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Comment Received From: Jeff Aardahl
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Comments on Notice of Preparation of a Draft Environmental Impact Report for the Soda Mountain Solar Project

See attached letter.

Additional submitted attachment is included below.



California Program Office

P.O. Box 401, Folsom, California 95763

www.defenders.org

August 29, 2025

Lisa Worrall, Project Manager
California Energy Commission
Siting, Transmission, and Environmental Protection Division
715 P Street
Sacramento, CA 95814

Submitted via email to: STEPsiting@energy.ca.gov

Re: Comments on Notice of Preparation of a Draft Environmental Impact Report for the Soda Mountain Solar Project

Dear Ms. Worrall:

Defenders of Wildlife (Defenders) submits this comment letter on the Notice of Preparation (NOP) of a Draft Environmental Impact Report (DEIR) for the Soda Mountain Solar Project (Project). Defenders has 2.1 million members and supporters in the United States, 311,000 of which reside in California. Defenders is dedicated to protecting all wild animals and plants in their natural communities. To that end, Defenders employs science, public education and participation, media, legislative advocacy, litigation, and proactive on-the-ground solutions to prevent the extinction of species, associated loss of biological diversity, and habitat alteration and destruction.

Brief Project Description

The Project is a 2,670 acre photovoltaic electric generating facility and associated infrastructure that would generate 300 megawatts (MW) of electricity to the statewide electricity transmission grid. It would also include on-site battery storage of 300 MW, a switchyard and substation.

The Project is located entirely on federally owned land managed by the Bureau of Land Management (BLM) approximately seven miles southwest of the community of Baker. BLM issued a right of way grant for the Project in 2016.

Comments

Defenders submits the following issue scoping comments in response to the NOP for the Project.

1. Status of the Project Right of Way Granted by BLM

On April 7, 2024, BLM determined that the Project applicant has made substantial changes to the previously approved Project to 1) Add approximately 300 MW of battery energy storage systems across 18 acres, 2) Increase the electrical generation capacity from 287 to 300 MW, 3) Extend the right-of-way grant term from 30-years to 40-years, and 4) Add five 100,000 gallon temporary water tanks during construction, one 36,000 gallon tank for panel washing, and one 22,500 gallon tank for fire suppression.

BLM will be analyzing the proposed changes and their impacts to the human environment in compliance with the National Environmental Protection Act (NEPA).

Comment: California Energy Commission (CEC) staff should discuss the changes to the previously approved Project with BLM staff and the approximate timeline for BLM to begin preparing a new analysis of the impacts due to changes in the Project. It has been over a year since BLM announced it would need to prepare a new impact analysis for the revised Project.

Recent policy changes by the Department of Interior (DOI) and BLM may place a hold on or result in cancellation of the Project. DOI issued Secretarial Order 3438¹ on August 1, 2025 (Managing Federal Energy Resources and Protecting the Environment) that directed the DOI and BLM to:

- Optimize the use of federal lands by considering, when reviewing a proposed energy project under NEPA, a reasonable range of alternatives that includes projects with capacity densities meeting or exceeding that of the proposed project;
- Ultimately, the FLPMA's [Federal Land Policy and Management Act's] multiple use mandate for [Public Lands] and NEPA's requirement to consider reasonable alternatives to a proposed action give rise to the question on whether the use of Federal lands for any wind and solar projects is consistent with the law, given these projects' encumbrance on other land uses, as well as their disproportionate land use when reasonable project alternatives with higher capacity densities are technically and economically feasible;
- Under FLPMA, the BLM must manage Federal lands in accordance with multiple use. Specifically, the BLM shall make "the most judicious use of the land for some or all of these resources" and consider "the long-term needs of future generations

¹ <https://www.doi.gov/document-library/secretary-order/so-3438-managing-federal-energy-resources-and-protecting>

for renewable and nonrenewable resources, including, but not limited to, recreation, range, timber, minerals, watershed, wildlife and fish, and natural scenic, scientific and historical values.”

- Because energy projects with higher capacity densities have lower Federal land use impacts and therefore disturb far less of the natural environment for fish, birds, and other wildlife, they provide more Federal lands for other uses, fulfilling FLPMA’s multiple use mandate.
- Based on common sense, arithmetic, and physics, wind and solar projects are highly inefficient uses of Federal lands.
- When there are reasonable alternatives that can generate the same amount of or more energy on far less Federal land, wind and solar projects may unnecessarily and unduly degrade Federal lands.
- The Department [of Interior] shall only permit those energy projects that are the most appropriate land use when compared to a reasonable range of project alternatives.

In addition, BLM issued a press release² on July 17, 2025, entitled “Interior ends preferential treatment for unreliable, subsidy-dependent wind and solar energy” which stated, in part:

“All Department-related decisions and actions concerning wind and solar energy facilities will undergo elevated review by the Office of the Secretary, including leases, rights-of-way, construction and operation plans, grants, consultations and biological opinions. This enhanced oversight will ensure all evaluations are thorough and deliberative.”

2. Project Alternatives to Protect Desert Bighorn Sheep

The applicant has filed a document in opposition to reducing the size of the Project, arguing that it has an executed Interconnection Agreement for 300 MW with the Los Angeles Department of Water and Power (LADWP). The applicant stated:

[Requiring a protective buffer for desert bighorn sheep would] “trigger a ‘material modification process’ with LADWP, further causing re-study and amendment of the Agreement. Such a process causes significant unknowns related to study timing, future costs and project schedule, and until resolved would impede the financial

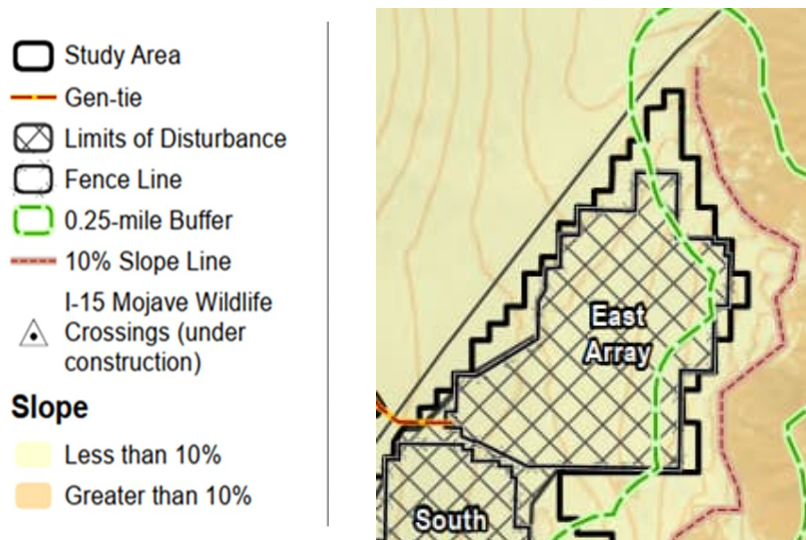
² <https://www.doi.gov/pressreleases/interior-ends-preferential-treatment-unreliable-subsidy-dependent-wind-and-solar>

investment necessary to advance the project development and construction.” The applicant further stated that “Implementing a 0.25-mile buffer from areas with 10% slope would result in a reduction to the total project footprint of 236 acres or 12%. This reduction would prevent the project from producing 300 MW of solar energy and the reduced production of energy at this project site would have to be made up by installing solar panels at another site.”

The protective buffer the applicant referred to was included in a study conducted by Dudek (2024)³ for the California Department of Fish and Wildlife (CDFW). Dudek made the following recommendation:

“Recommended New MM-BIO-23. Project Footprint Setback: Prior to project approval, the project will reconfigure the East Array alignment to stay outside of the 0.25-mile setback. This includes fencing and permanent infrastructure (e.g., roads). Smaller currently proposed encroachments may remain with the exception of the fencing intrusion between South Array 1 and South Array 2. Solar arrays lost during the reconfiguration of East Array may be added elsewhere so long as they do not additionally encroach upon the setback. This only applies to setbacks originating east of I-15.”

The 0.25 mile setback recommended by Dudek and the CDFW for the East Array is shown below:



³ Dudek. 2024. Desert Bighorn Sheep Study - Soda Mountain Solar Project. Prepared for the California Department of Fish and Wildlife, Inlands Deserts Region, Ontario, California. 121 pp.

In the NOP, CEC staff stated, in part:

“Staff anticipates that project construction and operation could have a potentially significant impact on biological resources. Specifically, impacts could affect various special-status wildlife species, including state and federally listed species. Ground disturbance proposed as part of the project could have adverse impacts to sensitive animals, such as desert tortoise (*Gopherus agassizii*), burrowing owl (*Athene cunicularia*), and desert bighorn sheep (*Ovis canadensis nelsoni*), and their habitats. Increased levels of human presence, noise, and fugitive dust could also adversely affect nesting birds along with other sensitive wildlife individuals, burrows, and dens if present within or adjacent to construction work areas. The introduction or proliferation of non-native weeds to sensitive desert vegetation communities may result in habitat degradation for a variety of common and special-status species known from the region. Operational impacts from increased noise and human presence and the installation of lighting could adversely affect wildlife use and movement through the area.” And,

“The applicant has proposed various mitigation measures to reduce the severity of any such impacts, including, but not limited to, implementing advanced technology that minimizes ground-disturbance due to site grading, conducting preconstruction surveys for special-status plants and wildlife, installing desert tortoise exclusion fencing, requiring worker environmental awareness training to all project staffing, and providing compensatory habitat mitigation. **Staff will evaluate the adequacy and effectiveness of these measures and anticipates drafting additional measures based upon independent research and consultation with the California Department of Fish and Wildlife (CDFW), the United States Fish and Wildlife Service (USFWS), and the United States Department of Interior Bureau of Land Management (BLM).**” (emphasis added).

Comment: We are pleased that CEC staff will consider additional independent research and consult with the CDFW, USFWS and BLM when they consider developing additional impact mitigation measures. The CEC should not constrain consideration, analysis and adoption of a reduced project footprint simply because the applicant executed an Interconnection Agreement with LADWP for 300 MW. Reducing the footprint of the Project by 12% in the East Array is a relatively minor reduction.

In addition to the recommendation by Dudek and CDFW, we recommend that an additional alternative be developed and analyzed in the DEIR that reduces the Project footprint in South Arrays 2 and 3 to avoid intermountain habitat used by desert bighorn sheep (see Dudek’s maps ID 1723, ID 1834 and ID 1836).

The California Environmental Quality Act requires lead agencies (i.e., the CEC) to consider and analyze a range of reasonable alternatives to a proposed project, especially those recommended by the CDFW, the Trustee Agency for wildlife resources.

We are aware of the July 28, 2025, report submitted to the CEC by SWCA Environmental Consultants on behalf of the Project applicant titled Desert Bighorn Sheep Literature Review and Technical Report for the Soda Mountain Solar Project. The report concludes that the Project is not expected to result in adverse impacts to desert bighorn sheep, contrary the findings and recommendations from Dudek to the CDFW. It also includes a series of recommended impact mitigation measures, some of which are in addition or revisions to those included in the DEIR for the Project by SWCA in 2025:

Revise MM BIO-24: Limited Operating Period to include restrictions on construction activity during the lambing period (January 1–June 30).

MM BIO-23: Prior to construction, a desert bighorn sheep mitigation and monitoring plan to monitor wildlife crossings, fencing effectiveness, water sources and all other implemented mitigation measures for a minimum of eight years.

MM BIO-26: The project will design and install at least five new artificial water sources in cooperation with CEC, CDFW, and BLM.

MM BIO-27: Compensatory Mitigation for loss of bighorn sheep foraging habitat will be acquired at a 1:1 ratio.

MM BIO-29: Impacts to bighorn sheep habitat connectivity will be address by requiring the Project applicant to support current CDFW and NPS [National Park Service] efforts to encourage connectivity of bighorn sheep populations between the south Soda Mountains, north Soda Mountains and the Avawatz Mountains. Specifically, the Project applicant will provide funding for CDFW, or similar entity, to install between three and five pre-fabricated bighorn sheep water sources in the north Soda Mountains/Avawatz Mountains corridor and provide funding to refill them through the life of the project. The project owner shall consult with BLM and with the CDFW Desert Bighorn Sheep Program Coordinator to identify strategic locations for water sources to promote bighorn sheep migration through the north Soda Mountain range. Water sources will be situated in locations that: 1) facilitate use of existing I-15 crossing sites at culverts and bridges; 2) are situated at key locations within the movement corridor; 3) are accessible using existing roads whenever possible for filling and maintenance; and 4) are situated outside of existing wilderness boundaries and outside of wilderness study areas.

The project owner shall monitor and manage the artificial or restored water source for the benefit of bighorn sheep for the life of the project, or shall provide sufficient funding to support such monitoring and management by an approved third party. At the end of the

Project, CDFW shall have the option to retain and manage the water sources or have them removed by the Applicant/Owner during the decommissioning process.

MM BIO-30: The Project applicant shall implement a Bighorn Sheep Adaptive Management Strategy in coordination with the BLM, NPS and CDFW to maintain existing foraging, movement for bighorn sheep near the project site and at improving regional opportunities to restore bighorn sheep movement. The Bighorn Sheep Adaptive Management Strategy shall be submitted to BLM, NPS, and CDFW for review and approval prior to initiation of ground-disturbing activities on the Project site and shall include, at a minimum, the following provisions:

1. The Applicant/Owner shall fund and/or implement a 10-year study that examines the response of bighorn sheep to the project. This may include the use of radio collars to track the movements of bighorn sheep prior to, during, and post-construction. The study will be conducted in coordination with BLM, CDFW, and NPS. The tracking of bighorn sheep will inform the adaptive management approaches that follow.
2. The Applicant/Owner shall improve the culvert crossing north of Zzyzx Road for bighorn sheep through the use of temporary water sources on both sides of the I-15 freeway. Water sources will be maintained and refilled for a minimum period of 10 years. With CDFW approval, the Applicant/Owner will implement a monitoring study to examine bighorn sheep behavior near the temporary water sources through the use of motion-sensor cameras, radio tracking collars, direct observation of sheep sign (e.g., the presence of tracks or scat), and/or by other means.
3. If the temporary water sources successfully encourage bighorn sheep to use the culvert crossing, as measured by sheep drinking from the water sources and/or crossing through the culvert, identified through the study implemented in item 1, the water sources shall be left in place permanently. Concurrently, the additional water sources described in Mitigation Measures BIO-26 and BIO-29 to encourage use of the north Soda Mountains/Avawatz Mountains corridor also shall be left in place and maintained/filled for the life of the project.
4. Based on the results of item 1, the Applicant/owner will implement measures to minimize the effects of human activities on bighorn sheep. Such actions may include removing fences that currently block underpass movement, establishing new fences to funnel sheep towards underpasses and away from traffic, and/or using shields to reduce the noise and visibility of traffic in key locations.
5. To provide for bighorn sheep demographic and genetic management, the Applicant/Owner shall establish a \$250,000 bond prior to the start of construction to be used, at CDFW's discretion, to conduct regional translocation of bighorn

sheep. If at any time, efforts are undertaken to construct an overcrossing near the project, with the approval of BLM, NPS, and CDFW, these funds may be allocated to that construction effort. If at any time, prior to expenditure of these funds, bighorn sheep are documented to move through the existing undercrossings between north and south Soda Mountains, or a bighorn sheep population has become established in the North Soda Mountains, these funds may be allocated for bighorn sheep connectivity and genetics management projects elsewhere in the Mojave desert.

MM BIO-31: The Project applicant will provide a biological consultant approved by the BLM and CDFW to serve as the Bighorn Sheep Monitor of construction activities located within 1,000 feet of bighorn sheep foraging or bedding areas. The Bighorn Sheep Monitor will be present if proposed construction activities are planned within approximately 0.5 mile of 20 percent slopes or within 0.25 mile of 10 percent slope (whichever is less). If bighorn sheep are observed, no construction activities will be conducted within 1,000 feet of the sheep until the Bighorn Sheep Monitor verifies that the sheep have moved to at least 1,000 feet from planned activities. If the Bighorn Sheep Monitor determines that planned activities are unlikely to adversely affect or disrupt normal sheep behavior, planned activities may proceed. If the Bighorn Sheep Monitor is not present on site when sheep are observed, all proposed activities within 0.5 mile of 20 percent slope or 0.25 mile of 10 percent slope will stop, and the Bighorn Sheep Monitor will be contacted immediately for guidance on how to proceed with planned activities. The Bighorn Sheep Monitor will prepare daily monitoring reports that will be submitted to the Designated Biologist and BLM, NPS, and CDFW.

MM BIO-32: The Project applicant shall acquire and protect suitable bighorn sheep foraging habitat to compensate for the loss of on-site foraging habitat within 0.25 mile of 10 percent slopes. Compensation habitats must be approved by BLM and CDFW.

MM BIO-33: Bighorn Sheep Demographic and Genetic Management. In lieu of bridge funding, the \$250,000 bond described in Mitigation Measure BIO-30, may be used by CDFW for bighorn sheep demographic and genetic management. If at any time, efforts are undertaken to construct an overcrossing near the Project, these funds may be allocated to that construction effort. If bighorn sheep are documented to move through the existing undercrossings between north and south Soda Mountains, or a bighorn sheep population has become established in the North Soda Mountains, these funds may be allocated for bighorn sheep connectivity and genetics management projects elsewhere in the Mojave desert.

Comment: The SWCA recommended mitigation measures that involve studies and research are not mitigation measures. In addition, SWCA constrained its analysis by assuming a 300 MW Project was the only option. This resulted in a biased outcome that omitted the obvious approach of reducing the size of the East Array.

In addition, the desert bighorn sheep location and movement data included in the Dudek analysis shows that both females and males traverse portions of South Arrays 2 and 3. Although individual animals do not spend much time traversing these areas, the frequency or duration of use cannot be used as a measure of the importance of that habitat. A simple example is intermountain habitat that allows individuals to access mountain habitat which is essential for this species to persist in metapopulations.

Desert bighorn sheep locations within the East Array and South Arrays 2 and 3 appear to be in the winter season, indicating that individuals may be foraging in areas where succulent forage is available.

Comment: Importantly, the following was included in the Dudek report:

The data collected and analyzed represents only a partial picture of the whole. The GPS [Global Positioning System] collars collect a single GPS point per time interval, which is typically set to 4 or 6 hours. Desert bighorn sheep are highly mobile animals and can move vast distances in a short period of time. As such, one can ascertain that areas that include occurrence points are used by desert bighorn sheep; however, areas lacking occurrence points cannot be presumed to be unused by or unimportant for the desert bighorn sheep, as the dataset only represents a portion of the overall habitat use and movement patterns of any one individual animal and is not representative of the whole picture. Additionally, the data provided were limited to a specific geographic area; therefore, data points for individuals that moved outside this geographic area are not included in this analysis. For example, one female shows data that ranged across 21 months; however, the dataset provided only included 8 data points. This may indicate this individual moved outside of the geographic area of interest; thus, additional data points were not included within the data provided by CDFW.

3. Mitigation for Impacts to Desert Tortoise and Burrowing Owl

In February 2025, the Project applicant submitted a revised biological resources report that included an evaluation of the direct, indirect and cumulative impacts and identified potential impact mitigation measures. In addition, in July 2025 the applicant submitted a revised impact and compensatory mitigation report.

Desert Tortoise: A protocol survey for desert tortoises was performed in April and May of 2023 and no live individuals were observed. The tortoise burrows showed no recent sign of use or were collapsed, and a limited amount of scat was found. A desert tortoise preconstruction clearance survey will be conducted during the desert tortoise active season (April–May and September–October). Prior to construction a temporary desert tortoise barrier fence will be installed around all the solar array units.

As a result of the revised impact and compensatory mitigation report, construction methods would reduce permanent impacts from 2,059 acres to 289.08 acres by significantly reducing the extent of site grading. In addition, wildlife friendly fencing will be installed around the entire project area, with openings so that adult desert tortoises can recolonize the site.

Compensatory mitigation at a ratio of 1:1 would be required for the permanent loss of 289.08 acres of desert tortoise habitat.

Comment: We appreciate that the applicant has revised the site preparation plan that will significantly reduce grading of the landscape. Based on desert tortoise surveys that have been performed on the Project site several times, it is unlikely that live desert tortoises would be found on or reoccupy the site following construction. The final compensatory mitigation requirements will be determined by CDFW and may change from the applicant's recommended ratio of 1:1.

Burrowing Owl: Burrowing owl surveys were performed in the spring and summer of 2023 and 50 potential burrows were found, with only one showing active use. As a result, the Project area was identified as suitable habitat for the species. An additional burrowing owl survey will be performed in suitable habitat prior to construction. If active burrows are found, they will be avoided with buffer zones and passive relocation will be required.

If Burrowing owls are observed during protocol-level surveys and CDFW-recommended buffers and avoidance measures are not feasible, we note that CDFW does not consider passive relocation as a take avoidance, minimization or mitigation method and considers it a potentially significant impact under the California Environmental Quality Act.⁴

Due to revised site preparation, there will be a permanent loss of 289.08 acres of burrowing owl habitat that will be compensated at a ratio of 1:1.

Comment: We appreciate that the applicant has revised the site preparation plan that will significantly reduce grading of the landscape. The final compensatory mitigation requirements will be determined by CDFW and may change from the applicant's recommended ratio of 1:1.

4. Soda Mountains Expansion Area of Critical Environmental Concern (ACEC)

Transmission of electricity to an existing substation north of Interstate 15 will require construction of a new line through the Soda Mountains Expansion ACEC, resulting in impacts to 36 acres.

⁴ California Department of Fish and Wildlife. 2023. Zeta Solar Generation and Battery Energy Storage System Project Notice of Preparation (NOP) State Clearinghouse No. 2023070088.

Comment: The 2025 Environmental Impact Statement and EIR for the Project concluded that the Project is consistent with that described in the project Record of Decision (ROD), and therefore the project would be exempt from the Conservation and Management Actions outlined in the Desert Renewable Energy Conservation Plan (DRECP) that would otherwise apply. Exempting the Project from the requirements of the DRECP was approved by BLM because the ROD for the Project predated the final 2016 DRECP. We recommend that the CEC consider measures to minimize the impacts on the ACEC in the DEIR for the Project.

5. Water Resources

Water for the Project would be supplied by up to five on-site groundwater production wells for dust suppression, soil compaction and grading during project construction. As an alternative, or in addition to, water may be obtained from the existing Silver Lake Valley Groundwater Basin well approximately 12 miles northeast of the Project site. Approximately 319 acre-feet of water over an 18-month period would be required for construction, with an operational water demand of 5.6 acre-feet for washing photovoltaic panels. There are no existing groundwater production wells on the Project site. As a result of minimizing grading, impacts to jurisdictional waters (dry washes) will be reduced from 498.68 acres to 28.35 acres, with a recommended compensatory mitigation ratio of 1:1.

Comment: On August 23, 2016, the San Bernardino County Board of Supervisors voted to not consider issuing a permit for two groundwater wells for a previous version of the Project shortly after it was approved by the BLM. CEC staff should confer with San Bernardino County to determine if the Board of Supervisors will continue to not consider issuing a permit for on-site groundwater wells. If so, the DEIR should include and analyze an alternative off-site source of water.

The final compensatory mitigation requirement for impacts to 28.35 acres of jurisdictional waters will be determined by CDFW and may be greater than at a ratio of 1:1 in order to achieve a no net loss of this resource.

Conclusion

We hope our scoping comments are helpful to CEC staff in preparing the DEIR for the Project. We consider the potential for adverse impacts, both direct and indirect, to desert bighorn sheep among the most important issues associated with the Project. CEC staff should defer to knowledgeable experts within the CDFW to analyze the potential adverse impacts and develop mitigation measures.

Please contact me via email if you would like to discuss our comments or obtain additional supporting information.

Sincerely,

A handwritten signature in dark ink, appearing to read "Jeff Aardahl", with a long, sweeping horizontal line extending to the right.

Jeff Aardahl
Senior California Representative
jaardahl@defenders.org