U.S. Department of the Interior
Bureau of Land Management

# PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT SCOPING SUMMARY REPORT MAY 2023

Utility-Scale Solar Energy Development on BLM-Administered Lands

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## ACRONYMS

| | |
|---|---|
| ACEC | area of critical environmental concern |
| BLM | Bureau of Land Management |
| DOE | U.S. Department of Energy |
| DRECP | Desert Renewable Energy Conservation Plan |
| EIS | Environmental Impact Statement |
| EO | Executive Order |
| EPA | Environmental Protection Agency |
| GRSG | greater sage grouse |
| LWC | land with wilderness characteristics |
| MW | megawatt |
| NCL | National Conservation Lands |
| NEPA | National Environmental Policy Act |
| NOI | notice of intent |
| PV | photovoltaic |
| RECO | Renewable Energy Coordination Office |
| ROD | Record of Decision |
| ROW | right-of-way |
| RMP | resource management plan |
| SDA | specially designated area |
| SEZ | solar energy zone |
| USFWS | U.S. Fish and Wildlife Service |
| USGS | U.S. Geological Survey |

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# 1 INTRODUCTION

The U.S. Bureau of Land Management (BLM) is considering updates to the 2012 Western Solar Plan (also known as the *Programmatic Environmental Impact Statement for Solar Energy Development in Six Southwestern States*) (BLM 2012). In Executive Order (EO) 14008, "Tackling the Climate Crisis at Home and Abroad," the President ordered the Secretary of the Interior to "review siting and permitting processes on public lands" with a goal of increasing "renewable energy production on those lands […] while ensuring robust protection for our lands, waters, and biodiversity and creating good jobs." The Energy Act of 2020 (Section 3104 of the Energy Act 42 USC §13201) directs the Secretary to "seek to issue permits that, in total, authorize production of not less than 25 gigawatts of electricity from wind, solar, and geothermal energy projects by not later than 2025, through management of public lands and administration of Federal laws." The BLM is preparing a Programmatic Environmental Impact Statement (EIS) in response to EO 14008 and the Energy Act, because its initial solar energy planning was conducted more than 10 years ago, and to support current and future clean energy goals, including the goal of decarbonizing the electric grid by 2035 and reaching net-zero carbon emissions by 2050 (EO 14057, Catalyzing Clean Energy Industries and Jobs Through Federal Sustainability). The BLM is committed to planning for responsible solar energy development on public lands in a way that balances the need for clean energy with protection of natural, cultural, and historic resources.

## 1.1 BACKGROUND

In October of 2012, the BLM signed the Western Solar Plan Record of Decision (ROD), implementing solar energy policies, procedures, and land-use plan amendments related to permitting of solar energy developments on public lands in six southwestern states (Arizona, California, Colorado, Nevada, New Mexico, and Utah). The Western Solar Plan played a large part in establishing a more comprehensive solar energy program within the BLM through authorization policies, procedures, and design features applicable to all utility-scale solar energy development on BLM-administered lands across the six-state area. It identified categories of lands to be excluded from utility-scale solar energy development and specific locations well suited for utility-scale production of solar energy where the BLM prioritizes development (solar energy zones, or SEZs).

The Western Solar Plan also established programmatic design features for utility-scale solar energy development on BLM-administered lands and provided a framework for the BLM to consider utility-scale solar development proposals on lands outside of SEZs in accordance with procedures in the variance process established by the plan and decisions. It amended the land-use plans in the six-state study area to reflect variance lands and SEZs. The Western Solar Plan facilitated the processing of solar development applications for locations within public lands where the landscape is generally flat, direct sunlight is ample, and high-value resources would not be significantly impacted.

In the 10 years since the Western Solar Plan was issued, the BLM has recognized that updating and expanding the solar energy program would be appropriate to advance current and future renewable energy goals and to support conservation and climate priorities. For example, the BLM has received applications for solar development on public lands in areas outside the six-state area addressed in the plan. In addition, due to technological advancements and reduced costs of photovoltaic (PV) systems, the BLM has received continued interest from PV solar developers in locations that were allocated as exclusion areas under the Western Solar Plan, based on exclusion criteria for slope or solar insolation values. The BLM has also received requests from solar developers to identify additional priority areas that are closer to available transmission infrastructure.

The BLM published a Notice of Intent (NOI) to prepare a *Programmatic EIS to Evaluate Utility-Scale Solar Energy Planning and Amend Resource Management Plans for Renewable Energy Development* (Programmatic EIS) in the *Federal Register* on December 8, 2022 (87 FR 75284). This Programmatic EIS will evaluate the potential impacts of eliminating technology-based criteria for solar development on public lands; expanding the Solar Energy Program to additional states; identifying new priority (or preferred) areas for solar development; changing the process for solar development applications outside of priority areas (the variance process); and re-evaluating appropriate criteria for excluding high-value resource areas from renewable energy development. The NOI sought public comment on whether the BLM should expand this planning effort to include five additional states: Idaho, Montana, Oregon Washington, and Wyoming. In the NOI, the BLM noted that it would consider the extent to which lands covered by the Desert Renewable Energy Conservation Plan (DRECP) may be included in the planning area. After consideration, the BLM chose not to include the area under the DRECP in the current effort as the BLM continues to believe the DRECP supports an acceptable balance between conservation and renewable energy opportunities within its planning area boundary. Public comments support this position (see Section 2.1.1 below). The planning area is shown in Figure 1. The BLM also sought public comment on the definition for utility-scale, the variance process, and incentivization of development in priority, or preferred, areas.


**Figure 1. Map of the Solar Programmatic EIS Planning Area.**

## 1.2 OVERVIEW OF THE SCOPING PROCESS

Public involvement is a vital and legally required component of the BLM planning process. Public involvement increases public investment in the decision-making process and allows for full environmental disclosure. Guidance for implementing public involvement under the National Environmental Policy Act (NEPA) (42 USC 4321) is codified in Title 40 of the *Code of Federal Regulations* (CFR), Section 1506.6. This guidance ensures that federal agencies make a diligent effort to involve the public in the NEPA process. Additional guidance for public involvement during land-use planning actions appears in the BLM's *Land Use Planning Handbook* (H-1601-1) (BLM 2005).

Scoping is an early and open process that helps the BLM to determine the important issues to be addressed and to identify the proposed action. Information collected during scoping may also be used to develop the alternatives to be addressed in a NEPA document.

In accordance with 43 CFR 1610.2(d), the BLM must document public scoping results. Its land-use planning guidance also requires the documentation of public involvement (BLM

2005). This scoping report summarizes the scoping process for the Solar Programmatic EIS and the comments received during the formal scoping period.

### 1.2.1 Notice of Intent

The public scoping process for the Solar Programmatic EIS began on December 8, 2022, when the NOI was published in the *Federal Register* (87 FR 75284), informing the public of the BLM's intent to prepare a Programmatic EIS to update the Western Solar Plan (BLM 2012). The NOI requested public comments concerning the scope of the analysis, potential alternatives, and relevant information or studies, and announced a series of public scoping meetings. The NOI explained that the end date of the public scoping period would be February 6, 2023, or 15 days after the last public scoping meeting, whichever occurred later. The last public meeting was held on February 14, 2023. Therefore, public scoping closed on March 1, 2023. The public scoping period lasted a total of 84 days.

The BLM will use public comments gathered during the scoping period to aid in determining the scope of the Programmatic EIS, including the scope of alternatives to be evaluated. The BLM will release the draft Programmatic EIS and Resource Management Plan (RMP) Amendments later in 2023, and will provide further public involvement opportunities, as appropriate, consistent with NEPA and the land-use planning process. Opportunities for additional public involvement include a 90-day comment period for the draft Programmatic EIS and RMP Amendments, a 30-day public protest period, and a concurrent 60-day governor's review period for the Final Programmatic EIS and Proposed RMP Amendments.

### 1.2.2 Planning Criteria

During the planning process, the BLM identified planning criteria for the Solar Programmatic EIS. Planning criteria are the constraints, standards, and guidelines that determine what the BLM will or will not consider during its planning process; they establish parameters, help focus analysis of the issues identified in scoping, and structure the preparation of the Programmatic EIS. These planning criteria are available at: https://eplanning.blm.gov/eplanning-ui/project/2022371/570.

### 1.2.3 Project Website

The BLM maintains a national NEPA Register webpage for this project (https://eplanning.blm.gov/eplanning-ui/project/2022371/510), with information related to the development of the Programmatic EIS. The website includes background documents, maps, information on public meetings, and contact information for the planning team. This website was also used to receive written scoping comments for this Solar Programmatic EIS, along with a BLM email option for submitting written comments.

### 1.2.4 Public Outreach, Cooperating Agencies, and Tribal Coordination

Members of the public, organizations, and local, county, and state agencies had several ways to provide comments during the scoping period. They could be provided through the BLM National NEPA Register project webpage, oral comment at scoping meetings, by email to solar@blm.gov, and individual letters and comment forms mailed to Solar Energy Programmatic EIS Scoping, 1849 C Street NW, Washington, DC 20240.

The BLM's public outreach efforts included publication of the NOI (as discussed in Section 1.2.1), distribution of news releases, and public scoping meetings (both in-person and virtual). The BLM hosted 14 public scoping meetings: 3 virtual meetings and 11 in-person meetings (Table 1). The purpose of these meetings was to inform the public about the project and to provide an opportunity for individuals to submit oral comments. Table 1 summarizes the scoping meeting dates, locations, and number of attendees.

Cooperating agencies are agencies that the BLM has agreed have the requisite jurisdiction by law or special expertise with respect to environmental issues necessary to participate in the Solar Programmatic EIS (BLM 2008). The BLM included information on the process for becoming a cooperating agency in the NOI and in scoping meeting presentation materials. The BLM also sent letters of invitation to more than 1,000 potential cooperating agencies in March of 2023, and is working to formalize agreements with agencies that expressed interest and are qualified. The list of cooperating agencies will be included in the Draft Solar Programmatic EIS, expected to be available for public comment in late Summer 2023.

**Table 1. Scoping Meeting Information**

| Meeting Date and Time[1] | Meeting Location | Approximate Number of Attendees |
|---|---|---|
| January 12, 2023, 12:30–3:30 pm | Virtual webinar via Zoom | 242 |
| January 13, 2023, 9 am–1 pm | Stewart Lee Udall Building, Washington DC | 15 |
| January 18, 2023, 10 am–2 pm | Courtyard Marriott, Sacramento, CA | 20 |
| January 19, 2023, 3–7 pm | Reno-Sparks Convention Center, Reno, NV | 19 |
| January 24, 2023, 3–7 pm | Southeast Regional Library, Gilbert, AZ | 22 |
| January 26, 2023, 3–7 pm | Crown Plaza, Albuquerque, NM | 9 |
| January 30, 2023, 3–7 pm | Spokane Convention Center, Spokane, WA | 5 |
| January 31, 2023, 3–7 pm | Holiday Inn Express Boise-University Area, Boise, ID | 16 |
| January 31, 2023, 3–7 pm | Laramie County Community College, Cheyenne, WY | 27 |
| February 2, 2023, 3–7 pm | DoubleTree by Hilton, Bend, OR | 46 |
| February 2, 2023, 3–7 pm | Billings Hotel & Convention Center, Billings, MT | 15 |
| February 7, 2023, 12–4 pm | BLM Utah State Office, Salt Lake City, UT | 34 |
| February 9, 2023, 3–7 pm | Grand Junction Convention Center, Grand Junction, CO | 23 |
| February 13, 2023, 12:30–3:30 pm | Virtual webinar via Zoom | 202 |
| February 14, 2023, 9–11:30 am PST | Virtual webinar via Zoom | 123 |

[1] All times are Mountain Standard Time (MST), unless noted as Pacific Standard Time (PST)

The BLM sent informational letters to 241 Federally recognized Tribes with affiliated lands within the 11-state planning area included in the Programmatic EIS on December 5, 2022.

## 1.3 SUMMARY OF SUBMITTALS AND COMMENTS

Table 2 summarizes the number of unique written and oral comments received through all submittal options (BLM's National NEPA Register webpage, oral comments at scoping meetings, by email, and as individual mailed letters and comment forms). In addition to unique submissions from individuals and organizations, several organizations asked their members to submit form letters (called "campaign" letters here). Table 3 summarizes the numbers of campaign letters received from various organizations and the concerns addressed in the letters. An example of each campaign letter appears in Appendix A. Campaign letters were reviewed for unique text (differing from the main form letter) to ensure that all unique text is represented in the overall comment record.

It is important to note that analyzing identical and similar comments as a group does not reduce the importance of the individual comments. NEPA regulations on scoping are clear that the scoping process is not a vote, but an opportunity to "determine the scope and the significant issues to be analyzed in depth in the environmental impact statement" (40 CFR 1501.7(a)(2)) and to "identify and eliminate from detailed study the issues which are not significant, or which have been covered by prior environmental review" (40 CFR 1501.7(a)(3)). The BLM does not weigh resource issues based on the number of comments it receives; rather, the BLM considers the content of each individual comment. For example, if there are multiple identical comments about water resources and one unique comment about vegetation, the BLM does not weigh water resources more heavily. Thus, whether one comment raises an issue or hundreds of comments raise the same issue, the issue is carried forward for consideration in the Programmatic EIS.

**Table 2. Public Comment Submittals Received**

| Submittal Type | Number of Submissions | Number of Comments |
|---|---|---|
| Unique written submittals | 297 letters | 1,551 unique comments |
| Oral comments | 75 speakers | 475 oral comments by category |

**Table 3. Campaign Letters**

| Form Letter | Source | Approximate Number of Comments | Comment Summary |
|---|---|---|---|
| A-1<br>A-2 | The Wilderness Society, via email<br>The Wilderness Society, via email | 1,710<br>6,130 | Expand to 11 states, exclude the Desert Renewable Energy Conservation Plan (DRECP) area, include local communities and Tribes in planning, incentivize low-conflict areas, plan near transmission, exclude land with wilderness characteristics (LWC), habitat connectivity areas, and migration corridors. |
| B | The National Wildlife Federation Action Fund, via email | 9,250 | Expand to 11 states, incentivize in priority areas, analyze capacity and demand on transmission lines, analyze wind and geothermal energy separately. |
| C-1<br>C-2 | Sierra Club, via email<br>Unknown, via email | 650<br>360 | Exclude the DRECP area, use the DRECP as a model, increase public engagement. |
| D | Sierra Club, via email | 1,900 | Use the DRECP as a model, prioritize disturbed lands, include local communities and Tribes in planning. |
| E | National Parks Conservation Association, via National NEPA Register | 2,850 | Use the DRECP as a model, expand to 11 states, include Tribes in planning. |
| F-1 | California Wilderness Coalition, via National NEPA Register | 50 | Analyze wind in a separate effort; update old RMPs; exclude the DRECP area, specially designated area (SDAs), migration corridors, greater sage grouse priority habitat management areas, and intact habitat areas. |
| F-2 | Friends of the Inyo, via National NEPA Register | 25 | Avoid Bodie Hills and Mono Basin. Exclude the DRECP, greater sage grouse (GRSG) habitat, national conservation lands (NCL), areas of critical environmental concern (ACECs), LWC, migration corridors, and important natural and cultural resources. Involve Tribes. Update RMPs and analyze wind in a separate effort. |

During the comment period, the BLM received 297 written submissions in addition to 75 oral comments at scoping meetings, for a total of 2,026 unique comments. For the purposes of this summary analysis, all comments were assigned to a unique comment category, although many of the comments touched on two or more topics. During its review, the BLM will consider any additional comments received after the close of the comment period. However, these comments are not included in this report.

All submittals were reviewed and categorized by individual topics addressed. Table 4 identifies the percentage of comments in each category. Comments responding to topics and questions posed in the NOI comprised the largest proportion of comments (42%). These include the 6.8% of the total comments on resource-based exclusions. The numbers of comments on the NEPA process and Resource Concerns were approximately equal (23% and 22%, respectively). Planning issue comments comprised 13% of all comments received. Section 2 provides more detailed descriptions of the comments received for each category.

**Table 4. Comment Categories and Numbers of Comments in Each Category**

| Comment Category | Number of Comments (total = 2,026) | % of Comments | Report Section |
|---|---|---|---|
| **NOI/Scoping** | **840** | **42** | **2.1** |
| Expand or limit the study area | 26 | 1.3 | 2.1.1 |
| DRECP concerns | 95 | 4.7 | 2.1.1.1 |
| Add new states | 61 | 3.0 | 2.1.1.2 |
| Land-use allocations | 91 | 4.5 | 2.1.2 |
| Locate near transmission | 67 | 3.3 | 2.1.2.1 |
| Develop on disturbed lands | 87 | 4.3 | 2.1.2.2 |
| Exclusion criteria | 14 | 0.7 | 2.1.3 |
| Technology-based exclusions | 55 | 2.7 | 2.1.3.1 |
| Resource-based exclusions | 137 | 6.8 | 2.1.3.2 |
| Exclusion buffers around populated areas/SDAs | 53 | 2.6 | 2.1.3.3 |
| Variance process | 76 | 3.8 | 2.1.4 |
| Change the definition of utility-scale | 45 | 2.2 | 2.1.5 |
| Incentivize development in priority areas | 59 | 2.9 | 2.1.6 |
| **NEPA Process** | **467** | **23** | **2.2** |
| NEPA process: general | **73** | 3.6 | 2.2 |
| Public outreach | 45 | 2.2 | 2.2.1 |
| Comment period extension request | 52 | 2.6 | 2.2.2 |
| Consultation | 32 | 1.6 | 2.2.3 |
| Best available information and baseline data | 85 | 4.2 | 2.2.4 |
| GIS data and analysis | 21 | 1.0 | 2.2.5 |
| Cumulative impacts | 30 | 1.5 | 2.2.6 |
| Coordination | 53 | 2.6 | 2.2.7 |
| Cooperating agencies | 18 | 0.9 | 2.2.8 |
| Mitigation | 50 | 2.5 | 2.2.9 |
| Monitoring | 8 | 0.4 | 2.2.10 |
| **Federal Law** | **5** | **0.25** | **2.3** |
| Federal law: general | **5** | 0.2 | 2.3 |

**Table 4. (Cont.)**

| Comment Category | Number of Comments (total = 2,026) | % of Comments | Report Section |
|---|---|---|---|
| **Resource Concerns** | **442** | **22** | **2.4** |
| Air quality | 11 | 0.5 | 2.4.1 |
| Climate change | 19 | 0.9 | 2.4.2 |
| Cultural resources and tribal concerns | 27 | 1.3 | 2.4.3 |
| Disturbed lands: wildfire, invasive species | 20 | 1.0 | 2.4.4 |
| Ecological resources: vegetation, wildlife, special status species | 110 | 5.4 | 2.4.5 |
| Geology | 14 | 0.7 | 2.4.6 |
| Human health | 33 | 1.6 | 2.4.7 |
| Land use: livestock grazing, mining, recreation, special designations, and wild horses and burros | 75 | 3.7 | 2.4.8 |
| Socioeconomics and environmental justice | 65 | 3.2 | 2.4.10 |
| Visual resources | 15 | 0.7 | 2.4.11 |
| Water resources | 53 | 2.6 | 2.4.12 |
| **Planning Issues** | **272** | **13** | **2.5** |
| Issues to be carried forward in the Programmatic EIS | 81 | 4.0 | 2.5.1 |
| Include wind in this Programmatic EIS effort? | 72 | 3.6 | 2.5.2 |
| Did it work? (referring to 2012 Western Solar Plan) | 15 | 0.7 | 2.5.3 |
| Issues out of scope | 104 | 5.1 | 2.5.4 |

# 2 ISSUE OR CONCERN STATEMENTS AND COMMENT SUMMARIES

This section summarizes the comments received during the 84-day scoping period. It is divided into four sections. Section 2.1 summarizes comments received related to the questions posted in the NOI. Section 2.2 summarizes comments suggesting how the BLM should undertake this NEPA process, including consultation and coordination, and scientific literature that the BLM should review. Section 2.3 addresses federal law comments. Section 2.4 summarizes resource-specific comments that the BLM could consider in developing alternatives in the EIS. Section 2.5 briefly summarizes comments on other planning issues.

## 2.1 NOI/SCOPING TOPICS

### 2.1.1 Expand or Limit the Study Area

While many commenters were in favor of expanding the study area, several commenters recommended not expanding it. These commenters noted the short timeframe for analysis of a large area covering a variety of land types and with multiple resources, and the differing regulatory frameworks in each state.

Many commenters also noted that solar development would remove the management of public lands from multiple uses, restricting the land from wildlife, vegetation, recreation, and grazing.

A commenter recommended that selected sites have the least environmental impacts and that applications for development outside priority areas should not be processed until all priority sites have been fully developed.

#### 2.1.1.1 Desert Renewable Energy Conservation Plan (DRECP) Area Concerns

Many commenters urged the BLM to exclude DRECP lands from the study area. Some recommended using the DRECP as a model for successful planning.

#### 2.1.1.2 Add New States

Many commenters support expansion to the five new states (Idaho, Montana, Oregon, Washington, and Wyoming), and recommended analysis using a landscape level “smart from the start” approach, because the study area expansion would allow the BLM to meet the goals established in EO 14008 and would allow energy to be produced closer to markets where it would be used. They noted that adding the new states could reduce the socioeconomic, ecological, and landscape burden on any particular state or region.

Several commenters recommended analyzing the five new states in a separate study. Commenters also recommended that current Renewable Energy Coordination Offices (RECOs) be fully staffed and new ones added to cover the five additional western states.

### 2.1.2 Land-Use Allocations

#### 2.1.2.1 Locate near Transmission

Commenters recommended that priority areas be located in low-conflict areas that are near transmission infrastructure. They noted that most SEZs from the 2012 Western Solar Plan were limited by their poor access to transmission infrastructure and substations and that, in contrast, the Arizona Restoration Design Energy Project identified areas based on proximity to transmission infrastructure. Commenters noted that priority areas located near transmission infrastructure would incentivize developers.

A commenter recommended the Solar Programmatic EIS clearly describe what is required to connect renewable energy projects to the electrical grid (e.g., points of interconnection, substations, smaller lines that can be tapped, capacity). Others recommended incorporating data from the Western Electricity Coordinating Council and the Section 368 West-wide Energy Corridors and coordinating with utility companies for information on the availability of existing and proposed transmission infrastructure.

Several comments recommended that the Programmatic EIS evaluate impacts of all infrastructure related to solar generating facilities, including energy storage, transmission, and substations, to comprehensively capture the potential effects of solar energy development on public lands.

#### 2.1.2.2 Develop on Disturbed Lands

Many commenters recommended prioritizing the siting of utility-scale projects on disturbed lands, for example on brownfields, abandoned mine lands, agriculture lands no longer in production, Superfund sites, and abandoned oil and gas sites. They suggested providing incentives for renewable energy development in these areas where resource conflicts are low. Many of these commenters noted that prioritizing solar energy development in these areas would have the also have the beneficial results of remediating and repurposing disturbed sites, avoiding new impacts in undisturbed areas, and restore the economic potential of degraded lands. One commenter suggested creating an agreement with the Department of Defense to site projects on withdrawn military lands.[1]

[1] The Secretary of the Interior has the authority to withdraw lands in Federal ownership, effectively removing an area of Federal land from settlement, sale, location, or entry for the purpose of limiting activities to maintain other public values in the area or reserving it for a particular public purpose or program. Some public lands are withdrawn and reserved for military training and testing. (Information from https://www.blm.gov/programs/lands-and-realty/land-tenure/withdrawals).

### 2.1.3 Exclusion Criteria

Many commenters recommended reviewing the exclusion criteria from the 2012 Western Solar Plan and using the best available information to expand or remove criteria to better meet updated priorities. Specific exclusion recommendations were separated into three categories: (1) technology-based exclusions, (2) resource-based exclusions, and (3) exclusion buffers surrounding communities and specially designated areas.

#### 2.1.3.1 Technology-Based Exclusions

Industry commenters recommended removing the technology-based exclusion criteria (slope and solar insolation, or the amount of sunlight), particularly when focusing solely on PV facilities, because updated PV technology allows profitable development in areas with higher slopes and lower insolation.

Other commenters were concerned that removing technology-based criteria would open lands that have other resource conflicts to solar development, primarily visual impacts and habitat loss. Some commenters were concerned about the visual impacts of mountain slopes and alluvial fans being covered in solar panels. They recommended that the BLM thoroughly analyze the natural and cultural resources in the areas where the technical exclusions currently apply, and identify and designate new resource-based exclusion criteria that are protective of the landscape and the resources contained therein.

A commenter recommended modifying slope restrictions as a planning criterion primarily in geographic regions with very limited amounts of available flat land or in regions where there are conflicts between potential development of agricultural land and utility-scale solar energy generation. A few commenters recommended the slope exclusion be increased to 10–15%, based on current engineering design standards.

#### 2.1.3.2 Resource-Based Exclusions

Commenters recommended that the BLM identify areas with the lowest conflict as priority areas and identify exclusions based on current, updated science. Some commenters suggested exclusion evaluations be completed during project-level NEPA activities. They recommended the following exclusions:

- Ecological concerns:
  - GRSG habitat
  - U.S. Fish and Wildlife Service (USFWS) critical habitat
  - Habitat for BLM special status species (species specifically mentioned included lesser prairie chicken, San Joaquin kit fox, burrowing owls, Wyoming pocket gopher, pygmy rabbit, pika, red fox, white tailed jackrabbit, Shiras moose, pronghorn antelope, mule deer, and desert bighorn sheep)

  - Habitat for specific plants (species specifically mentioned included Joshua trees, yuccas, rare plants, and areas with high cactus density)
  - USFWS waterfowl production areas and waterfowl priority areas
  - Mojave Desert tortoise habitat and connectivity
  - Sonoran Desert tortoise habitat and connectivity
  - Big game migration and winter habitat
  - Bighorn sheep habitat
  - Lands to which special status species have been translocated
  - BLM lands where federal, state, or tribal funds have been invested to improve habitat quality in big game winter ranges, migration corridors, and other priority habitats
  - BLM lands adjacent to existing or planned highway wildlife crossing structures
  - Riparian corridors
  - Connecting lands between habitats
  - Bird migration corridors
  - Areas containing sensitive soils (including biological soil crusts and desert pavement), serpentine soils, rare soils, and hydric soils
  - Sand dunes and sand corridors (habitat for several special status species)
  - Unstable or steep slopes

- Specially designated areas:
  - National landscape conservation lands, including national historic and scenic trails, national monuments, wilderness areas, wilderness study areas, and wild and scenic rivers
  - LWC, including citizen-inventoried LWC
  - ACECs, including nominated ACECs
  - Special recreation management areas
  - Backcountry conservation areas
  - Conservation opportunity areas
  - Scenic byways
  - Backcountry byways
  - National parks (note that national parks are not administered by the BLM)

- Cultural resource, tribal interests, and environmental justice concerns
  - Traditional cultural properties
  - Areas of tribal importance including burial sites, sacred sites, spiritual sites, and ceremonial sites
  - Areas on the National Register of Historic Places
  - Japanese American confinement sites
  - Japanese American World War II history network
  - Areas near drinking water sources

- Visual resource management Class I and Class II (in Utah Class III) areas

- Other:
  - Lands identified as carbon sinks
  - Climate refugia
  - Areas undergoing scientific research studies
  - Old growth forests
  - Roadless core areas
  - Right-of-way (ROW) exclusion areas
  - Remaining natural areas of the Mojave Desert
  - Recreation areas
  - Lands acquired or improved with Land and Water Conservation Fund resources
  - Grazing allotments
  - Wild horse and burro management areas
  - Areas with high potential fossil yield classification (Class IV and V)
  - Desert washes and ephemeral streams
  - Portions of wilderness areas and wilderness study areas designated as variance in the 2012 Western Solar Plan (Dirty Devil, Fiddler Butte, and Flat Top in Colorado)
  - Lands slated for mineral withdrawal – specifically known sodium leasing areas
  - Modoc Plateau, Carrizo Plain, Diablo Range, Mono Basin, Bodie Hills, Owens Valley, Adobe Valley, Granite Basin, Chalfant Valley, Oregon Desert, Scotty's Castle Road, Cactus Springs, the Magic Valley in Idaho, Eastern Sierras
  - Areas in BLM's Motherload, Applegate, and Eagle Lake Field Offices

#### 2.1.3.3 Exclusion Buffers around Populated Areas and/or Specially Designated Areas

Commenters recommended buffers around certain areas, including:

- National parks: 15 mi
- Population centers: 20–30 mi
- Desert Center, California: at least 5 mi
- Lake Tamarisk: at least 5 mi
- Amargosa Valley
- Critical habitat and connectivity habitat
- National forests
- Beatty, Nevada: 25 mi
- Watershed resources such as wetlands, riparian areas, springs, streams, and large desert washes
- Chaco Culture National Historical Park: 10 mi

### 2.1.4 Variance Process

Commenters noted that maintaining a robust variance process in the updated Programmatic EIS will serve to ensure projects are designed to minimize negative impacts to resources and to adhere to Instruction Memorandum 2023-015, issued in December of 2022.

Several commenters recommended updates to the variance process at the programmatic level, stating that the process is not working and/or is not directing developers to the preferred SEZs. There were complaints that the current process occupies too much BLM staff time. Some commenters suggested rejecting variance land applications until all SEZs have approved applications. Recommendations included streamlining the variance process, reducing or eliminating variance lands, revising existing variance lands using updated data for exclusion areas, and improving the efficiency of project-specific NEPA reviews in variance areas by identifying mitigation opportunities.

Many commenters recommended that variance areas should have higher processing fees, rents, and megawatt capacity fees, as well as more stringent mitigation, monitoring, and reporting requirements than priority areas. A commenter recommended that the BLM speak directly to staff, first-line supervisors, and second-line supervisors in the Southern Nevada and California Desert District Offices about their experience using the screening and prioritization instruction memorandums and variance processes, in order to benefit from their experience and get feedback on proposed changes to the existing variance process for screening and prioritizing proposals.

### 2.1.5 Change the Definition of Utility-Scale

The Department of Energy (DOE) Solar Energy Technologies Office Solar Futures Study was suggested as a source of information about the amount of land needed to meet national renewable energy goals. The National Renewable Energy Laboratory definition of utility-scale as generating 5 MW or more was also cited as a source of information.

Some commenters recommended reducing the number of megawatts that define utility-scale to better align with the smaller areas of disturbed lands available, while others felt the 20 MW threshold was appropriate. Concern was expressed that lowering the threshold for utility-scale could create an increase in applications and strain the process, as well as fragmenting the landscape if new smaller projects are not sited on disturbed lands. A commenter recommended keeping the 20-MW definition unless there is a need for small areas like the BLM's "checkerboard" lands.[2]

Several commenters recommended changing the basis of the utility-scale definition from megawatts to acreage of land to be developed, with 50–100 acres as a possible threshold.

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2 Checkerboard patterns of land ownership resulted from the federal land grant program off the mid- to late 1800s that granted every other square mile section of land to the railroads.

Defining projects as utility-scale based on project area, rather than on output capacity, could be useful from a resource-planning perspective as technology advances.

### 2.1.6 Incentivize Development in Priority (Preferred) Areas

Many commenters stated that more needs to be done to incentivize development in priority areas and not to incentivize in variance areas. They noted that the 2016 Wind and Solar Competitive Leasing Rule inadvertently incentivized development in variance areas rather than SEZs. They recommended that the BLM fully staff RECOs and add new RECOs to the five additional states to assist with expedited and streamlined NEPA reviews.

One commenter recommended incentivizing priority areas through access to data, guidance, and agency expertise, rather than just monetary incentives. Priority areas should be identified and vetted with local government for incentives to apply. Another commenter thought that the BLM should create incentives for minimal nighttime lighting, less grading, and minimal vegetation disturbance to mitigate ecological impacts. There were also recommendations to incentivize use of American-made solar system components that use labor unions, development on disturbed lands, and development collocated with livestock.

An industry commenter proposed that the BLM offer lands competitively on a more frequent and regular schedule (e.g., annually or semiannually) to ensure robust market participation. Another industry commenter noted that the current ROW application requirements—specifically what is required for the preliminary plan of development, processing, and level of information needed to begin the NEPA process—are inconsistent and often unattainable for industry. They requested that, as part of the Programmatic EIS, the BLM update the Preliminary Plan of Development needs to align with realistic industry timelines and practices.

## 2.2 NEPA PROCESS

Many commenters recommended a landscape-scale planning process that uses a "smart from the start" (DOW 2012) approach to avoid impacts. This approach provides a framework for identifying low-conflict, low-impact areas for solar development. There were also many suggestions to slow the process. Others requested a clearly identified purpose and need.

Environmental groups recommended the Programmatic EIS provide a robust analysis to enable future NEPA analysis for projects in priority areas to largely tier to the Programmatic EIS. A commenter suggested that the Programmatic EIS present the impacts and alternatives in a comparative form to provide a clear basis for decision making.

Recommendations for alternatives to be analyzed included the following:

- Distributed generation alternative
- Energy conservation alternative

- Disturbed lands alternative
- Private land alternative
- No variance alternative
- Resource-based exclusion alternative

### 2.2.1 Public Outreach

Several organizations stressed the need for more robust community engagement at every stage of the renewable energy planning process, including engagement with members of affected communities, landowners, conservation groups, Tribes, renewable energy companies, and local and state agencies. Commenters noted that close communication with stakeholders would help ensure consistency with local land-use plans, assist in avoiding the disturbance of significant cultural and natural resources, and maximize benefits to local communities.

Several people commented that better public outreach was needed via local newspapers, mailed flyers, local news, public service announcements, and social media; publishing a notice in the *Federal Register* is not sufficient. One commenter noted the lack of information regarding this solar initiative on BLM Nevada's website.

Some commenters also felt that more meetings should have been held and that hybrid meetings should be conducted both in person and online, which would allow more people to participate. One commenter pointed out that the eastern and southern parts of the country should have been offered opportunities for local scoping meetings.

### 2.2.2 Comment Period Extension Request

Many commenters requested that the comment period be extended to allow the public to provide substantive comments.

### 2.2.3 Consultation

Numerous commenters recommended that BLM appropriately engage potentially affected Native American Tribes as part of the planning process. They stated that outreach should include both government-to-government consultation and outreach to members of Native American Tribes whose cultural and recreational interests may be affected by the BLM's management of utility-scale solar facilities on public lands. Commenters emphasized that the BLM must consult early and often to ensure tribal interests are brought forward in the planning process.

An agency commenter noted that agencies should solicit and elevate indigenous traditional ecological knowledge into the Tribal consultation process to better inform decision-making.

### 2.2.4 Best Available Information and Baseline Data

Many commenters noted the BLM RMPs associated with the study area are outdated. It was recommended that the BLM use the most current landscape-level scientific datasets available to identify geographies that merit consideration for exclusion areas. High-resolution national geospatial datasets exist that allow researchers to map, quantify, and track changes in landscape conditions, biodiversity priorities, connectivity priorities, and other factors.

Several commenters recommended the DOE Solar Futures Study as a source of information about the amount of land needed to meet national renewable energy goals. The Nature Conservancy's Power of Place mapping tool was also recommended. Some commenters provided additional specific literature for the BLM to review and consider.

### 2.2.5 Geospatial Information System (GIS) Data and Analysis

Commenters recommended GIS-based landscape scale planning similar to that undertaken for previous renewable energy siting projects. They stated that a GIS-based protocol that incorporates multiple levels of data should be used to identify areas with the greatest and least conflict. This method provides a non-biased, science-based method of determining siting appropriateness and may help the BLM avoid contentious project proposals. Visual maps along with detailed analysis should be included in the Programmatic EIS. Specific emphasis was put on LWC and identifying locations where inventories are needed.

Two commenters requested that the BLM update the Solar Mapper tool and include all solar applications filed since 2012.

### 2.2.6 Cumulative Impacts

Commenters recommended that the Programmatic EIS include a landscape-scale cumulative impacts section to identify the future condition of resources based on analysis of impacts from reasonably foreseeable projects or actions added to existing conditions and current trends. This thorough analysis of cumulative impacts would help to determine what mitigation is needed at the landscape level. Many commenters also requested that the Programmatic EIS evaluate the full life-cycle impacts of solar energy development on BLM-administered lands.

### 2.2.7 Coordination

Commenters suggested that the update to the 2012 Western Solar Plan happen openly and collaboratively, with a focus on local involvement and coordination. Early coordination helps identify potential conflicts, cumulative impacts, and appropriate conservation measures. Most commenters agreed that coordination with state energy planners, industry, utility companies and wildlife specialists would benefit the planning process. Several commenters recommended coordination with the BLM Section 368 Energy Corridors project and agencies and organizations

responsible for regional transmission planning to ensure that the BLM's land allocation criteria, both for proposed priority areas and for exclusion areas, sufficiently anticipate planned and existing transmission lines, substations, and other related energy infrastructure.

### 2.2.8 Cooperating Agencies

Several organizations requested cooperating agency status. For those that met the requirements (see Section 1.2.4), the BLM sent invitation letters and is negotiating memorandums of understanding.

### 2.2.9 Mitigation

Commenters recommended the BLM establish consistent, effective mitigation requirements that avoid, minimize, and mitigate impacts. Environmental groups suggested a regional-scale mitigation framework so additional compensatory mitigation requirements would be minimal in priority areas. They also urged the BLM to commit to a net benefit standard to ensure that lands restored or preserved for compensatory mitigation more than offset the areas affected by solar development. Mitigation projects should be implemented in designated areas and monitored for success, and adaptive management measures should be implemented to ensure impacts are fully offset.

Specific mitigation actions suggested include:

- Use of low-impact construction techniques to protect soils and vegetation and reduce restoration efforts.
- An updated approach to relocating and/or translocating displaced tortoises, including an analysis of previous translocation efforts.
- Approved projects pay fees in lieu of taxes to local governments to fund schools, police and fire protection, rural health, and public administration.
- Use of The Nature Conservancy's 10 Principles for Applying the Mitigation Hierarchy (TNC 2015).
- Reassessing design features and best management practices.
- Use of underground gen-tie lines wherever possible.

### 2.2.10 Monitoring

Several organizations recommended that the Draft Programmatic EIS describe a monitoring program with a set of monitoring criteria that could be used to evaluate and reduce

the impacts associated with solar development. The program could be used as an effective feedback mechanism to inform adaptive management decisions that would help meet environmental objectives. One organization wanted the BLM to require that applications for solar projects include an environmental inspection and monitoring program to assess the effectiveness of mitigation measures. Another organization wanted the BLM to require that solar development include a monitoring plan to integrate vegetation management with fire prevention and response.

## 2.3 FEDERAL LAW

Commenters requested that the Programmatic EIS advance the goals of the Energy Act of 2020 and EO 14008 and address the Inflation Reduction Act. The Nature Conservancy and several other commenters asked that the Programmatic EIS evaluate the impacts of the provisions in the Inflation Reduction Act (Public Law No: 117-169) that tie solar energy ROWs to a minimum acre threshold offered for oil and gas leasing.

## 2.4 RESOURCE CONCERNS

### 2.4.1 Air Quality

Several commenters stated that the Programmatic EIS should discuss emission sources necessary to construct and operate each of the analyzed solar technologies; generate emissions estimates for criteria pollutants, hazardous air pollutants, and greenhouse gases; assess potential direct, indirect, and cumulative air quality impacts; and analyze reasonable, practicable mitigation measures. They requested that the Programmatic EIS look at how specific siting conditions could affect emissions (for example, soils that are easily wind eroded or geographically remote location that may require more vehicle miles traveled to construct and operate the site). Dust generation from solar facilities was a frequently noted concern.

### 2.4.2 Climate Change

Commenters concerned with climate change issues urged that the Programmatic EIS should acknowledge the current climate crisis. They recommended considering carbon sequestration in desert soils.

Several commenters suggested the Programmatic EIS discuss how long-term emission changes will help in meeting greenhouse gas reduction targets (such as the 2050 net-zero target) set at the federal, regional, or state level as required in 40 CFR § 1506.2(d), including the U.S. 2030 Paris Accord greenhouse gas reduction target. Commenters living near existing solar facilities expressed concerns regarding the heat island effect from utility-scale solar facilities.

### 2.4.3 Cultural Resources and Tribal Interests

Commenters suggested the Programmatic EIS discuss how to avoid or minimize adverse effects on cultural or archaeological sites as well as mitigation measures. BLM should provide a summary of coordination with Tribes, state historic preservation officers, and tribal historic preservation officers. Some commenters requested that the BLM perform cultural inventories and ethnographic studies to update BLM land-use plans.

Commenters noted that cultural landscapes have been impacted under the 2012 Western Solar Plan, including Owens Valley in California and the Tableland Wilderness Study Area/ACEC.

### 2.4.4 Disturbed Lands: Wildfire and Invasive Species

Commenters expressed concern with invasive species establishment after construction disturbance and recommended an invasive species management plan to monitor and control noxious weeds. One agency commenter was particularly concerned with the weeds ventenata (*Ventenata sp.)* and medusahead (*Taeniatherum caput-medusae (L.) Nevski*). An analysis of potential herbicides should be included.

Commenters noted that areas identified as inherently at high risk for wildfires should not be developed, and that rural areas have limited resources to combat additional fire risks. Some commenters were concerned with toxins that could be released from the panels in the event of a fire. Human-caused fire was also listed as a concern.

### 2.4.5 Ecological Resources: Vegetation, Wildlife, and Special Status Species

Many commenters were concerned about wildlife habitat and connectivity. They recommended assessments be completed before land designations are determined. Commenters stressed that it was important to focus on not only endangered and threatened species but also species of special concern and future species that may be listed. A landscape-level approach to analysis with particular attention to connectivity was recommended, along with a clear description of how avoidance, mitigation, and conservation measures will protect and encourage the recovery of the species and their habitats within the project area. Commenters questioned whether requirements for monitoring and adaptive management of species included in the 2012 Western Solar Plan had been effective. They also noted that the size of utility-scale solar facilities has impacts on habitat, and that smaller projects may have smaller impacts.

Species-specific recommendations included the following:

- The Programmatic EIS should include maps displaying GRSG priority habitat management areas, general habitat management areas, core population areas, connectivity corridors, leks, seasonal habitat, and brooding areas in relation to priority areas.

- The Programmatic EIS should discuss the direct, indirect, and cumulative impacts that reasonably foreseeable solar projects proposed near desert tortoise habitat are expected to have on this species. An agency commenter recommended reviewing the Copper Rays Solar Project (BLM 2023), the Gemini Solar Project (BLM 2020), and U.S. Geological Survey (USGS) Open-File Report 2021-1033, "Connectivity of Mojave Desert tortoise populations – Management implications for maintaining a viable recovery network."

- The BLM should coordinate with the USFWS to determine whether consultation under Section 7 of the Endangered Species Act (16 USC 1531 et seq.) would be required. Coordination with USFWS and state wildlife agencies would produce current and consistent surveying, monitoring, and reporting protocols.

- Assess whether there is increased fatality risk to birds, particularly waterfowl, associated with PV solar facilities and the "lake effect."[3] The Draft Programmatic EIS should include bird and bat conservation strategies with avian mortality monitoring and adaptive management measures.

- Review USGS big game migration corridor data to update migratory corridors and winter ranges. Review the Sweetwater Solar Facility in Wyoming report by Sawyer et al. (2022).

- Consider how compensatory mitigation may apply for conservation of specific species.

- The Programmatic EIS should discuss how climate change may affect wildlife species and their habitats.

- Sites should mitigate the loss of habitat for pollinator species by enhancing areas along fence lines and access roads.

- Criteria for migration corridors and winter ranges should be screened rather than excluding them all together.

- Consider how to protect the shrub-steppe vegetation in Washington that is an imperiled ecological system supporting multiple endangered species. Mitigation is often unavailable or infeasible.

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3 The lake effect, suggests that birds view reflective surfaces of PV panels as water bodies (Kagan et al. 2014-TN146). They then collide with the panels when they attempt to land. This lake effect hypothesis also attempts to explain the presence of waterbird mortality at desert PV sites. Kosciuch et al. (2021-TN123) noted that PV facilities are unlikely to provide a lake signal at all times, and they suggest that the fatality risk is probably species and context specific.

- Consider how to maintain vegetation at solar sites to benefit wildlife. It was noted that sage hens survive under the panels and the site fence protects them from predators.

### 2.4.6 Geology

Commenters were concerned about the impacts on soils during construction and maintenance of utility-scale solar facilities. They noted that surface-disturbing activities and soil compaction may lead to long-term, irreversible impacts. They also requested that the Programmatic EIS discuss how utility-scale renewable energy will impact carbon sequestration in the natural soil and vegetation systems removed for development.

A commenter recommended including a discussion on biological soil crusts, which are important because they protect desert surfaces from erosion and contribute to carbon dioxide sequestration. They noted that the Programmatic EIS should consider alternatives and siting requirements to avoid disturbing biological soil crusts in the planning areas and adopt techniques to minimize impacts on soil crusts from utility-scale solar projects. Concerns were also raised about toxic chemicals from solar projects getting into the soil.

### 2.4.7 Human Health

Commenters recommended that the Programmatic EIS analyze potential human health and safety impacts, as well as measures to prevent or reduce the risk of exposure for workers and residents. Dust exposures (including silica and natural asbestos) were a major concern with respect to pulmonary issues, and for potential exposures to the dust-borne fungus that causes Valley Fever.

A few commenters expressed concerns about increased noise levels from solar facilities near their community. Construction noise, increased noise levels due to vegetation removal, and the continuous humming from inverter boxes and battery storage could contribute to stress and adversely affect quality of life.

Some commenters had concerns regarding toxins from broken or burnt PV panels. They also recommended that local emergency response crews be notified of projects to increase emergency preparedness.

### 2.4.8 Land Use

#### 2.4.8.1 Livestock Grazing

Many ranchers expressed concern that existing grazing allotments, a historical component of the multiple-use character of BLM lands, would be cancelled or not renewed

because of solar development. This type of action would disrupt local business, communities, and the nature of the public lands. Even if allotments were renewed, excluding grazing from a significant number of developed acres would likely reduce the value and productivity of those allotments. The ranchers asked that the Programmatic EIS discuss permit displacement and include assessment of potential loss of all known range improvements on lands to be made available for solar development.

An agency commenter recommended communication between the solar developers, solar operators, and livestock permittees to identify strategies, such as compensatory mitigation, to help lessen the burden and reduce economic impacts on grazing permittees related to project development. Analysis should include consideration of the positive effects of livestock grazing on the environment, including lowering wildfire risk, invasive weed control, and providing open space.

Some commenters recommended that if any animal unit months or other range improvements would be affected, the BLM should provide timely notice with multiple grazing seasons to adjust use, assist a permittee or lessee in finding alternative forage, and preserve the preference and animal unit months for future use.

Questions posed included:

- Could there be incentives for ranchers?
- How have ranchers been compensated under the 2012 Western Solar Plan?
- Would cattle be able to graze at solar facilities as sheep currently do?
- Would land surrounding solar facilities be used for mitigation?

Some commenters recommended the BLM acquire grazing permits as mitigation to protect certain species (desert tortoise, sage grouse).

#### 2.4.8.2 Mining

A commenter recommended analysis of trona mining in the Known Sodium Leasing Area in Wyoming. Another commenter noted that the BLM should require mining companies to meet their reclamation requirements and consider development at abandoned mine sites.

#### 2.4.8.3 Recreation

Commenters stated that because utility-scale solar facilities restrict access to public land use for recreation, recreation economies would suffer from solar development. They requested that the BLM collaborate with state agencies, other federal agencies, and local communities to assess all routes and areas that may be affected and keep roads and trails open.

#### 2.4.8.4 Specially Designated Areas

Many commenters recommended updating inventories for ACECs and LWCs. Environmental groups suggested including citizen wilderness inventories, especially where BLM inventories are lacking. Commenters suggested that old growth forests should be identified and protected.

#### 2.4.8.5 Wild Horses and Burros

Commenters recommended that the BLM analyze the impacts of utility-scale solar development and herd management areas in the Programmatic EIS. They asked the BLM to consult with local permittees, state agencies, and any other interested parties to catalog impacts on herd population dispersion that could be caused by solar facility construction.

### 2.4.9 Socioeconomics and Environmental Justice

Commenters recommended prioritizing meaningful engagement with any minority and low-income communities that have environmental justice concerns. Members of communities near solar facilities expressed concern for their property values and desired way of life and noted that removing grazing and recreation opportunities could affect the economy of nearby communities. They had experienced termite issues during construction of nearby solar facilities.

Many commenters pointed out that utility-scale solar facilities provide only temporary construction jobs. They recommended that projects should hire local union workers.

Commenters suggested incentives (electrical credits) or equity for communities near solar facilities. They recommended that the BLM provide money from renewable energy projects to rural economic development grant programs or revenue sharing.

### 2.4.10 Visual Resources

Commenters note that large-scale solar development is presenting a new level of challenge for scenery management and visual impacts and stressed that visual concerns should be considered during planning in order to avoid destroying the visual beauty of the land. They recommended that the BLM should update visual resource management classifications, because many existing RMPs are decades old.

Commenters stated that the Programmatic EIS should evaluate night sky impacts in coordination with the International Dark Sky Association and the National Park Service.

### 2.4.11 Water Resources

Many commenters noted that there is stress on groundwater availability and requested an evaluation of water requirements for the construction and operation of utility-scale PV facilities. They recommended that the Programmatic EIS describe waters that may be impacted and include maps that identify waters within the planning area. An agency commenter recommended avoiding streams, wetlands, desert washes, vernal pools, and other hydrologic features.

Commenters suggested the Programmatic EIS should include requirements to avoid disturbing topography that would alter natural drainage patterns, as well as a description and assessment of potential impacts for fen wetlands within the planning area.

## 2.5 OTHER PLANNING ISSUES

Planning issues include resource use, development, and protection opportunities to consider in preparing the Programmatic EIS. Issues form the basis of alternatives development and, in turn, the scope of effects analysis. In addition to the many issues noted above, the BLM received comments on other issues that should be addressed in the Programmatic EIS, as well as issues that are considered outside the scope of the Programmatic EIS. As requested in the NOI, some commenters also addressed the question of including wind energy development on public lands in the Programmatic EIS.

### 2.5.1 Recommendations for Other Issues to be Addressed in the Programmatic EIS

- One commenter suggested that the BLM only focus on PV technology in the Programmatic EIS.

- Many commenters recommended that the BLM include analysis of the potential impacts of battery storage systems.

- One commenter suggested that instead of rectangular designs, linear designs for solar facilities should be considered (for example, along roadways or over canals).

- Commenters suggested that end-of-life issues for damaged solar panels or panels from decommissioned facilities need to be considered. Currently, landfills are ill-equipped to handle this volume of industrial waste. One commenter wanted solar energy projects to be put on hold until a method for recycling solar energy waste is established.

- Commenters suggested that reclamation bonding needs to adequately cover costs to restore the lands to pre-development conditions (IM-2019-013).

- Commenters suggested that the BLM discuss impacts of large-scale solar developments on airports, air navigation, and pilot safety. One commenter stated that

a U.S. Air Force study showed that people exposed to bright light flashes took 4–12 seconds to recover vision to read instruments, noting that solar farms could have large areas of bright reflection.

- Commenters suggested that the heat island effect must be understood for projects that are located near airports.

- Commenters recommended that the BLM not interfere with military operations, and avoid military special use air space for solar leasing and development. Solar PV facilities can affect military operations through glint and glare.

### 2.5.2 Whether to Include Wind Energy in This Programmatic EIS

Most comments received on this topic recommended that the BLM examine the suitability of BLM lands for wind energy development in a separate review process.

### 2.5.3 Performance of the Current Western Solar Plan

Several commenters recommended reviewing data from development in the SEZs and variance lands designated in the Western Solar Plan to understand how the current plan is performing. Many commenters thought the plan failed, since most applications were for variance lands and not the desired SEZs. For example, the state of Utah has seen more interest in their State Institutional Trust Lands Administration parcels than SEZs.

An industry commenter noted "the last 11 years of permitting under the Solar Programmatic EIS have demonstrated that a 'zone-based' planning paradigm does not expedite – and indeed, can hinder – renewable energy permitting. Because the SEZ identification was done at a high level of generalization, many sites within a SEZ are not developable, either because of commercial infeasibility or higher than expected resource conflicts."

One commenter stated "a fundamental flaw of the 2012 [Western Solar] Plan is that some SEZs do not have adequate transmission access, which makes them unattractive for solar development relative to variance areas. Areas lacking current or planned transmission should by default be non-priority areas."

Commenters asked what effective mitigation measures have been used in the development of solar projects under the existing Wester Solar Plan.

### 2.5.4 Issues Out of Scope

Several comments and questions received during scoping raised issues which are outside the purview of the BLM, and therefore out of scope for this Programmatic EIS. The BLM received the following comments and questions that are out of scope:

- Many commenters suggested putting solar on rooftops to reach energy goals, because this would avoid resource impacts and disturbance of pristine land. Although rooftop solar is being aggressively developed in many locations, Congress instructed the BLM to facilitate responsible utility-scale solar development on public lands.

- Incentivize rooftop solar on farm infrastructure.

- Identify priority areas for new transmission.

- Where will the energy go?

- What are other countries doing with their solar?

- Develop on private land instead of public.

- Look at hydroelectric projects.

- Nuclear power should be analyzed.

- Help Tribal nations host renewable energy projects on reservations.

- A comprehensive analysis like the rapid ecoregional assessments should be undertaken in this Programmatic EIS.

# 3 FUTURE STEPS

Scoping is the first public involvement opportunity in the planning process. Several more steps are necessary in the NEPA process, including formulating alternatives, analyzing the effects of alternatives, publishing a Draft Programmatic EIS and RMP Amendments, publishing a Final Programmatic EIS and Proposed RMP Amendments, and issuing the Final ROD/Amendments.

The next phase for the BLM is to develop a Draft Programmatic EIS, which will include a range of alternatives based on the issues presented in Section 2 of this report. The BLM will work with cooperating agencies and Tribal nations throughout the planning process. The Draft Programmatic EIS and RMP Amendments will be available for public review and comment for a 90-day period following publication of the notice of availability in the *Federal Register*. During the comment period, public meetings will be held in key locations, and virtually, to provide information on the Draft Programmatic EIS and to solicit comments on the draft document.

After the public comment period has closed, the BLM will respond to substantive comments and revise the Draft Programmatic EIS as warranted. The notice of availability for the Final Programmatic EIS and Proposed RMP Amendments will be announced in the *Federal Register*, starting a 30-day public protest period and concurrent 60-day governor's consistency review. Once any protests have been resolved, the BLM will prepare and publish the ROD.

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# APPENDIX: CAMPAIGN LETTERS

## A.1 FORM LETTER A:

Dear Acting Division Chief Jeremy Bluma,

I am writing to ask that you update the 2012 Solar Programmatic Environmental Impact Statement to help meet the Biden-Harris administration's ambitious renewable energy and conservation goals in an equitable, responsible way.

The Bureau of Land Management should take a comprehensive, landscape-level, smart-from-the-start approach to renewable energy. Like the six original states included in the 2012 Plan, comprehensive planning is also needed in the five other western states – Idaho, Montana, Oregon, Washington and Wyoming – to guide solar energy deployment on public lands.

BLM should meaningfully involve frontline communities and Tribes at every point in the planning process, including by identifying solar energy priority areas and avoiding significant cultural and tribal resources. BLM should also strengthen incentives for solar development in low-conflict areas, including on former minelands and brownfields.

In particular, BLM must take a thoughtful and holistic approach to identifying and updating the criteria it uses to exclude solar development in certain critical landscapes throughout the West. In addition to avoiding significant cultural and tribal resources, those criteria should take into account shared resource values like wilderness characteristics, wildlife habitat, areas of connectivity between intact landscapes, migration corridors, biodiversity and ecosystem representation, ecological integrity, and social vulnerability.

Lastly, it is critical that BLM integrates transmission-line planning into this new plan and encourages solar development in close proximity to existing and planned transmission infrastructure.

Some of our nation's best renewable energy resources are found on public lands and waters, especially in the western U.S. But decarbonizing the energy sector should not come at the expense of the West's lands, waters, biodiversity or communities.

We support improvements to the Western Solar Plan that expand renewable energy development to meet our energy needs and combat climate change. But we must do so in ways that protect communities, Tribes and the many values of our shared lands.

Once again, please update the 2012 Solar Plan with these goals in mind.

Sincerely,

## A.2 FORM LETTER B:

Dear Director Stone-Manning,

I applaud the agency s plan to update the Western Solar Plan. A comprehensive, landscape-level approach is needed to balance resource management and conservation needs with the goal of building new renewable energy on public lands. We urge you to take the following steps as you build a framework to guide the buildout of renewable energy and related infrastructure in the West.

The BLM should expand the existing solar plans to comprehensively address impacts of development across the eleven western states, including Idaho, Montana, Wyoming, Washington and Oregon (in addition to Utah, Nevada, New Mexico, California, Colorado, and Arizona).

The BLM should identify ways to incentivize solar energy development in priority areas where it would have the least impact on wildlife and other important resources

The BLM should analyze the capacity and demands of existing and permitted transmission infrastructure and use this information to inform the identification of priority areas.

The BLM should prohibit solar energy development where it will have negative impacts on important wildlife habitat, cultural and Indigenous resources, and nearby communities.

The BLM should separately and expeditiously amend plans to address wind and geothermal energy development and transmission. Thank you for all you are doing to steward our public lands and helping our nation responsibly transition to a clean energy economy.

Sincerely,

## A.3 FORM LETTER C:

Dear Bureau of Land Management,

To whom it may concern,

I am writing to request that as the Bureau of Land Management works to update its Western Solar Plan, you exclude the BLM lands within the boundary of the Desert Renewable Energy Conservation Plan (DRECP) from the study area for the update to the Solar Programmatic Environmental Impact Statement.

The lands within the DRECP have been closely evaluated through the DRECP for both conservation and energy development. The identified Development Focus Areas provide more than enough lands to meet federal renewable energy goals for public lands. The DRECP is consistent with California's ambitious climate and energy goals and assumptions, with at least 15 GW of solar projects already permitted or in BLM's permitting queue.

Changes to the DRECP will slow down the BLM?s efforts to meet President Biden's renewable energy and public lands goals. In addition, changes to the DRECP will create uncertainty as the DRECP is a critical modeling input for California's energy and transmission planning processes-each long-lead processes.

Instead, we urge the BLM to use the DRECP's landscape scale assessment for lands appropriate for solar development and lands that should be conserved as a model for the update to the Solar PEIS on BLM lands outside of the DRECP boundary.

Lastly, I want to express my concern with the lack of robust public engagement for this planning effort. Updates to the Western Solar Plan will have tremendous implications for communities, the environment, the climate, and the economy in California. Simply holding one in-person meeting is not just insufficient for collecting robust input, but exclusionary and inaccessible for the many stakeholders whose voices are valuable in this process. I respectfully request that you hold at minimum one virtual meeting for California prior to the close of the public comment deadline, which will allow more participants from across the state to participate.

Thank you for the opportunity to provide input into this important planning effort.

Sincerely,

This message was sent by KnowWho, as a service provider, on behalf of an individual associated with Sierra Club.

## A.4 FORM LETTER D:

As the BLM develops the programmatic EIS for renewable energy development in Western States, it is important to provide adequate protections for our valuable public lands and wildlife.

I support including all 11 western states in the PEIS study area. I also support involving Indigenous communities and Tribes at all stages of the planning process, including identifying solar energy priority areas and avoiding culturally significant Tribal resources. Frontline communities must also be included early in every process.

I believe that the Desert Renewable Energy Conservation Plan (the DRECP) should be excluded from the study area for this PEIS and instead used as a model of landscape level renewable energy planning.

When prioritizing areas for solar siting, it is important to look at the land holistically. I support prioritizing lands that have been mechanically disturbed, "type-converted" from native vegetation through plowing, public lands of comparatively low resource value adjacent to degraded private lands, brownfields, and locations adjacent to urbanized areas.

At the same time, it is important to exclude public lands that support sensitive biological resources, including but not limited to: federally designated and proposed critical habitat; significant populations of federal or state threatened and endangered species, significant populations of sensitive, rare and special status species, and rare or unique plant communities. Locations directly adjacent to National or State Park units should also be avoided.

Sincerely,

This message was sent by KnowWho, as a service provider, on behalf of an individual associated with Sierra Club.

## A.5 FORM LETTER E:

As a national park advocate, I encourage you to expand the scope of the Solar Programmatic Environmental Impact Statement.

If adhered to, the type of landscape-level planning articulated in the Programmatic Environmental Impact Statement can go a long way toward minimizing impacts. We have seen that in California with the Desert Renewable Energy Conservation Plan and hope that plan will remain unchanged and be used as a model elsewhere moving forward. I am glad to see more states being included in this draft.

Sufficient time must be allotted in the process to allow affected Tribes to provide their views. As the first stewards of these landscapes, their thoughts are especially important.

Climate change is the single greatest threat to parks, and I applaud your commitment to increasing renewable energy. However, we cannot replace one problem with another by industrializing critical wildlife habitats and sensitive landscapes near national parks with development.

## A.6 FORM LETTER F:

"To Whom It May Concern,

I'm writing to provide scoping comments on the BLM's scoping effort on the 2012 Western Solar Plan. I have the following general comments:

- Any update to the Plan should take a landscape-scale approach to planning. This includes, ensuring lands for conservation and recreation are identified before new areas for renewable energy development, and that any development is balanced with additional conservation.

- BLM must continue to exclude all lands within the National Landscape Conservation System and Areas of Critical Environmental Concern (ACECs) from renewable energy development.

- Many BLM Resource Management Plans (RMPs) are decades old and are in need of being revised. As BLM considers the lands that it manages for renewable energy development, BLM cannot rely on outdated information from existing RMPs. Instead, there must be an updated robust environmental analysis at the local level to properly inform such development.

- BLM should examine the suitability of BLM lands for wind energy development in a separate review process.

- I ask BLM to specifically exclude renewable energy development from the following:

- All Lands identified as having Wilderness Characteristics: The 2012 Western Solar Plan current excludes Lands with Wilderness Characteristics (LWCs) from development, but only if they are protected by an existing RMP. Numerous BLM RMPs across the West are in the midst, or cusp, of active RMP revision processes. In places where robust LWC inventories have been completed, but final plan decisions have yet to be made regarding the management of these lands, all lands identified as LWCs should be excluded from development.

- Lands nominated as Areas of Critical Environmental Concern (ACECs): The 2012 Plan currently excludes ACECs. However, areas that have been nominated as ACECs should also be excluded from development, especially if the existing RMP has not been updated recently.

- Wildlife migration corridors.

- Important sage-grouse habitat: The existing Plan does not reflect the changes made to a multi- state Sage-Grouse Plan or a planning process that is underway that is not anticipated to be completed until 2023. BLM should complete the current Sage-Grouse plans to inform the 2012 Plan planning process. In particular, as the BLM

finalizes the priority habitat management areas and sagebrush focal areas, these habitats should also be excluded.

Please exclude all lands within the DRECP planning area from any update to the 2012 Western Solar Plan. The DRECP was an 8-year collaborative planning process and is working. Inclusion of these lands would undermine this previous work and the current balance of renewable energy, conservation, and recreation in the California Desert. The DRECP should be used as a model for future BLM planning of renewable energy development.

We will be taking a close look at the lands within the Mother Lode, Applegate, and Eagle Lake Field Offices to ensure that there are no resource conflicts with any proposed renewable energy development. We urge BLM to exclude lands in those Field Offices as mentioned above. In addition, we ask that the Carrizo Plain area and Modoc Plateau not be made sacrifice zones for renewable energy development in California. These areas hold rare and intact landscapes found nowhere else. We urge the BLM to evaluate these areas carefully and avoid developing in remote areas, intact habitat areas, areas that connect or are near already protected areas.

Sincerely,

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