

CALIFORNIA ENERGY COMMISSION

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July 18, 2008



Solar Energy PEIS Scoping
Argonne National Laboratory
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Dear Solar PEIS Project Team:

The California Energy Commission appreciates this opportunity to comment on the scope of the programmatic environmental impact statement (PEIS) to facilitate installing utility-scale solar electric generating facilities on lands managed by the U. S. Bureau of Land Management (BLM) or funded by the U.S. Department of Energy (DOE).

The Energy Commission is the State's primary energy policy and planning agency and is responsible for assuring that the State develops adequate energy supplies while protecting the environment and public health and safety. We license all thermal power plants¹ with generating capacities of 50 megawatts (MW) or greater, including those on BLM-managed lands. The Energy Commission and the California BLM have a memorandum of understanding (MOU)² to conduct joint environmental reviews of large solar thermal projects proposed on BLM-managed lands.³ We value our close working relationship with the BLM and look forward to participating in the Solar PEIS process as well as other state and federal efforts to develop California's renewable energy resources.

The Energy Commission will become a cooperating agency to the Solar PEIS under a new MOU with the BLM. In this role, the Energy Commission has organized an interagency working group of federal, state, and local government agencies to encourage and coordinate their participation in the Solar PEIS process. The purpose of the interagency working group is to enhance communication among our members, the BLM, the DOE, and the Argonne National Laboratory (the Solar PEIS Project Team). The Notice of Intent (NOI) for the Solar PEIS identifies a federal mandate to add at least 10,000 MW of renewable generation on public lands by 2015. Permitting renewable

¹ Thermal power plants are electricity generators that use a thermal source of energy. Utility-scale solar photovoltaic facilities are not under the Energy Commission's siting jurisdiction.

² See http://www.energy.ca.gov/siting/solar/BLM_CEC_MOU.PDF.

³ Currently, our agencies are preparing joint environmental impact report/environmental impact statements for the Ivanpah Solar Electric Generating System and the Stirling Energy Solar Two projects.

generation and related transmission facilities on BLM-managed lands would also help California implement its renewable energy policy initiatives. California's Renewables Portfolio Standard (RPS) mandates investor-owned utilities and energy service providers to supply 20 percent of their annual electricity sales in 2010 from renewable supplies. Governor Schwarzenegger has called for accelerating the RPS to 33 percent by 2020. In a draft scoping plan to implement California's Global Warming Solutions Act, the California Air Resources Board has also recommended reaching a statewide goal of 33 percent goal by 2020 as a strategy for reducing greenhouse gas emissions caused by California's electricity consumption.

Proposed Action

The BLM and the DOE are proposing to establish environmental policies and mitigation strategies that would facilitate development of environmentally responsible utility-scale solar electric facilities on BLM lands or sponsored with DOE funds. As a result of the Solar PEIS, the BLM may replace or supplement its existing solar development policy, amend selected land-use or resource-management plans, identify lands environmentally suitable and not suitable for solar energy development, and designate new electricity transmission corridors needed to deliver power from solar facilities.

Comment:

- The Energy Commission supports this initiative to define and facilitate "environmentally responsible" development of utility-scale solar electricity generating facilities and associated electricity transmission corridors. The Solar PEIS process is an efficient approach to identifying and examining the potential environmental impacts of utility-scale solar energy development and determining what actions should be taken to mitigate anticipated negative impacts.
- The Energy Commission supports the BLM's intention to identify land under its management that is environmentally suitable for solar development as well as land that should be excluded from such development.
- The Energy Commission believes maps should be developed as part of each land-use plan amendment that identify BLM-managed lands where solar development could occur with few stipulations (green areas), where development could occur under restrictive stipulations (yellow areas), and where development is not permitted (black areas).

- The Energy Commission's transmission corridor designation program was created to help streamline California's transmission planning and permitting processes. Two of the program's strategic objectives are to provide access to renewable resource areas and to designate corridors on non-federal lands that would interconnect with existing or proposed federal corridors. The Solar PEIS's intention to designate transmission corridors aligns fully with the Energy Commission's interests and objectives.

Excluded Lands

The Notice of Intent (NOI) stated that lands within the National Landscape Conservation System (NLCS) are excluded from the Solar PEIS analysis. It also provided a list of example land designations included within that system.

Comment:

- Please clarify whether exclusion from the Solar PEIS analysis is the same as exclusion from future solar development. If these lands are likely to be excluded from future solar development, then they should be included in the Solar PEIS analysis so that the BLM will have the "analytical basis" to list these lands as excluded in future land-use plan amendments.
- The Energy Commission has indicated previously that it agrees solar development should not occur on designated lands within the NLCS. An enclosure to this letter lists specific wild areas, including wilderness, wilderness study areas, and other designated areas in California that the Energy Commission believes should generally be excluded from solar development.
- The entire California Desert Conservation Area (CDCA) is included under the NLCS. The Energy Commission understands that the NOI did not intend to exclude the entire CDCA from the Solar PEIS analysis. Instead, it meant to exclude only lands in the CDCA that have additional NLCS designations.

Other Federal Agency Lands

The NOI stated that the BLM also will not consider public lands withdrawn or set aside for use by another federal agency over which it has no administrative jurisdiction.

Comment:

- This exclusion would likely include lands in California administered by the U.S. Forest Service and the Department of Defense (such as military bases). However, the BLM should include other federal agencies' plans to permit solar development on lands adjacent to BLM lands in its cumulative impact analysis. For example, Edwards Air Force Base, located within the BLM's California Northern Mojave Planning Area, is planning to lease land for solar energy development.

Alternatives

The NOI proposes three preliminary alternatives: No-Action, Facilitated Development, and Limited Development⁴. According to the National Environmental Policy Act (NEPA), each alternative must be evaluated equally, including its direct, indirect, and cumulative impacts.

Comment:

- The Energy Commission encourages coordinated planning for solar development among federal agencies so that the linear facilities needed to support this development, such as roads and transmission lines, can be shared by multiple projects.
- The NOI stated that a Reasonably Foreseeable Development (RFD) scenario will be prepared for the Facilitated Development alternative, which quantifies the potential for future solar energy development activities over a 20-year study period. The Energy Commission supports conducting this analysis. However, if the RFD scenario will be used as part of the cumulative impact analysis, then a separate RFD scenario should be developed for each alternative, not just the Facilitated Development alternative.

No-Action Alternative

Under the No-Action alternative, the BLM would continue to evaluate solar energy projects on a case-by-case basis, according to the requirements of its current Solar

⁴ Only the BLM proposed evaluating a Limited Development alternative, not DOE.

Energy Development Policy, Instruction Memorandum No. 2007-097.⁵ Under this alternative, the BLM would amend its land-use or resource-management plans separately and over a longer time period than the Facilitated Development alternative, which would amend affected plans simultaneously to incorporate the new solar program.

Comment:

- The analysis of the No Action alternative should evaluate whether delaying land-use plan amendments would also delay solar development on BLM lands.
- The No Action alternative should compile a state-by-state matrix that provides information about each pending application for a solar right-of-way grant on BLM-managed land or for DOE sponsorship. The information should include the project applicant name, which BLM land-use or resource-management plan the site is covered under, the site's proximity to environmentally sensitive areas, generating capacity (in megawatts), technology type, acreage, and projected annual electricity production (in megawatt-hours). The matrix should also indicate each project's status, including whether it is behind another pending application for the same site, whether an environmental analysis or an environmental impact statement has been completed, and whether it has a completed Plan of Development.
- For each project that has a completed environmental impact statement, please add a link to the document on the Solar PEIS project website.
- For each project that has a completed Plan of Development, please add a link to the document on the Solar PEIS project website.

⁵ In California, "Guidance for Processing Applications for Solar Power Generation Facilities on Bureau of Land Management Administered Public Lands in the California Desert District" supplements this instruction memorandum. See http://www.blm.gov/pgdata/etc/medialib/blm/ca/pdf/cdd/energy.Par.6172.File.dat/SolarPowerGenerationGuidance_04-21-2008.pdf.

Facilitated-Development Alternative

The Facilitated Development alternative is the proposed action for both the BLM and the DOE. Each agency would develop solar energy programs, including environmental policies and mitigation strategies. An RFD scenario would be created to define the potential for future utility-scale solar energy development on BLM-administered land over a 20-year study period. This scenario would also identify which BLM land-use or resource-management plans would be amended.

Comment:

- The RFD scenario should assume a reasonable, foreseeable range of solar development, including a high level of development on BLM-managed lands over the next 20 years due to the Western states' Renewables Portfolio Standards and their efforts to reduce greenhouse gas emissions. By assuming a high level of solar development, the Solar PEIS would likely produce a more thorough, comprehensive, and defensible cumulative impacts analysis.
- As a less conservative estimate, the RFD scenario should also assume a low level of solar development, due to physical constraints such as limited transmission access and other barriers, such as a lower federal investment tax credit after 2008.

Limited-Development Alternative

The BLM proposed a Limited Development alternative. This alternative would evaluate the impacts of developing only those solar projects which had completed plans of development and were awaiting the BLM's approval as of the NOI's publication date, May 29, 2008.

Comment:

- Given the BLM's recent decision to continue accepting new solar applications, it appears that the "Limited Development" alternative is no longer feasible.

Planning Criteria

The NOI lists proposed planning criteria that would guide the Solar PEIS and the BLM's land-use planning and plan-amendment processes. Planning criteria are the constraints, standards, and guidelines that determine what the BLM will and will not consider during these processes. Additional planning criteria may be announced during the Solar PEIS process.

Comment:

- The Energy Commission reviewed these planning criteria and agrees with all of them.
- The Energy Commission supports using the Solar PEIS as the analytical basis for future BLM land-use or resource-management plan amendments. Using the Solar PEIS for this purpose is an efficient and reasonable approach to updating multiple land-use plans simultaneously so that they all recognize environmentally responsible solar energy development as an acceptable use and establish consistent best management practices and restrictions.
- It is also appropriate for the BLM to consider and analyze the impacts from increased land use for solar rights-of-way on other managed natural and cultural resources. This analysis will enable the BLM to determine whether the following, three planning criteria in the NOI are feasible:
 - Land-use amendments will address only solar development, not other managed resources.
 - Other resources will continue to be managed under pre-existing terms, conditions, and decisions in the applicable land-use plans.
 - The BLM will continue to recognize valid existing rights contained in current land-use plans.
- Utility-scale solar development will likely affect other managed resources and land uses due to the large land footprint of these facilities and the likelihood that fences will be erected to prohibit public (and wildlife) access onto project sites.
- BLM should coordinate and consult with federal, state, and local agencies and tribal governments and make every effort to encourage public participation.

- The Energy Commission agrees that environmental protection and energy production are not mutually exclusive priorities.
- The Energy Commission welcomes receiving geographical information that illustrates the affected environment, proposed alternatives, and the results of environmental analyses.
- The Energy Commission supports including consideration and analysis of climate change impacts within the scope of BLM land use plans and associated environmental documents. The methodology for quantifying impacts, including beneficial impacts, of solar energy should be presented in the Solar PEIS for public review and comment.

Approach for the Solar PEIS

The BLM and the DOE requested information and comments on resources in the western United States that utility-scale solar energy development may impact. The NOI states that the Solar PEIS will evaluate direct, indirect, and cumulative impacts to the following “significant” resource areas: wildlife, wildlife habitat, threatened and endangered species, and vegetation; proximity to wilderness or other special management areas; and impacts to cultural, paleontological, socioeconomic, visual and water resources. Specialists with expertise in solar energy, wildlife and fisheries, vegetation, air quality, outdoor recreation, archeology, paleontology, hydrology, soils, land use, visual resources, sociology and economics will conduct these analyses.

The Solar PEIS’s contents will describe the purpose and need for the project; effects of solar energy development on the nation; solar energy technologies; distribution of regional solar energy resources; activities to be undertaken for site monitoring, evaluation, and utility-scale development; impacts associated with implementing current technologies and mitigation measures; and constraints relevant to solar energy development. It will also consider the need to designate additional electricity transmission corridors on BLM-managed lands.

Comment:

- The Energy Commission commends the DOE and the BLM for defining a comprehensive scope of analysis for each proposed alternative.

- The Energy Commission and the California BLM intend to use the Solar PEIS to streamline future permitting of solar thermal power plants, provided it meets the information requirements of the California Environmental Quality Act (CEQA). Other California state agencies also would be able to streamline their environmental work related to solar permitting if the Solar PEIS were a CEQA-equivalent document. The California Solar PEIS Working Group can provide more information to the BLM and the DOE about what analyses would be required to make the Solar PEIS a CEQA-equivalent document.
- The Energy Commission also requests that the Solar PEIS include a California section for documenting results of any California-specific analyses and for publishing any California-specific solar development policies, restrictive stipulations, and mitigation strategies. For example, this part would contain GIS maps showing the “black, yellow, and green” locations (that is, coded by environmental suitability) for future solar development in California. Each other state may see value in having its own section as well.
- The Energy Commission and the California BLM currently use the following checklist of potential issues to prepare site-specific environmental reviews of solar thermal power plant proposals. Because they were not mentioned in the NOI, the Energy Commission recommends that the following **bolded** issue areas be included in the Solar PEIS’s scope of analysis.
 - Air Quality
 - Biological Resources
 - Cultural Resources
 - **Fire Protection**
 - **Hazardous Materials**
 - **Land Use (including recreation and grazing)**
 - **Noise**
 - **Public Health and Safety**
 - Socioeconomics
 - Soils
 - **Transmission Line Safety and Nuisance**
 - **Traffic and Transportation**
 - Visual
 - **Waste**
 - Water
- In particular, the Energy Commission recommends that the following significant resource issues associated with utility-scale solar energy development receive in-depth analysis:
 - Long-term loss of wildlife habitat
 - Loss of natural drainage caused by soil removal and land contouring

- Soil erosion caused by vegetation removal and land contouring
- Inefficient use of scarce water resources and depletion of groundwater
- Loss of other uses of the land
- Project retrofitting or decommissioning and site restoration
- The Solar PEIS should determine policies for wildlife habitat mitigation ratios or financial compensation for long-term loss of wildlife habitat.
- For the joint Issues Identification Report for the Ivanpah Solar Energy project, the Energy Commission is developing the following Low Impact Development principles with the California BLM to mitigate potential for improper erosion control:
 - Help maintain natural drainage paths and landscape features to slow and filter runoff and maximize groundwater recharge.
 - Reduce the impervious ground cover created by a project and its associated transportation network.
 - Manage runoff as close to the source as possible.

These and any additional principles should be considered for adoption as planning criteria or best management practices.

- Water use for solar thermal development is a significant concern to the public. The Energy Commission urges the BLM and the DOE to evaluate the environmental and economic impacts of water use required for a variety of solar thermal technologies including, limiting the use of fresh water for power plant cooling.⁶

⁶ The 2003 *Integrated Energy Policy Report* states, "...[T]he Energy Commission will approve the use of fresh water for cooling purposes by power plants which it licenses only where alternative water supply sources and alternative cooling technologies are shown to be "environmentally undesirable" or "economically unsound." Additionally, as a way to reduce the use of fresh water and to avoid discharges, the Energy Commission will require zero-liquid discharge technologies unless such technologies are shown to be "environmentally undesirable" or "economically unsound." The Energy Commission interprets "environmentally undesirable" to mean the same as having a "significant adverse environmental impact" and "economically unsound" to mean the same as "economically or otherwise infeasible." Publication No. 100-03-0189, Page 41, <<http://www.energy.ca.gov/reports/100-03-019F.PDF>>.

- Although these solar facilities are expected to be on-line for 20 years or more, new solar technologies could make obsolete this first generation of solar thermal plants. The Solar PEIS should consider adopting a policy that permits expedited review of proposals to “repower” solar energy power plants.
- The Solar PEIS should also develop policies and best management practices for decommissioning solar facilities that lose their economic viability. The policies should include a sinking fund or bond requirement to afford facility removal, site clean-up and restoration.
- The Solar PEIS process needs to conduct a robust and thorough cumulative impacts analysis, which foresees where utility-scale solar development will occur in California and the associated natural and cultural-resource impacts from such development. The Solar PEIS provides an occasion for a more exhaustive consideration of effects and alternatives than would be practical in an EIS on an individual action, and it can ensure consideration of cumulative impacts that might be inadequately addressed in a case-by-case analysis.
- The Energy Commission recommends that the Solar PEIS focus its cumulative impact analysis on all renewable energy development, including geothermal, wind, and solar development, that is occurring and is likely to occur on BLM lands and on other federal lands, including Forest Service and Department of Defense, State lands, and on private lands. In addition, the cumulative impact analysis needs to examine potential transmission corridors that would cross or interconnect with transmission on state or private lands.
- The Energy Commission commends the DOE and the BLM for including transmission corridor planning in the scope of the Solar PEIS. As mentioned in the NOI, transmission planning efforts for renewables are underway already, including the California Renewable Energy Transmission Initiative (RETI) and the Western Governors’ Association Renewable Energy Zone Project. Results from the RETI will be forwarded to the Solar PEIS Project Team as resource maps and written products become available.
- The State of California uses the following principles for transmission planning:
 - Encourage the use of existing rights-of-way by upgrading existing transmission facilities where technically and economically justifiable.

- When construction of new transmission lines is required, encourage expansion of existing rights-of-way, when technically and economically feasible.
- Provide for the creation of new rights-of-way when justified by environmental, technical, or economic reasons, as determined by the appropriate licensing agency.
- Where there is a need to construct additional transmission, seek agreement among all interested utilities on the efficient use of that capacity.

These principles should be considered for adoption as planning criteria or best management practices.

The Energy Commission is committed to working on the successful completion of the Solar PEIS. The NOI identifies an ambitious, but appropriate scope. The DOE, the BLM, and the Argonne National Laboratory have already demonstrated their interest in working with us and other members of California's Solar PEIS Interagency Working Group. We look forward to participating in this important process.

Should you have any questions about these comments, please call Ms. Mignon Marks, Coordinator for the California Solar PEIS Interagency Working Group, at (916) 654-4732.

Thank you for this opportunity to comment on the scope of the Solar PEIS.

Sincerely,


JACKALYNE PFANNENSTIEL
Chairman

Enclosure

WILD PLACES AT RISK

Bureau of Land Management Wilderness

- Black Mountain Wilderness, BLM California Desert Conservation Area
- Carrizo Gorge Wilderness, BLM California Desert Conservation Area
- Chuckwalla Mountains Wilderness, BLM California Desert Conservation Area
- Coyote Mountains Wilderness, BLM California Desert Conservation Area
- Fish Creek Mountains Wilderness, BLM California Desert Conservation Area
- Kelso Dunes Wilderness, BLM California Desert Conservation Area
- Little Chuckwalla Mountains Wilderness, BLM California Desert Conservation Area
- Mecca Hills Wilderness, BLM California Desert Conservation Area
- Newberry Mountains Wilderness, BLM California Desert Conservation Area
- Nopa Range Wilderness, BLM California Desert Conservation Area
- Old Woman Mountains Wilderness, BLM California Desert Conservation Area
- Orocopia Mountains Wilderness, BLM California Desert Conservation Area
- Palo Verde Wilderness, BLM California Desert Conservation Area
- Piute Mountains Wilderness, BLM California Desert Conservation Area
- Rodman Mountains Wilderness, BLM California Desert Conservation Area
- Rice Valley Wilderness, BLM California Desert Conservation Area
- Sawtooth Mountains Wilderness, BLM California Desert Conservation Area
- Stepladder Mountains Wilderness, BLM California Desert Conservation Area
- Turtle Mountains Wilderness, BLM California Desert Conservation Area

Bureau of Land Management Wilderness Study Areas

- Cady Mountains Wilderness Study Area, BLM California Desert Conservation Area
- Death Valley #17 Wilderness Study Area, BLM California Desert Conservation Area
- Dry Valley Rim Wilderness Study Area, BLM Eagle Lake Field Office
- Skedaddle Wilderness Study Area, BLM Eagle Lake Field Office
- Soda Mountains Wilderness Study Area, BLM California Desert Conservation Area

National Forest Wilderness

- Cucamonga Wilderness, San Bernardino National Forest
- Desolation Wilderness, Eldorado National Forest
- Ishi Wilderness, Lassen National Forest
- Mokelumne Wilderness, Eldorado National Forest

National Forest Inventoried Roadless Areas

- Caples Creek Roadless Area, Eldorado National Forest
- Cajon Roadless Area, San Bernardino National Forest
- Circle Mountain Roadless Area, San Bernardino National Forest
- Cucamonga Roadless Area, San Bernardino National Forest
- Dardanelles Roadless Area, Lake Tahoe Basin Management Unit
- Fish Canyon Roadless Area, Angeles National Forest
- Freel Roadless Area, Lake Tahoe Basin Management Unit
- Grizzly Mountain Roadless Area, Plumas National Forest
- Heart Lake Roadless Area, Lassen National Forest
- Ishi Roadless Area, Lassen National Forest
- Magic Mountain Roadless Area, Angeles National Forest
- Middle Fort Feather River Roadless Area, Plumas National Forest
- Mill Creek Roadless Area, Lassen National Forest
- Red Mountain Roadless Area, Angeles National Forest
- Salt Creek Roadless Area, Angeles National Forest
- Salt Springs Roadless Area, Eldorado National Forest
- San Sevaine Roadless Area, San Bernardino National Forest
- Steele Swamp Roadless Area, Modoc National Forest
- Strawberry Peak Roadless Area, Angeles National Forest
- Tragedy-Elephant's Back Roadless Area, Eldorado National Forest
- Tule Roadless Area, Angeles National Forest
- West Fork Roadless Area, Angeles National Forest
- Wild Cattle Mountain Roadless Area, Lassen National Forest

National Parks

- Death Valley National Park
- Joshua Tree National Park
- Lassen Volcanic National Park
- Mojave National Preserve

State Parks

- Anza-Borrego Desert State Park