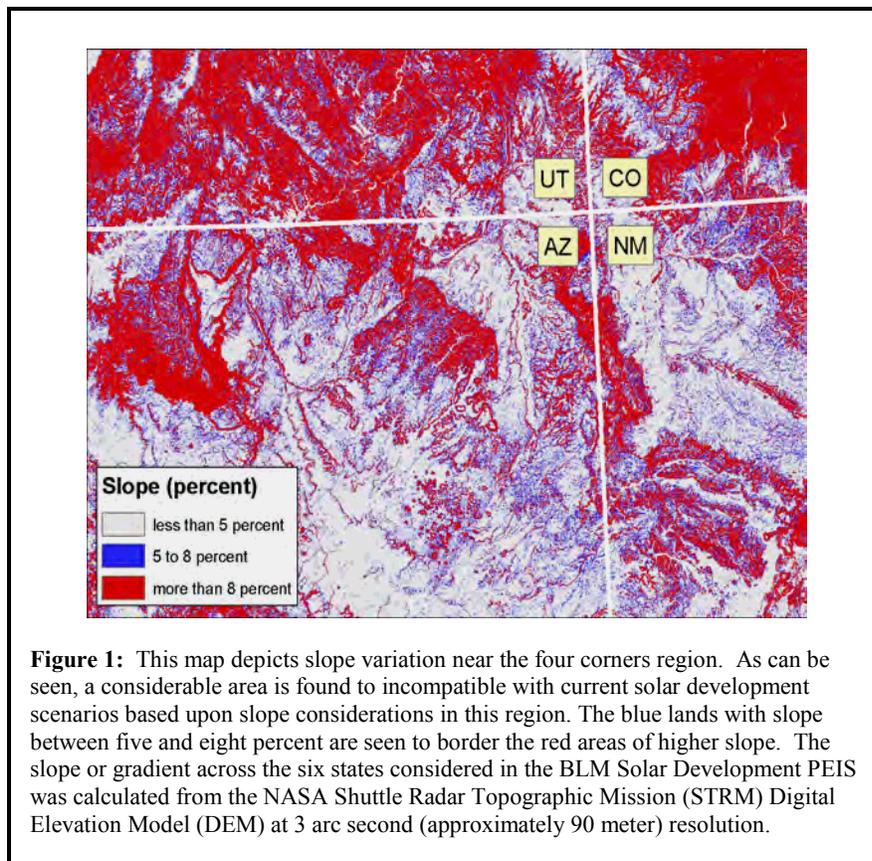
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<sup>6</sup> This discussion is not meant to discount our willingness to consider and support a pilot project or other modest measures that incorporate additional flexibility in the technical criteria process, provided that all requirements under the National Environmental Policy Act and the Federal Land Planning and Management Act of 1976 are strictly adhered to, appropriate restrictions are imposed, and the need for and the potential efficacy of such a proposed change can be substantiated. Two such modest exceptions were included in the joint environmental-industry letter referenced above in Footnote 1.

preparation of another supplement and/or exposing the Department to additional management liabilities that could result in crippling conflicts that could undermine the BLM's obligations in managing these resources.

a. **Wholesale alterations of the slope and insolation exclusion area designations would involve millions of acres.**

Slope and insolation exclusion area criteria are highly significant factors in assessing solar energy development on BLM lands, roughly accounting for over 60 million acres. The no action alternative totals approximately 97.6 million acres; the no action alternative excluding conservation, wildlife and ROW restrictions totals approximately 82.9 million acres; and the development alternative, which adds the slope and insolation exclusion area restrictions, totals approximately 20.3 million acres.<sup>7</sup> *Figure 1* provides a rough demonstration of the possible magnitude of change if slope criteria were to be altered with respect to lands being considered.



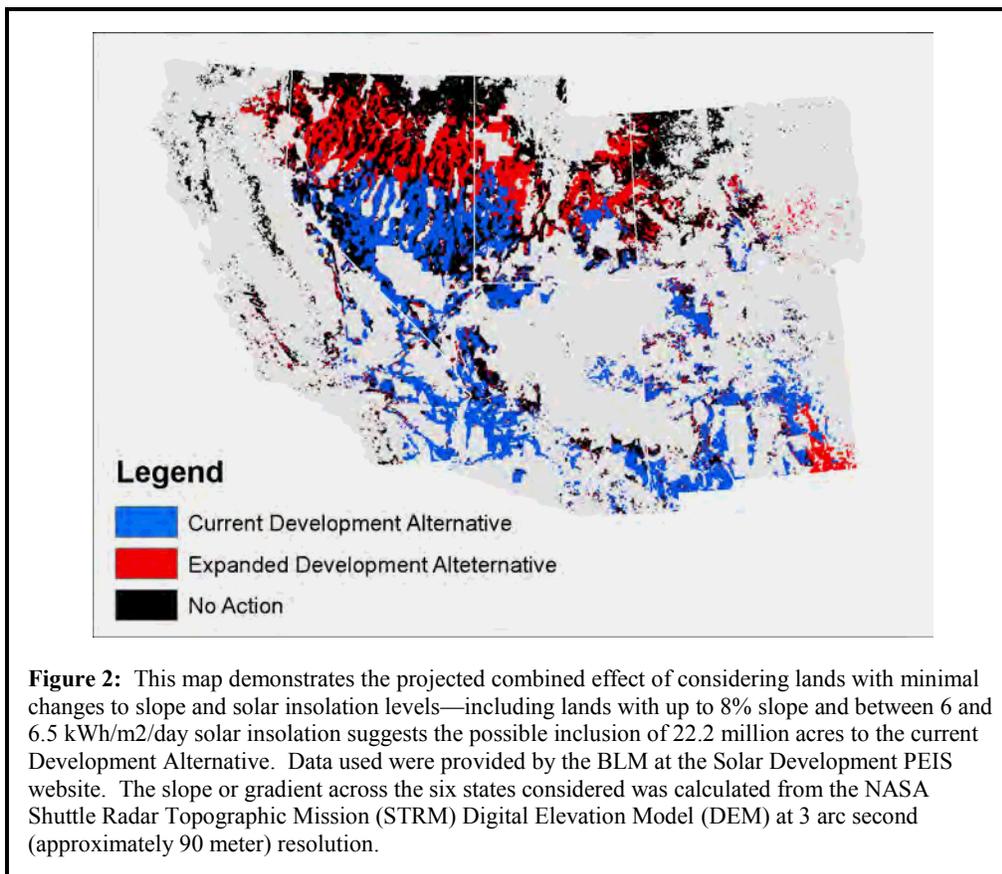
Similarly, *Table 1* depicts the projected effect of considering lands with relatively small changes to slope *and* solar insolation levels. The most noticeable factor in this case is altering solar insolation levels—holding the slope constant at less than 5% while adding lands with solar

<sup>7</sup> For this analysis we used the GIS datasets provided by BLM at the Solar Energy Development Programmatic EIS website (<http://solareis.anl.gov/index.cfm>).

insolation between 6 and 6.5 kWh/m<sup>2</sup>/day suggests an addition of 12.4 million acres. Combining the totals of each of these limited changes would suggest the likely inclusion of 22.2 million additional acres within the current Development Alternative, as depicted in *Figure 2*.

**Table 1:** Alternative Slope and Insolation Scenarios

Insolation	< 5% Slope	5% - 8% Slope
6 - 6.5 kWh/m <sup>2</sup> /day	12.4 MILLION ACRES	3.6 MILLION ACRES
> 6.5 kWh/m <sup>2</sup> /day	CURRENT DEVELOPMENT ALTERNATIVE	6.2 MILLION ACRES



To summarize, by increasing slope and/or insolation values, the effects of such a prescription would incite a multitude of difficulties—problems that could very likely undermine and jeopardize the effective management of solar resources. For one, there is little or no evidence that such changes are viable at a technological scale given the current conditions that define utility-scale solar development. The best solar resources, married to the best solar technologies, may not benefit from an alteration of current proposed slope and isolation paradigms. On the contrary, development within such areas could likely result in solar authorizations unable to

sustain themselves economically—which puts the resource and the goals of a BLM solar program at risk.

More critically, altering these values would place millions of acres of lands and their resources at risk, risk that has not been evaluated at all to date. For example, allowing development on slopes above 5% will implicate different wildlife and plant species, different soil types and different hydrologic regimes, none of which have been identified or addressed in the NEPA process to date. These upslope lands too are expected to be critically important for climate change adaptation.

Finally, instead of concentrating development near suitable areas and adjacent to infrastructure, the opening of these acres would perpetuate a piecemeal approach that could scatter development across landscapes on lands that are likely to be unsuitable based on ecological reasons.

#### **4. The approach to transmission analysis utilized in the Supplement needs to be changed.**

Transmission is an essential ingredient for a successful SEZ. To their credit, the Interior Department and BLM attempted to respond in the Supplement to requests from the solar industry and others for more information on transmission in connection with proposed zones and with future zones. Unfortunately, the approach taken is inherently flawed and, equally importantly, seems to assume that BLM should engage in the transportation planning business, rather than find a way to integrate transmission and land use planning considerations into the process of identifying, evaluating and designating new zones.

NRDC contracted with Aspen Environmental Group, a well known consulting company, to take a look at the “Methodology for Conducting Enhanced Transmission Assessment” that was developed for and tested in connection with the Supplement. Their report is attached as *Appendix 2*. It documents the flaws in the approach used in the Supplement, including the failure to consider critical factors.

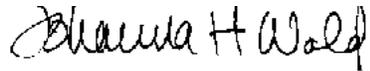
BLM is a land management agency. It cannot now develop the needed information about transmission and it should not be expected to. Rather than develop and analyze such information, the Bureau should obtain it from transportation planning entities such as the Western Electricity Coordinating Council (WECC). Indeed, BLM very appropriately submitted a study request to WECC earlier this month regarding the SEZs proposed in the Supplement.

The real challenge for the Bureau and the Department is to integrate the transmission information they receive from WECC and others with land use considerations, such as exclusion areas and other land use conflicts between potential SEZs and potential markets. We are eager to work with the BLM and potentially others to develop an approach that could be used to integrate land use and transmission considerations in such a way as to provide information that is useful not just to BLM but also to developers, utilities and other stakeholders.

## Conclusion

Thank you again for your commitment to zone-based solar development and to the establishment of a comprehensive and environmentally responsible framework for managing the solar resources of the public lands. Thank you also for considering these comments. If you have any questions, please do not hesitate to contact us.

Sincerely,



Johanna H. Wald  
Director, Western Renewable Energy Project  
Natural Resources Defense Council  
111 Sutter Street, 20th floor  
San Francisco, CA 94104

Bobby McEnaney  
Senior Public Lands Policy Analyst  
Natural Resources Defense Council  
1152 15<sup>th</sup> Street, NW Suite 300  
Washington, DC 20005

Katie Umekubo  
Western Renewable Energy Project Attorney  
Natural Resources Defense Council  
1152 15<sup>th</sup> Street, NW Suite 300  
Washington, DC 20005

## Appendix 1: Solar ROW Mapping Update

In our original comments on the Solar PEIS, dated May 2, 2011, NRDC submitted a report entitled *Bureau of Land Management Utility-Scale Solar Applications: A Geospatial Survey of Active ROW Applications*. The report was a Geographic Information Systems (GIS) assessment in which NRDC analyzed and mapped 166 right-of-way (ROW) boundaries for proposed and authorized utility-scale solar projects on Bureau of Land Management (BLM) lands in California, Nevada, New Mexico and Arizona. NRDC prepared the report to provide a single, contemporary snapshot of ROW applications likely to be considered active by solar developers and the BLM. Included here is an update to that report, providing a geospatial snapshot of active solar ROW applications within the context of revisions to the solar energy zones and variance area designations, as well as incorporating additional transmission data.

The following maps include the 79 active ROW applications identified in Appendix A of the Supplement to the Draft Solar Program EIS, as well as those applications included on BLM's Approved and 2011/2012 Priority Projects lists.

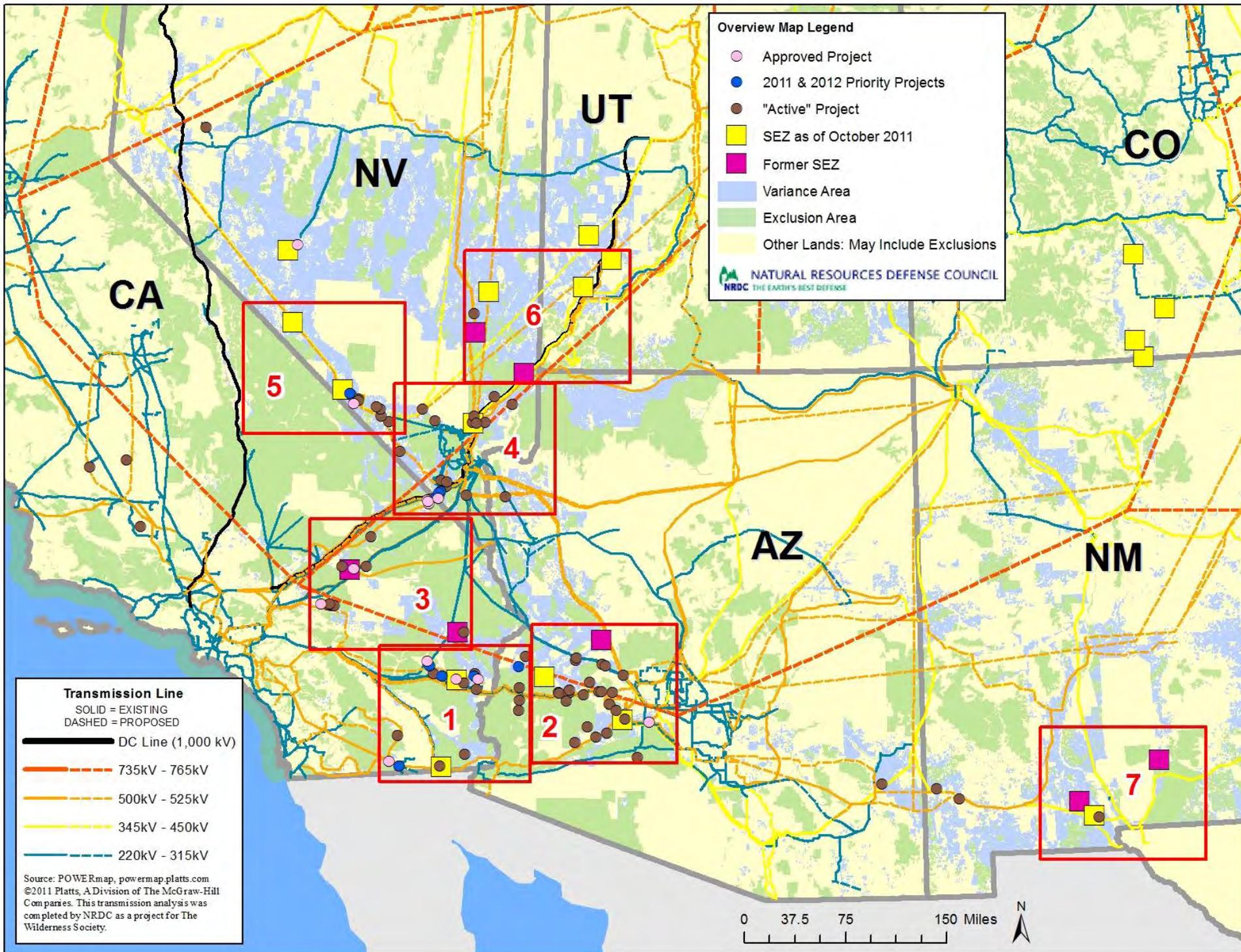
The following data layers were used to compile these maps (accessible at: <http://solareis.anl.gov/maps/gis/index.cfm>):

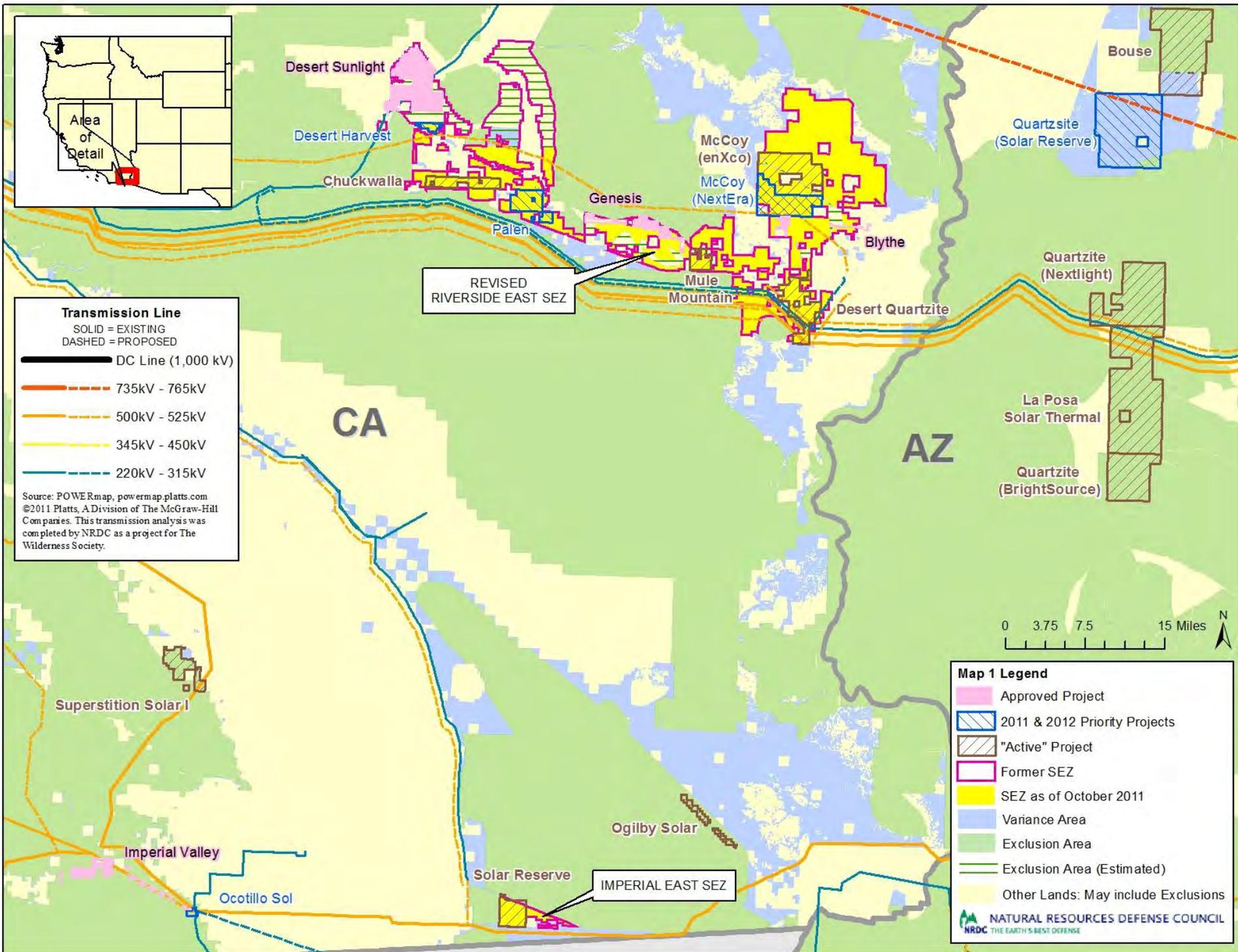
- Modified BLM Alternatives Group (SEZ PEIS Proposed, Modified SEZ Alternative and Variance Areas)
- Protected Resources Group (ACEC, National Monument, Roadless Area, Specially Designated Area, SRMA, Wilderness, Wilderness Study Area, Wild and Scenic River, NSO, ROW Avoidance, ROW Exclusion)
- Flora Critical Habitat, Fauna Critical Habitat, Fauna/CDCA (DWMA, Flat-Tailed Horned Lizard Habitat, Fringe-Toed Lizard Habitat, Mojave Ground Squirrel Habitat)

The GIS data for ROW boundaries, as well as depicted land designations were downloaded from BLM's Legacy Rehost 2000 System (LR2000) and ArcIMS service, found at [www.geocommunicator.gov](http://www.geocommunicator.gov), prior to the data being removed from the public website in late February 2011. In addition, transmission data was incorporated from Platts POWERmap as part of a project conducted by NRDC for The Wilderness Society. Additional exclusion area data from other available sources for the proposed Mojave Trails National Monument was also incorporated.

As we previously commented on the Draft PEIS, NRDC's analysis was hampered by inconsistencies with BLM's data—similar problems persist with the Supplement. Due to the fact that some of BLM's legacy data sets had these embedded inconsistencies, we caveat that the data layers used here are the most recent GIS data that was available to the public. Inconsistencies with revised solar energy zone maps and ROW boundary acreage estimates, as provided in the PEIS Supplement, are acknowledged.

*This work was performed by Rachel Fried, Bobby McEnaney, Matthew McKinzie, and Katie Umekubo of NRDC's Lands and Wildlife Program.*





**Transmission Line**  
 SOLID = EXISTING  
 DASHED = PROPOSED

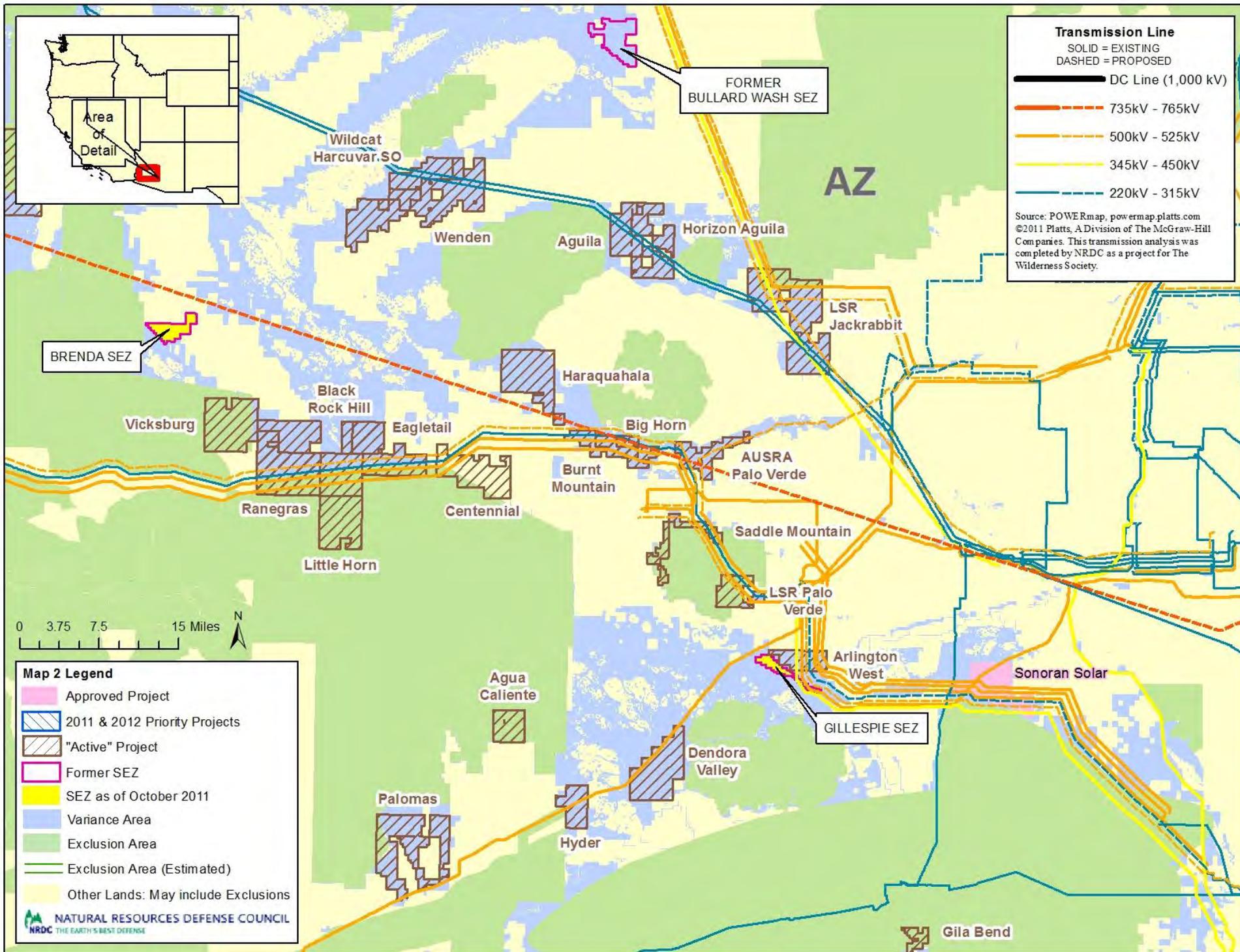
DC Line (1,000 kV)  
 735kV - 765kV  
 500kV - 525kV  
 345kV - 450kV  
 220kV - 315kV

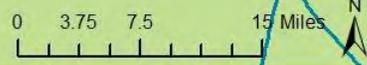
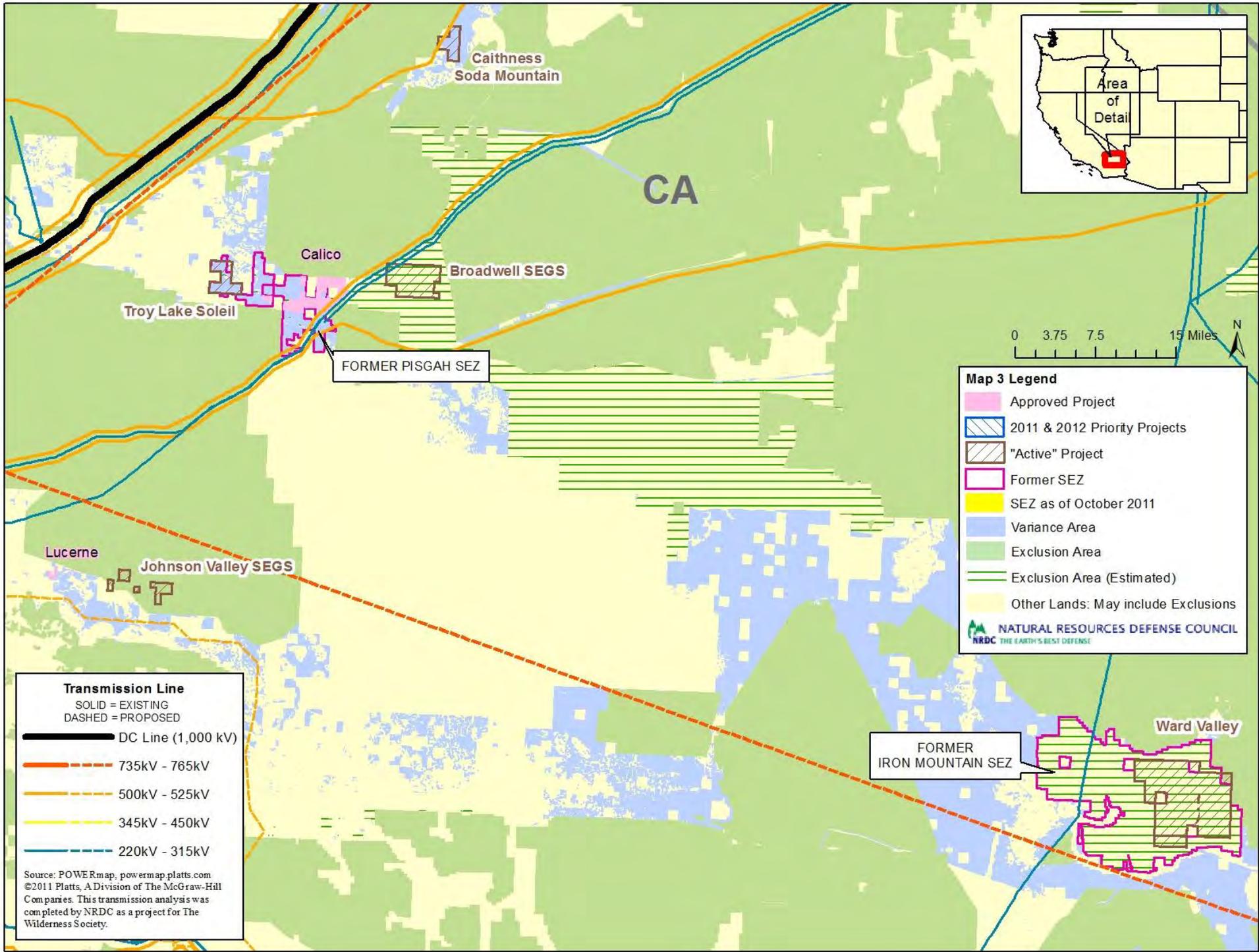
Source: POWERmap, powermap.platts.com  
 ©2011 Platts, A Division of The McGraw-Hill Companies. This transmission analysis was completed by NRDC as a project for The Wilderness Society.

**Map 1 Legend**

- Approved Project
- 2011 & 2012 Priority Projects
- "Active" Project
- Former SEZ
- SEZ as of October 2011
- Variance Area
- Exclusion Area
- Exclusion Area (Estimated)
- Other Lands: May include Exclusions

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**Map 3 Legend**

- Approved Project
- 2011 & 2012 Priority Projects
- "Active" Project
- Former SEZ
- SEZ as of October 2011
- Variance Area
- Exclusion Area
- Exclusion Area (Estimated)
- Other Lands: May include Exclusions

**NATURAL RESOURCES DEFENSE COUNCIL**  
 NRDC THE EARTH'S BEST DEFENSE!

**Transmission Line**  
 SOLID = EXISTING  
 DASHED = PROPOSED

- DC Line (1,000 kV)
- 735kV - 765kV
- 500kV - 525kV
- 345kV - 450kV
- 220kV - 315kV

Source: POWERmap, powermap.platts.com  
 ©2011 Platts, A Division of The McGraw-Hill Companies. This transmission analysis was completed by NRDC as a project for The Wilderness Society.

CA

Calico

Broadwell SEGS

Troy Lake Soleil

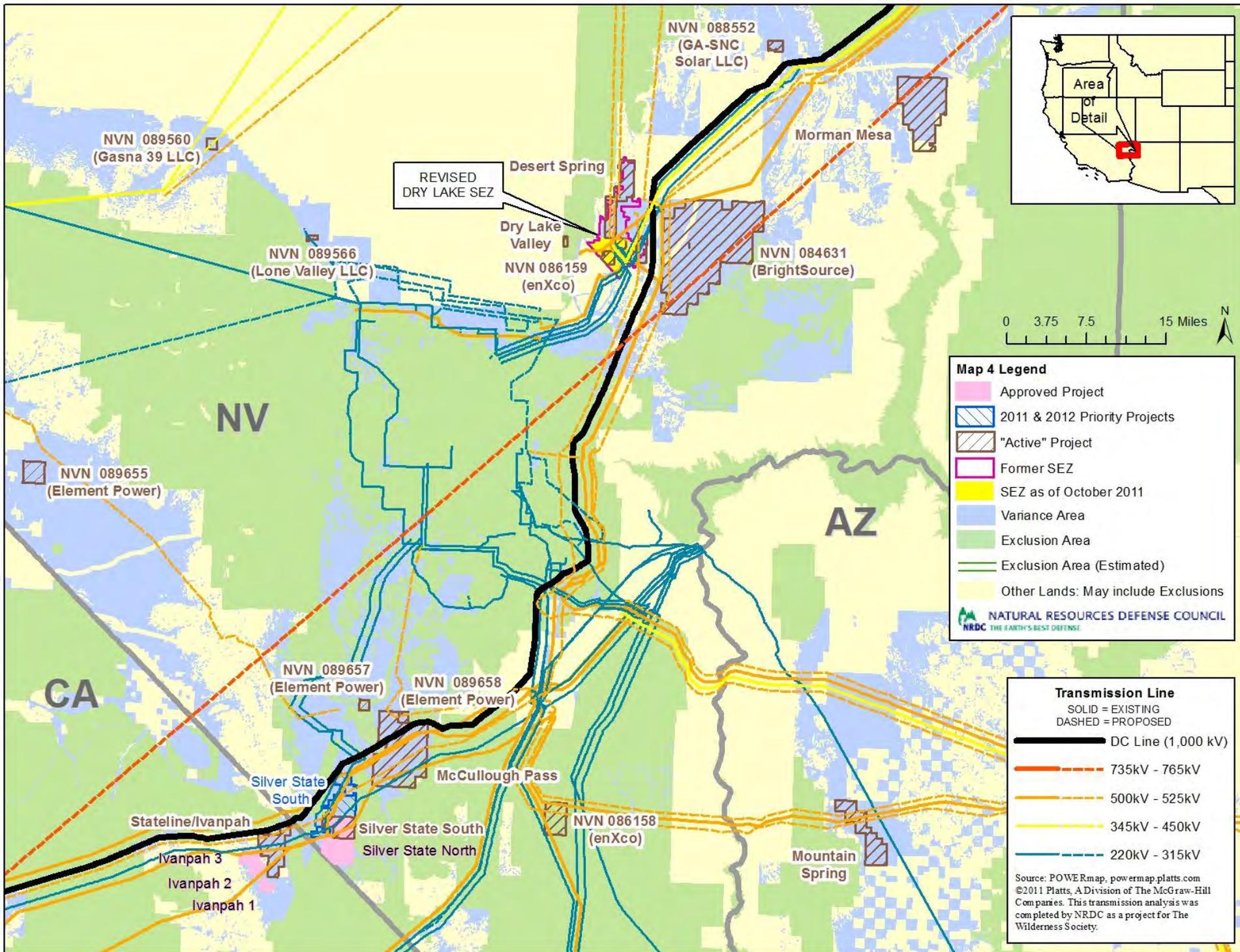
FORMER PISGAH SEZ

Lucerne

Johnson Valley SEGS

FORMER IRON MOUNTAIN SEZ

Ward Valley



**Map 4 Legend**

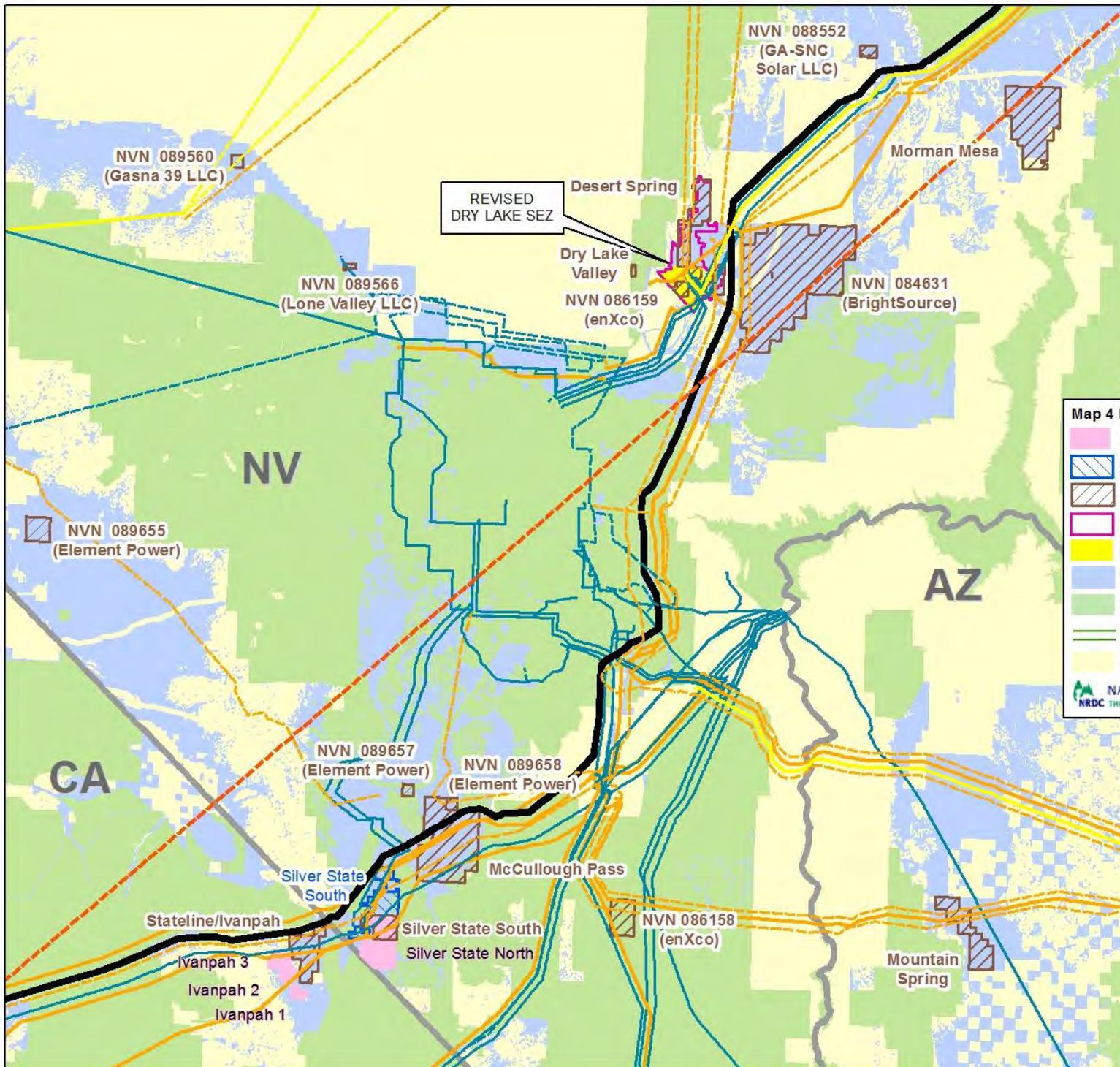
- Approved Project
- 2011 & 2012 Priority Projects
- "Active" Project
- Former SEZ
- SEZ as of October 2011
- Variance Area
- Exclusion Area
- Exclusion Area (Estimated)
- Other Lands: May include Exclusions

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**Transmission Line**  
 SOLID = EXISTING  
 DASHED = PROPOSED

- DC Line (1,000 kV)
- 735kV - 765kV
- 500kV - 525kV
- 345kV - 450kV
- 220kV - 315kV

Source: POWERmap, powermap.platts.com  
 ©2011 Platts, A Division of The McGraw-Hill Companies. This transmission analysis was completed by NRDC as a project for The Wilderness Society.





GOLD POINT SEZ

**Transmission Line**  
 SOLID = EXISTING  
 DASHED = PROPOSED

- DC Line (1,000 kV)
- 735kV - 765kV
- 500kV - 525kV
- 345kV - 450kV
- 220kV - 315kV

Source: POWERmap, powermap.platts.com  
 ©2011 Platts, A Division of The McGraw-Hill Companies. This transmission analysis was completed by NRDC as a project for The Wilderness Society.

NV

CA

REVISED AMARGOSA VALLEY SEZ

Amargosa North

NVN 089656 (Element Power)

NVN 089659 (Element Power)

Amargosa Farm Road

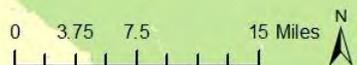
Spector Range

Lathrop Wells Solar

Highway 160

Crystal/Johnnie

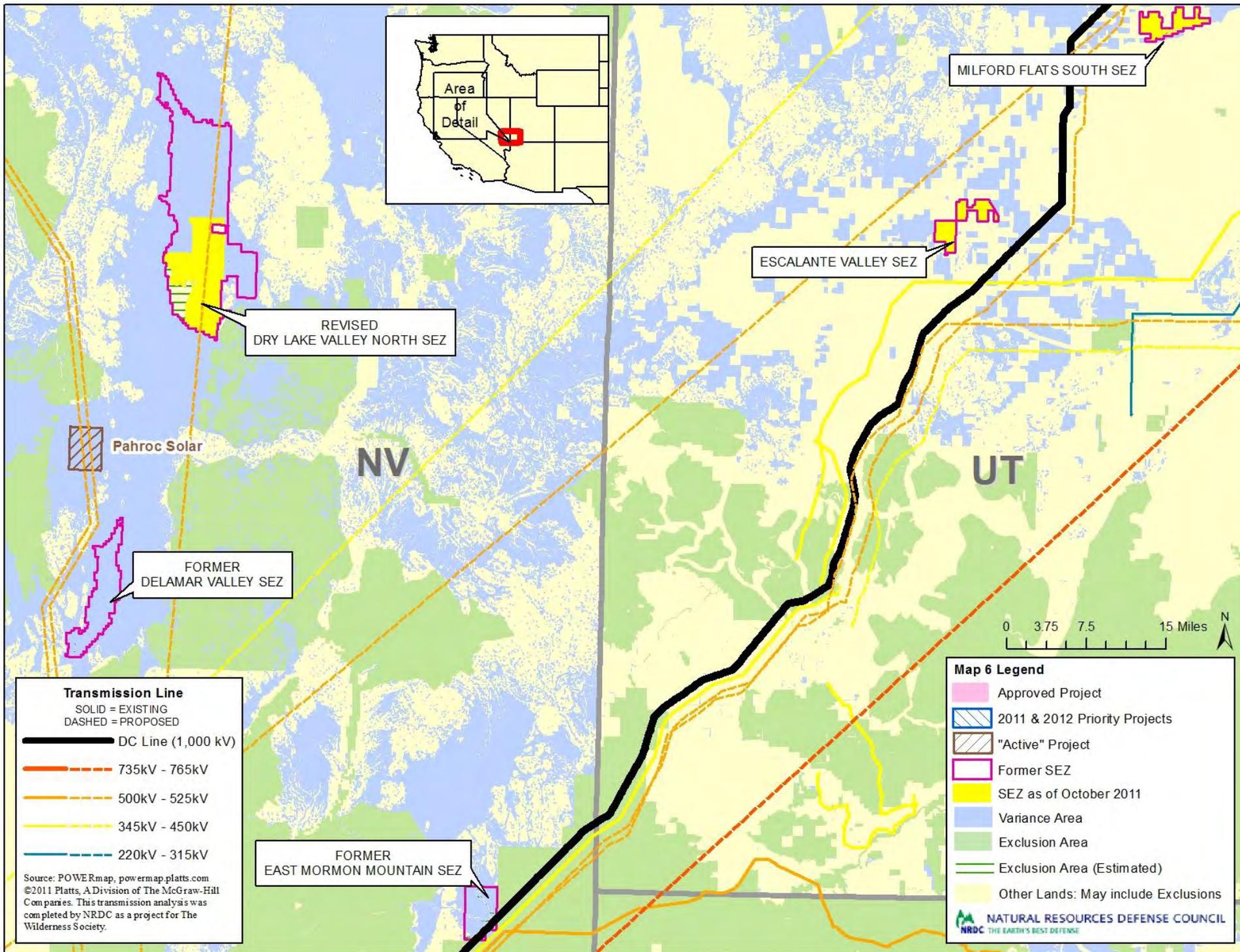
Johnnie Pahrump



**Map 5 Legend**

- Approved Project
- 2011 & 2012 Priority Projects
- "Active" Project
- Former SEZ
- SEZ as of October 2011
- Variance Area
- Exclusion Area
- Exclusion Area (Estimated)
- Other Lands: May include Exclusions

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REVISED  
DRY LAKE VALLEY NORTH SEZ

MILFORD FLATS SOUTH SEZ

ESCALANTE VALLEY SEZ

Pahroc Solar

NV

UT

FORMER  
DELAMAR VALLEY SEZ



**Transmission Line**  
 SOLID = EXISTING  
 DASHED = PROPOSED

- DC Line (1,000 kV)
- - -** 735kV - 765kV
- - -** 500kV - 525kV
- - -** 345kV - 450kV
- - -** 220kV - 315kV

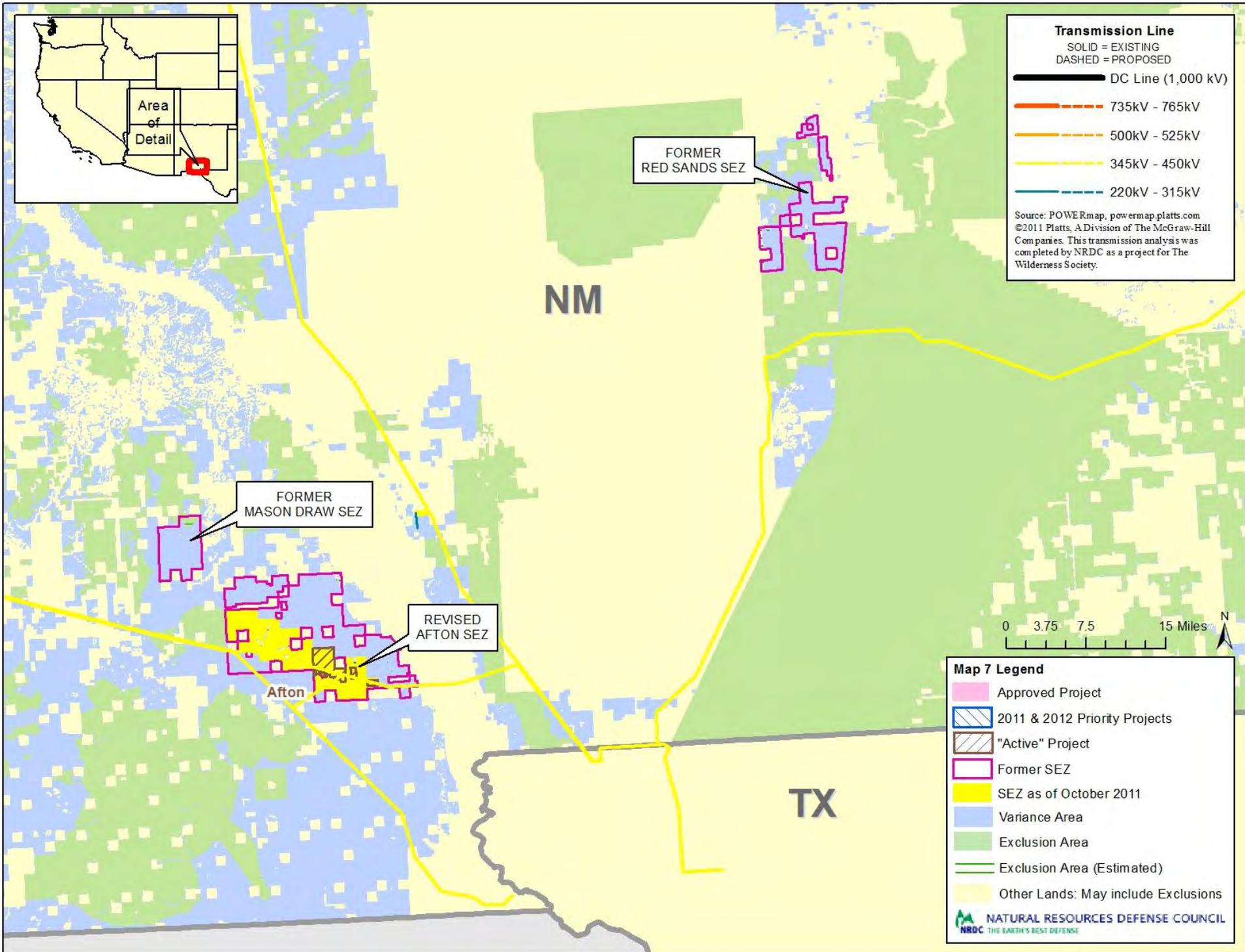
Source: POWERmap, powermap.platts.com  
 ©2011 Platts, A Division of The McGraw-Hill  
 Companies. This transmission analysis was  
 completed by NRDC as a project for The  
 Wilderness Society.

FORMER  
EAST MORMON MOUNTAIN SEZ

**Map 6 Legend**

- Approved Project
- 2011 & 2012 Priority Projects
- "Active" Project
- Former SEZ
- SEZ as of October 2011
- Variance Area
- Exclusion Area
- Exclusion Area (Estimated)
- Other Lands: May include Exclusions

**NATURAL RESOURCES DEFENSE COUNCIL**  
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January 23, 2012

235 Montgomery Street, Suite 935, San Francisco, CA 94104-3002  
Tel. 415-955-4775, Fax 415-955-4776, www.aspeneg.com

**To:** Johanna Wald, NRDC

**From:** Susan Lee & Emily Capello, Aspen Environmental Group

**Subject:** Comments on Supplemental Draft Solar PEIS, Transmission Methodology

## **Appendix 2: Solar Energy Zones and Transmission Lines**

Attached are Aspen's comments on the transmission methodology presented in the Supplemental Draft of the Solar PEIS.



## Solar Energy Zones and Transmission Lines

### A. Background

This analysis evaluates the methodology proposed for conducting enhanced transmission assessments for proposed solar energy zones (SEZs), as presented in the Supplemental Draft Programmatic Environmental Impact Statement for Solar Energy Development in Six Southwestern States (Solar PEIS).

**Draft Solar PEIS Consideration of Transmission.** The Draft Solar PEIS considered transmission in the following manner:

- It identified the nearest transmission lines available for each SEZ in Sections 8.1 through 13.3. The Draft PEIS assumed at least some of the solar energy developed would be transmitted over the nearest existing transmission line; however, the Draft PEIS assumed that for full build out, all SEZs would require additional transmission.
- It assumed a transmission line segment would be constructed from the SEZ to the nearest existing transmission line for initial build out of the SEZ. It assumed the ROW width would be less than 250 feet including additional width needed for construction. It was unclear whether access roads or other required disturbance areas (e.g., pull sites, laydown areas) for the transmission lines were included in the calculation of disturbance area.
- It identified generic transmission line impacts in Chapter 5 and generic transmission line mitigation measures, and it also noted that each transmission line upgrade or new transmission line would require separate NEPA compliance documentation.
- In addition, three appendices of the Draft PEIS addressed transmission:
  - Appendix D identified the nearest transmission corridors for each SEZ (between 0 to 39 miles) and regional transmission initiatives;
  - Appendix F summarized the West-wide Energy Corridor PEIS description of activities required for construction, operation, and decommissioning of transmission lines; and
  - Appendix G included a Transmission Constraint Analysis.

### B. Consideration of Transmission in the Supplemental Draft Solar PEIS

The Supplemental Draft Solar PEIS (SDSPEIS) proposed a revised methodology that would be implemented in the Final Solar PEIS to better quantify transmission impacts. The SDSPEIS does not define the impacts that would result from the transmission interconnections; these would be presented in the Final Solar PEIS. The SDPEIS does present a test case analysis for the proposed Brenda SEZ to demonstrate the types of additional information that would be included in the Final Solar PEIS.

The Supplemental Draft Solar PEIS attempts to quantify transmission capacity and need for the SEZs and establishes a methodology for analysis of the potential impacts of and need for transmission for a SEZ.

We appreciate the effort put into development of the transmission methodology in the SDPEIS, because defining logical and real transmission corridors for each SEZ is essential to the viability of a SEZ. Some aspects of the proposed methodology are valuable. However, some the methods proposed in the Supplemental Draft PEIS are extremely problematic, and would result in an illogical and inaccurate transmission build-out scenario.

Our major concerns about the methodology proposed for use (and illustrated with Brenda SEZ Analysis) are the following:

- **Definition of load area characteristics.** The population estimates at the load centers are inaccurate. There is no consideration of the fact that most load areas would be served by more than one SEZ (and other types of renewable resources). Information regarding demand for solar resources required by each load center did not include the analysis of load areas' local RPS requirements so the likelihood of transmission being required to serve a load area may be overstated. As such, the broad assumption that solar resources would provide 20 percent of the load requirement for renewable resources is unrealistic. For example, the San Diego load center (with California RPS requirements) should have a very different load profile for use of renewable resources than would Phoenix, Tucson, or Las Vegas.
- The use of non-traditional methods to determine available capacity on the existing transmission system is problematic, and results in inconsistent results in comparison to the numerous ongoing transmission planning processes. The methodology used thermal ratings for the lines rather than path ratings, which can give very different results. For example, in Nevada the On-Line or South SWIP lines have a thermal rating of 2,000 MW but in fact, only 600 MW can be carried safely.
- The methodology ignores transmission usage cost issues or delivery cost issues (rate pan-caking) and does not consider operating limitations of electric system. The analysis should not assume that the electric system can use all the rated power on the system as the availability of a particular line is dependent on the entire system and varies on a regular basis. Operating characteristics of each potential line should be considered, including the direction of generation and load.
- The methodology does not consider that the electric system may not be able to accommodate the delivery of solar resources without downstream transmission infrastructure enhancements and ancillary services.
- The analysis does not address the quality of resource and other competitive issues such as recognizing that some SEZs would be potentially competing for the same markets or market access points.
- The methodology does not consider how states will actually be most likely to meet their RPS requirements (e.g., an NREL study <sup>1</sup> determined that most western States will meet their RPS needs with in-state resource and sell excess prime resources out of state).
- The analysis assumes that "Planned transmission facilities" will be available for use by SEZs. This assumption does not recognize that many of the planned transmission lines illustrated on local or federal planning maps will not be built.
- The methodology does not recognize land use limitations of existing corridors (e.g., narrow areas with constraints limiting future lines). The assumption that a new transmission line can be added parallel to any existing corridor is not always correct.

## C. Suggested Revisions to Transmission Methodology

**Components to be Retained.** While some components of the methodology proposed in the SDSPEIS would result in illogical conclusions, some of the considerations defined in the algorithm are valuable and should be retained in any methodology for identifying transmission considerations for proposed and

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<sup>1</sup> Renewable Resources and Transmission: Needs and Gaps. Southwest Renewable Energy Transmission Conference. May 21, 2010. [online at:] <http://www.azcc.gov/images/presentations/NREL/Hurlbut%20NREL.pdf>

future SEZs and identifying associated impacts. The following components of the methodology proposed in the SDSPEIS should be retained:

- Identification of potential markets
- Distance to markets
- Use of existing corridors
- Existing capacity in transmission lines

While the components listed above should be retained, we recommend that the methods used to determine each of these items be revised as noted below.

**Other Components to be Considered.** A number of general factors should be included in the transmission analysis of any existing or proposed SEZ. The transmission requirements for a particular SEZ and the impacts associated with transmission lines will be driven by general information about the SEZ while the system in which the renewable energy is being proposed as well as by issues relating to the deliverability of the energy in the SEZ.

**General Factors.** The general factors are the following:

- **Size and Capacity of Potential SEZ.** Defining the size and potential capacity of each SEZ, so the appropriate transmission need is considered.
- **Applicable State and Federal Requirements.** Defining state RPS and other local or federal requirements that drive the demand for renewable energy near the SEZ.
- **Potential Markets and Distance to Market/Market Access Point.** Identifying the potential markets for the renewable energy generated in the SEZ, and then defining the substation market access points through which that energy has to pass. The likely market access point may not be within the urban areas; it would be a major substation that provides access to the urban load centers. The length of the transmission line to market access points would help determine land use impacts, because length and corridor width can be used to determine acres of impact.
- **Competing Renewable Resources.** Defining whether there are competing renewable resources that might increase or decrease the likelihood of transmission development between a SEZ and a load center.
- **Competing or Complimentary SEZs.** Defining whether there are other SEZs that may either limit the development of the SEZ under consideration based on intervening locations or having similar resource quality and positioning.

**Transmission Deliverability.** After the market factors have been defined, the deliverability of the energy or ease of building transmission to the SEZ should be established. Specifically in evaluating a SEZ, the following factors should be considered:

- **Transmission Requirements to Access Markets.** Identifying relative transmission costs and complexity to access the defined markets, including currently existing transmission capacity and transmission systems, if available.
- **Existing/Expandable Corridors.** Defining existing designated corridors and existing transmission lines (de facto corridors) and the relative likelihood of whether these corridors can be expanded for new lines.

- **Existing Transmission Line Capacity/Constraints.** Defining the likelihood of available existing transmission line capacity and constraints to using the available capacity.
- **Transmission Queue.** Considering the transmission queue between applicable substations.

We are aware that it's not easy to define available capacity in existing lines. Ideally, the transmission queue should reveal useful information, but determining how a queue would use available capacity is difficult without a system impact study or the required technical expertise and data. However, the DOE could conduct an analysis that demonstrates how to best use existing transmission capacity to access potential markets.

## **D. Conclusion**

Much of the information described above can be obtained with relative ease. The Interior Department and Bureau of Land Management should work with other agencies, and specifically transmission planning entities, to obtain the types of information specifically identified by this assessment. By adopting these recommendations, the BLM will be able to maximize the agency's limited resources in directing development to those areas that will have the greatest chance for success.

Thank you for your comment, claudia sall.

The comment tracking number that has been assigned to your comment is SEDDSupp20180.

Comment Date: January 27, 2012 21:14:48PM  
Supplement to the Draft Solar PEIS  
Comment ID: SEDDSupp20180

First Name: claudia  
Middle Initial:  
Last Name: sall  
Organization:  
Address: 54919 skyline ranch rd  
Address 2: po box 37  
Address 3:  
City: pioneertown  
State: CA  
Zip: 92268  
Country: USA  
Privacy Preference: Don't withhold name or address from public record  
Attachment: BLM\_Solar SPEIS\_Comments\_Claudia\_27Jan2012.DOC

Comment Submitted:

please see attached comment letter.

**Claudia Sall**  
**PO Box 37**  
**Pioneertown, CA 92268**

January 27, 2012

Draft Solar Energy Programmatic EIS  
Argonne National Laboratory  
9700 S. Cass Avenue – EVS/240  
Argonne, IL 60439

RE: Public comments on the Supplement to the Draft Solar Energy Programmatic Environmental Impact Statement [PEIS]

Attn: Bureau of Land Management and Department of Energy

Several years ago the Secretary of the Interior announced that the Department would become a prominent player in the development of renewable energy generation on 22 million acres of public lands in the Southwest. Shortly afterward, BLM was inundated with applications for landscape scale development of renewable energy projects in remote regions of the California Desert. Citizens protested about the impact that such industrialization would have on the ecological integrity of the region and contended that such widespread development mandated an integrated NEPA investigation. BLM complied and began examining the wind and solar development, although in separate actions, not as the comprehensive examination requested by citizens.

In this effort, BLM employed a strategy of creating solar energy zones [SEZs] where solar development would be concentrated and where solar projects would avoid public lands with high conservation value. Citizens and organizations representing collective voices of citizens have actively engaged in PEIS process for the past 3 years and those 22 million acres were refined into SEZ's to a fraction of that acreage. We have reasonably expected that the refining of the SEZs was nearing completion, that is, until pink and blue variance lands began appearing on the maps of the Supplemental PEIS and the Preferred Alternative.

Upon examination of those areas, we have learned that the Bureau is putting all original 22 million acres back onto the table, still allowing solar development in those “non-SEZ” public lands on a “case by case” basis and thereby, effectively negating the NEPA work and independent science analysis that has been going on these past 3 years. These pink and blue lands have known wildlife corridors that preserve the biodiversity health of major protection blocks in the California Desert, i.e. Mojave National Preserve, Joshua Tree National Preserve, and Death Valley National Preserve. Moreover, the Bureau has lumped lands of low conservation value with lands of unknown conservation value, a practice that must stop. Adding insult to injury, they have also placed lands donated with private tax dollars to the federal government and with the intent of conservation onto the renewable-energy auction block. These actions by the BLM are serious breaches of the public trust and have raised issues that must be redressed.

I remind BLM that the Solar PEIS was initiated as a response to the American public’s request for fair play and thoughtful planning for renewable energy development on their public lands. BLM’s focus of the Solar PEIS thus began as an effort to discover appropriate areas of low conservation value, to determine what and where was needed for solar development, and to refine that acreage into appropriate areas agreed upon by public consensus.

Therefore, I oppose the “No-Action” Alternative and the present, altered version of the Preferred Alternative of the Solar PEIS. In addition, I request that

- the pink and blue variance areas be removed,
- that the unknown conservation lands be removed from the same category as the “low conservation” lands
- and that the unaltered Preferred Alternative worked on by citizens and stakeholders be restored.

Claudia Sall  
Citizen of the California Desert

Thank you for your comment, Steven Belinda.

The comment tracking number that has been assigned to your comment is SEDDSupp20181.

Comment Date: January 27, 2012 21:23:03PM

Supplement to the Draft Solar PEIS

Comment ID: SEDDSupp20181

First Name: Steven

Middle Initial: R

Last Name: Belinda

Organization: Theodore Roosevelt Conservation Partnership

Address: PO Box 1945

Address 2:

Address 3:

City: Red Lodge

State: MT

Zip: 59068

Country: USA

Privacy Preference: Don't withhold name or address from public record

Attachment: FINAL-Supplemental Solar PEIS comments.pdf

Comment Submitted:

# **SPORTSMEN** FOR **Responsible Energy Development**

January 27, 2012

Solar Energy Draft PEIS  
Argonne National Laboratory  
9700 S. Cass Avenue—EVS/240  
Argonne, IL 60439

**RE: Comments to the Supplement to the Draft Programmatic Environmental Impact Statement for Solar Energy Development in Six Southwestern States**

To Whom It May Concern:

Please accept the following comments from the Sportsmen for Responsible Energy Development (SFRED) coalition, represented by the organizations signed below, on the Bureau of Land Management's (BLM) and the Department of Energy's (DOE) proposed **Supplement to the Draft Programmatic Environmental Impact Statement for Solar Energy Development in Six Southwestern States (SPEIS)**. SFRED supports the public process underway as our nation moves forward in seeking responsible ways to develop our enormous solar potential on public lands in the West.

Sportsmen for Responsible Energy Development (SFRED) is a coalition of hunting, fishing and conservation organizations and individuals who represent the wide spectrum of America's outdoor community that support and promote responsible energy development on public lands. We are dedicated to the stewardship of America's landscape to help expand fish and wildlife habitat and increase public access to quality hunting and fishing. Our primary concern with any proposal to develop projects on federal lands is based on the needs of fish and wildlife and those who pursue fish and game for recreation and subsistence.

These comments supplement our organizations' previous comments on the Draft PEIS submitted in April 2011 and address only those new issues found in the Supplemental Draft PEIS (SPEIS). Our comments also include issues, concerns, and recommendations developed from sportsmen and conservation organizations who participated in the Sportsmen for Responsible Energy Development "Sportsmen Speak on Solar" forum held in Las Vegas on November 30, 2011. This forum had over 25 national, regional, and local conservation organizations represented and over 50 individuals participating, many of those groups have signed on to support these comments.

We would like to thank BLM for addressing some issues that we raised in our original comments and providing more detail and direction on how solar energy zones will be authorized and implemented. We also applaud BLM for identifying and committing to regional mitigation plans

January 27, 2012

and areas that will be excluded. We are also pleased to see that BLM is making a very conscientious effort to eliminate those zones that do not have production potential for industry and those that cannot immediately export the electricity produced due to lack of transmission capacity. This has made the existing Solar Energy Zones (SEZ) presented in the SPEIS more acceptable to sportsmen and will provide building blocks for considering new zones in the future.

The following are our specific comments on the details of the SPEIS and our concerns and recommendations for solar energy production on BLM lands that should be addressed in the Final PEIS.

### ***Proposed Solar Energy Zones***

The reduction in acreage and zones in the SPEIS is a positive effort to only include those areas that will have the least conflict with other uses and values, be attractive to industry for actual production of solar energy, and be able to immediately link to existing or soon-to-be-built transmission lines. As this is a programmatic document intended to set policy for solar production, the inclusion of SEZ and their subsequent authorization could be problematic. BLM has done a good job of screening the zones and efforts to further refine the SEZ should continue through to the Final PEIS. In addition, we recommend the BLM implement the recent BLM IM 2012-039 (*Identification and Uniform Mapping of Wildlife Corridors and Crucial Habitat*, or CHAT) released January 1, 2012 and effective immediately. This new directive is pursuant to a Memorandum of Understanding (MOU) with the Western Governors' Association and their ongoing coordination among Federal agencies and states to provide better information about priority habitats. As for future SEZ, the process should follow a similar process for establishment and refinement. Positive developments within the SPEIS include:

- Reduction of acreage for SEZ from 677,000 acres to 285,000 acres
- Reduction in availability outside zones from 21.6 Million acres to 20.3 Million acres
- Increased projected utilized acreage from 31.6% to 75% = efficient use of designated SEZ
- 24,000 MW of energy that is not produced by fossil fuels
- Reduction of SEZ from 24 to 17
- Optimized linkage to existing or real transmission

### ***Recommendations***

1. Continue to screen proposed SEZ and pending applications for Solar Right of Ways (ROW) to provide enough acreage for solar energy production, with the ability to link to transmission lines, in the least conflicting areas with fish and wildlife resources and values.

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2. Create additional screening criteria for the inclusion of impacts to recreation of public lands that will be affected by the development of SEZ. Recreation must include hunting, fishing, and other fish and wildlife related activities.
3. Only designate areas for SEZ that will be utilized for solar energy production and strive to keep a 75% utilization rate of lands designated as SEZ. This will minimize the amount of needed acres for solar production and eliminate the problems with lands being held for future development without real intention for production (speculation).
4. Delay taking any new applications for Solar ROW until the Final PEIS and Record of Decision (ROD) is signed. By continuing to accept ROW applications, BLM is creating a workload problem and may run into problems with implementation of the ROD. This will also build trust with other public land users who have experienced inadequate decisions resulting in significant impacts from the BLM during oil and gas leasing and development.
5. Include in the Final PEIS an analysis of those areas outside of the SEZ that will experience reduced access for hunting and shooting activities because of buffers or “no shooting zones”.

#### ***Handling of Existing Solar Applications***

We are concerned that the current solar project applications, pending or authorized, will have inadequate guidance frameworks for siting, evaluation, monitoring, and enforcement of environmental quality control. Due to the uniqueness of solar development and the limited research on its environmental impacts, we remain concerned that the “grandfathering” of 79 applications and more than 685,000 acres under current management direction is problematic. A primary concern of ours is the effects on groundwater and surface water sources. In addition, the determination of the priority for processing these previous applications will have an impact on the availability of Agency personnel needed to work on new applications within the approved SEZ.

We support the concept of solar energy development but we must be realistic about the potential direct and indirect impacts that can occur. The use of parabolic trough and central tower systems requiring steam plants for their electricity source require relatively large volumes of water. Water sources in a desert environment remain scarce and highly valuable, especially for fish and wildlife species. With the unknown impacts concentrated solar power facilities would have on temperature variations and associated effects to the surrounding habitat, we recommend that all pending and pre-approved applications under current policies include commitments for rigorous monitoring, reporting, and research in order to minimize and correct any indicated problems.

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### ***Regional Mitigation Plans***

We are very pleased to see the BLM commit to mitigation as part of the SPEIS, but we have concerns with the certainty of implementation and the funding required to conduct successful mitigation of impacts. We have observed mitigation being used by many agencies, including the BLM, as a “justification” for authorizing energy development on sensitive wildlife areas. However, these mitigation efforts often lack a rigorous, science-based mitigation program that has effectively allowed for resources to be sustained, as promised, throughout development. The worst-case example is the Pinedale Anticline natural gas project in western Wyoming where mule deer and sage-grouse declines have occurred beyond acceptable levels. Although millions of dollars have been spent on mitigation there is no evidence that the impacts have been offset, alleviated or replaced. Mitigation can be very expensive, particularly if you have a large magnitude impact on species that have specialized habitat needs or in arid environments.

### ***Recommendations***

1. Completion of Regional Mitigation Plans for each region (can be defined within the Final PEIS) and actions that will be part of any SEZ authorization ***within 6 months*** of the ROD for the Final PEIS. These plans should include population or habitat objectives and impact thresholds for each focus species or habitat and also include mitigation for impacts to recreation and loss of access to public lands.
2. Regional Mitigation Plans should be based on current guidelines for mitigation published by the Council for Environmental Quality (CEQ) . This includes a commitment to science-based, structured mitigation plans that are based on a “value-for-value” approach.
3. Regional Mitigation Advisory Teams should be constructed with members consisting of affected stakeholders, industry, government (Federal, State, Local), and external scientists. These advisory teams should be in place within 6 months of the Final PEIS and ROD or within 6 months of each new SEZ being authorized.
4. Mitigation trust accounts should be established for each Regional Mitigation Plan that will be used to carry out mitigation activities. Funding for each trust account should be identified in the Final PEIS.
5. For solar energy activities that are tiered to the Final PEIS, the CEQ guidelines for mitigation during NEPA planning should be followed if activities are authorized using a Finding of No Significant Impact.

### ***Exclusion Areas***

We support the BLM’s approach to identifying areas of public lands where solar energy will not be a suitable use. This approach will provide certainty for industry and allow for other multiple-use resource values to be managed without fear of impacts from solar energy. Our organizations have advocated and promoted the identification of “special areas” that are too valuable to develop and the BLM’s strategy is congruent with that approach. We understand

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the need for some flexibility in these areas based on changing conditions but it must be used very carefully and with public consideration of the tradeoffs.

***Recommendations***

1. Provide more details for the exclusion areas to eliminate any confusion or misinterpretation of values or areas that will be included.
2. Include high value and high use recreation areas, including those areas that are deemed irreplaceable or “world class” for fish and wildlife habitat or hunting and fishing activities.
3. Provide for a systematic monitoring process and review for exclusion areas every 5 years with stakeholder involvement.
4. Incorporate other processes being developed to identify important fish and wildlife values such as the Western Governors Association’s sponsored Critical Habitat Assessment Tool (CHAT) and state fish and wildlife agencies’ developed Decision Support Systems.
5. Provide detailed status maps via a designated website for the exclusion areas and the reason they are being excluded from solar development.

***Variance Process***

We understand the desire to have a process in place for the development of solar energy outside of those SEZ identified in the PEIS. We also understand the BLM’s need to comply with the Federal Land Policy and Management Act (FLPMA) requirements for the identification of suitable uses for lands through the Resource Management Plans (RMPs) for BLM administered lands. We have concerns, however, based upon BLM’s experience with oil and gas leasing and development, that similar mistakes may be made in the authorization of public lands for solar energy development. It is for that reason that we strongly support the designation of SEZ. The variance process as set forth in the SPEIS could undermine the value of SEZ. We are concerned that many of the factors identified in the variance process need only be “considered” by BLM. We are concerned that the process does not emphasize the value of meaningful public involvement. We are also concerned that the variance process will result in never ending planning and NEPA documents, which take up needed resources and funding for other management needs.

***Recommendations***

1. Require advanced public and outside government stakeholder notification and meetings similar to pre-proposal meetings with BLM, as identified in the Final PEIS.
2. Clarify when the variance process will be employed and how the BLM will make the information available for public review and comment.
3. Require an annual meeting within each state that reports on any new applications for solar development that will be disclosed to the public.
4. Post all variance requests and affiliated documents on each state BLM office’s website within 30 days of receipt.

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5. Outline how BLM will entertain changes to the variance process and how often the variance process will be reviewed or revised. We recommend a thorough review every 5 years
6. Applicants should be required to meet some of the factors listed for consideration, including the viability of the project and that it will have little or no impact on other public lands resources, before a variance will be granted.

### ***Adaptive Management***

The BLM's historical application of adaptive management for energy development has been largely inadequate. We understand the flexibility and advantages of using a scientific adaptive management approach to land management but have concerns that given the lengthy time commitment, the large geographic area devoted to solar energy production, and the lack of technical options for producing solar energy that adaptive management may not be the best approach. We do not advocate using an adaptive management approach in the Final PEIS, but if BLM chooses to keep this approach we recommend the items below.

### ***Recommendations***

1. Review the applicability of the use of adaptive management for solar energy through the advice of experts in adaptive management – both within federal government and external sources.
2. Provide clear guidance and instruction on how adaptive management will be applied to BLM lands used for solar energy. This includes how adjustments to operations will be made, how monitoring will be conducted and funded, how annual review cycles will be held, timelines to be met and what authorizations or uses will be changed based on monitoring results.
3. Follow DOI handbook on Adaptive Management and other guiding documents available in published literature.
4. Establish an adaptive management review team, including external experts, which will have the responsibility and authority to ensure successful implementation of adaptive management.
5. Create a webpage available to the public that posts current and relevant information of the implementation of the adaptive management program.

### ***Public/Stakeholder Involvement***

Public lands belong to all Americans and are held in trust for the public by the BLM. Hunters, anglers, and other public land users are stakeholders in the management of public lands and must be engaged early and often in the policy discussions and decision making processes. BLM has done a good job to date on the SPEIS and that effort must continue as SEZ are authorized, exclusion areas are identified, mitigation plans are made, and the variance process takes shape.

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***Recommendations***

1. Require the public to be notified on all implementation of solar energy development on public lands via the Internet, local media sources, and other avenues for notification.
2. Develop a dedicated webpage for the implementation, mitigation, and variance process for solar development on public lands.
3. Make all data used for decisions, monitoring, and variance processes available in a timely manner to the public for download and use.
4. Hold annual review meetings on the implementation and mitigation actions of solar development on public lands.
5. Develop specific stakeholder groups, including sportsmen and conservation organizations, that can work with industry at the local or regional level.

***Wildlife***

The management of habitat is extremely important for the future of fish and wildlife on public lands. In addition to habitat concerns, applying professional wildlife management practices and ensuring access to public lands for research and recreation is also of importance. Sensitive species and other important habitats should be identified and considered for exclusion areas. Important surface and groundwater sources must be protected. Mitigation plans must meet the needs of fish and wildlife and habitat should be linked to populations and objectives for each set in coordination with state and federal fish and wildlife agencies. Of particular concern are sage-grouse, mule deer, desert bighorn sheep.

***Recommendations***

1. Identify important fish and wildlife habitats and migration/movement corridors for each region in coordination with federal and state fish and wildlife agencies and by utilizing CHAT.
2. Avoid all irreplaceable habitats or other areas where solar development would have irreparable impacts to fish and wildlife.
3. Develop a process to link habitat management on public lands to state population objectives for game species like deer, elk, bighorn sheep, and upland game birds.
4. Develop a regular review process for reviewing the fish and wildlife management activities taking place in conjunction with solar energy development and how to include future science and information into land management.
5. Identify gaps in knowledge or science for the impacts on fish and wildlife from solar energy development and assist with funding research projects to address those gaps.

***Sage-Grouse***

1. Develop a process for inclusion of any future federal, state, or local management planning for sage-grouse on public lands including adjustments that may result from federal protection due to an Endangered Species Act listing.

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2. Adjust the habitat mitigation ratio from 1:1 (which is not adequate to ensure sustainable sage-grouse populations and is not based on science) to a more appropriate value-for-value ratio based on current science or other mitigation (i.e. – Fish and Wildlife Coordination Act).
3. Ensure that sport hunting for sage-grouse is not closed or restricted due to solar energy development on public lands.

***Mule Deer***

1. Identify key mule deer migration and movement routes in addition to other key habitats (winter, parturition) and avoid impacts to these habitats that would impair their continued productive use by mule deer.
2. Implement the recommendations contained within the 2011 Western Association of Fish and Wildlife Agencies Mule Deer Working Group publication, “Energy Development Guidelines for Mule Deer.”
3. Implement the recommendations contained within the 2011 Theodore Roosevelt Conservation Partnership report, “Mule Deer and Energy: Federal Policy and Planning in the Greater Green River Basin.”
4. Develop a Memorandum of Understanding with the Mule Deer Foundation and other conservation groups on mule deer management on public lands within each region affected by solar energy development.
5. Ensure that mule deer hunting or access to mule deer hunting are not closed or restricted due to solar energy development on public lands.

***Bighorn Sheep***

1. Identify key bighorn sheep migration and movement routes in addition to other key habitats (winter, parturition) and avoid impacts to these habitats that would impair their continued use by bighorn sheep.
2. Adhere to any specific bighorn sheep management plans that are developed by the state fish and wildlife agencies.
3. Develop a Memorandum of Understanding with the bighorn sheep focused groups and other conservation groups on bighorn sheep management on public lands within each region affected by solar energy development.
4. Ensure that bighorn sheep hunting or access to bighorn sheep hunting are not closed or restricted due to solar energy development on public lands.
5. Use habitat enhancements or other accepted techniques to prevent bighorn sheep from utilizing habitats close to SEZ and other high visibility areas that might put them at risk.

***Access***

The ability to access and use public lands is imperative to multiple-use management and public trust stewardship. Solar Energy Zones will convert many acres of public lands to single use and

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that will result in loss of access and use of those lands within, and possibly adjacent to, authorized SEZ.

***Recommendations***

1. Ensure that overall access to public lands will not be affected other than those lands that are essential for solar energy production.
2. Require all losses of access to be offset by the acquisition of private lands, access easements to private lands, or access to currently inaccessible isolated public lands.
3. No shooting zones or other restrictions to hunting and shooting need to be identified in the Final PEIS and those acres adequately mitigated.
4. Public use of roads, trails, and other rights-of-way for access to public lands should not be impacted, unless compensation is provided.
5. No region or state should have so much solar energy development that the public would be dissuaded from accessing public lands due to industrial solar energy development.

***Cumulative Impacts***

Solar energy development is just one of the types of use that is authorized on public lands that creates stress on fish and wildlife, watersheds, air quality and public land users. The secondary infrastructure required for transmission lines for solar power can have a much larger impact that is often not fully taken into account. In order to understand the magnitude of impacts that solar energy contributes, a comprehensive cumulative impact evaluation is needed. Often NEPA documents have weak cumulative impact analysis requirements and defer this important information to a later time and then it is never completed.

***Recommendations***

1. The cumulative impact analysis should include impacts from all existing and future energy development (oil/gas, coal-bed methane, wind, geothermal) and mineral extraction (coal, uranium, precious metals) as well as development on adjacent or nearby non-federal lands.
2. Cumulative impacts should be tied to the mitigation planning to effectively alleviate impacts to fish and wildlife resources, access, and recreation.
3. An “energy road map” for each state should be developed by BLM to identify what type of energy and how much of each type will be produced for the near (10 year) term.
4. Solar energy zones or variance applications should not proceed in areas where cumulative impacts would result in unacceptable impacts or irretrievable losses to fish, wildlife, and outdoor recreation.
5. No loss of hunting or fishing opportunities should result from cumulative impacts associated with solar energy development on public lands.

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### ***Compensation***

The designation and authorization of solar energy development on public lands is a new paradigm in energy development for public land management. SEZ will become single use areas and could be interpreted as a change in the multiple-use management (this is also true for intensive industrial authorizations of other forms of energy development like oil, gas, and wind). In order to adequately offset the conversion of public lands to a single use, compensation mitigation must be applied as lands are designated for solar energy development.

### ***Recommendations***

1. Compensatory mitigation actions should be incorporated in Regional Mitigation Plans and include actions for losses to fish and wildlife habitats, access, and outdoor recreation.
2. Compensatory mitigation ratios should be established to identify how much compensation is required for each resource and value that is converted to single use.
3. Lands within each region should be designated as “compensatory reserves” where energy development (all types) would not take place to offset the designation of SEZ. These reserves should be in areas where fish, wildlife, recreation, and access can be sustained for the life of the SEZ.
4. Voluntary exchanges, easements, or other actions from industry to compensate for the designation of SEZ should be included in the Final PEIS.
5. Funding mechanisms, either appropriated or voluntary, should be included in the mitigation trust fund and established in the Final PEIS.

### ***Additional Recommendations***

1. Continue to move forward with the SPEIS and complete a final document in 2012.
2. Establish a process for competitive leasing for solar energy on public lands within or outside of SEZ to generate a fair return for the use of public lands. Integrate successful local, state, or regional planning into the Final PEIS and ROD. We strongly support the process where all future solar energy development proposals are executed with a competitive lease process. Currently the BLM is seeking comments on developing regulations for competitive leasing of solar and wind energy on public lands. We applaud and support this effort. We believe such a process will provide a more enhanced development review structure and public review process for guiding location and implementation of solar and wind projects on our nation’s public lands.
3. Evaluate the potential socio-economic loss of hunting, fishing, and other recreation on public lands from the development of solar energy and the designation of SEZ and mitigate it.

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4. Improve the analysis of how surface and groundwater is going to be impacted and provide more details on how water allocation and use will be secured and conserved by solar energy proponents.
5. Continue to seek additional funding for mitigation and compensation for impacts to fish, wildlife, access and recreation.

**State Specific Comments/Recommendations**

**California**

1. Remove the Iron Mountain Solar Energy Zone from further consideration or defer it until it is addressed in the Desert Renewable Energy Conservation Plan (DRECP) process.
2. Subject all proposals outside of SEZ including in the variance areas to the DRECP process before moving forward with solar projects.
3. Identify potential private lands that could be used to increase the amount of acreage that SEZ could entail to protect sensitive fish and wildlife habitats.
4. Coordinate all SEZ and Variance processes with on-going and soon-to-be-completed BLM Resource Management Plan amendments.
5. Incorporate the final DRECP plans into future solar energy development on public lands through appropriate NEPA and RMP amendments.

**Nevada**

1. Suspend the variance process until the existing 24 applications have been put through the SEZ screening and process for potential designation.
2. Carry forward the proposal to remove the west flank of the old Dry Lake North SEZ as it was in a mule deer migration corridor and the East Mormon Mountain SEZ due to the potential for cutting off already limited access to the Mormon Range

In conclusion, we are pleased with the progress the BLM has made and its commitment to addressing concerns that the SFRED coalition and our individual organizations have raised in the Draft PEIS. Our coalition supports responsible energy development on public lands and applaud the BLM for moving solar energy development in this direction. We look forward to continuing to work with the BLM on the development of the Solar PEIS and offer our assistance in those areas where we have specific policy or management expertise such as mitigation of fish, wildlife and recreational impacts from energy development

Sincerely,

Kate Zimmerman  
Senior Policy Advisor  
Public Lands Program  
National Wildlife Federation

Steve Belinda  
Senior Policy Advisor, Energy  
Theodore Roosevelt  
Conservation Partnership

Brad Powell  
Energy Director, Sportsmen  
Conservation Project  
Trout Unlimited

# **SPORTSMEN** **FOR** **Responsible Energy Development**

Arizona Wildlife Federation

Backcountry Hunters and Anglers

Bull Moose Sportsmen's Alliance

Colorado Wildlife Federation

Desert Bighorn Sheep Council

Fraternity of the Desert Bighorn

New Mexico Wildlife Federation

Quail & Upland Wildlife Federation

Quail & Upland Wildlife Federation – Santa Clarita Valley Chapter

The Wildlife Society

World Wildlife Fund – Freedom to Roam Initiative

Thank you for your comment, Mike Trujillo.

The comment tracking number that has been assigned to your comment is SEDDSupp20182.

Comment Date: January 27, 2012 21:24:49PM

Supplement to the Draft Solar PEIS

Comment ID: SEDDSupp20182

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Country: USA

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Attachment: Mike Trujilo PEIS Comment.docx

Comment Submitted:

January 27, 2012

Attn: Linda Resseguie

Argonne National Laboratory

9700 S. Cass Avenue EVS/240

Argonne, IL 60439

**RE: Public Comment for the Supplement to the Draft Programmatic Environmental Impact Statement (PEIS) for Solar Energy Development in Six Southwestern States**

To Whom It May Concern:

Consider this as a formal statement of concerns as the Mayor of the Town of Antonito. The Town of Antonito is approximately one mile north of the proposed Antonito Southeast Solar Energy Zone (SEZ) in the state of Colorado. Thank you to the Bureau of Land Management (BLM) and Department of Energy (DOE) for the opportunity to comment on the Draft PEIS (supplement).

I have attended two meetings, in Alamosa, CO, with regards to the proposed PEIS and have the understanding that large-scale projects can provide jobs, economic growth and energy efficiency. Alamosa County is currently engaged in large-scale solar projects. The majority of the comments at the public meetings I attended were not in support of this federal driven campaign. Many concerns were recorded and heard and I appreciate it. I believe that most of my issues were addressed by others at these meeting, but will take this opportunity to address my other concerns.

**Town of Antonito's Interest in a Portion of Antonito Southeast Site:**

I have been the Mayor of Antonito for six years and have been a member of the Town of Antonito Board of Trustees (TOA) for eight years. During this time period, the TOA has been a supporter of renewable energy. The TOA was interested in leasing land from the BLM to develop an industrial park and partnered with the San Luis and Rio Grande Railroad (SL&RG) for this development. The project took on many different titles, which was finally termed "Intermodal Exchange". The initial application requested approximately 1/8 of the current Antonito Southeast Site, which encompassed a portion of Highway 285 and a square piece of land owned by the state; which is the west end of the Antonito Southeast SEZ. At the time it was not known to be Antonito Southeast Site. The TOA 's half was to be devoted to developing renewable energy plants, a mechanical plant, a truck stop, service stations, etc.; whereas SL&RG would use their half for storage of train cars, service centers for train cars and loading docks.

BLM determined a right of way would be more consistent with their policy. The TOA then sought to acquire the state land reserved for schools (Section 18 and Section 36) for the industrial park and wrote a letter supporting SL&RG's right of way. The use of the state land, the missing square on the Antonito Southeast Site, was never clearly defined but that it would be used in an industrial setting. There were

also discussions by SL&RG to use a portion of the land for soil storage. This led to some disagreements and caused SL&RG to purchase private land near the river to develop their own "Intermodal Exchange". This caused a legal battle between local governments that partnered with a nonprofit organization and SL&RG that partnered with Department of Energy (DOE), Energy Solutions; a low-level radioactive waste dump operator and hazardous soil removing company out of Utah and Los Alamos. The result: SL&RG is currently not using their property to transfer soil from Los Alamos.

Because there was no clear direction on how to acquire BLM land, neither SL&RG nor TOA benefited from their efforts. I believe that a portion of the Antonito Southeast Site should be left out of the study being that local efforts had a vested interest and that the use would be diverse. I believe that BLM needs to visit with elected officials and become aware of the efforts of the local municipalities and be cognizant of the needs of municipalities, and local companies as well as multi-national corporations.

The land belongs to the people and have entrusted their representatives to get the best benefits from this parcel, which could include revenue sharing, restoration and regulation.

### **Infrastructure:**

Conejos County is one of the poorest counties in the United States and does not possess the amenities required to accommodate a project this size (greater than 20 MW). The promise of jobs and energy conservation has my full support; however it needs to reflect the need. A power plant that is constructed to sustain a community and limit the amount of coal, nuclear and natural gas is beneficial and a wonderful concept. The proposed PEIS is targeting a county that is primarily on septic systems and well water. The exceptions are those that are hooked up to the Town of Antonito Water and Sewer system (close proximity to the town). This system is out dated and will need to be upgraded in the near future. The town would not be able to provide water to a facility far from town and water rights are not easy to acquire for augmentation. The size of the project will also require a large influx of temporary employees and they may want to build homes and hook up to a water supply. These temporary workers will run into the same problem as highlighted during public meeting by Alamosa County officials.

The TOA also has issues with its drainage system. The downtown Highway 285 is currently undergoing damage as a result of five drainages that need to be replaced. The Colorado Department of Transportation (CDOT) is willing to pave the highway provided that the TOA replaces these drainages that are underneath Highway 285. The project would cost the TOA one million dollars and is an expense that is not affordable. I assume that with a project this size that our highway will not be able to withstand the increase in traffic, it is not handling the existing load now and is a hazard. Antonito experiences heavy rainfall July through August and the result is a flooded downtown area.

### **Mitigation:**

Poor drainage is another problem the TOA faces. There are no accommodations for large quantities of people. Natural disasters would yield chaos if people were forced to stay in the local area. We are currently working on this mitigation plan but nothing is in place. Our neighbor to the north, Alamosa, would have to take the brunt of the load. The seasonal natural disasters we experience here are forest fires, blizzards and heavy rainfall in the late summer.

**Schooling:**

I am a math/music teacher at Antonito High School and our district has hired architects to develop a new school. Colorado Department of Education (CDE) will help us build the school through a grant program and we would need matching funds. Conejos would have to acquire a bond or increase the mill levy. They will look at our enrollment from the past two years and use this figure to project that size of school and the funding that we will need. The time of completion should be two years and we would need estimates or a study done on the potential enrollment increases from a project this size, so that we could give that data to CDE. High projections could be a burden to the tax payer in an already impoverished community. The county would need to be compensated for this increase.

**Economic Development:**

A portion of our community would have a direct impact with regards to employment and a segment of Antonito residents currently work for the solar developments in Alamosa County. The employment is not consistent and the complaint from many of them is that they start off with high wages and are progressively phased out.

The TOA is currently working on developing a Community Solar Garden, under the Solar Gardens Act of 2010 in the State of Colorado, on its own private property that could be a gateway to many other developments around the community. The goal is self-sustainability and establishing another enterprise. The TOA currently provides its citizens with water and waste water. The current water and waste water enterprise provides 2.5 permanent employees with temporary employment between 2-20 positions. The current solar garden project will be 500MW with the potential to become 2MW. This could mean two full time positions being funded by the savings from hosting the Community Solar Garden.

The TOA recently acquired two grants for the restoration of its historic Denver Rio Grande Depot. The grants are from CDOT and National Historic Society. The project will yield jobs; however, due to the bonding requirements and state regulations none of our local contractors will have a chance. I believe that the large scale utility would have the same conclusion.

I am in support of renewable energy; however, I believe through the use of distributed generation and building in phases will provide a more sustainable outcome for small municipalities. To support large-scale solar projects, a community would need a large-scale infrastructure to support those projects. The TOA does not have that infrastructure. I believe the TOA can benefit through shared lease agreements with multi-national corporations, revenue sharing, detailed mitigation plans and multi-national corporations developing accommodations within the town boundary to support a large volume of people. Thank you for the opportunity to comment on the Draft (PEIS).

Sincerely,

Mike Trujillo, Mayor

Town of Antonito

Antonito, CO 8110

[grayghosttrujillo@gmail.com](mailto:grayghosttrujillo@gmail.com)

719-580-4331

Thank you for your comment, Stu Webster.

The comment tracking number that has been assigned to your comment is SEDDSupp20183.

Comment Date: January 27, 2012 22:56:19PM  
Supplement to the Draft Solar PEIS  
Comment ID: SEDDSupp20183

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Attachment: Iberdrola\_SDPEIS\_Comment-FINAL-27Dec12.pdf

Comment Submitted:



January 27, 2012

Solar Energy PEIS  
Argonne National Laboratory  
9700 South Cass Avenue-EVS/240  
Argonne, IL 60439

RE: 1610 (300): Supplement to the Draft Programmatic Environmental Impact Statement for Solar Energy Development in Six Southwestern States

To Whom It May Concern:

Iberdrola Renewables, Inc. (IRI) is an independent power provider. We own and operate approximately 5,000 megawatts of wind and solar energy projects nationwide, and are actively developing wind and solar projects of various technologies across the U.S. We have been working in partnership with BLM for eight (8) years on wind and solar projects across four (4) western states. Currently we have two (2) assets now operating on lands administered by the Bureau of Land Management (BLM), and close to 20 additional wind and solar projects in various stages of development.

We thank you and your staff for your committed efforts in producing and releasing the Supplement to the Draft Programmatic Environmental Impact Statement for Solar Energy Development (SDPEIS), and for your dedication to seeking long-term solutions that will support the solar industry. We wish to stress that our commitment to this process is to realize the areas of common agreement with other industry stakeholders as well as non-industry stakeholders. To such an end, we start by stating our general support of the industry's combined efforts as submitted by Peter H. Weiner, Partner of Paul, Hastings, Janofsky & Walker LLP, on behalf of the Center for Energy Efficiency and Renewable Technologies (CEERT), Large-Scale Solar Association (LSA), and Solar Energy Industries Association (SEIA). Additionally, we recognize the challenges that BLM faces with meeting the needs and expectations of multiple land interests. We therefore also support the comments and suggestions made in the Joint Comment Letter (as submitted by representative signatories from the solar industry and environmental organizations, IRI included). Finally, we are aware that The Nature Conservancy (TNC) is developing a proposed path forward for development of a mitigation program. While we are not fully aware of the specific elements we do generally concur with the TNC that such a program is needed sooner than later in order to fully maximize the potential of the solar PEIS. With said support, we feel it important to expand on some of the stated positions as well as bring forward key issues which we believe need additional focus:

1. We ask that the BLM explicitly confirm that applications and project commitments underway prior to issuance of a Final PEIS be evaluated under *existing* BLM policies. To this end, the reference that pending applications in proposed exclusion areas may be denied (Page 1-11) should be removed and confirmed as not applicable. The importance of this is the level of investment made to date on BLM land that may very well enable solar energy development while avoiding, minimizing, and/or mitigating impacts to a sufficient degree. Additionally, to act contrary to this recommendation leaves a significant

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number of pending applications and project commitments with no incentive to be moved forward by BLM staff, opting to instead to wait for this PEIS process conclude, the timing of which is suspect given the public review and potential challenge of so ambitious an effort.

2. The current Solar Energy Zones (SEZs) proposed in the SDPEIS are insufficient, both in size, number and location. While we recognize that the SEZ concept is deemed by the BLM a preferred element of the SDPEIS for reaching common ground with all stakeholders, IRI is seeking assurances beyond what little is documented in the SDPEIS on how the variance process will be practically implemented and managed. Undoubtedly, due to the lack of environmental assessment of the SEZs selected by the BLM to date, there will be a need to accommodate solar energy development in non-SEZ areas in order to meet the expectations of meaningful total build out of renewable energy on federal lands. The possibility of such an outcome is clearly contemplated by BLM under Table 2.2-1 *Revised Areas for Exclusion under the BLM's Modified Solar Energy Development Program Alternative*, criteria #26 which states that areas within a SEZ may be deemed inappropriate through a NEPA process. As detailed in the industry letter, we encourage the BLM to commit to designating additional zones in the near future, and by a specific date, to respond to industry and Renewable Portfolio Standards (RPS) needs.
3. Given the lack of environmental screening, transmission constraints, and physical limitations, the current proposed SEZs do not provide clear development advantages over variance areas, naturally leading to an unsubstantiated prejudice towards proposed projects in non-SEZ areas. Rather than address the inadequacy or lack of criteria that dictates what is an appropriate area for development, the SDPEIS addresses the acknowledged inadequacy of SEZ by creating a variance process for non-SEZ consideration as well as commitment for additional or expanded SEZs in the future. Both of these options still require a substantive set of criteria to establish the appropriateness of development, which the SDEIS fails to address. To that end, we strongly encourage the BLM to include with this PEIS process an adaptive management commitment whereby the BLM evaluates the difference of applications within and without SEZs. Such an analysis, combined with stakeholder input, should lend well to making an informed decision on how to proceed with broadening the effectiveness of managing BLM land for solar energy development.
4. In the interim, the variance process, as currently proposed, must provide adequate flexibility for developers, particularly as zones are insufficient or infeasible. We support the industry position that variance applications should be permitted in areas with low or comparatively low resource conflicts. Further, we maintain that BLM's proposal to impose additional screening requirements for applications in variance areas (e.g., additional public meetings and earlier cultural resource surveys) are burdensome, superfluous and unnecessary in light of basic NEPA requirements that already apply for such projects. The NEPA process was developed to publicly and fully vet consideration of federal actions. NEPA was not contemplated to be a secondary effort of publically vetting an action already deemed appropriate by a public agency.
5. With respect to the immaterial nature of the method used to select SEZs for solar development, IRI strongly recommends that BLM not attempt to predict the logistical feasibility of solar development. In order to optimize project development, the BLM should be more lenient on the treatment of slopes and solar resource areas. Additionally, BLM should not assume that transmission infrastructure dictates energy development interests. If no capacity exists on a given transmission line then it is effectively as meaningless as if the line did not exist. We concur with the industry letter comment that the analysis conducted by BLM on line capacity falls well short of accurately portraying the conditions of those lines, a process which, for a single line, costs hundreds of thousands of dollars to conduct.
6. Exclusions based on slope or solar insolation are technology considerations that should not be mixed with environmental considerations. Areas currently defined with a direct normal insolation (DNI) below 6.5 kWh/m<sup>2</sup>/day should not be considered exclusion areas based on these characteristics alone. Dozens of economically successful solar plants in North America and Europe operate with solar resources well below this value. As the solar industry advances, technological innovations will

continue to reduce the insolation threshold necessary for a feasible project. A decision to exclude lower insolation areas will make BLM policies discrepant with best industry practices.

Additionally, areas currently defined with slopes above 5 percent should not be considered exclusion areas based on their terrain alone. As technology innovations continue, these areas may provide sensible and advantageous locations for new solar development. Current NEPA screening requirements are sufficient to identify and protect any sensitive habitat areas that may be located in steeper terrain.

7. We do not support BLM's proposal for a 10-foot height and PV-only limitations on more than 25 percent of the SEZ areas. The 10-foot limitation is an arbitrarily-defined threshold that may unnecessarily restrict the successful application of some technologies. Project heights, as with other project design features, should be evaluated and mitigated, when necessary, on a case-by-case basis.
8. Finally, as noted in the industry letter, exclusion areas, as currently proposed, are unnecessarily restrictive and vaguely or subjectively defined. As one of several examples detailed in the industry letter, IRI is adamantly opposed to item 29; "Individual additional areas identified by BLM State or field offices as requiring exclusion due to ecological or cultural concerns." This limitless uncertainty of future exclusion zones will have a detrimental effect on streamlining the application and permitting processes. Exclusion areas should not require additional interpretation from the field offices subsequent to the publication of the Final PEIS.

In addition to the shared industry positions points above, we offer the following points from our own perspective working with BLM on numerous wind and solar projects across the West and Southwest.

9. We support measures to distinguish between substantive applications and applications that will not result in actual solar energy projects (a.k.a., land squatters). We further support BLM's proposal to include this as a variance screening criterion. However, we encourage the BLM to utilize the PEIS process to clarify the intent of previously adopted Instruction Memorandums (IMs) (specifically 2011-059, 2011-060, and 2011-061). Experience has been that practical application of the IMs results in inconsistent and unreasonable expectations, particularly driving environmental review effort for the sake of administrative progress rather than in logical steps of environmental review that reflect the realities and constraints of project development. This is not a trivial issue as the margin of competitiveness with conventional fuel energy generation is narrower than ever before. BLM's mandate for supporting renewable energy necessitates that mindful development must be balanced with cost efficiencies of development and of the application process. We suggest the following steps be developed in the SDPEIS:
  - a. Training seminars to bring consistency among BLM office staff on how to appropriately meet the intent of the financial and environmental due diligence IMs.
  - b. Create a platform whereby BLM responds to public comments and recommendations on how to clarify the intent of the IMs, given they were drafted with no input from affected parties.
  - c. Greater emphasis on IM 2011-060, *Solar and Wind Energy Applications – Due Diligence* on...as the primary filter for viable project applications. The financial stability of the applicant should be fully vetted before the National Environmental Policy Act (NEPA) process is unduly instigated for no other reason than to compel a developer to act or abandon a Right-of-Way (ROW) grant process.
10. Solar thermal technologies. As noted above in Comment 8, we are concerned about undue restrictions on solar thermal technologies (including wet cooled systems), which will play an important part in helping states meet their RPS goals. Energy customers (utilities) are seeking competitively priced products, but also delivery on demand. Concentrated solar projects offer a useful and increasingly desirable source of dispatchable power, particularly when they include added storage. While we support all solar technologies, we believe there is a strong likelihood that customers will increasingly seek dispatchable sources of power to balance out load fluctuations introduced by other

intermittent resources as well as the impending retirement of highly polluting coal plants. We therefore urge BLM to provide flexibility in allowing solar thermal projects of all technologies and cooling systems as long as they appropriately address water use impacts. We believe it is extremely important for BLM to not pick technology winners and losers, but instead follow their mandate to create a transparent, clear and robust policy environment that facilitates timely deployment of renewable energy on federal lands.

11. ROW grant timing. The SDPEIS does not provide a clear method for preserving an issued ROW grant beyond a limited period of time. If such a concession is in place with current policy, it is not well understood nor does it provide a sufficient level of assurance to compel an applicant to risk pursuing a ROW grant that lacks a clear market for and delivery of solar energy. Rather, the SDPEIS suggests a continuation of using the NEPA process as a means of forcing applicants to move forward with developing projects that may not be economically viable. This is effectively a cart before the horse scenario – evaluating the environmental benefits and impacts of a project that is not capable of responding to market demand.. This issue is reflected in point 2 above with respect to current policy, as detailed in BLM IM 2011-059.

In short, we do not advocate the SEZ-only alternative and greatly appreciate the BLM's recognition of the impracticality of the SEZ-only alternative by creating a variance option. The zone-only proposal, due to its limitations in size and location, does not respond to the short-term realities of national renewable energy policies. Finally, IRI fully supports and embraces the concept of responsible energy development. However, much like sustainable development, it remains merely a concept without definition. BLM should work towards developing a transparent, consistent, repeatable criteria by which all proposed energy development on public land is evaluated equally; benefits as well as impacts. This would establish a definition to responsible development, moving beyond a subjective concept, prone to being reduced to merely a source of endless debate.

We look forward to continuing to work with the BLM to find mutually acceptable and effective methods of promoting solar development on BLM-administered land. Feel free to contact me at your convenience at (503) 796-6951 to discuss these comments if further information or clarification would be helpful.

Best Regards,



Stu S. Webster

Iberdrola Renewables, Inc.

Director, Permitting and Environmental Affairs 1125 NW Couch St., Suite 700  
Portland, OR 97209

Thank you for your comment, Michael Garabedian.

The comment tracking number that has been assigned to your comment is SEDDSupp20184.

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Comment ID: SEDDSupp20184

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Comment Submitted:

## **Committee on 245 Million Acres**

*BLM Solar = Unsound on the Ground*

7143 Gardenvine Avenue  
Citrus Heights, California 95621

January 27, 2012

### Electronic Submission

Director Bob Abbey, Bureau of Land Management  
Secretary Steven Chu, Department of Energy  
Argonne National Laboratory  
9700 S. Cass Avenue - EVS/240  
Argonne, Illinois 60439

Re: The Solar Energy Development in Six Western States project  
Supplemental DPEIS and the need for public hearings throughout  
The West after release of sufficient NEPA documentation

Dear Secretary Chu and Director Abbey:

John Muir in 1905, upon arriving near Mount Graham in southeastern Arizona from Palm Springs, wrote, "I never breathed air more distinctly, palpably good, It is clean, fresh, and pure as the icy Arctic air." Donald Worster, *A Passion for Nature: The Life of John Muir* (2008), page 392.

Mary Austin too wrote about the pristine desert air, "For one thing, there is the divinest, cleanest air to be breathed anywhere in God's world." Mary Austin, *The Land of Little Rain* (1903), in, *Words for the Wild: The Sierra Club Trailside Reader*, Ann Ronald Ed. (1987), page 151.

Austin was writing in the Owens Valley, California, which today is measured to be among the most toxic air basins of the world. Today with desert solar, another desert environmental reversal is upon us.

In 1879 referring to the abandoned mining towns of Nevada, John Muir wrote, "They are monuments of fraud and ignorance—sins against science." But he went on in a more positive vein,

The fever period is fortunately passing away. The prospector is no longer the raving, wandering ghoul of ten years ago, rushing in random lawlessness among the hills, hungry and footsore; but cool and skillful, well

supplied with every necessary, and clad in his right mind. Capitalists, too, and the public in general, have become wiser, and do not take fires so readily from mining sparks; while at the same time a vast amount of real work is being done, and the ration between growth and decay is constantly becoming better.

John Muir, Nevada's Dead Towns, in, The Sierra Club Desert Reader, Gregory McNamee, Ed. (1995), page 18.

I visited Ivanpah Valley to see it and the solar plant construction destruction there eleven days ago for the second time in four weeks. Contrary to Muir's pre Hetch Hetchy dam optimism, Ivanpah and other areas in the six states are faced with a new fever, the solar energy fever that is sweeping the deserts of the southwest. This is a land rush for which BLM and DOE and their "cool and skillful" stakeholders are positioning themselves as the facilitating agents. Law and science are being put aside in a modern, unprecedented retreat from wisdom and into the ignorance Muir described.

Muir's 1879 vision that modern times were better for the desert may have found a more recent adherent whose writing defines the current and proposed actions of BLM, DOE, the six states, their apologist stakeholders who are giving cover to government desert-based welfare and public land giveaways, and the corporate solar profiteers<sup>1</sup> and beneficiaries of solar largesse. The definitions of Joseph Wood Krutch are apt for describing the scandal of solar public land misuse as a radical conquest of the desert by those who are incapable of listening to it.

To those who do listen, the desert speaks with an emphasis quite different from that of the shore, the mountains, the valleys or the plains. Whereas they invite action and suggest limitless opportunity, exhaustless resources, the limitations and mood of the desert are something different. For one thing, the desert is conservative, not radical. It is more likely to provoke awe than to invite conquest. It does not, like the plains say, "Only turn the sod and unaccountable riches will spring up." The heroism which it encourages is the heroism of endurance, not that of conquest.

Jopseph Wood Krutch, The Voice of the Desert (1955), in, Words for the Wild: The Sierra Club Trailside Reader, Ann Ronald Ed. (1987), page 187.

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<sup>1</sup> "A Gold Rush of Subsidies in Clean Energy Search," NY Times, 11/11/11, [http://www.nytimes.com/2011/11/12/business/energy-environment/a-cornucopia-of-help-for-renewable-energy.html?\\_r=1&ref=business](http://www.nytimes.com/2011/11/12/business/energy-environment/a-cornucopia-of-help-for-renewable-energy.html?_r=1&ref=business)

And, what is at stake here? It is the delicate and still significantly unknown biology of the desert and its roles in the ecosystem as the largest remaining mainly undisturbed American landscape outside of Alaska.

These lands are under immediate threat of long-term ecological destruction by massive scale centralized solar development. These deserts – The basin and range of The Great Basin from which I like to separate out a widened and geologically distinct Colorado Plateau, The Sonoran, The Mojave, and the Chihuahuan -- are the Alaska of the continental states. That is, a wild backyard for us and its plant and animals.

The deserts represent one of the last North American areas in which large tracts of land remain relatively uninhabited. The arid wilderness has been slower to "develop" in the usual sense than areas more amenable to settlement and exploitation through agriculture and industry—a magnificent beneficence insofar as desert and wilderness aficionados are concerned. Space between people is one of the desert's most pleasing aspects for those who would explore it. ...

When Environmental stresses build, animals and man can crawl, walk, run, or fly to reach the most amenable environmental conditions available; not so the rooted, immobile plants which must meet sun, wind, heat, and aridity where they stand. In the desert where moisture supplies tend to be limited and environmental stresses tend to be extreme, the plants, in order to survive, must be capable of operating with a low margin of error where high demand and low supply of water is concerned. Ranging from cacti to creosote bush to boojum tree, those plants that have been successful in meeting this challenge make up one of the most highly adapted, unusual, and interesting of the world's faunas. ...

The so-called desert world is actually a mosaic of smaller worlds, and the environmental conditions present in any one of these small worlds are often strikingly different from those of another area which may be located only a few feet or even inches away. These smaller pieces of habitat, or microhabitats, in general each have their own microclimate

Peggy Larson with Lane Larson, Drawings by Lynn Larson, Foreward by Edward Abbey, A Sierra Club Naturalist's Guide to The Deserts of the Southwest (1977) pages 14, 49 and 50.

**Failure to recognize, identify and describe the great diversity of Mojave Desert plant communities and the assessment needs and mechanisms to carry out this area and species identification and assessment the great diversity of Mojave Desert plant communities.**

I (Michael) am a native Californian, and in the Summer of 1964 I first looked, not having seen it before, at the basin and range disappearing into the distance from Fandango Pass in the Warner Mountains of California. My exploration of it started then, continued in earnest beginning 15 years later when I went to the valleys proposed for MX missile race tracks, and continues to this day.

My travel to the Colorado Plateau began in 1979 in southeast Utah, and then grew exponentially and has continued in the slickrock/Canyonlands desert from 1989 to the present, though I entered my first of so many slot canyons only in 1997 in Grand Staircase Escalante, NM.

I've also traveled for many years in the high deserts of Oregon and other states, and in more recent years to Big Bend NP, Saugauro NM, Organ Pipe NM.

Regarding the Mojave, in the winter of 1964 I first visited Death Valley—my introduction to it. I've been to Death Valley many times, heavily from 1979 to 1981 including every way I could find in and out of it, and regularly since returning to California in 1997. As for the rest of the Mojave, other than a north-south trip through the heart of it in the 1960's, I've traveled through it many times without stopping until I reached my destination.

So, none of these desert wanderings prepared me for the five days I've spent in the last five weeks seriously exploring the Mojave Desert outside of Death Valley for the first time. As we or I went to different landforms and places, I began to notice different dominant shrub species, and this more than the landforms we were seeking on the first trip began to dominate my curiosity. Before that I could never have imagined encountering the amazing variety of shrub species that are found in the Mojave from one place to the next, not to mention the interspersed cacti. I got my B.S. in Forestry and Conservation field work that was mostly in the Sierra Nevada, and this familiarized me with paying attention to the shrub layer and the limited number of dominant shrub species that are there compared to what can be seen moving around the Mojave. When I returned to the Mojave for my second recent trip, this is what I looked for, even retracing my steps. I'd come to have little expectation of more than seeing one or two dominant species like sage or pinyon juniper that dominate so many other plant communities of the west.

**And now I look for and do not find in the SPEIS documents meaningful recognition of, information about, assessment mechanisms for, or explanation of, how the plant community diversity I experienced in the shrub layer or other plant community diversity will be handled and protected for this project. Does the failure of the PEIS documents to give major recognition to this stunning biological fact of the Mojave and to alert the decision makers and public to it mean that the PEIS is inadequate to the task at hand? In a word, yes. It is reasonable to conclude that the virtual uncountable number of species found in some places and the variability from one place to the next -- a dozen, a couple of dozen, or more species -- are not on the BLM-DOE radar.**

It is this experience that led me to the books quoted at the beginning of this letter.

**Failure to identify, inventory, map and describe and address the country's last remaining largely undisturbed desert ecosystems including their value, and to provide a NEPA assessment of project impacts on them and how this can be prevented or mitigated.**

The DPEIS failure to address the rich shrub and other vegetation diversity of the Mojave leads to and is connected to the larger failure of the documents to address the existence of and impacts on the larger desert ecosystems.

The supplement goes in the wrong direction by seeming to narrow its geographic scope without providing for identification and assessment of the ecosystem-wide deserts and the impacts of the project and project options on them.

Any narrowing only points to the fact that both a more "limited" project and the no project alternative may have significant and wide-ranging negative impacts on the desert ecosystems and on the benefits to the environment that the deserts now provide.

But it is basically the same point to say that providing for the opening up of new post-PEIS SEZ areas also is also an unaddressed impact on the larger desert ecosystems.

**Failures regarding national, state, district and local and other offices to describe current BLM and DOE staffing including issue, administrative and other assignments, and geographic assignment locations; failure to identify the level of BLM, DOE and other staffing and funding necessary to implement the project, and to failure assess the adequacy of known staffing and funding for achieving the purposes of the project including enforcement.**

Missing is identification of the BLM and DOE staffing and the funding that is necessary to carry out the six state project.

Missing is identification of the present BLM and DOE staffing at the local through national levels.

Missing is a comparative touchstone regarding the level of staffing that is necessary to adequately administer BLM lands including the project. One essential comparison is to US National Forest staffing levels from National Forest Districts to regional and national USFS headquarters as a comparative mechanism to determine the adequacy of BLM staffing and ability of BLM to carry out the project in the necessary manner.

We note that National Forest staffing now appears to us to outstrip BLM staffing at every level, and BLM does not even have the necessary level of staffing to prepare this DPEIS or to oversee contractors working for BLM.

The present situation of governmental financial incentives to solar developers without the parallel of BLM staffing resources makes it essential for BLM and DOE to identify the staffing needs it has for this project. Without necessary BLM and DOE staff, Congressional financial incentives to solar developers become a factor adding to the giveaway of public lands contemplated in the SPEIS.

**Large scale solar facilities and this project pose the biggest threats to our public lands and to our country's ecology in history.** We oppose both.

The massive failures of the PEIS documents and the absence of public involvement regulations are additional independent reasons for our opposition positions. The NEPA documents and the public process are failures. We do not have sufficient information to make any other recommendation. BLM and DOE do not have sufficient information and public involvement to make a decision.

**Once sufficient NEPA documentation is released, and after public involvement regulations have been adopted, there must be hearings throughout the West on the project and on the future of our country's ecological integrity that is threatened by big desert solar.**

Sincerely,

QuickTime™ and a  
decompressor  
are needed to see this picture.

Michael N. Garabedian, Co-founder  
916-727-1727