THE WILDLIFE SOCIETY
Leaders in Wildlife Science, Management and Conservation

April 18, 2024

Mr. Jeremy Bluma
Acting Division Chief
National Renewable Energy Coordination Office
BLM Headquarters
1849 C Street NW
Washington, DC 20006

Re: Bureau of Land Management Draft Programmatic Environmental Impact Statement for Utility-Scale Solar Energy Development (89 Fed. Reg. 3687)

Dear Mr. Bluma,

The Wildlife Society and our undersigned affiliate chapters and sections appreciate the opportunity to provide comments to the Bureau of Land Management concerning the Draft Programmatic Environmental Impact Statement for Utility-Scale Solar Energy Development (PEIS).

The Wildlife Society (TWS) inspires, empowers, and enables wildlife professionals to sustain wildlife populations and their habitats through science-based management and conservation. Founded in 1937, TWS and our network of affiliated chapters and sections represents more than 15,000 professional wildlife biologists, managers, and educators dedicated to excellence in wildlife stewardship. As leaders in wildlife science, management, and conservation, TWS promotes the use of science in all aspects of policy.

Our comments are aimed at ensuring decisions regarding utility-scale solar energy development across the PEIS planning area enable wildlife professionals to continue their work of sustaining wildlife populations on public lands. These comments, supported by the expertise of our Renewable Energy Working Group, supplement the input we and other conservation organizations offered during the PEIS scoping period. We encourage BLM to adequately consider the needs of wildlife and potential impacts to wildlife populations and their habitats from the implementation of the PEIS.

Introduction and Summary

The Wildlife Society recognizes the need for urgent action at the global, regional, and local scale to address the human-caused drivers of climate change–including through the development of renewable energy sources. Climate change is having drastic effects on natural systems and the wildlife populations within those systems. A transition to more renewable energy sources will help to limit greenhouse gas emissions and slow the rate of climate change impacts on wildlife and their habitats.

However, the development of renewable energy sources themselves, including solar energy infrastructure, can negatively impact wildlife populations, and care must be taken to achieve development with minimal direct and indirect impacts (REWI 2023).

Establishment of solar energy facilities will displace wildlife in those areas, destroy wildlife habitats, and further fragment wildlife habitats. Habitat loss and fragmentation resulting from utility-scale solar development and associated transmission have the potential to significantly impact wildlife and sensitive habitats (Lovich and Ennen 2011, Turney and Fthenakis 2011, Smallwood 2022). Solar facilities and transmission infrastructure will continue to impact wildlife for years beyond development and operation. TWS urges the BLM to minimize the adverse impacts of energy development to wildlife from the implementation of the PEIS wherever possible. As discussed in greater detail below, we recommend the following to the BLM:

- Utilize current data and the best available science to ensure that the needs of wildlife–including at-risk species (e.g. SGCN) which are not federally listed, and those important for hunting and other recreation–are met when selecting lands available for the development of utility-scale solar installations, as identified by exclusion criteria within the PEIS;
- Prioritize and incentivize the development of utility-scale solar installations on previously-disturbed lands and lands in close proximity to existing transmission infrastructure;
- Recognize the effects of utility-scale solar installations beyond their physical footprint, and plan for/avoid negative effects on wildlife and wildlife habitats accordingly;
- Ensure design features included in development projects minimize and mitigate impacts to wildlife, and;
- Require adequate monitoring and adaptive management strategies for wildlife across all phases of solar facility projects to detect and mitigate impacts to wildlife.

Lands Available for Utility-Scale Solar Energy Application and Proposed Exclusion Criteria

The Wildlife Society advocates for the adequate incorporation of wildlife needs in land management planning. This includes ensuring that biodiversity is retained across multiple scales, and that rare and unique wildlife habitats are conserved.

Across the 5 alternatives identified by the BLM, TWS is **concerned that the proposed exclusion criteria may fall short of comprehensively addressing the conditions needed to sustain robust wildlife populations.** Appropriate siting based on these exclusion criteria is critical if the PEIS is to succeed in balancing energy production and wildlife conservation goals.

The resource-based exclusion criteria proposed in Section ES.2.4.1.1 are currently based in BLM resource management plans (RMPs) from across the planning area which are, in many cases, substantially out of date. These RMPs may fail to reflect crucial wildlife-related information such as recently-designated critical habitat, new species listings under the U.S. Endangered Species Act (ESA), or critical migration corridors identified as part of BLM's and the Department of the Interior's implementation of S.O. 3362 and other research endeavors. The BLM **must incorporate the best-available data to inform these exclusion criteria**.

Across the planning area, lands that would be made available for solar energy development under multiple proposed alternatives support habitat for wildlife not listed as threatened or endangered under the ESA. This includes species listed under state endangered species legislation, at-risk wildlife identified as Species of Greatest Conservation Need (SGCN) in State Wildlife Action Plans, and avian species identified by the U.S. Fish and Wildlife Service as Birds of Conservation Concern. To better minimize–or fully prevent–impacts to these wildlife and their habitats, the BLM's **Exclusion Criteria 2 should be expanded** to exclude habitats critical for the survival of these species, as identified by state and federal partners, including those habitats utilized outside breeding seasons.

Migratory species including large mammals are disproportionately vulnerable to the negative impacts of habitat disturbance, fragmentation, and loss (Xu et al. 2021). Exclusion Criteria 9, as currently written, only excludes big game migratory corridors and winter ranges identified in existing land-use plans. Significant progress has been made in recent years by wildlife professionals documenting big game migration corridors using GPS collar technology, however, this data is not reflected in the outdated land-use plans which will form the basis of this exclusion criteria. **Exclusion Criteria 9 must reflect the most current data available for big game migratory corridors across the planning area**. Specifically, we recommend the inclusion of data from the USGS publications "Ungulate Migrations of the Western United States" Volumes 1-4, products of the USGS Corridor Mapping Team, as well as the resources and research products of the Wyoming Migration Initiative.

Alternative 5 is the only identified alternative which prioritizes the development of previously disturbed lands and lands in close proximity to transmission infrastructure. Co-locating solar installations with existing transmission infrastructure or planning new transmission routes in areas with minimal ecological value can reduce impacts on wildlife habitats and facilitate efficient energy transmission (Hoffacker et al. 2017, Sawyer et al. 2022). Developing solar projects on previously disturbed lands may also reduce the risk of project delays and the need for some mitigation activities (Macknick 2013). This approach to project siting **should be prioritized regardless of the alternative adopted by the BLM**. The Desert Renewable Energy and Conservation Plan (DRECP) offers an existing framework to incentivize and prioritize development in close proximity to existing transmission infrastructure and previously disturbed lands. The PEIS should include similar incentives, as well as incentives to minimize the overall impacts of energy transmission.

Finally, utility-scale solar installations are likely to have effects on wildlife populations beyond their physical footprint on the landscape. Some species will avoid installations and decrease their use in the immediate surrounding area following construction (Sawyer et al. 2022), while attraction to solar facilities may cause increased rates of mortality for other species across the lifespan of the facility (Chock et al. 2020). These impacts to species behavior have significant implications when, for example, attempting to avoid fragmentation of historic migration routes (Sawyer et al. 2017, 2022). **We recommend that BLM add a biologically-relevant and science-based buffer around exclusion areas** to more effectively protect at-risk wildlife and sensitive habitats from the indirect impacts of solar installations following construction.

Design Features, Mitigation, and Monitoring

We appreciate the inclusion of wildlife-related programmatic design features in the PEIS, as presented in Appendix B, Section B.4.1.4., as well as habitat design features included in Section B.4.2.1. As noted in Appendix B, the technology associated with solar energy projects, and in turn with design features intended to mitigate impacts to wildlife and their habitats, is constantly evolving. Solar power generating facilities can and should be designed, constructed, and operated in a manner that accounts for impacts to at-risk species (Cypher et al. 2021). Our membership, publications, and network of sections, chapters, and working groups are a collective source of expertise in this subject area that should be utilized to inform the implementation of programmatic design features and any updates to these features as the PEIS is applied across the planning area.

Notably, the PEIS provides several General Habitat Design Features intended to address impacts to wildlife corridors and crucial winter ranges. Many species of wildlife display high fidelity to historic migratory routes and wintering grounds, and adequate mitigation for impacts to those habitats is unproven in scientific literature. We refer to our earlier comments on exclusion criteria and buffers to exclusion areas, and recommend updates to the current PEIS which exclude these habitats from utility-scale solar developments on BLM-managed lands. Following Sawyer et al. (2022), we recommend incorporating layout designs that accommodate movements of ungulates and other wildlife. Currently, there are no best management practices or corridor widths available to inform layout design, but we encourage experimentation with fence angles and corridor widths, with associated monitoring in the form of GPS collars and trail cameras, to better inform future science-based management practices.

TWS supports national, provincial, state, and local agencies in their mandate to require mitigation measures that minimize or avoid deterioration of public trust wildlife and wildlife habitats. Section ES.2.4.1.2 of the PEIS states that “For those impacts that cannot be avoided or minimized, the BLM will consider implementing compensatory mitigation to offset impacts, with a goal of ensuring viability of resources over time.” Section 5.22.4 of the PEIS then states that adverse impacts that cannot be addressed at the programmatic level would be addressed at the project level. We request explicit language in the PEIS that ensures that unavoidable impacts to wildlife are addressed with an appropriate compensatory mitigation strategy during the project review stage. This may include the need for mitigation measures that benefit the suite of wildlife not listed as federally threatened or endangered which we noted earlier in these comments. The DRECP offers a current example of public land mitigation measures which are durable and provide benefits to wildlife across the lifespan of utility-scale solar projects, including the duration of the project lease and any required site remediation post-lease. The PEIS must similarly address how it will ensure that measures to offset impacts to wildlife are durable.

Adequate monitoring across all phases of development is a crucial component of ensuring that wildlife needs are being met by the conditions established in the PEIS. Sufficient data collection during monitoring allows for the application of adaptive management principles and the determination of mitigation efficacy. Information gathered from experimental fencing layouts as recommended above will inform future corridor guidelines or practices to minimize impacts to migratory corridors. Insufficient monitoring is likely to mask undesired impacts to wildlife and their habitat during and post-construction, and biases in monitoring methodology is likely to underestimate impacts such as fatalities at solar project sites (Smallwood 2022).

Proposed Alternatives

Among the alternatives presented, we suggest that **Alternative 5**, with additional considerations based on our above comments, and which focuses on previously disturbed lands near transmission infrastructure while also considering resource and slope criteria, best minimizes negative impacts to wildlife while achieving the BLM's identified energy needs. This approach offers a balanced solution that minimizes habitat disturbance and land use while leveraging existing infrastructure for renewable energy development. We support prioritizing the utilization of previously disturbed lands and co-locating solar installations with transmission infrastructure, and refer to our comments above recommending that the BLM include incentives to this effect in the PEIS. The PEIS anticipates a need for 500,000 acres of development. As currently written, Alternative 5 provides approximately 8 million acres for solar development. While our suggested modifications to resource-based exclusion criteria will reduce acres available for development, there will likely still be ample flexibility for installation siting under this alternative.

Conclusion

The Wildlife Society and our undersigned affiliate chapters and sections thank the Bureau of Land Management for considering our input on the PEIS. Any questions on these comments can be directed to TWS policy staff at policy@wildlife.org.

Sincerely,

The Wildlife Society

Sections of The Wildlife Society
Western (CA, NV, HI, GU)
Southwest (AZ, NM, TX)

Chapters of The Wildlife Society
Montana
Nevada
New Mexico
Oregon
Sacramento-Shasta

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