April 18, 2024

Jeremy Bluma
Acting Division Chief
National Renewable Energy Coordination Office
Bureau of Land Management

Re: Wyoming Outdoor Council and Wyoming Wilderness Association Draft Utility-Scale Solar Energy Development PEIS/RMPA Comments.

COMMENTS SUBMITTED VIA E-PLANNING

Dear Mr. Bluma,

On behalf of the Wyoming Outdoor Council and Wyoming Wilderness Association, we would like to thank the BLM for undertaking this important update to the 2012 Western Solar Plan and for including the state of Wyoming in the planning effort. Our organizations collectively represent thousands of Wyoming residents who value our state's public lands, wildlands, air and water. Our members and supporters, the vast majority of whom reside in Wyoming, are deeply invested in seeing renewable energy developed responsibly, without impinging on important cultural, wildlife, plant, soil, or water resources. We believe that this Draft PEIS/RMPA is a good start in achieving that objective and we generally support Alternative 5 for Wyoming. We have several recommendations on necessary improvements to the plan that expand considerations for wildlife, cultural resources, and lands with wilderness characteristics that need to be incorporated before the final Record of Decision is released.

WYOMING SPECIFIC CONTEXT AND BACKGROUND

Expanding the BLM's Western Solar Plan to include Wyoming is important and timely. Our organizations' decades-long experience working in communities and public lands across the state leads us to conclude that proactive planning and coordination on renewable development is essential to reduce conflict, litigation, and damage to important wildlife and cultural resources. Currently, the vast majority of renewable energy development in Wyoming is on private lands. However, with rapid advances in technology, the decreasing cost of both solar and wind energy, and ambitious federal policy goals to permit more renewable energy on public land in the coming decades, the need to work proactively to direct development towards low-conflict areas on public lands is here now.[1]

[1] LAZARD. 2023. Levelized Cost of Energy. Available at: https://www.lazard.com/research-insights/2023-levelized-cost-of-energyplus/

Efforts to improve the siting of solar and wind projects in Wyoming have been ongoing over the last decade and have primarily focused on incentivizing responsible development on private lands. However, a more recent initiative through the Wyoming Renewable Energy Siting Collaborative – which was convened by the University of Wyoming Ruckelshaus Institute and made up of a diverse group of industry representatives, conservation groups, and other stakeholders – published a series of recommendations to improve siting and discussed the need for more state and federal cooperation around renewable energy siting on federally managed lands.[2] Specifically, the group recommended "that the Governor continue to have state agencies engage closely with federal decision-makers for siting solar and wind energy projects on Wyoming's federally managed lands."

The need for Wyoming to be included in a broader and more comprehensive plan to address solar development on public lands is clear. However, for reasons discussed below, Wyoming's public lands are unique in ways that justify a more prescriptive alternative for solar leasing than the BLM's preferred Alternative 3. Wyoming's public lands are deeply loved by those of us who live here as well as others from across the country and around the world. From one of the largest unfenced areas in the Lower 48 in the Red Desert, to the longest mule deer migration corridor in the world, and the lion's share of unbroken Greater sage-grouse habitat on the planet, our largely intact landscapes and habitats provide critical refuge and connectivity that bolster wildlife populations, affording them greater resilience in the face of a changing climate and development pressures that have altered habitats in other regions. It is also not lost on us living here that Wyoming is the least populated state in the country and located far from large populations and load centers that are demanding renewable energy.

For the BLM's Western Solar Plan to succeed in Wyoming, it must direct development away from critical wildlife habitats, cultural areas, and sensitive landscapes. The exclusion criteria that BLM has identified in its draft will capture many of these concerns, but are still inadequate in ways discussed in our comments. We know from experience and working closely with partners and residents in Wyoming how poorly sited projects can have a negative impact on community support, encourage future opposition, and generate political backlash at local and state levels. The threat of poorly sited projects is a liability for developers and the agency in achieving national climate and renewable energy goals that underline the BLM's efforts to update and expand the Western Solar Plan.

A prime example of this is the state's first solar project developed in 2019 on public lands, the Sweetwater Solar project which we discuss as a case study.[3] The impacts of this one poorly sited project are fresh in the minds of many Wyomingites. The impacts to big game and the safety concerns posed to vehicle traffic highlighted by the poor siting of this project have created damaging perceptions of solar energy. In fact, the social license for renewable energy in Wyoming has actually *decreased* over the last several years, in part because of

[2] University of Wyoming Ruckelshaus Institute. Wyoming Renewable Energy Siting Collaborative Recommendations. 2021. Available at: https://www.uwyo.edu/haub/_files/_docs/ruckelshaus/collaboration/2021-renewable-energy-collaborative.pdf

[3] Bureau of Land Management. 2018. Sweetwater Solar Facility – Environmental Assessment. Rock Springs Field Office. Available at: https://eplanning.blm.gov/public_projects/nepa/69990/149052/183074/508_sweetwater_solar_EA_text_20180625.pdf

the perceived impacts that utility scale solar (and wind) will have on Wyoming's abundant wildlife, open spaces, rural heritage, and visual and cultural resources. Research from the University of Wyoming School of Energy Resources has found that in 2023 only 52% of Wyomingites support solar energy, which is down from nearly 69% support in 2019 (we've seen a similar decrease in wind energy approval as well).[4][5] These trends extend beyond just Wyoming. One of the leading conclusions of Columbia University Law School's Sabin Center for Climate Law's most recent (2023) nationwide publication documenting opposition to renewable energy facilities in the United States found that, "*local opposition to renewable energy facilities is widespread and growing, and represents a potentially significant impediment to achievement of climate goals*."[6]

We see the Western Solar Plan as an opportunity to look ahead to avoid future conflicts and buck this trend. In light of Wyoming's unique considerations, we urge the BLM to consider the most prescriptive alternative for solar development in Wyoming, Alternative 5. We also strongly recommend that the BLM consider adopting a combination of alternatives in its final plan that vary by geographic region. A "one-size fits all" alternative that covers 22 million acres (in BLM's preferred alternative) and 11 Western states will fail to capture many of the important differences and resource values between regions and field offices and could be overly restrictive of solar leasing in some regions, while not going far enough to protect other regions from solar development. A final plan that is flexible and responsive to the unique context and concerns of different regions will also help the Western Solar Plan endure the changes of future federal administrations and evolving energy priorities.

RECOMMENDATIONS

(A comprehensive list can be referenced in Appendix Table 1)

Alternative 5 is the best alternative for Wyoming

- **The BLM must clarify for the public, with supporting data, the acreage threshold needed to provide developers with "sufficient flexibility" before finalizing the PEIS/RMPA.**

According to the Draft PEIS/RMPA, the BLM selected Alternative 3 rather than 5 because "the BLM believes that the substantially larger amount of land available under Alternative 3 is needed to support future solar energy development and provide sufficient flexibility for solar energy developers to address potential local siting constraints."[7] No citations or further details are offered to define what constitutes a "substantially larger" amount of

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[4] Western, J, S Gerace, and W Benkelman. 2023. *Social License for Wyoming's Energy Future: Replication Study.* University of Wyoming School of Energy Resources. Available at: https://www.uwyo.edu/ser/research/centers-of-excellence/energy-regulation-policy/_files/social-license-report-2022.pdf

[5] Western, J and S Gerace. 2020. *Social License for Wyoming's Energy Future. What do residents want?* University of Wyoming School of Energy Resources. Available at: https://www.uwyo.edu/haub/_files/_docs/ruckelshaus/pubs/2020-wyomings-energy-social-license-report.pdf

[6] Eisenson, M. 2023. *Opposition to Renewable Energy Facilities in the United States*. Sabin Center for Climate Change Law, May 2023 ed. Available at: https://scholarship.law.columbia.edu/cgi/viewcontent.cgi?article=1201&context=sabin_climate_change

[7] Draft PEIS for Utility-Scale Solar Energy Development, vol. 1, at 2-47.

land. Without data or documentation to illustrate the ratio between the number of acres where solar infrastructure is proposed relative to the number of acres where solar infrastructure is ultimately built, it is difficult to assess what surplus is actually necessary to meet siting flexibility needs.

Specifically, under Alternative 3, 31 times as many acres would be open to solar development as are called for under the BLM's reasonably foreseeable development scenario (RFDS) across the entire planning area (Appendix Figure 1). Meanwhile, Alternative 5 would open roughly 11 times as many acres to solar development as are projected to be needed in the RFDS (Appendix Figure 2).[8,9] Without data providing an estimate of how much surplus acreage is required for adequate siting flexibility, deeming 31 times the acreage projected under the RFDS "substantially larger" while asserting 11 times as much acreage does not meet the "substantially larger" threshold appears arbitrary. The BLM should provide information clarifying what the threshold for "substantially larger" is, along with supporting data, to the public before finalizing the PEIS/RMPA.

- **The BLM should select different alternatives for different states or regions that better align with reasonable foreseeable development scenarios for each state.**

When considering surplus acreage available under different alternatives by individual states relative to the RFDS, it becomes apparent that Alternative 3 is not the necessary or best choice universally. For California and Washington, Alternative 3 would offer roughly 1.5 times the amount of acreage projected under the RFDS on BLM lands within each state — far less than the factor of 31 seen when acreages for all states in the planning area are combined (Appendix Figure 1). Furthermore, Alternative 3 would open more than 200 times the acreage projected under the RFDS in New Mexico and more than 100 times the acreage projected under the RFDS in both Nevada and Wyoming. Even under Alternative 5, more than 100 times the acreage projected under the RFDS would be open to solar development in New Mexico and more than 50 times the acreage projected under the RFDS would be open in Wyoming (Appendix Figure 2).

This inconsistency and inequality in the application of "substantially larger" acreages for individual states is a strong argument in favor of selecting different alternatives for various states depending on the factor by which an alternative overshoots projected solar development needs under the RFDS. The Draft PEIS/RMPA endorses such an option when it states, "[t]he BLM may choose to adopt one of the alternatives or a combination of alternatives; selected alternatives could also vary by geographic region."[10]

- **The BLM should select Alternative 5 for Wyoming as a more targeted approach**

[8] Draft PEIS for Utility-Scale Solar Energy Development, vol. 1, at Table ES-2.

[9] Draft PEIS for Utility-Scale Solar Energy Development, vol. 1, at Table ES-4.

[10] Draft PEIS for Utility-Scale Solar Energy Development, vol. 1, at 2-1.

that protects Wyoming's resources while still providing significant flexibility for solar development.

Alternative 5 is the most appropriate alternative for Wyoming. BLM's preferred Alternative 3 would open 109 times as much acreage for solar development as the RFDS projects Wyoming's need to be. We believe this to be excessive, especially without further justification supporting what sufficient flexibility for development looks like. Moreover, with only 27,255 acres projected to be developed, Wyoming is the third state from the bottom of the list in terms of how much solar development is actually projected by 2045. Because the majority of the demand for solar is elsewhere, selecting Alternative 3 for Wyoming will not appreciably add to siting flexibility across the larger planning area. Selecting Alternative 5 for Wyoming is a more targeted approach that better protects other critical resources and uses of public lands in Wyoming while still providing the siting flexibility needed for successful solar development on BLM lands in the West.

Big game and wildlife considerations

- **The BLM must strengthen its exclusion criteria for big game winter range, migration corridors, and parturition areas at the programmatic level and not only rely on individual land use plans.**

Proper siting is the first and most important line of defense in protecting wildlife from large development projects. This is true for any industry, but it becomes especially important in the case of utility-scale solar projects when considering impacts to large-bodied mammals. Because the National Electrical Code mandates fences at least two meters in height around solar facilities, big game species are effectively excluded over the entirety of a project's footprint.[11] This inevitable habitat loss necessitates that utmost care be taken to avoid sensitive big game habitat when planning solar installations. As written, the Draft PEIS/RMPA does not include sufficient exclusions for big game crucial winter range, migration corridors, or parturition areas. In fact, the draft does not introduce any protections for big game habitat at the programmatic level, relying instead solely on protections afforded in individual land use plans. Strengthening exclusion criteria for big game habitat is necessary to ensure project proponents are directed to appropriate areas with the fewest resource conflicts and to protect the health of our ungulate herds — a win-win scenario for industry and wildlife.

Solar development impacts to big game

As noted above, construction of utility-scale solar facilities and associated fencing result in the complete removal of habitat for large-bodied wildlife species over a project's footprint. While other forms of energy development retain some permeability, allowing ungulates to pass through project areas, the fencing required at solar facilities results in total habitat

[11] National Fire Protection Association. 2020. NFPA 70: National Electrical Code. Quincy, MA: NFPA.

loss for species such as pronghorn, mule deer, and elk.[12] Accordingly, it is imperative to site solar installations outside of sensitive ungulate habitat, including crucial winter range, parturition areas, and migration corridors.

The need for proper siting has been acknowledged for decades and is the best way to guard against destruction of important habitats and the creation of barriers to animal movement and gene flow.[13,14] In the case of big game species, research has validated the vital role seasonal habitats play for herd health and population numbers. While smaller in size relative to other seasonal habitats, the forage and cover available in parturition areas play a crucial role in neonate survival and the eventual recruitment of new animals into the population.[15] Crucial winter range is, conversely, more expansive in size and well-represented on BLM lands. It also represents essential habitat for ungulates at a time of year when animals are at their most nutritionally stressed and when disturbance can result in negative impacts to herd health and population numbers.[16] Finally, our herds in Wyoming are thought to support more individuals than they might otherwise due to their mixed migration strategy wherein some individuals travel great distances to access high quality forage.[17,18] Without strong management direction to protect connectivity for these migration corridors, Wyoming can expect to see smaller herd sizes in the future, running counter to BLM's directive to manage for "sustained yield" of renewable resources under the Federal Land Policy and Management Act (FLPMA).[19]

Direct habitat loss and fragmentation are not the only impacts to contend with at solar facilities. Many studies have documented adverse effects of energy development for ungulate species. Both mule deer and pronghorn in Wyoming have shown avoidance

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[12] Sawyer, H, NM Korfanta, MJ Kaufmann, BS Robb, AC Telander, and T Mattson. 2022. Trade-offs between utility-scale solar development and ungulates on western rangelands. Frontiers in Ecology and the Environment. 20(6):345-351. doi:10.1002/fee.2498

[13] Tsoutsos, T, N Frantzeskaki, and V Gekas. 2005. Environmental impacts from solar energy technologies. Energy Policy. 33:289-96. doi:10.1016/S0301-4215(03)00241-6

[14] Lovich, JE and JR Ennen. 2011. Wildlife conservation and solar energy development in the desert southwest, United States. BioScience. 61(12):982-92. doi:10.1525/bio.2011.61.12.8

[15] Gese, EM, CA Bleke, P Atwood, SB Roberts, and PA Terletzky. 2023. Spatially and temporally explicit environmental drivers of fawn recruitment in a native ungulate. Ecosphere, 14, e4681.

[16] Mautz, WW. 1978. Sledding on a bushy hillside: The fat cycle in deer. Wildlife Society Bulletin, 6(2), 88–90. https://www.jstor.org/stable/3781295

[17] Kaufmann, MJ, EO Aikens, S Esmaeili, P Kaczensky, A Middleton, KL Monteith, TA Morrison, T Mueller, H Sawyer, and JR Goheen. 2021. Causes, consequences, and conservation of ungulate migration. Annual Review of Ecology, Evolution, and Systematics. 54:453-78.

[18] Fryxell, JM, J Greever, and ARE Sinclair. 1988. Why are migratory ungulates so abundant? American Naturalist. 131:781-98.

[19] 43 U.S.C. §§ 1701(a)(7) & (8), 1712(c)(1), 1732(a).

behavior around anthropogenic features at utility-scale energy development sites.[20,21,22,23] Research also indicates that energy development can alter the timing of migration such that ungulates miss periods of peak green-up, thereby losing out on the nutritional benefits of migration.[24] In the case of solar facilities specifically, pronghorn in Wyoming have been negatively impacted, suffering from barrier effects and showing avoidance behaviors that steer them away from preferred habitat.[25] Given the predictably negative consequences of siting solar facilities within important big game habitats, we do not believe the Draft PEIS/RMPA takes a strong enough stance to protect this habitat. Thankfully, the BLM can remedy this by excluding sensitive big game habitats from consideration for solar development and directing proponents to more appropriate areas.

Sweetwater Solar Facility case study

In our experience, concerns with big game habitat and migration need to be addressed *before* project-level analysis. In the case of Wyoming's Sweetwater Solar Facility, for instance, concerns over the project area's overlap with a known movement corridor for pronghorn were brought up repeatedly during the National Environmental Policy Act (NEPA) process, but not heeded. The project went forward in the proposed location and, due partly to poor siting and partly to poor design, approximately 1,000 pronghorn were funneled onto a state highway in the fall of 2019 as they attempted to reach wintering grounds further south. The situation was dangerous for motorists and pronghorn alike, several pronghorn were killed, and each winter this situation must be monitored to avoid repeated problems.

Our fear is that this kind of outcome could be repeated if big game parturition areas, crucial winter range, and migration corridors are not excluded from consideration for solar development. In many cases, by the time cooperating agencies or the public are asked for input, substantial resources have been expended and desired locations fixed by project proponents. It becomes much harder to change course at this point. For a state like Wyoming, where the RFDS is dwarfed by the acreage the BLM proposes leaving open to solar development, there is no reason not to take a conservative approach to protecting big game habitat. We strongly advocate that sensitive big game habitats be excluded from solar development to avoid a situation like Sweetwater Solar from occurring again.

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[20] Wyckoff, TB, H Sawyer, SE Albeke, SL Garman, and MJ Kaufmann. 2018. Evaluating the influence of energy and residential development on the migratory behavior of mule deer. Ecosphere. 9(2):e02113.

[21] Sawyer, H, NM Korfanta, RM Nielson, KL Monteith, and D Strickland. 2017. Mule deer and energy development – Long-term trends of habituation and abundance. Global Change Biology. 23:4251-29.

[22] Reinking, AK, KT Smith, TW Mong, MJ Read, and JL Beck. 2019. Across scales, pronghorn select sagebrush, avoid fences, and show negative responses to anthropogenic features in winter. Ecosphere. 10(5)e02722.

[23] Sawyer, H, JP Beckmann, RG Seidler, and J Berger. 2018. Long-term effects of energy development on winter distribution and residency of pronghorn in the Greater Yellowstone Ecosystem. Conservation Science and Practice. 1(9):e83.

[24] Aikens, EO, TB Wyckoff, H Sawyer, and MJ Kauffman. 2022. Industrial energy development decouples ungulate migration from the green wave. Nature Ecology and Evolution. 6:1733-41.

[25] Sawyer, H, NM Korfanta, MJ Kaufmann, BS Robb, AC Telander, and T Mattson. 2022. Trade-offs between utility-scale solar development and ungulates on western rangelands. Frontiers in Ecology and the Environment. 20(6):345-351. doi:10.1002/fee.2498

- **BLM's exclusion criteria must reflect the latest federal guidance for conserving big game habitat.**

Recent updates to federal policy on the management of big game habitat can and should be better reflected in the final PEIS/RMPA. Secretarial Order 3362, "Improving Habitat Quality in Western Big-Game Winter Range and Migration Corridors", was issued in 2018 and directs the Department of the Interior and the BLM to conserve and improve big game habitat, minimize development that would fragment winter range and primary migration corridors, and limit disturbance of big game on winter range.[26] Only last month, the BLM announced nearly $12 million in new investments to protect and restore western wildlife habitats and migration corridors in support of Secretarial Order 3362[27]. If the BLM is committed to expending these kinds of resources to shore up habitat and connectivity for wildlife in the 10 project areas, it is counterproductive to imperil important wildlife habitat elsewhere with lax exclusion criteria that could allow for poorly sited solar projects. Similarly, the BLM's "Habitat Connectivity on Public Lands" instruction memorandum of 2022 directs the agency to manage for intact, connected habitat in consultation with state fish and wildlife agencies and Tribes. The memorandum notes that, "with increasing fragmentation and degradation, maintaining habitat integrity and connectivity has become a significant need."[28] Without including meaningful, programmatic exclusions for important big game habitat, the Draft PEIS/RMPA falls short of this latest guidance to the detriment of wildlife and the public.

- **BLM's exclusion criteria must be based on the best available science rather than outdated land use plans in order to protect important resource values on public lands.**

We contend that it is inappropriate for the Draft PEIS/RMPA to defer solely to underlying land use plans in determining resource-based exclusion criteria, as is the case for big game exclusion criterion (number 9), lands with wilderness characteristics (number 3), and Areas of Critical Environmental Concern (number 1). Resource management plans (RMPs) can go decades between revisions, growing increasingly decoupled from emerging resource management challenges and best available science over that time.

Given rapid advancements in solar technology, economic conditions have very recently become favorable for utility-scale solar development to occur more widely in Wyoming. This means utility-scale solar development is less likely to have been adequately analyzed in many of the state's RMPs. Similarly, technological advances in GPS collar technology and analysis methods have led to an explosion in new research and findings around ungulate

[26] U.S. Department of the Interior. 2018. Secretarial Order 3362 – Improving Habitat Quality in Western Big-Game Winter Range and Migration Corridors. Available at https://www.doi.gov/sites/doi.gov/files/uploads/so_3362_migration.pdf

[27] Bureau of Land Management. 2024, March 26. *Interior Department announces nearly $12 million to protect and restore western wildlife habitats and migration corridors* [Press Release]. Available at https://www.blm.gov/press-release/interior-department-announces-nearly-12-million-protect-and-restore-western-wildlife

[28] Bureau of Land Management. 2022. Instruction Memorandum 2023-005, Change 1 – Habitat Connectivity on Public Lands. Available at https://www.blm.gov/policy/im-2023-005-change-1

movement and migration.[29] Much of this new data has allowed ungulate habitat to be mapped with greater precision and at a finer scale than was possible 10-15 years ago.

Relying on outdated RMPs to recognize and adequately account for the need to avoid impacts to big game habitat in the face of solar development needlessly imperils our ungulate herds. The BLM has superior data to draw on and should do so in this instance. Wyoming cannot afford to wait on lengthy land use plan revisions to put protections in place when the demand for solar development is here now and the negative impacts to big game are clear.

Recognizing the broader significance of Wyoming's ungulate herds and migrations

Wyoming is renowned for its big game populations. Hunters, photographers, and wildlife-watchers travel here from all over the country and beyond to experience our herds of elk, mule deer, and pronghorn. Likewise, Wyoming's people prize these animals and consider them important to their quality of life and the state's economy.[30] Maintaining our herds hinges on their having sufficient, undisturbed habitat to meet their needs throughout the year. Because of the superlative habitat that exists on Wyoming's public lands, which in turn supports big game populations that are the envy of the region, there is a heightened responsibility to act as good stewards and keep from diminishing the world-class wildlife we are blessed with.

In the case of pronghorn — a sagebrush-obligate species — Wyoming boasts greater numbers than any other state, due in large part to Wyoming retaining the largest tracts of intact sagebrush habitat on the continent.[31,32] As a global stronghold for the species, the way pronghorn habitat is managed in Wyoming, and on BLM lands in particular, has an outsized influence on the population trajectory for the entire species. Between the catastrophic mortality event in western Wyoming during the winter of 2022–23 and new research showing declining productivity for pronghorn across the state, now is the time to be more conservative than ever about what kinds of development we permit within

[29] Tomkiewicz, SM, MR Fuller, JG Kie, and KK Bates. 2010. Global positioning system and associated technologies in animal behavior and ecological research. Philosophical Transactions of the Royal Society B: Biological Sciences. 365(1550):2163-76.

[30] Gautier, NM, DE Bennet, and R Bonnie. 2019. Public Opinion on Wildlife Migration Corridors in Wyoming. Wyoming Open Spaces Initiative, University of Wyoming. Laramie, WY: Ruckelshaus Institute of Environment and Natural Resources.

[31] O'Gara, BW and JD Yoakum. 2004. Pronghorn: ecology and management. University of Colorado, Boulder, Colorado, USA.

[32] Doherty, K, DM Theobald, JB Bradford, LA Wiechman, G Bedrosian, CS Boyd, M Cahill, PS Coates, MK Creutzburg, MR Crist, SP Finn, AV Kumar, CE Littlefield, JD Maestas, KL Prentice, BG Prochazka, TE Remington, WD Sparklin, JC Tull, Z Wurtzebach, and KA Zeller. 2022. A sagebrush conservation design to proactively restore America's sagebrush biome: U.S. Geological Survey Open-File Report 2022 – 1081, 38 p., https://doi.org/10.3133/ofr20221081.

pronghorn habitat.[33,34]

In addition to enjoying the largest share of the world's pronghorn population, Wyoming is unique because of the long-distance big game migrations that occur within, and occasionally just beyond, its borders. The degree of habitat connectivity and landscape intactness that still exist in Wyoming are crucial to the ability of our ungulate herds to travel dozens and even hundreds of miles between their summer and winter ranges. Among the many incredible routes taken by Wyoming's migratory herds, two have gained special notoriety for the staggering distances traveled. The Sublette Pronghorn Migration Corridor is one of the longest undertaken by pronghorn anywhere, while the Sublette Mule Deer Migration Corridor is the longest recorded for the species on the planet.[35,36] These represent two of the longest migrations of terrestrial mammals remaining on Earth and, in fact, research shows that long distance, terrestrial migrations are under threat.[37,38] These peerless wildlife resources, unmatched in other parts of the country, warrant special protections and support the exclusion of big game parturition areas, crucial winter range, and migration corridors from consideration for solar development within the state of Wyoming.

We ask that the BLM modify the language of the big game exclusion criterion (number 9) to offer protections for sensitive habitat at the programmatic level for all the reasons listed above:

- **4.1 Table 2.1-3, Exclusion No. 9**: All big game migratory corridors identified in applicable land use plans to the extent the land use plan decision prohibits utility-scale solar energy development. All big game winter ranges identified in applicable land use plans to the extent the land use plan decision prohibits utility-scale solar energy development.
  Revise to: *All big game migratory corridors identified in applicable land use plans; all bottleneck, stopover, and high -use habitat within migration corridors as*

[33] Tan, C. 2023. 'Pronghorn hunting tags slashed by 75 percent after about half of the Sublette herd died off'. *Wyoming Public Radio*. 30 May. https://www.wyomingpublicmedia.org/natural-resources-energy/2023-05-30/pronghorn-hunting-tags-slashed-by-75-percent-after-about-half-of-the-sublette-herd-died-off

[34] Donovan, VM, JL Beck, CL Wonkka, CP Roberts, CR Allen, and D Twidwell. 2024. Declining pronghorn (*Antilocapra americana*) population productivity caused by woody encroachment and oil and gas development. Global Ecology and Conservation. https://doil.org/10.1016/j.gecco.2024.e02848

[35] Joly, K, E Gurarie, MS Sorum, P Kaczensky, MD Cameron, AF Jakes, BL Borg, D Nandintsetseg, JGC Hopcraft, B Buuveibaatar, PF Jones, T Mueller, C Walzer, KA Olson, JC Payne, A Yadamsuren, and M Hebblewhite. 2019. Longest terrestrial migrations and movement around the world. Scientific Reports. 9:15333. https://doi.org/10.1038/s41598-019-51884-5

[36] Sawyer, H, F Lindzey, and D McWhirter. 2005. Mule deer and pronghorn migration in western Wyoming. Wildlife Society Bulletin. 33(4):1266-73.

[37] Harris, G, S Thirgood, JGC Hopcraft, JPGM Cromsigt, and J Berger. 2009. Global decline in aggregated migrations of large terrestrial mammals. Endangered Species Research. 7:55-76

[38] Wilcoe, DS, and M Wikelski. 2008. Going, going, gone: is animal migration disappearing? PLoS Biology. 6:1361-64.

identified by state wildlife management agencies[39], USGS[40,41,42], or through independent modeling of route data; and cap solar development within medium- and low-use habitat as identified by state wildlife management agencies, USGS, or through independent modeling of route data at 3%. All big game winter ranges identified in applicable land use plans. All big game parturition areas identified in applicable land use plans.

Further, we request the following changes to better protect big game habitat in the final PEIS/RMPA:

- **B.1.2, N-C-7:** Project developers shall plan noisy construction activities near sensitive receptors to take place during the least noise-sensitive times of day (i.e., daytime between 7 a.m. and 7 p.m.), and on weekdays. For wildlife, noise-sensitive times shall consider breeding, nesting, and wintering.
  Revise to: *Project developers shall plan noisy construction activities near sensitive receptors to take place during the least noise-sensitive times of day (i.e., daytime between 7 a.m. and 7 p.m.), and on weekdays. For wildlife, noise-sensitive times shall consider breeding, nesting, calving or fawning, wintering, and migration.*

- **B.1.3, N-O-1:** Project operators shall schedule activities to minimize disruption to nearby residents and existing operations surrounding the project areas, and to minimize disruption to sensitive wildlife receptors especially during breeding, nesting, and wintering periods.
  Revise to: *Project operators shall schedule activities to minimize disruption to nearby residents and existing operations surrounding the project areas, and to minimize disruption to sensitive wildlife receptors especially during breeding, nesting, calving or fawning, wintering, and migration periods.*

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[39] Wyoming Game and Fish Department Open Data. https://wyoming-wgfd.opendata.arcgis.com/

[40] Kauffman, MJ, HE Copeland, J Berg, S Bergen, E Cole, M Cuzzocreo, S Dewey, J Fattebert, J Gagon, E Gelzer, C Geremia, T Graves, K Hersey, M Hurley, J Kaiser, J Meacham, J Merkle, A Middleton, T Nuñez, B Oates, D Olson, L Olson, H Sawyer, C Schroeder, S Sprague, A Steingisser, and M Thonhoff. 2020. Ungulate migrations of the western United States, Volume 1: U.S. Geological Survey Scientific Investigations Report 2020-5101, 119 p. https://doi.org/10.3133/sir20205101

[41] Kauffman, MJ, B Lowrey, J Beck, J Berg, S Bergen, J Berger, J Cain, S Dewey, J Diamond, O Duvuvuei, J Fattebert, J Gagnon, J Garcia, E Greenspan, E Hall, G Harper, S Harter, K Hersey, P Hnilicka, M Hurley, L Knox, A Lawson, E Maichak, J Meacham, J Merkle, A Middleton, D Olson, L Olson, C Reddell, B Robb, G Rozman, H Sawyer, C Schroeder, B Scurlock, J Short, S Sprague, A Steingisser, and N Tatman. 2022. Ungulate migrations of the western United States, Volume 2: U.S. Geological Survey Scientific Investigations Report 2022-5008, 160 p. https://doi.org/10.3133/sir20225008

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- **B.4.1.4, ER-G-2w:** Project developers shall schedule major maintenance or repairs outside critical periods for wildlife (e.g., feeding, breeding, nesting, wintering, migration), as identified and recommended by the BLM or other Federal and state agencies during site specific planning.
  Revise to: *Project developers shall schedule major maintenance or repairs outside critical periods for wildlife (e.g., feeding, breeding, nesting, calving or fawning, wintering, migration), as identified and recommended by the BLM or other federal and state agencies during site specific planning.*

- **5.4.2.2:** Overall, contributions to cumulative impacts are expected to be small, provided mitigation measures to preserve important habitat and migration corridors are implemented (or sufficient alternative lands are set aside as compensation).
  Revise to: *Overall, contributions to cumulative impacts are expected to be small, provided mitigation measures to preserve important habitat and migration corridors are implemented.* ~~*(or sufficient alternative lands are set aside as compensation).*~~

  Justification: We do not agree that damage to important habitats, including migration corridors, can be repaired by setting aside other lands in compensation. High-use areas and bottlenecks along migration corridors receive heavy use, year after year, and it is foolhardy to think animals can be rerouted to other lands managers may set aside. In the case of mule deer specifically, migratory pathways and behavior are highly inflexible, and animals exhibit strong fidelity to migration routes across years.[43] Certain habitats are irreplaceable and the BLM needs to take management actions that preserve important big game habitat and migration corridors. Furthermore, the word "sufficient" is ambiguous and could be interpreted to mean setting aside a similar acreage rather than habitat of comparable quality. If alternative lands were to be set aside as compensation, they would have to be of equal or greater quality and importance to ungulate herds.

Tribal consultation and other considerations

- **BLM must consult with Tribes to identify the Tribal Interest Areas to be excluded and resolve Tribal concerns through the final exclusion criteria, design features, or other means.**

It is critical that BLM meaningfully consult with sovereign Tribal nations and engage with local communities during all phases of solar development and planning while recognizing the legal relationship between the federal government and Tribal governments.[44] Meaningful consultation must respect Tribal self-government and sovereignty, Tribal treaty rights, reserved rights, and consider traditional Indigenous knowledge and practices in consultation and future solar development.[45]

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[43] Sawyer, H, JA Merkle, AD Middleton, SPH Dwinnell, and KL Monteith. 2018. Migratory plasticity is not ubiquitous among large herbivores. Journal of Animal Ecology. 88:450-60.

[44] United States Constitution, Article 1, Section 8 / 25 USC 5301/ Ex. Ord. No. 13175, Nov. 6, 2000, 65 F.R. 67249

[45] Bureau of Land Management. 1780 Tribal Relations Manual. Bureau of Land Management, 15 Dec. 2016, p. Chapter 3. www.blm.gov/sites/blm.gov/files/uploads/MS%201780.pdf.

- **BLM should expand its exclusion criteria description of Tribal Interest Areas beyond traditional cultural properties and sacred sites, based on its Tribal consultation within the current planning process. This may include adding Tribal interests such as sacred lands and viewsheds to the description.**

The BLM should expand exclusion criteria (number 17) to consider broader landscapes and historic connections to the land instead of limiting the existing exclusion criteria to "traditional cultural properties" and "sacred sites." We encourage the BLM to adhere to a broader interpretation provided by the 2021 U.S. Department of the Interior inter-agency memorandum of understanding (MOU) to increase collaboration with Tribes and ensure good stewardship and rightful access to sacred sites. The MOU acknowledged that while a sacred site is defined as a "specific, discrete, narrowly delineated location," these sites "often occur within a larger landform or are connected through physical features or ceremonies to other sites or a larger sacred landscape." Therefore, federal agencies were instructed to "consider these broader areas and connections."[46]

- **BLM should ensure that proactive steps are taken in the updated Western Solar Plan that allow Tribal communities to access and benefit from future utility-scale solar development and expanded grid infrastructure on public lands.**

A worrying concern over renewable energy development across the West is that the large-capacity, direct-current transmission lines needed to connect renewable energy generation sources to urban load centers often by-pass Tribal communities, keeping them from participating in these markets and utilizing their own renewable resources. Unlike developers and corporations, Tribes often lack the upfront capital and internal expertise to navigate the regulatory and permitting system to connect large projects and add their power to the grid.[47] Tribal lands cover 5% of the U.S. land base but account for 10% of the nation's renewable energy potential.[48] If Tribal communities are to fully participate and receive the benefits of future renewable energy development, it is critical that they too have the ability to access these transmission systems and bring renewable energy to market. Specifically, the high-voltage, direct-current lines that connect generation to load sources are not easily accessible for communities with smaller utility scale projects. Furthermore, bottlenecked transmission capacity and long interconnection queues prevent the export of renewable energy from Tribal lands. The BLM needs to prioritize energy equity in its planning and consultation with Tribal communities to seek solutions that help tribes benefit from local projects. To this end, consideration and intentionality is needed now at both programmatic and project-specific levels to ensure that Tribes are not overlooked or by-passed in a clean energy transition.

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[46] National Park Service. *Memorandum Of Understanding Regarding Interagency Coordination And Collaboration For The Protection Of Indigenous Sacred Sites* (Nov. 16, 2021); NPS Bulletin 38 at 1, 9, 18-19 (TCPs include culturally significant natural "landscapes"), https://www.nps.gov/subjects/nationalregister/upload/NRB38-Completeweb.pdf.

[47] Volcovici, V. *Why Native American Tribes struggle to tap billions in clean energy incentives.* Reuters. Sept 2023. Available at: https://www.reuters.com/sustainability/climate-energy/why-us-tribes-struggle-tap-billions-clean-energy-incentives-2023-09-08/

[48] Zaffoes, J. *Renewable energy on tribal lands stalls out*. High Country News. July 2015. Available at: https://www.hcn.org/articles/federal-agency-shortcomings-stalling-solar-wind-tribal-winds/

Lands with Wilderness Characteristics

- **BLM should exclude all inventoried Lands with Wilderness Characteristics from solar development, including LWCs that have not yet received land protection measures in resource management planning processes and LWCs identified by the public that have not yet been evaluated under resource management plans.**

Wyoming has over one million acres of identified Lands with Wilderness Characteristics (LWCs). These lands encompass valuable wildlife habitat within Wyoming's high deserts and sagebrush biome with the potential to preserve intact landscapes with high ecological integrity. However, only about 12,000 acres in Wyoming are currently being managed to preserve these wilderness values. Similar to our observations for big game, many of the resource management plans governing LWCs are woefully out of date, or are in the process of being revised. The process for updating RMPs can take decades to complete after which time many of these LWCs will lose their wilderness character, if they are not protected.

Exclusion criteria number 3 excludes solar development within "all areas for which an applicable land use plan establishes protection for lands with wilderness characteristics." While we support this exclusion criterion, we believe it does not go far enough to protect wilderness character. As written the proposed exclusion criterion does not account for LWCs identified in a land use plan, but not afforded protections, or LWCs identified by private citizens, but not yet evaluated by the agency.

BLM's obligation to protect Lands with Wilderness Characteristics

BLM Policy Manual 6310 outlines requirements for LWCs: naturalness and outstanding opportunities for solitude or a primitive and unconfined type of recreation.[49] Because of their undisturbed state, LWCs offer critical wildlife habitat, protecting essential core areas and migration corridors. Wyoming holds the most intact expanses of sagebrush ecosystem and the highest density of sage-grouse in the world, an ecosystem that is losing up to 1.3 million acres per year to human activity and development.[50] LWCs identified in Wyoming encompass valuable sagebrush and high desert habitat that is still intact and undegraded. Preserving the sagebrush biome depends upon preserving as much intact sagebrush lands as possible. Furthermore, the sparse route density and lack of development activities in LWCs, which typically draw motorized vehicles, are fundamental aspects of their wilderness character, vital for sustaining productive wildlife habitat, facilitating large-scale connectivity, and preserving riparian areas. As a result, these areas are unsuitable for solar development.

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[49] Bureau of Land Management Policy Manual 6310. Available at: https://www.blm.gov/sites/default/files/docs/2021-01/BLM-Policy-Manual-6310.pdf

[50] Doherty, K, DM Theobald, JB Bradford, LA Wiechman, G Bedrosian, CS Boyd, M Cahill, PS Coates, MK Creutzburg, MR Crist, SP Finn, AV Kumar, CE Littlefield, JD Maestas, KL Prentice, BG Prochazka, TE Remington, WD Sparklin, JC Tull, Z Wurtzebach, and KA Zeller. 2022. A sagebrush conservation design to proactively restore America's sagebrush biome: U.S. Geological Survey Open-File Report 2022 – 1081, 38 p., https://doi.org/10.3133/ofr20221081. Available at: https://www.usgs.gov/publications/a-sagebrush-conservation-design-proactively-restore-americas-sagebrush-biome

Section 201 of FLPMA requires the BLM to maintain a current inventory of its resources, including regularly updating this inventory. Section 202 of FLPMA requires the BLM to incorporate this information in developing, maintaining, and updating land use plans that set out management for different tracts of land and types of resources.[51] These resources include LWCs: As the U.S. Court of Appeals for the Ninth Circuit held (Case No. 05-35931, Oregon Natural Desert Association v, Bureau of Land Management), "wilderness characteristics are among the 'resource and other values' of the public lands to be inventoried under § 1711. BLM's land use plans, which provide for the management of these resources and values are to 'rely to the extent it is available, on the inventory of the public lands, their resources, and other values."[52] BLM's Land Planning Handbook further states that land use planning represents an opportunity to identify decisions to protect or preserve wilderness character, determine goals to protect the resource, and prescribe conditions for authorized activities to minimize or avoid impacts to the wilderness character. Land use plans are often badly outdated, and as a result, many LWCs identified by the public have not yet been evaluated. Without updated inventories or land use plans, many of these lands have not had the opportunity to be protected.

Addressing cumulative impacts

- **The BLM should consider setting density thresholds on acreages covered by solar infrastructure in areas open to solar leasing as a failsafe to account for cumulative impacts of projects over the long-term.**

The time to plan for broader cumulative impacts of solar energy development is at the programmatic level and land use planning level. As we have seen with other forms of energy development, especially on private lands, the cumulative impacts of large infrastructure projects on the landscape can have compounding and non-linear effects on wildlife and other resource values.[53,54] To date, very little research has been done on the cumulative impacts of solar energy development to wildlife and, while NEPA analyses are currently required to consider these compounding effects, this has been challenging for agencies to achieve. Because cumulative impacts typically arise as the result of multiple projects interacting with one another, it is difficult or impossible to address impacts at the individual project development level. As such, the BLM should proactively consider protections in its final plan that take into account cumulative impacts such as density thresholds for developed acreages that could be applied to limit the development intensity of any one area. Although the appropriate level for this guidance might be at the RMP level and vary based on the potential to impact different resources in the planning area, giving

[51] U.S. Department of the Interior, Bureau of Land Management (editor), 2016. The Federal Land Policy and Management Act of 1976, as amended. U.S. Department of the Interior, Bureau of Land Management, Office of Public Affairs, Washington, DC. 106 pp.

[52] Oregon Natural Desert Ass'n v. Bureau of Land Management, Case No. 03-CV-1017-JE (D. Or. Sep. 28, 2010)

[53] U.S. Department of Energy. Exploring Wind Energies Impacts on Wildlife. Wind Energy Technology Office. June 2023. Available at: https://www.energy.gov/eere/wind/articles/exploring-wind-energys-impacts-wildlife#:~:text=Renewable%20Energy%20Wildlife%20Institute,-The%20Renewable%20Energy&text=Although%20the%20impact%20of%20wind,of%20any%20type%20of%20bird.

[54] Naugle, DE, KE Doherty, BL Walker, HE Copeland, and JD Tack. 2011. Sage-grouse and cumulative impacts of energy development. Pages 213-225 *in* PL Krausman and LK Harris, editors. Cumulative effects in wildlife management. CRC Press, New York, New York, USA.

field offices tools and flexibility to help manage project density in leasing areas could help alleviate unexpected cumulative impacts that could not be predicted in advance.

Planning ahead for community engagement and benefits at the project level

- **BLM should clarify that environmental impact statements will generally be required for project-level NEPA reviews in solar application areas.**

Ensuring a common understanding for how solar leasing will occur in solar application areas is important to ensure the program's success. We recommend that the BLM clarify that Environmental Impact Statements (EISs) will generally be required for project-level NEPA. This general assurance and common understanding will help communicate the final Western Solar Plan to members of the public and reassure them of the opportunity and need to be engaged and participate at the project-specific level.

- **BLM should promote, outline, and consider ways to incentivize Community Benefits Agreements (CBAs) to address local community concerns, adjacent Tribal lands, environmental justice, and cultural resource impacts from solar energy development.**

BLM should consider as a part of this programmatic review the role of community benefit plans for future solar development on public lands. For context, community benefit agreements (CBAs) are enforceable agreements between project developers and community groups or coalitions, that address topics such as developer monetary or in-kind contributions for community services, agreed-upon mitigation measures, or local workforce training and deployment, which often lead to broader community support for projects.[55]

In the context of Wyoming, where skepticism of renewable energy runs deep in many communities, CBAs are a way to identify and address frustrations and concerns voiced by residents, Tribal members, and local governments and can help build trust and support for

[55] U.S. Department of Energy, *About Community Benefits Plans* ("DOE CBPs") ("A 'Community Benefits Agreement' is an agreement signed by community groups or coalitions and a project developer, identifying the community or labor benefits a developer agrees to deliver in return for community support or workforce availability for a project. Community coalitions can comprise stakeholder groups that would be impacted by a project, including neighborhood associations, faith-based organizations, worker-serving organizations, environmental groups, labor unions, child care providers, and others. Community Benefit Agreements help ensure that measurable local benefits will be given to a community. They are enforceable, legally binding contracts for all parties. They typically specify responsibilities, reporting, and remedies."), https://www.energy.gov/infrastructure/about-community-benefits-plans; *see* Katherine Hoff & Katie Segal, Berkeley Law Center for Law, Energy, & the Environment, *Offshore Wind and Community Benefits Agreements in California*, (June 2023) ("Hoff & Segal 2023"), https://www.law.berkeley.edu/wp-content/uploads/2023/06/CBA-Policy-Paper.pdf; DOE, *Guide to Advancing Opportunities for Community Benefits through Energy Project Development* (Aug. 1, 2017) ("DOE Guide"), https://www.energy.gov/diversity/articles/community-benefit-agreement-cba-resource-guide; Julian Gross et al., *Community Benefits Agreements: Making Development Projects Accountable* (2005), https://juliangross.net/docs/CBA_Handbook.pdf; Trace Allen et al., *Community Benefits Agreement Guidelines for Renewable Energy Projects on Tribal Lands in the U.S. Applied to Solar Development on Red Lake Nation* (May 2023), Community Benefits Agreement Guidelines for Renewable Energy Projects on Tribal Lands in the U.S. by MIT DUSP - Issuu.

solar energy development. Encouraging these agreements and solidifying them into the program structure of the Western Solar Plan could present a path forward to better aligning the goal of renewable energy transition with conservative rural communities across the West. This is especially true in the context of solar energy development, which typically requires a large influx of short-term construction jobs to plan and build a project, but only employs a handful of full-time workers in its post construction phase. Addressing the impacts of hosting large temporary workforces in small communities is one example of how CBAs might be utilized as a win-win for communities and developers alike.

CONCLUSION

At the most basic level, it is critical that our nation's efforts to generate renewable energy do not undermine the ecosystem services, biodiversity, and wildlife that a clean energy transition is intended to protect. This is an unacceptable outcome for an energy transition, and one that we can avoid with careful planning. We are grateful to the BLM for initiating this process and remain resolute in seeing Wyoming meet a critical moment in history where the need to decarbonize our electrical grid and economy could not be clearer. The renewable energy boom is here and this process offers a once in a generation opportunity to help plan for the future we want. Thankfully, Alternative 5, along with a necessary broadening of exclusion criteria, would allow Wyoming to rise to the occasion — providing ample acreage to meet the projected needs of solar development while excluding lands that are not suitable for solar development, and would likely be mired in local conflict and opposition anyway. Even with the best planning, we know that not every conflict can and will be avoided, but we should be able to learn from examples in the past, like Sweetwater Solar, to avoid making the same irreversible mistakes.

Thank you for taking the time to read and consider our comments. We appreciate your efforts to facilitate responsible renewable energy development that does not come at the cost of irreplaceable habitats, cultural sites, and values in Wyoming.

Sincerely,

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APPENDIX

1. Figures

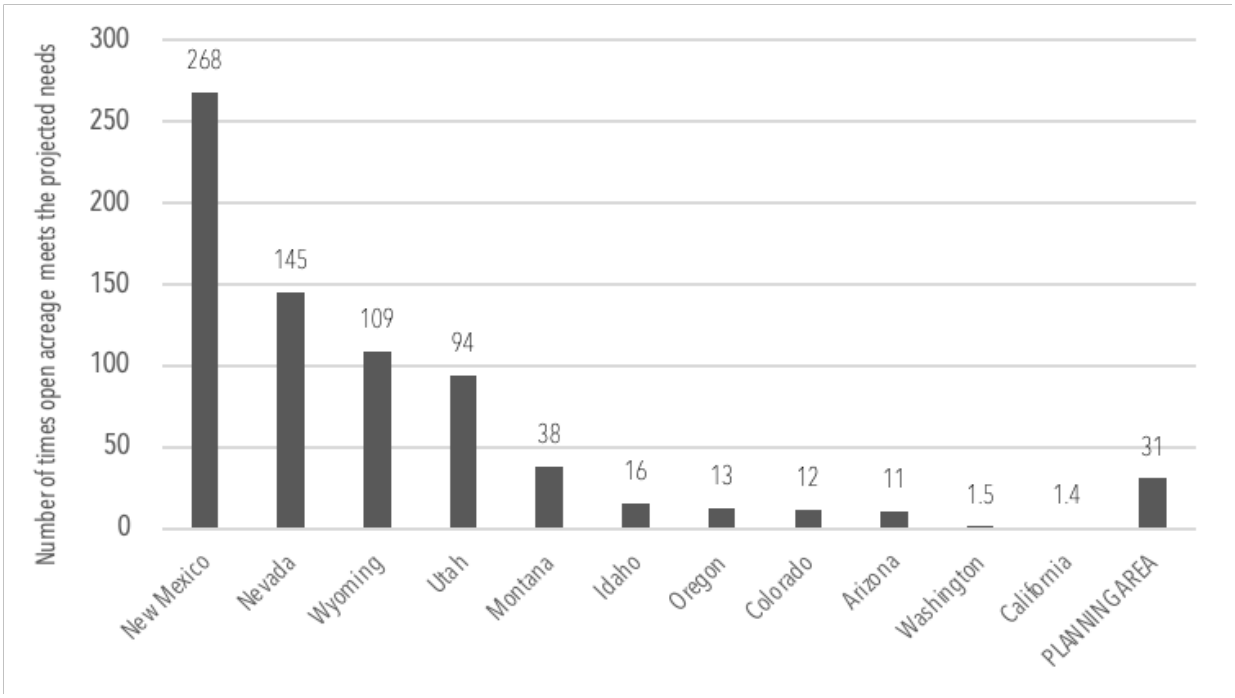

Figure 1. Factor by which the acres open for solar development under Alternative 3 of the Draft PEIS/RMPA exceed the projected need according to BLM's Reasonably Foreseeable Development Scenario (RFDS), or the number of times open acreage could meet the needs projected under the RFDS. Numbers were calculated by dividing the total acres of "Lands Available for Application" under Alternative 3 by the total acres reported in the RFDS.[56,57]

[56] Draft PEIS for Utility-Scale Solar Energy Development, vol. 1, at Table ES-2.

[57] Draft PEIS for Utility-Scale Solar Energy Development, vol. 1, at Table ES-2.

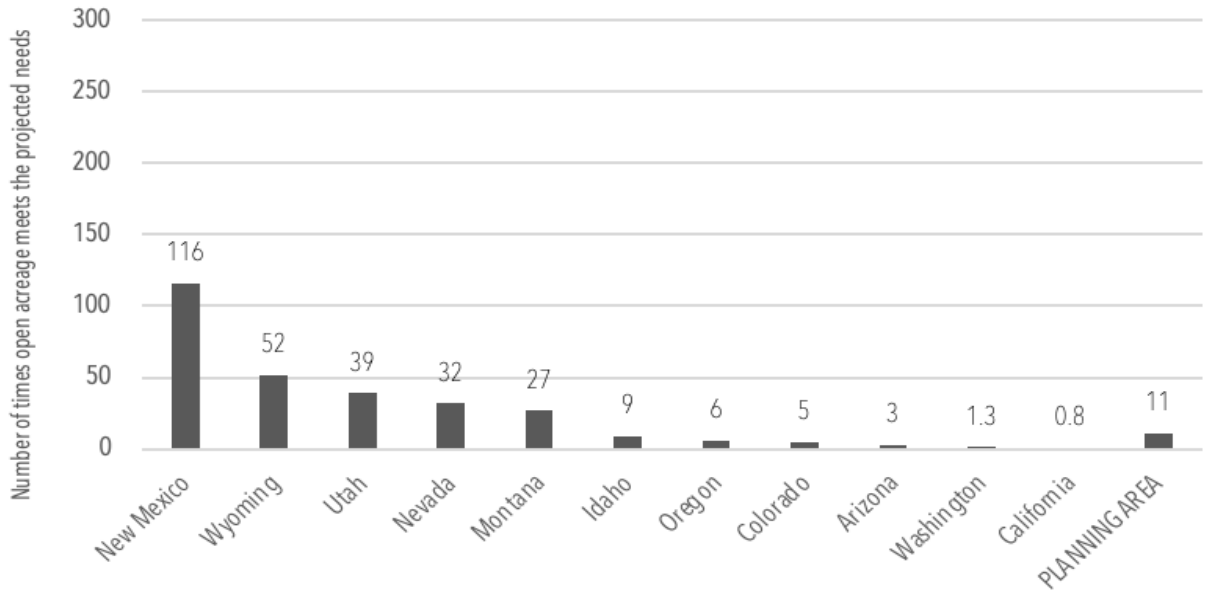

Figure 2. Factor by which the acres open for solar development under Alternative 5 of the Draft PEIS/RMPA exceed the projected need according to BLM's Reasonably Foreseeable Development Scenario (RFDS), or the number of times open acreage could meet the needs projected under the RFDS. Numbers were calculated by dividing the total acres of "Lands Available for Application" under Alternative 5 by the total acres reported in the RFDS.[58,59]

[58] Draft PEIS for Utility-Scale Solar Energy Development, vol. 1, at Table ES-2.

[59] Draft PEIS for Utility-Scale Solar Energy Development, vol. 1, at Table ES-4.

2. Tables

Table 1. Comprehensive List of Recommendations.

Clarifying Data	**The BLM must clarify for the public, with supporting data, the acreage threshold needed to provide developers with "sufficient flexibility" before finalizing the PEIS/RMPA.**
Multiple Alternative Approach	**The BLM should select different alternatives for different states or regions that better align with reasonable foreseeable development scenarios in the states.**
Alternative 5	**The BLM should select Alternative 5 for Wyoming as a more targeted approach that protects Wyoming's resources while still providing significant flexibility for solar development.**
Wildlife	**The BLM must strengthen its exclusion criteria for big game winter range, migration corridors, and parturition areas at the programmatic level and not only rely on individual land use plans.**
	BLM's exclusion criteria must reflect the latest federal guidance for conserving big game habitat.
	BLM's exclusion criteria must be based on the best available science rather than outdated land use plans in order to protect important resource values on public lands.
	4.1 Table 2.1-3, Exclusion No. 9: All big game migratory corridors identified in applicable land use plans to the extent the land use plan decision prohibits utility-scale solar energy development. All big game winter ranges identified in applicable land use plans to the extent the land use plan decision prohibits utility-scale solar energy development. **Revise to:** *All big game migratory corridors identified in applicable land use plans; all bottleneck, stopover, and high -use habitat within migration corridors as identified by state wildlife management agencies, USGS, or through independent modeling of route data; and cap solar development within medium- and low-use habitat as identified by state wildlife management agencies, USGS, or through independent modeling of route data at 3%. All big game winter ranges identified in applicable land use plans. All big game parturition areas identified in applicable land use plans.*
	B.1.2, N-C-7: Project developers shall plan noisy construction activities near sensitive receptors to take place during the least noise-sensitive times of day (i.e., daytime between 7 a.m. and 7 p.m.), and on weekdays. For wildlife, noise-sensitive times shall consider breeding, nesting, and wintering. **Revise to:** *Project developers shall plan noisy construction activities near sensitive receptors to take place during the least noise-sensitive times of day (i.e., daytime between 7 a.m. and 7 p.m.), and on weekdays. For wildlife, noise-sensitive times shall consider breeding, nesting, calving or fawning, wintering, and migration.*
	B.1.3, N-O-1: Project operators shall schedule activities to minimize disruption to nearby residents and existing operations surrounding the project areas, and to minimize disruption to sensitive wildlife receptors especially during breeding, nesting, and wintering periods. **Revise to:** *Project operators shall schedule activities to minimize disruption to nearby residents and existing operations surrounding the project areas, and to minimize disruption to sensitive wildlife receptors especially during breeding, nesting, calving or fawning,*

	wintering, and migration periods.
	B.4.1.4, ER-G-2w: Project developers shall schedule major maintenance or repairs outside critical periods for wildlife (e.g., feeding, breeding, nesting, wintering, migration), as identified and recommended by the BLM or other Federal and state agencies during site specific planning. **Revise to:** *Project developers shall schedule major maintenance or repairs outside critical periods for wildlife (e.g., feeding, breeding, nesting, calving or fawning, wintering, migration), as identified and recommended by the BLM or other federal and state agencies during site specific planning.*
	5.4.2.2: Overall, contributions to cumulative impacts are expected to be small, provided mitigation measures to preserve important habitat and migration corridors are implemented (or sufficient alternative lands are set aside as compensation). **Revise to:** *Overall, contributions to cumulative impacts are expected to be small, provided mitigation measures to preserve important habitat and migration corridors are implemented.* ~~(or sufficient alternative lands are set aside as compensation).~~
Tribal Interest Areas and Considerations	**BLM must consult with Tribes to identify the Tribal Interest Areas to be excluded and resolve Tribal concerns through the final exclusion criteria, design features, or other means.**
	BLM should expand its exclusion criteria description of Tribal Interest Areas beyond traditional cultural properties and sacred sites, based on its Tribal consultation within the current planning process. This may include adding Tribal interests such as sacred lands and viewsheds to the description.
	BLM should ensure that proactive steps are taken in the updated Western Solar Plan that allow Tribal communities to access and benefit from future utility-scale solar development and expanded grid infrastructure on public lands.
Lands with Wilderness Characteristics	**BLM should exclude all inventoried Lands with Wilderness Characteristics from solar development, including LWCs that have not yet received land protection measures in resource management planning processes and LWCs identified by the public that have not yet been evaluated under resource management plans.**
Cumulative Impacts	**The BLM should consider setting density thresholds on acreages covered by solar infrastructure in areas open to solar leasing as a failsafe to account for cumulative impacts of projects over the long-term.**
Clarifying NEPA and Community Benefits Agreements	**BLM should clarify that environmental impact statements will generally be required for project-level NEPA reviews in solar application areas.**
	BLM should promote, outline, and consider ways to incentivize Community Benefits Agreements (CBAs) to address local community concerns, adjacent Tribal lands, environmental justice, and cultural resource impacts from solar energy development.

3. Citations

Due to file size limitations on BLM's E-planning portal, PDF files for each of the many dozens of references cited below will be provided to BLM HQ for inclusion in the project record.

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