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To: [Klein, Elizabeth A](#); [Culver, Nada L](#)
Cc: [Rees, Gareth C](#); [Blasing, Francesca M](#); [Ben Tettlebaum](#)
Subject: [EXTERNAL] Meeting request - discuss comments on O&G Comprehensive Review
Date: Wednesday, April 28, 2021 5:49:17 PM
Attachments: [TWS Comprehensive Review Letter 4 15 21.pdf](#)

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Dear Senior Counselor Klein and Deputy Director Culver,
I hope you're well. Thank you for all of your leadership on the Comprehensive Review of the oil and gas program. I am writing to request a meeting to discuss key elements of the comments The Wilderness Society submitted (attached again here). Please let us know if you have any availability in the next week or two, and thanks in advance if you're able to share some of your time. We can share a suggested agenda before we meet if that's helpful.

Sincerely,

Alex

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April 15, 2021

Submitted via email: energyreview@ios.doi.gov

The Honorable Debra Haaland
Secretary of the Interior
United States Department of the Interior
1849 C St. NW
Washington, D.C. 20240

Re: Recommendations for the Comprehensive Review of the Federal Oil and Gas Program

Dear Secretary Haaland:

The Wilderness Society (TWS) deeply appreciates the leadership of the Biden Administration, the Department of the Interior (DOI), the Bureau of Land Management (BLM), and the Bureau of Ocean Energy Management (BOEM) in conducting a comprehensive review of the federal oil and gas program. This letter provides recommendations for reforming the program to achieve critical, equitable climate solutions, as directed by Section 208 of Executive Order 14008, Tackling the Climate Crisis at Home and Abroad.

Executive Summary

Systemic problems with the federal oil and gas program are exacerbating the climate crisis.¹ The program is failing to meet BLM's multiple-use mandate, polluting our public lands and environment, sacrificing community health and wellbeing, threatening wildlife habitat and cultural resources, and failing to provide a fair return to the public. Many oil and gas laws and regulations have not been updated for decades; some for over a century. The current system is deeply flawed, chiefly serves the monetary interests of oil and gas industry executives, and undermines the Administration's climate goals.

The science is unequivocal: immediate action is needed to avert the worst effects of the climate crisis. Over the last decade, greenhouse gas (GHG) emissions stemming from oil, gas, and coal pulled from public lands and waters were equivalent to nearly a quarter of total U.S. GHG emissions.² DOI has both an obligation and ample existing authority to rapidly transition our public lands and waters from part of the climate problem to a leading part of the climate solution, helping ensure a livable world for future generations.

¹ Many of the same problems permeate the federal coal program. We strongly urge DOI to address those systemic issues. In these comments, we incorporate the scoping comments TWS provided on the Coal Programmatic Environmental Impact Statement (attached as Appendix F).

² Prest, B. *Supply-Side Reforms to Oil and Gas Production on Federal Lands: Modeling the Implications for Climate Emissions, Revenues, and Production Shifts*, Resources for the Future, 1 (March 2021), available at: <https://www.rff.org/publications/working-papers/supply-side-reforms-oil-and-gas-production-federal-lands/> [hereinafter Prest 2021].

To fulfill its stewardship responsibilities over our public lands and waters, DOI should take bold action to reform the federal oil and gas program expeditiously, with the comprehensive review completed and any associated reforms implemented by no later than early 2023. We strongly support the pause on new leasing during the entirety of the comprehensive review. The climate crisis demands that we stop opening new leaks while repairing the proverbial ship.

TWS offers a suite of recommendations to reform the oil and gas program and protect our shared public lands and waters. We urge DOI to undertake actions in whatever combination reduces and ultimately eliminates GHG emissions from fossil fuel development on federal public lands and offshore waters as efficiently, effectively, and durably as possible:

- Ensure inclusive processes that fully engage and guarantee participation of Tribal Nations, the general public, environmental justice communities, communities financially dependent on fossil fuel development, and other stakeholders in decision-making concerning oil and gas development, including this comprehensive review.
- To avoid a 1.5°C rise in global temperatures, establish an emissions management framework for federal public lands and waters that will achieve net zero GHG emissions from fossil fuels by 2030 and no fossil fuel development on federal lands and waters by 2050. Implement the framework in a manner consistent with efforts to conserve at least 30 percent of U.S. lands and waters by 2030 and ensure a just and equitable transition for affected communities.
- Impose a net zero GHG emissions obligation on producers and lessees for all new oil and gas development—including new wells on existing leases—through compensatory mitigation, using tools such as a climate fee.
- Place a climate fee on any new or renewed oil and gas leases, and new development on existing leases, to address the climate pollution costs of oil and gas development. This kind of fee is within DOI's discretion under existing statute and regulation and will reduce emissions while simultaneously increasing revenue. The fee amount should be tiered to the scientifically and economically supported social cost of greenhouse gases, capturing the full lifecycle of emissions costs.
- Use the social cost of greenhouse gases to evaluate impacts from oil and gas planning, leasing, and development and to inform decisions, including for the oil and gas program.
- Promote healthy communities and economies, focusing on environmental justice and a just and equitable transition away from fossil fuels.
- Create a publicly accessible central database that tracks oil and gas leasing, permitting, and production and provides a comprehensive accounting of the GHG emissions associated with oil and gas development on public lands and waters.
- Re-establish and strengthen DOI and BLM mitigation policies and establish a robust mitigation program to require full mitigation of the climate impacts of the oil and gas

program; ensure no net loss of conservation value; and fully address impacts to cultural resources, recreation, and other resources and values on public lands.

- When making or revising land management decisions involving fossil fuel development, BLM must prioritize: (1) avoiding new leasing and development and associated emissions to the maximum extent possible, and protecting natural and cultural resources from leasing and development; (2) minimizing any emissions that do occur; and (3) offsetting any remaining emissions via increasing terrestrial carbon sequestration and maintaining existing carbon stocks, as well as increasing responsible renewable energy development.
- Establish and implement a new overarching mandate for the oil and gas program that leasing is discretionary and allowed only to the extent consistent with multiple use, sustained yield, the emissions management framework, and protection of important conservation values, cultural resources, and other important resources and values.
- Significantly constrain noncompetitive leasing and support legislative efforts to abolish the practice, prohibit leasing of low or no potential lands, limit participation by bad actors, and eliminate lease suspension loopholes.
- Implement fiscal reforms to ensure taxpayers are not unwittingly subsidizing climate change, including increasing the royalty rate and establishing a climate fee; increasing rental rates and reducing standard lease periods; increasing the minimum bid amount; updating reclamation bond amounts and requirements to adequately cover cleanup costs; and ensuring proper valuation and closing industry loopholes.
- Under the emissions management framework and to the maximum extent allowed by law, mitigate the cumulative climate impacts of development on existing leases at the application for permit to drill (APD) stage.
- Curb methane emissions by defending the 2016 Waste Prevention Rule, which—if upheld—would realize immediate climate benefits by reducing gas that is wasted through venting, flaring, and leaking.
- As directed by Executive Order 13990, complete independent review of the fundamentally flawed Arctic National Wildlife Refuge Coastal Plain Leasing Program and take swift action to protect these lands sacred to the Arctic Indigenous peoples.
- Ensure protections for the nationally and internationally recognized values of the National Petroleum Reserve – Alaska. Expedite review of the deeply flawed and recently approved Willow Master Development Plan. Through amending the regulations that apply to the Reserve, implement a new management direction focused on meeting climate goals and protecting the extraordinary ecological values of the Reserve.

Please see the attached Oil and Gas Reform Toolkit (Appendix A) for a complete table of recommendations.

I. CONDUCT AN EFFICIENT AND INCLUSIVE REVIEW PROCESS WITH THE GOAL OF MAKING OUR PUBLIC LANDS AND WATERS A LEADING PART OF AN EQUITABLE CLIMATE SOLUTION.

Reforming the oil and gas program requires a clear roadmap, which should include:

- a. **Goals.** The principal goal should be to achieve net zero GHG emissions from fossil fuels on public lands and waters by 2030 and no fossil fuel development on public lands and waters by 2050 consistent with: (1) climate science; (2) conserving at least 30 percent of U.S. lands and waters by 2030; and (3) ensuring a just and equitable transition for affected communities. DOI should conduct this comprehensive review through the lens of the climate crisis and Interior’s stewardship responsibilities over public lands, waters, and their resources.³ Specifically, the Federal Land Policy and Management Act (FLPMA) mandates that BLM:
 1. Manage public lands to “protect the quality of scientific, scenic, historical, ecological, environmental, air and atmospheric, water resource, and archeological values”;⁴
 2. Account for “the long-term needs of future generations” under multiple use principles;⁵
 3. “Withdraw” areas of land “to maintain . . . public values”;⁶
 4. Prevent “permanent impairment of the productivity of the land and quality of the environment”;⁷ and
 5. Prevent “unnecessary or undue degradation of the lands.”⁸
- b. **Process.** Lay out a clearly defined process for the comprehensive review. We urge DOI to identify reforms to the oil and gas program that can be completed using different types of mechanisms, balancing efficiency with durability:
 1. Those that can be enacted swiftly through Instruction Memorandum, policy statement, or otherwise, without the need for rulemaking or legislation.
 2. Those that require or would greatly benefit from rulemaking, a broader programmatic review and analysis under NEPA,⁹ or both. For those reforms that cannot be enacted swiftly, DOI should consider undertaking a programmatic environmental impact statement (PEIS) process with the purpose and need of aligning the oil and gas program with its duties under FLPMA.
 3. Those that require or would greatly benefit from legislation.

³ Exec. Order No. 14008, 86 Fed. Reg. 7619, 7624 (2021); *see* 43 U.S.C. §§ 1701(a)(8), 1702(c), 1732(b).

⁴ 43 U.S.C. § 1701(a)(8).

⁵ *Id.* § 1702(c).

⁶ *Id.* §§ 1702(j), 1712(e)(2), 1714(c).

⁷ *Id.* § 1702(c).

⁸ *Id.* § 1732(b).

⁹ *See, e.g.*, 42 U.S.C. §§ 4331(b)(1), 4321, 4331, 4332(1) (requiring “to the fullest extent possible . . . the policies, regulations, and public laws of the United States [to] be interpreted and administered in accordance with the policies set forth in this chapter”).

- c. **Participation.** Conduct an inclusive, open, and transparent review. Provide waypoints for outreach and engagement with Tribes, the public, frontline and fenceline communities,¹⁰ state and local governments, federal agency partners, and stakeholders. DOI must continue to distinguish between inclusive stakeholder engagement with the general public and consultation with Tribal Nations. The comprehensive review presents a key opportunity to work closely with Tribal governments to arrive at joint solutions for the future of public lands, which are the traditional homelands of Native peoples.

For the public at large, the review must ensure open and fair opportunities to meaningfully participate in this important review concerning the use and future of our shared public lands. To better understand the need for substantial, lasting reform, DOI should listen to the stories of communities and individuals who are already experiencing adverse health effects because of the acute impacts from the climate crisis. These communities have shouldered a long history of environmental racism, pollution, visible changes to landscapes and weather patterns, and climate migration, fueled by oil and gas development. The most impacted communities—both those that have historically benefitted from and are adversely impacted by oil and gas development—need clear opportunities to engage in the decision-making process.

- d. **Timeline.** Set a timeline that ensures efficiency, while also thoroughly considering input from outreach and engagement. Enact reforms that do not require programmatic review within one year. Complete any programmatic review by no later than early 2023.

RECOMMENDATIONS:

- Clearly outline: (1) goals of the review; (2) review process; (3) opportunities for outreach and engagement; and (4) timeline.
- Conduct robust government-to-government consultation with Tribes.
- Hold public meetings and listening sessions that allow full and equitable participation.
- Engage, consider, and implement input from Tribes, the public, frontline and fenceline communities, state and local governments, federal agency partners, and stakeholders, with adequate notice and time for comment submissions.
- Identify reforms to the oil and gas program that: (1) can be enacted swiftly—before the end of 2021—through Instruction Memorandum, policy statement, or otherwise, without the need for rulemaking or legislation; (2) require or would greatly benefit from rulemaking, programmatic review, or both, and complete that process by early 2023; and (3) require or would greatly benefit from legislation.
- Support Senator Bennet’s *Public Engagement Opportunity on Public Lands Act of 2020* (S. 4641), and Representative Levin’s *Restoring Community Input and Public Protections in Oil and Gas Leasing Act of 2021* (H.R. 1503). These bills include provisions that allot a reasonable time for public and stakeholder input, require shorter lease terms, and ensure that other uses are considered for the land in question.

¹⁰ Frontline communities are those that have experienced systemic socioeconomic disparities as well as those that will be impacted first and hardest by the climate crisis. These communities include low-income communities, Indigenous peoples and communities of color, deindustrialized communities, and rural communities with economies dependent on fossil fuel development. Fenceline communities are those living immediately adjacent to fossil fuel refinement who experience environmental injustice and increased negative public health impacts from fossil fuel development.

II. CHART A PATH TO ELIMINATING FOSSIL FUEL DEVELOPMENT ON PUBLIC LANDS AND WATERS WHILE ENSURING A JUST TRANSITION.

To avoid a 1.5°C rise in global temperatures—what science tells us is needed to avoid some of the most devastating climate impacts—we must, at the least, cut global emissions in half by 2030 and reach net zero emissions by 2050.¹¹ We can and must do more. To leverage public lands and waters as a leading part of the solution, we strongly urge DOI to immediately set a course to achieving net zero GHG emissions from fossil fuel development on federal public lands and waters by 2030 and no fossil fuel emissions from federal public lands and waters by 2050.

TWS defines “net zero fossil fuel emissions” from public lands and waters as follows: when the lifecycle GHG emissions stemming from fossil fuel development on U.S. federal public lands and waters (full lifecycle – from production sites to burning by end users) over a specified period are balanced by an equal amount of GHG emissions removed from the atmosphere and a combination of responsible offsets that will be phased out as our public lands become free of fossil fuel development. “No fossil fuel emissions by 2050” is defined as no emissions (both GHG and local air pollution) stemming from fossil fuel development on federal public lands and waters, i.e., no fossil fuel development on federal public lands and waters.¹²

To accomplish these critical climate goals, we offer a suite of recommendations and urge DOI to undertake those actions in whatever combination achieves GHG emissions targets as efficiently, effectively, and durably as possible. These efforts must be consistent with efforts to conserve at least 30 percent of U.S. lands and waters by 2030 and ensure a just and equitable transition for affected communities.

a. Establish a DOI emissions management framework for achieving net zero GHG emissions from fossil fuels on public lands and waters by 2030 and no fossil fuel development on public lands and waters by 2050 at the latest.

Based on these emissions targets, DOI must develop a GHG emissions management framework to guide its management and energy development decisions. As part of this framework, DOI should systematically calculate, track, and publicly disclose the lifecycle emissions and associated climate and public health costs of management decisions.

¹¹ Rogelj, J., D. Shindell, K. Jiang, S. Fifita, P. Forster, V. Ginzburg, C. Handa, H. Kheshgi, S. Kobayashi, E. Kriegler, L. Mundaca, R. Séférian, and M.V. Vilariño, 2018: Mitigation Pathways Compatible with 1.5°C in the Context of Sustainable Development. In: Global Warming of 1.5°C. An IPCC Special Report on the impacts of global warming of 1.5°C above pre-industrial levels and related global greenhouse gas emission pathways, in the context of strengthening the global response to the threat of climate change, sustainable development, and efforts to eradicate poverty [Masson-Delmotte, V., P. Zhai, H.-O. Pörtner, D. Roberts, J. Skea, P.R. Shukla, A. Pirani, W. Moufouma-Okia, C. Péan, R. Pidcock, S. Connors, J.B.R. Matthews, Y. Chen, X. Zhou, M.I. Gomis, E. Lonnoy, T. Maycock, M. Tignor, and T. Waterfield (eds.)]. In Press. Available at: <https://www.ipcc.ch/sr15/chapter/chapter-2/>.

¹² The scope of the net zero and no-fossil-fuel emissions targets cover all greenhouse gases sourced from federal public lands and waters, including carbon dioxide, methane, nitrous oxide, and fluorinated gases, if applicable. The scope also covers the full lifecycle of activities resulting in the release of emissions, beginning with fossil fuel exploration and production and ending with consumer use.

Under the emissions management framework, DOI should adopt a federal net zero obligation at the national level and in land use planning, and impose a net zero obligation on lessees at the leasing and permitting stages. Leasing- and permitting-stage net zero obligations can and should flow from national policy and land management plan direction to achieve net zero on all new development, including new wells on existing leases, through compensatory mitigation using tools such as a climate fee. While an overarching national DOI emissions management framework is being developed, all relevant BLM field offices across the country should establish and implement plans to achieve net zero fossil fuel emissions within their regions, as detailed in Section II(f).

Additionally, to achieve climate emissions goals, protect taxpayers, and safeguard natural and cultural resources already leased and at risk of damage from production, DOI must significantly reduce potential emissions and liability by taking a hard look at the stock of existing leases. DOI should research and develop criteria and a programmatic approach for buying back existing leases with appropriate and effective valuation. A properly incentivized lease buyback program would yield significant co-benefits, including reducing GHG and other fossil fuel pollution and freeing land tied up under speculative and non-producing leases.

RECOMMENDATIONS:

- Establish a GHG emissions management framework to guide DOI's management and energy development decisions at the national, land use planning, leasing, and permitting stages to achieve net zero GHG emissions from fossil fuel development on federal public lands and waters by 2030 and no fossil fuel development by 2050. Implement the framework in a manner consistent with efforts to conserve at least 30 percent of U.S. lands and waters by 2030 and to ensure a just and equitable transition for affected communities.
- Develop a measurement protocol for GHG emissions from federal lands consistent with climate science.
- Develop a dashboard that will provide the information needed to manage publicly owned energy resources in a manner consistent with climate and other DOI goals.
- Develop tools necessary to populate the dashboard, including calculating volumes of fossil fuels and associated upstream and downstream pollution from existing leases, methods to estimate the carbon consequences of nominated and approved leases and reasonably foreseeable development in planning documents, and other key metrics.
- Adopt a federal net zero obligation at the national level and in land use planning, and impose a net zero obligation on lessees at the leasing and permitting stages, including new wells on existing leases, through compensatory mitigation using tools such as a climate fee.
- Research and consider developing a lease buyback program. Support legislation and appropriations as needed.
- Regularly disclose progress toward meeting emissions targets to the public.

b. Adopt a climate fee that accounts for the climate pollution costs of oil and gas development, tiered to the social cost of greenhouse gases.

One of the most efficient ways to reduce emissions is to incorporate the negative societal costs into the price of a unit of fossil fuel production, such as a barrel of oil or cubic foot of gas.

Research shows that imposing the cost of climate damages on oil and gas development could get at over 70 percent of the emissions reductions that an end to all new leasing could have by 2030, while having the co-benefit of raising billions of dollars in additional revenue, which could be used to mitigate climate impacts.¹³

Specifically, a climate pollution price (also known as a “carbon adder,” “climate surcharge,” or “climate fee”) is an additional price placed on a unit of oil, gas, or coal produced or sold based on each ton of carbon (or carbon dioxide equivalent) estimated to be emitted from the production of the unit.¹⁴ The fee amount should be tiered to the scientifically and economically supported social cost of greenhouse gases and capture full lifecycle GHG emissions costs. This climate fee could be incorporated into royalty rates or applied as a compensatory mitigation fee. It should be set at an amount that maximizes global emissions reductions.

Existing authority gives DOI discretion to incorporate a climate fee into royalty rates. The Mineral Leasing Act (MLA) requires a royalty “at a rate of not less than 12.5 percent,” allowing DOI to impose a higher rate.¹⁵ Current regulations explicitly permit DOI to set rates above 12.5 percent on new leases.¹⁶ Using the social cost of greenhouse gases, along with adjustments to minimize leakage of oil and gas development from federal to non-federal lands, DOI could institute a royalty rate that incorporates a climate fee.¹⁷

Alternatively, DOI could assess a climate fee as compensatory mitigation.¹⁸ FLPMA, MLA, and NEPA provide ample authority.

FLPMA requires DOI to manage public lands for “multiple use” and “sustained yield”; receive “fair market value” for using public lands; avoid “unnecessary or undue degradation of the lands”; and “protect the quality of the scientific, scenic, historical, ecological, environmental, air and atmospheric, water resource, and archeological values.”¹⁹ These clear and expansive conservation directives require the agency to mitigate climate impacts and confer substantial discretion in how to do so.²⁰

The MLA endows DOI with broad discretion to determine generally which, and how much, public land to lease for mineral extraction.²¹ To address climate impacts, DOI may require full mitigation of GHG emissions and associated climate impacts via lease stipulations and

¹³ Prest, 2021, available at: <https://www.rff.org/publications/working-papers/supply-side-reforms-oil-and-gas-production-federal-lands/>.

¹⁴ *Id.* at 3-5.

¹⁵ See 30 U.S.C. § 226(b)(1)(A); 30 U.S.C. § 352 (applying to leases on acquired land).

¹⁶ 43 C.F.R. § 3103.3-1.

¹⁷ See, e.g., Michael Burger, *Mitigation-Based Rationale for Incorporating a Climate Change Impacts Fee into the Federal Coal Leasing Program* 4, Sabin Center for Climate Change Law, Columbia Law School (Sept. 2016) [hereinafter Burger 2016]; see also Prest 2021.

¹⁸ See, e.g., Michael Burger, *A Carbon Fee as Mitigation for Fossil Fuel Extraction on Federal Lands*, 42 Colum. J. Envtl. 295, 302 (2017) [hereinafter Burger 2017].

¹⁹ 43 U.S.C. §§ 1701, 1732(a) & (b).

²⁰ See Burger 2017 at 318.

²¹ See 30 U.S.C. § 226(a); see, e.g., *W. Energy All. v. Salazar*, 709 F.3d 1040, 1044 (10th Cir. 2013).

conditions of approval designed “to minimize adverse impacts to other resource values.”²² DOI also has discretion to undertake leasing in the “public interest,” which includes consideration and mitigation of climate impacts.²³

NEPA provides further support of DOI’s use of compensatory mitigation. In the context of an agency issuing a finding of no significant impact under an environmental assessment, courts have repeatedly held that the agency can require mitigation measures that reduce impacts below significant levels.²⁴ Environmental impact statements must include a “reasonably complete” discussion of mitigation.²⁵ Though NEPA alone does not mandate that DOI institute mitigation, it does “impose a duty to identify, assess, and disclose mitigation measures.”²⁶ DOI’s statutory and regulatory regime thus offers sufficient authority to impose a climate fee on new and renewed oil and gas leases as compensatory mitigation.

To address the urgent need to quickly ramp down and ultimately eliminate GHG emissions, DOI must also reduce emissions from existing leases. Incorporating a climate fee at the APD stage offers an important tool for doing so. DOI could utilize compensatory mitigation in a similar way to the use of such mitigation under Section 404 of the Clean Water Act.²⁷ Under Section 404, permittees must provide compensatory mitigation to offset unavoidable adverse impacts when discharging dredged or fill materials into waters of the United States.²⁸ The Section 404 regulations lay out three mechanisms for providing compensatory mitigation: in-lieu fee programs; mitigation banks; and permittee-responsible measures.²⁹ DOI could promulgate regulations that utilize analogous tools for compensatory mitigation efforts in oil and gas permitting processes. In fact, DOI previously recognized these tools as options for compensatory mitigation measures during the Obama Administration.³⁰

In applying the Section 404 compensatory mitigation mechanisms, DOI could tie regulations into existing oil and gas permitting processes. Under Section 404, the compensatory mitigation mechanisms are built into water discharge permits. Similarly, DOI could reform permitting processes associated with oil and gas leasing at the APD stage to include compensatory mitigation and mechanisms similar to those used under Section 404. Such regulations would align with existing FLPMA, MLA, and NEPA mandates.³¹

²² 43 C.F.R. §§ 3101.1-2 & 3101.1-3; see 30 U.S.C. § 226(g); see also BLM Form 3100-11 at 3 (showing BLM’s standard lease form, which requires lessees to “conduct operations in a manner that minimizes adverse impacts to land, air, and water, to cultural, biological, visual, and other resources, and to other lands uses or users”).

²³ See 30 U.S.C. § 192.

²⁴ See, e.g., *Cabinet Mountains Wilderness/Scotchman's Peak Grizzly Bears v. Peterson Spiller v. White*, 352 F.3d 235, 241 (5th Cir. 2003); *Greenpeace Action v. Franklin*, 14 F.3d 1324, 1328 n.4 (9th Cir. 1992).

²⁵ *Robertson v. Methow Valley Citizens Council*, 490 U.S. 332, 352 (1989) (“[O]mission of a reasonably complete discussion of possible mitigation measures would undermine the ‘action-forcing’ function of NEPA.”); see 42 U.S.C. §§ 4331(b), 4332(2)(C) & (E).

²⁶ Burger 2017 at 325.

²⁷ See Burger 2016 at 42.

²⁸ See 33 U.S.C. § 1344(b)(1) (requiring the EPA Administrator and the Chief of Engineers to develop guidelines for disposal permits); 40 C.F.R. § 230.91.

²⁹ 40 C.F.R. § 230.93(b).

³⁰ See Department of the Interior, Departmental Manual, Landscape-Scale Mitigation Policy 600 DM 6 (Oct. 2015), §§ 6.6(C)(3)(b), 6.7, <https://www.doi.gov/sites/doi.gov/files/uploads/TRS%20and%20Chapter%20FINAL.pdf>.

³¹ See 43 U.S.C. §§ 1701, 1732(a) & (b); 30 U.S.C. §§ 119, 226.

The agency's standard lease form terms would allow DOI the needed authority to impose a climate fee on existing leases through regulation. The lessees' rights are subject to "regulations . . . hereafter promulgated when not inconsistent with lease rights granted or specific provisions of this lease."³² Lessees must "take all reasonable measures deemed necessary by lessor to" minimize impacts to land, air, water, and other resources.³³ The lessee is also required to "prevent unnecessary damage to, loss of, or waste of leased resources."³⁴ Consistent with these lease terms, new regulations could require reasonable compensatory mitigation through a climate fee on existing leases.

RECOMMENDATIONS:

→ Incorporate a climate pollution price into royalty rates or implement through a climate fee as compensatory mitigation. DOI can increase royalty rates upon lease issuance or renewal, by instruction memorandum, or through a rulemaking. Alternatively, DOI can place a climate fee on new or renewed leases upon issuance but should strongly consider a rulemaking that encompasses both new and renewed leases and new wells on existing leases at the APD stage.

c. DOI should use the social cost of greenhouse gases to evaluate impacts from oil and gas planning, leasing, and development and to inform decisions for the oil and gas program.

DOI should integrate the social cost of greenhouse gases into all its oil and gas policies. The Interagency Working Group (IWG) on Social Cost of Greenhouse Gases has developed monetary estimates for the value to society of changes in carbon, methane, and nitrous oxide emissions resulting from regulations and agency actions.³⁵ The IWG comprised multiple federal agencies and White House economic and scientific experts, and the estimates were developed with the best available science and methodologies.

The IWG's social cost of carbon (SCC) estimates were developed using peer-reviewed integrated assessment models (AIM) in 2010 and updated in 2013.³⁶ In August 2016, IWG also published estimates of the social cost of methane (SCM) and nitrous oxide (SCN). While the IWG updates the social cost of greenhouse gases in line with the requirements in E.O. 13990, interim estimates may actually underestimate intergenerational climate costs because they need to be updated

³² BLM Form 3100-11.

³³ *Id.* § 6.

³⁴ *Id.* § 4.

³⁵ Interagency Working Group on Social Cost of Greenhouse Gases, United States Government, *Technical Support Document: Technical Update of the Social Cost of Carbon for Regulatory Impact Analysis under Executive Order 12866* (2016). Available at: https://www.epa.gov/sites/production/files/2016-12/documents/sc_co2_tsd_august_2016.pdf. [hereinafter, IWG 2016 Report].

³⁶ Interagency Working Group on Social Cost of Greenhouse Gases, United States Government, *Technical Support Document: Technical Update on the Social Cost of Carbon for Regulatory Impact Analysis - Under Executive Order 12866* (2013); Interagency Working Group on Social Cost of Greenhouse Gases, United States Government, *Technical Support Document: Technical Update on the Social Cost of Carbon for Regulatory Impact Analysis - Under Executive Order 12866* (2010).

based on the latest peer reviewed science and economics.³⁷ These interim estimates remain the best for agencies to use in evaluating agency actions until the IWG releases revised final estimates in January 2022.³⁸

According to one analysis, “[t]he SCC estimates the benefit to be achieved, expressed in monetary value, by avoiding the damage caused by each additional metric ton (tonne) of carbon dioxide (CO₂) [released] into the atmosphere.”³⁹ The SCC estimates the dollar value of negative economic impacts and recognizes that every marginal ton of CO₂ carries with it a social cost of carbon.⁴⁰ For the SCC, the current IWG interim estimates that each additional ton of carbon oxide emitted in 2020 will cost between \$14 and \$152 with a central value of \$51 per metric ton of CO₂ (measured in 2020 dollars).⁴¹ Several courts have rejected agency refusals to use the SCC as a means of evaluating the impact of GHG emissions that result from agency action.⁴²

Similar to the SCC, the SCM is a valuable tool that DOI should use to analyze and disclose the impacts of lifecycle methane pollution from prospective oil and gas leasing on society. The IWG estimated that each additional ton of methane emitted in 2020 will cost between \$670 and \$3,900 dollars, with a central value of \$1,500 per metric ton of CH₄ (measured in 2020 dollars).⁴³ For the SCN, the current IWG interim estimates that each additional ton of nitrous oxide emitted in 2020 will cost between \$5,800 and \$4,800 with a central value of \$18,000 per metric ton of N₂O.⁴⁴

RECOMMENDATIONS:

³⁷ Interagency Working Group on Social Cost of Greenhouse Gases, *Technical Support Document: Social Cost of Carbon, Methane, and Nitrous Oxide, Interim Estimates under Executive Order 13990* (2021), available at: https://www.whitehouse.gov/wp-content/uploads/2021/02/TechnicalSupportDocument_SocialCostofCarbonMethaneNitrousOxide.pdf [hereinafter, IWG 2021 Report].

³⁸ The complete set of annual, unrounded interim estimates for 2020-2050 for all three SC-GHGs in 2020 dollars are available on OMB website. Available at: <https://www.whitehouse.gov/omb/information-regulatoryaffairs/regulatory-matters/#scghgs>.

³⁹ Ruth Greenspan Bell & Dianne Callan, *More than Meets the Eye: The Social Cost of Carbon in U.S. Climate Policy, in Plain English*, Env'tl. Law Inst. 1 (2011). Available at: http://pdf.wri.org/more_than_meets_the_eye_social_cost_of_carbon.pdf.

⁴⁰ Richard Revesz et al., *Global Warming: Improve Economic Models of Climate Change*, 508 *Nature* 173, 173-175 (2014).

⁴¹ IWG 2021 Report.

⁴² See, e.g., *Sierra Club v. FERC*, 867 F.3d 1357, 1375 (D.C. Cir. 2017); *Montana Env't Info. Ctr. v. U.S. Office of Surface Mining*, 274 F. Supp. 3d 1074, 1094-99 (D. Mont. 2017) (rejecting agency's failure to incorporate the federal SCC estimates into its cost-benefit analysis of a proposed mine expansion); *Zero Zone, Inc. v. U.S. Dep't of Energy*, 832 F.3d 654, 679 (7th Cir. 2016) (holding estimates of the SCC used to date by agencies were reasonable); *High Country Conservation Advocs. V. U.S. Forest Serv.*, 52 F. Supp. 3d 1174, 1190-93 (D. Colo. 2014) (holding the SCC was an available tool to quantify the significance of GHG impacts, and it was “arbitrary and capricious to quantify the benefits of the lease modifications and then explain that a similar analysis of the costs was impossible”) (emphasis in original). An agency may not assert that the social cost of fossil fuel development is zero: “by deciding not to quantify the costs at all, the agencies effectively zeroed out the costs in its quantitative analysis.” *High Country Conservation Advocates*, 52 F. Supp. 3d at 1192; see also *Ctr. for Biological Diversity v. Nat'l Highway Traffic Safety Admin.*, 538 F.3d 1172, 1200 (9th Cir. 2008) (finding that while there is a range potential social cost figures, “the value of carbon emissions reduction is certainly not zero”).

⁴³ IWG 2021 Report.

⁴⁴ *Id.*

- DOI should use the social cost of greenhouse gases to evaluate impacts from oil and gas planning, leasing, and development and to inform decisions for the oil and gas program, including establishing a climate fee, as described in Section II(b) of these comments.
- DOI should integrate the social cost of greenhouse gases into all its oil and gas policies.

d. DOI must ensure transparency with data related to oil and gas operations.

Sound management of GHG emissions requires clear, accurate, and transparent measurement. The U.S. government is one of the largest energy asset managers in the world. Yet, it has done little to inform its shareholders—American taxpayers—about the federal energy program and its associated climate related risks. Currently, there is no central database available that provides a comprehensive accounting of the cumulative GHG greenhouse emissions from federal public lands and waters.

As noted in Section II(a) above, DOI should track and publish data related to GHG emissions from fossil fuel development on our public lands and waters. The Department should ensure this data is available and easily accessible online so that the public can monitor and utilize this information. This data is essential not only for tracking purposes toward emissions goals, but also for addressing environmental justice and helping state and local leaders make informed decisions about their communities' energy uses and needs. DOI should build off the U.S. Geological Survey's 2018 report analyzing GHG emissions stemming from fossil fuels extracted from public lands.⁴⁵ This recommended approach is consistent with the efforts of the Extractive Industries Transparency Initiative.⁴⁶

RECOMMENDATIONS:

- DOI should create and maintain through USGS, or work with another agency to create and maintain, a publicly accessible central database that tracks oil and gas leasing, permitting, and production and provides a comprehensive accounting of the GHG emissions associated with fossil fuel development on public lands and waters.
- Support passage of the *Transparency in Energy Production Act (TEPA)* (H.R. 1506) sponsored by Representative Lowenthal. This legislation directs companies seeking or holding a lease to drill on public lands to track and report the amount of energy production and resulting emissions from federal lands and waters.

e. Reinstate DOI and BLM mitigation policies and establish a robust mitigation program that requires no net loss of conservation value and full mitigation of climate impacts.

DOI and BLM are subject to a broad range of authorities supporting mitigation measures to avoid, minimize, and offset unavoidable impacts.⁴⁷ As part of the Comprehensive Review, DOI

⁴⁵ U.S. Geological Survey, *Federal Lands Greenhouse Gas Emissions and Sequestration in the United States: Estimates for 2005-2014* (2018), available at: <https://pubs.usgs.gov/sir/2018/5131/sir20185131.pdf>. This report accounts for upstream and downstream emissions.

⁴⁶ <https://eti.org/document/transparency-in-transition-climate-change-energy-transition-eti>.

⁴⁷ See 43 C.F.R. §§ 1701, 1732(b). BLM has authority and obligation to ensure all operations protect natural resources and environmental quality, including by imposing mitigation requirements under NEPA, the Endangered

and BLM should reinstate and improve several mitigation policies to ensure no net loss of conservation value, fully address impacts to cultural resources, recreation, and other resources and values on public lands, and require full mitigation for the climate impacts of the oil and gas program. These policies include but are not limited to Secretarial Order 3330 – Improving Mitigation Policies and Practices of the Department of the Interior; DOI Manual 600 DM 6 – Landscape-Scale Mitigation Policy; BLM Mitigation Handbook H-1974-1; and Solicitor’s Opinion M-37039. DOI and BLM should implement these policies at the land use planning, leasing, and permitting phases.

The mitigation hierarchy aims to minimize environmental harms associated with agency actions. BLM must first seek to avoid impacts; then minimize impacts (e.g., through project modifications, permit conditions, interim and final reclamation, etc.); and, generally, only if those approaches are insufficient to fully mitigate the impacts will BLM seek to require compensation for some or all of the remaining impacts (i.e., residual effects). In addition to using the mitigation hierarchy to address impacts to conservation values, cultural resources, recreation, and other resources and values on public lands, BLM should apply the mitigation hierarchy to fully address the climate impacts of the oil and gas program, including planning, leasing, and development.⁴⁸

RECOMMENDATIONS:

- Reissue and improve Secretarial Order 3330 – Improving Mitigation Policies and Practices of the Department of the Interior; DOI Manual 600 DM 6 – Landscape-Scale Mitigation Policy; BLM Mitigation Handbook H-1974-1; and Solicitor’s Opinion M-37039. BLM should incorporate these mitigation policies into oil and gas decision-making in land use planning, leasing, and permitting to ensure no net loss of conservation value, and fully address impacts to cultural resources, recreation, and other resources and values on public lands.

f. DOI must utilize land use planning decisions to make progress towards climate goals.

DOI has the authority to adopt a programmatic as well as a localized approach to phase out and ultimately eliminate fossil fuel development on federal lands and waters.⁴⁹ Resource Management Plans (RMPs) are a critical lever the federal government should use to ensure climate smart decision-making and progress towards overarching fossil fuel emission goals.

Agency field offices are required by NEPA to develop and evaluate a set of alternatives that reflect planning priorities, as well as to “revise land use plans based on ‘new data’ and ‘a change

Species Act, the National Historic Preservation Act, the Paleontological Resources Preservation Act, and the National Landscape Conservation System Act.

⁴⁸ Gibbs Pleune, J., J.C. Ruple, and N. Wolff Culver, *A Roadmap to Net Zero Emissions for Fossil Fuel Development on Public Lands*, ELR 10734 (2020), available at: https://www.eli.org/sites/default/files/docs/elr_pdf/50.10734.pdf.

⁴⁹ 43 U.S.C. §§1701-1785; 42 U.S.C. §§ 4321-4370h; 30 U.S.C. §§ 226(a), (b), (m); 43 C.F.R. § 3101.1-2 (2019); see also Gibbs Pleune, J., J.C. Ruple, and N. Wolff Culver, *A Roadmap to Net Zero Emissions for Fossil Fuel Development on Public Lands*, ELR 10734 (2020), available at: https://www.eli.org/sites/default/files/docs/elr_pdf/50.10734.pdf.

in circumstances.”⁵⁰ Throughout this process, they must consider all reasonable alternatives, including a range of options for minimizing, reducing, and offsetting climate change impacts and GHG emissions.⁵¹

To ensure alignment with the Biden Administration’s climate commitments, BLM should immediately require a no new leasing alternative as well as a net zero fossil fuel emissions alternative in all relevant land use planning processes and revisions. Additionally, BLM should develop and apply both nationwide and state-specific screening criteria to guide the selection of lands that may be offered for leasing. To assist in implementing this analysis, we have developed a framework to explain how achieving net zero fossil fuel emissions in any given field office is possible. This framework is attached as Appendix D1 and is referred to as the “net zero framework.” Appendix D2 presents a hypothetical application of the framework.

The net zero framework requires all land use planning processes with potential for fossil fuel development to follow a hierarchy of avoiding, minimizing, and offsetting emissions to ensure alignment with climate goals. BLM must immediately prioritize avoiding emissions by rapidly phasing down and ultimately eliminating new leasing and development. BLM should establish robust screening criteria throughout the RMP process to ensure all decisions adequately apply the multiple use mandate, including prioritizing the protection of important conservation values and cultural resources from leasing and development. These decisions must be consistent with efforts to conserve at least 30 percent of U.S. lands and waters by 2030 and to ensure a just and equitable transition for affected communities.

As federal fossil energy development is rapidly ramped down, land management decisions must prioritize minimizing fossil fuel emissions from any continuing operations as much as possible. Minimization tactics include implementing a phased approach to leasing, prioritizing development with minimal impact to natural systems, implementing technology-based measures to capture leaking emissions, and enabling the option for additional restrictions on fossil fuel development over time. It is crucial for BLM to require the full cost of emissions via the social cost of emissions to be incorporated into the fees tied to production, phased leasing and development, stipulations requiring methane control, and other measures.

After implementing all possible minimization tactics, BLM offices should consider measures to counteract the remaining emissions through increasing terrestrial carbon sequestration and maintaining existing carbon stocks. The remaining federal fossil fuel emissions should be addressed through a combination of offsets, such as emissions avoided due to additional generating capacity from responsible renewable energy development on federal public lands and waters, and, as a last resort, purchasing accredited carbon offsets.

⁵⁰*Id.*, citing 43 C.F.R. 1610.4-9 (2019), *id.* 1610.5-6; *id.* 1610.5-5.

⁵¹*See, e.g., Wilderness Workshop v. Bureau of Land Mgmt.*, 342 F. Supp. 3d 1145, 1156 (D. Colo. 2018) (holding BLM failed to take a hard look at the severity and impacts of GHG pollution, specifically the indirect impacts of oil and gas combustion, in an RMP revision); *W. Org. Of Res. Councils v. Bureau of Land Mgmt.*, 2018 U.S. Dist. LEXIS 49635 at *53-54 (D. Mont., Mar. 26, 2018) (holding BLM needed to consider climate change impacts relative to the amount of coal available for leasing, consider the downstream combustion of coal, oil, and gas open to development, and consider a 20-year global warming potential rather than 100-year).

The net zero framework provides a mechanism for BLM to achieve net zero GHG emissions from fossil fuel development in any given planning area. This framework and approach may be scaled up to a regional or district level and is expected to evolve as national and programmatic strategies are developed and implemented. BLM should also work closely with relevant state and Tribal governments to ensure alignment and consistency with other jurisdictions' climate goals. The agency has a tremendous opportunity to ensure alignment with climate commitments moving forward as several relevant planning processes are not yet finalized⁵², are subject to ongoing litigation⁵³, or are on remand for consideration of climate impacts.⁵⁴

RECOMMENDATIONS:

- When drafting or revising land management decisions involving fossil fuel development, BLM should prioritize (1) avoiding new leasing and development and associated emissions as much as possible, and protecting natural and cultural resources from leasing and development, (2) minimizing emissions that occur, and (3) offsetting remaining emissions via terrestrial carbon sequestration, maintenance of existing carbon stocks, and increasing responsible renewable energy.
- To ensure progress towards zero emissions, fossil fuel-free public lands by 2050, all relevant NEPA processes should require a no new leasing alternative as well as an alternative that achieves net zero fossil fuel emissions by 2030 within the relevant field office, using the attached net zero framework as a model.⁵⁵ The framework should be implemented to be consistent with efforts to conserve at least 30 percent of U.S. lands and waters by 2030 and to ensure a just and equitable transition for affected communities.
- Support Senator Bennet's *Public Engagement Opportunity on Public Lands Act of 2020* (S. 4641). This bill would prohibit the leasing of any parcel which has not been specifically identified or evaluated in the NEPA documentation for a particular lease sale.

g. Promote healthy communities and economies, focusing on environmental justice and a just and equitable transition away from fossil fuels.

The federal fossil fuels program has disproportionately impacted both those communities closest to and most dependent upon oil and gas development and communities experiencing the brunt of fossil fuel pollution. It is time for a just and equitable transition.

For communities nearest fossil fuel development or dependent upon its revenues, the industry may provide not only jobs, but also a way of life and pride in the work. To be successful, a transition to a net zero and, ultimately, emissions free public lands future, must be addressed holistically and with great care.

⁵² Farmington Mancos-Gallop RMP Amendment (NM), Carlsbad RMP (NM), Eastern Colorado RMP (CO), and Rock Springs RMP (WY) are all at the Draft RMP stage.

⁵³ See *Western Slope Conservation Ctr. v. Bureau of Land Mgmt.*, 1:20-cv-02787 (D. Colo. 2020) (challenging BLM's RMP for the Uncompahgre Field Office in Colorado based on lack of analysis for climate change impacts, amongst other claims).

⁵⁴ Grand Junction Resource Management Plan (CO) is on voluntary remand. See *Ctr. for Biological Diversity v. U.S. Bureau of Land Mgmt.*, 1:19-cv-02869 (D. Colo. 2019). Colorado River Valley Field Office RMP (CO) has been remanded by the court for consideration of climate impacts. See *Wilderness Workshop v. Bureau of Land Mgmt.*, 342 F. Supp. 3d 1145 (D. Colo. 2018).

⁵⁵ See Appendix D1.

Since 1920, when the MLA was passed, states have been incentivized to produce increasing amounts of fossil fuels to provide income. In many rural areas—where the vast majority of oil and gas revenues are generated—communities often do not properly invest in the workforce and economic diversification when the incentive system is rooted in the 1920s. We must create strong incentives to build a diversified economy that works for everyone. This includes supporting uses of our public lands that can both offer diverse jobs—such as in clean, renewable energy, outdoor recreation, restoration, and no- or low-carbon intensive industries—and provide important quality-of-life opportunities for people drawn to those areas by other employment.

DOI must take into deep consideration that some states are profoundly reliant on fossil fuel production to support government essential services. Legislative solutions are necessary to help address the incentives that facilitate this reliance. It is critical for DOI to be aware of this interaction between oil and gas policy, state budgetary policy, and local economies, given that these pressures may potentially impede overarching climate goals. DOI should support legislative efforts that provide certainty, incentives, and opportunities for states and communities to invest in their own futures, free from the boom-and-bust cycles of fossil fuel markets. As highlighted throughout EO 14008, it is essential to foster economic revitalization of and investment in these communities, ensure the creation of good jobs that provide a choice to join a union, and secure the benefits that have been earned by fossil fuel workers.

DOI must also center environmental justice in transitioning public lands to being part of the climate solution. Frontline and fenceline communities and workers experience the worst health impacts from fossil fuel development that occurs in or near where they live. DOI must acknowledge and address these historical and ongoing inequities. Every NEPA review should thoroughly assess the adverse impacts of fossil fuel development on environmental justice communities and seek their input and engagement.

As suggested during DOI's oil and gas comprehensive review forum on March 25, 2021, we urge DOI to consider forming an advisory committee under the Federal Advisory Committee Act (FACA) comprised of diverse stakeholders and affected communities. DOI should discuss what should be the contours of this committee and its charter with environmental justice community members themselves. But, at a minimum, DOI could consult this committee in relevant land use planning processes to root out prospective injustices in resource use and allocation before they get embedded in an RMP, whether wittingly or not. This committee could also receive special solicitation in NEPA review processes involving fossil fuel development on federal public lands. Such a committee aligns with the Administration's priorities of developing a strategy to address current and historic environmental injustice by consulting with local environmental justice leaders and developing clear performance metrics to ensure accountability,⁵⁶ along with seeking to provide timely remedies for systemic environmental violations and contaminations, and injury to natural resources, and ensure comprehensive attention to environmental justice.⁵⁷

RECOMMENDATIONS:

- Support legislative solutions that provide support for state that have budgetary reliance on federal fossil fuel production.

⁵⁶ Exec. Order 14,008, 86 Fed. Reg. 7619, 7629–30 (Feb. 1, 2021).

⁵⁷ *Id.* at 7631.

- Support legislative solutions and invest in programs that create new jobs in fossil fuel dependent places and ensure robust attention to: restoring natural resources and wildlife habitat, parks creation, and maintenance; incentivizing sustainable recreation economies; expanding responsible access to nature; and increasing resilience in communities prone to natural disasters and pollution.
- Assemble an advisory committee under FACA, representative of diverse, affected stakeholders, including members of frontline and fenceline communities, to consult broadly on land use planning and during all stages of oil and gas development.
- Work with the BLM Foundation to create public-private partnerships to support local and regional economic planning and establish an orphan well cleanup fund.

III. LEASING AND PERMITTING REFORMS.

As described in Section II(a) of these comments, DOI should establish an emissions management framework and use it and other mechanisms to achieve net zero GHG emissions from fossil fuel development on federal lands and waters by 2030 and no fossil fuel development on federal lands and waters by 2050. This framework must be implemented in a manner consistent with efforts to conserve at least 30 percent of U.S. lands and waters by 2030 and to ensure a just and equitable transition for affected communities. DOI must exercise its authority to rapidly ramp down and ultimately eliminate leasing and development. To the extent that any additional leasing does occur, serious reforms are needed across the leasing program.

- a. DOI should establish an overarching mandate for the oil and gas program recognizing that leasing is discretionary and allowed only to the extent consistent with multiple use, sustained yield, the emissions management framework, and protection of important conservation values, cultural resources, and other important resources and values.**

DOI and BLM have traditionally administered the federal onshore oil and gas program as if leasing and development were required. However, federal courts have consistently ruled otherwise, holding that oil and gas development is not the dominant use of public lands and must be weighed against other valid uses.⁵⁸ As provided in FLPMA, multiple use management does not require the balance of uses on every tract of public land, but rather a combination of resource conservation and uses to “best meet the present and future needs of the American people.”⁵⁹ The notion that resource development must be balanced with conservation management is explicit in the definition of “multiple use”:

[T]he management of the public lands and their various resource values so that they are utilized in the combination that will best meet the present and future needs of the American people; . . . *the use of some land for less than all of the resources*; a combination of balanced and diverse resource uses that takes into account the long term needs of future generations 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*; and

⁵⁸ See, e.g., *New Mexico ex rel. Richardson v. BLM*, 565 F.3d 683, 710 (10th Cir. 2009).

⁵⁹ 43 U.S.C. § 1701, et seq.,

harmonious and coordinated management of the various resources without permanent impairment of the productivity of the lands and the quality of the environment with consideration being given to the relative values of the resources and not necessarily to the combination of uses that will give the greatest economic return or the greatest unit output.⁶⁰

Managing and planning for multiple use and sustained yield necessarily means that there must be a significant portion of public lands devoted to conservation in order to sustain public resources. Sustained yield does not support a focus on outputs from resource extraction or industrial uses. FLPMA specifically directs BLM to maintain in perpetuity “a high-level annual or regular periodic output of the various renewable resources of the public lands consistent with multiple use.”⁶¹ Therefore, sustained yield requires BLM to sustain high-level yields of natural landscapes, scenic resources, clean air and water, wildlife, night skies, soundscapes, and opportunities for solitude, quiet-use, and primitive types of recreation.⁶²

RECOMMENDATIONS:

- DOI should establish an overarching mandate for the oil and gas program recognizing that leasing is discretionary and allowed only to the extent consistent with multiple use, sustained yield, the emissions management framework (detailed in Section II(a) of these comments), and protection of important conservation values, cultural resources, and other important resources and values. BLM should announce the overarching mandate as soon as possible as a clarification under existing authorities, consider seeking a Solicitor’s Opinion rightfully interpreting FLPMA, MLA, and NEPA to require this mandate, and codifying the mandate through rulemaking.
- Support Senator Bennet’s *Public Engagement Opportunity on Public Lands Act of 2020* (S. 4641), and Representative Levin’s *Restoring Community Input and Public Protections in Oil and Gas Leasing Act of 2021* (H.R. 1503). These bills include provisions that allot a reasonable time for public and stakeholder input, require shorter lease terms to ensure the leasing agent is working with the most current information, and ensure that other uses are considered for the land in question.

b. Update the lease sale screening and nominations process.

BLM currently does not routinely or systematically screen proposed leases using criteria that are designed to eliminate conflicts with other uses or resources and to maximize taxpayer returns. Instead, once nominated, BLM looks primarily at whether lands are “eligible” and “available” for leasing.⁶³ If so, BLM typically includes those lands in lease sale offerings. Current agency

⁶⁰ 43 U.S.C. § 1702(c) (emphasis added).

⁶¹ *Id.* at § 1702(h).

⁶² Courts have confirmed agency’s discretion and obligation to protecting environmental values. *See New Mexico ex rel. Richardson v. Bureau of Land Mgmt.*, 565 F.3d 683, 710 (10th Cir. 2009) (court rejected BLM’s argument that its NEPA analysis did not need to include an alternative that closed Otero Mesa to oil and gas development because doing so would violate its multiple use mandate, stating “[d]evelopment is a *possible* use, which BLM must weigh against other possible uses – including conservation to protect environmental values.”)

⁶³ *See* 30 U.S.C. § 226(b)(1)(A).

practice continually leaves the vast majority of land available for leasing and development.⁶⁴ Instead, BLM should enact a vigorous screening process at the land use planning stage, as explained in our net zero framework in Section II(f) above.

While deferrals at the lease sale stage can and do occur, they normally stem from political pressure rather than a decision-making framework that looks at whether leasing nominated lands is appropriate and consistent with conservation, fair market value, and climate change goals. BLM’s “informal” lease nomination process, which allows any member of the public to anonymously nominate any parcel of public land for leasing, is wasteful, encourages speculation, and shields the identities of bad actors from public scrutiny.⁶⁵

To address these problems, BLM should establish robust screening criteria for nominated or proposed leases to ensure they align with RMPs and the multiple use mandate, ensure protection of important conservation values and cultural resources from leasing and development, and align with climate goals and an established emissions management framework consistent with the latest climate science.

These screens should be grounded in obligations under FLPMA⁶⁶, MLA⁶⁷, NEPA⁶⁸ and NHPA⁶⁹. The screens should also address “option value” in determining whether, when and how much to lease. As discussed in a recent New York University School of Law Institute for Policy Integrity report, “[w]hile private companies routinely account for option value, timing their purchasing and development decisions to be privately optimal, BLM fails to account for option value in its land use planning and lease sale processes.”⁷⁰

RECOMMENDATIONS:

- Amend 43 C.F.R. § 3120.1-1 (lands available to competitive leasing) to require nationwide and state-specific leasing screens, which should be reevaluated and adjusted, as necessary, on an ongoing basis (e.g., annually). The screens should ensure that leases align with resource management plans and the multiple use mandate; ensure protection of important conservation values, cultural resources, and other important resources and values from leasing and development; and align with climate goals and an established emissions management framework consistent with the latest climate science.

⁶⁴ [include cite to a few land use plans that had +90% of land available for development]; see also The Wilderness Society’s online article, *Open for business (and not much else): analysis shows oil and gas leasing out of whack on BLM lands*, Available at: <https://www.wilderness.org/articles/article/open-business-and-not-much-else-analysis-shows-oil-and-gas-leasing-out-whack-blm-lands>.

⁶⁵ BLM IM No. 2014-004, *Oil and Gas Informal Expressions of Interest* (2013), available at: <https://www.blm.gov/policy/im-2014-004>.

⁶⁶ 43 U.S.C. § 1732(b).

⁶⁷ 30 USC § 187.

⁶⁸ 42 U.S.C. §§ 4321-4370(h).

⁶⁹ 54 U.S.C. § 300101 *et seq.*

⁷⁰ New York University School of Law; Institute for Policy Integrity, *Look Before You Lease: Reducing Fossil Fuel Dominance on Public Lands by Accounting for Option Value*, 4 (2020); See also Jayni Foley Hein, *Harmonizing Preservation and Production* (2015) (“Option value derives from the ability to delay decisions until later, when more information is available. . . . In the leasing context, the value associated with the option to delay can be large, especially when there is a high degree of uncertainty about resource price, extraction costs, and/or the social and environmental costs of drilling.”), available at: https://policyintegrity.org/files/publications/DOI_LeasingReport.pdf.

- Revoke and replace BLM IM 2014-004 (Oil and Gas Informal Expressions of Interest) with a new policy that requires companies and individuals who nominate public lands for leasing to identify themselves, as well as any parties who they represent.
- Support passage of Sen. Rosen & Grassley’s bill *The Fair Return for Public Lands Act* (S. 624) to impose a lease nomination fee and Rep. Levin’s *Restoring Community Input and Public Protections in Oil and Gas Leasing Act of 2021* (H.R. 1503), and Rep. Porters *Ending Taxpayer Welfare for Oil and Gas Companies Act of 2021* (H.R. 1517) to end anonymous lease nominations and impose a lease nomination fee.

c. Limit the frequency and scope of lease sales.

As detailed in a recent law review article, there is “ample legal authority to limit or call a halt to fossil fuel leasing on America’s public lands” and BLM could do so by declaring lands to be “ineligible” for leasing.⁷¹ In other words, leasing on federal lands is discretionary. Leasing should be rapidly ramped down to achieve net zero GHG emissions from fossil fuels on federal lands and waters by 2030 and no fossil fuel development on federal lands and waters by 2050. These efforts must be consistent with efforts to conserve at least 30 percent of U.S. lands and waters by 2030 and to ensure a just and equitable transition for affected communities.

At a minimum, BLM should immediately and substantially limit the frequency and scope of lease sales to achieve multiple use and sustained yield goals and objectives, limit government waste, and save taxpayer resources.

The MLA states that public lands “may be leased” and authorizes—but does not require—BLM to hold quarterly lease sales in every state where lands are “available” and “eligible” for leasing.⁷² Yet, over the years, BLM has administered the leasing program as if quarterly lease sales are mandatory.⁷³

As a consequence, BLM routinely holds lease sales in spite of unresolved conflicts with fish, wildlife, recreation, and other multiple use values and suboptimal market conditions. The conflict and waste that ensue are well-documented. For example, during the Trump Administration, federal courts set aside more than one million acres of leases because of improper consideration of air quality, wildlife impacts, and other impacts; over half of BLM’s lease sales generated less than \$1 million for federal and state taxpayers.⁷⁴

⁷¹ John D. Leshy, *Interior’s Authority to Curb Fossil Fuels Leasing*, 49 *Env’tl Law Reporter* 10631 (July 2019), available at: <https://elr.info/news-analysis/49/10631/interiors-authority-curb-fossil-fuel-leasing>.

⁷² 30 U.S.C. § 226(a), (b)(1)(A).

⁷³ See, e.g., 2020 Preliminary Leasing EA (“Offering quarterly oil and gas lease sales is mandated to the BLM. . . .”) available at:

https://eplanning.blm.gov/public_projects/2000032/200383114/20023959/250030163/NWD_EA_Dec2020_Comment.pdf.

⁷⁴ Jesse Prentice-Dunn, *The dismal legacy of Trump’s ‘Energy Dominance’ agenda*, Westwise via Medium (Jan. 25, 2021). Available at: <https://medium.com/westwise/the-dismal-legacy-of-trumps-energy-dominance-agenda-872eea6a2560>.

The U.S. Supreme Court and other federal courts have consistently recognized that the Secretary of the Interior’s authority over the timing and location of leasing—and whether to offer leases at all—is extremely broad.⁷⁵

RECOMMENDATIONS:⁷⁶

- BLM should amend 43 C.F.R. Part 3120 (Competitive Leases) to clearly establish that leasing is discretionary, and sales will be held only when consistent with multiple use, sustained yield, the emissions management framework (detailed in Section II(a) of these comments), and protection of important conservation values, cultural resources, and other important resources and values.
- BLM should also consider seeking a Solicitor’s Opinion to provide firm grounding for BLM’s authority under the MLA to limit the quantity and scope of lease sales and BLM’s authority to declare lands ineligible and unavailable for leasing.
- Support Senator Bennet’s *Public Engagement Opportunity on Public Lands Act of 2020* (S. 4641), and Representative Levin’s *Restoring Community Input and Public Protections in Oil and Gas Leasing Act of 2021* (H.R. 1503). These bills include provisions that allot a reasonable time for public and stakeholder input, require shorter lease terms to ensure the leasing agent is working with the most current information, and ensure that other uses are considered for the land in question.

d. Significantly constrain noncompetitive leasing and support legislative efforts to abolish the practice.

Noncompetitive leasing is a prime example of government inefficiency that wastes time and taxpayer resources, which could instead go to improving wildlife habitat, trail maintenance, or other resource management needs. Noncompetitive leasing imposes high fiscal, administrative, and opportunity costs when lands are no longer managed to support other fundamental uses, such as conservation or recreation.

Data clearly shows that the noncompetitive leasing system is broken. A Congressional Budget Office report found that, for parcels leased between 1996 and 2003 (all of which have reached the end of their 10-year exploration period), only three percent issued noncompetitively actually entered production.⁷⁷ Between 2009 and 2018, Americans only received \$4 million in revenue from leases through this backdoor process, amounting to just one-tenth of one percent of the

⁷⁵ *Udall v. Tallman*, 380 U.S. 1, 4 (1965); see also *W. Energy Alliance v. Salazar*, 709 F.3d 1040, 1044 (10th Cir. 2013) (“The MLA, as amended by the Reform Act of 1987, continues to vest the Secretary with considerable discretion to determine which lands will be leased.”); *McDonald v. Clark*, 771 F.2d 460, 463 (10th Cir. 1985) (“It is clear that the Secretary has broad discretion in this area. While the statute gives the Secretary the authority to lease government lands under oil and gas leases, this power is discretionary rather than mandatory.”); *Bob Marshall All. v. Hodel*, 852 F.2d 1223, 1230 (9th Cir. 1988) (“We have held that the [MLA] ‘allows the Secretary to lease such lands, but does not require him to do so. . . . The Secretary has discretion to refuse to issue any lease at all on a given tract.’ Thus refusing to issue the Deep Creek [oil and gas] leases . . . would constitute a legitimate exercise of the discretion granted to the Interior Secretary under that statute.”).

⁷⁶ We strongly urge BLM to review and, as needed, revise its oil and gas-related web pages generally, but also specifically regarding any statements of law.

⁷⁷ Congress of the United States, Congressional Budget Office (CBO), *Options for Increasing Federal Income from Crude Oil and Natural Gas on Federal Lands* (April 2016), available at: https://www.cbo.gov/sites/default/files/114th-congress-2015-2016/reports/51421-oil_and_gas_options.pdf.

federal government's total leasing revenue.⁷⁸ More than half of noncompetitive leases sold, covering 1.6 million acres of public land, end up terminated by the BLM within two years—usually for non-payment of rental fees.⁷⁹

RECOMMENDATIONS:

- Amend 43 C.F.R. Subpart 3110 (Noncompetitive Leases) to require a “public interest” determination prior to issuing noncompetitive leases. This determination should inform whether applicants for noncompetitive leases are “responsible” and “qualified” under 30 U.S.C. § 226(c)(1) and should evaluate such factors as the applicant’s development history, capabilities, and plans, and compliance history, including whether the applicant has a history of failing to make rental or other payments on other federal leases.
- Create and maintain a publicly accessible portal for noncompetitive lease offers (pre- and post-sale) and provide the public with at least 30 days to review and comment on noncompetitive lease offers.
- Support passage of *Leasing Market Efficiency Act of 2020* (S. 4223), and *The Restoring Community Input and Public Protections in Oil and Gas Leasing Act* (H.R. 15013) (Rep. Levin) which among other reforms would end noncompetitive leasing.

e. End speculative leasing: require BLM to assess mineral development potential and prohibit leasing of low or no potential lands.

As mentioned above, the current system allows land to be offered for leasing regardless of its development potential or the presence of higher and better uses, like wildlife conservation, outdoor recreation, or watershed protection. This has resulted in millions of acres of public lands with low or no potential being leased for development. Furthermore, this practice generates little income to taxpayers and imposes significant fiscal, administrative, and opportunity costs when public lands are no longer managed to enhance other important uses like conservation and recreation. BLM has the authority and the duty to update its policies regarding leasing on low potential lands.

RECOMMENDATIONS:

- Issue guidance to close low and no potential lands to leasing in land use plans and not to include them in lease sales.
- Amend 43 C.F.R. § 3120.1-1 to prohibit leasing in lands identified in applicable land use plans as having low or no potential for development. To the extent that the applicable land use plan has not identified the development potential of nominated lands, preclude leasing in those lands until that plan is amended and includes this information.
- Support passage of Senator Cortez-Masto’s *End Speculative Oil and Gas Leasing Act* (S. 607), which would end the practice of leasing low potential lands by requiring the BLM to assess all lands’ mineral development potential before offering those lands for lease and prohibiting leasing on any lands found to have low or no development potential.

⁷⁸ Kate Kelly, Jenny Rowland-Shea, Nicole Gentile, *Backroom Deals: The Hidden World of Noncompetitive Oil and Gas Leasing*, Center for American Progress (May 23, 2019), available at:

<https://www.americanprogress.org/issues/green/reports/2019/05/23/470140/backroom-deals/>.

⁷⁹ The Wilderness Society, The Center for American Progress, *America’s Public Lands Giveaway: Oil and gas companies are paying bargain rates to acquire and sit on millions of acres* (April 2020), available at:

<https://storymaps.arcgis.com/stories/36d517f10bb0424493e88e3d22199bb3>.

f. Limit participation by bad actors.

BLM should prevent individuals and companies with a history of violating the terms of federal oil and gas leases from purchasing or otherwise acquiring new leases. BLM has broad authority to limit participation in the leasing process to “responsible qualified” bidders.⁸⁰ Further, the MLA specifically prohibits the issuance or assignment of leases to companies (and their subsidiaries) that have failed to comply “with the reclamation requirements and other standards . . . for any prior lease.”⁸¹

BLM does not, however, scrutinize the compliance records or development intentions or capabilities of participants in the oil and gas leasing process. As a consequence, industry actors with a history of violating the terms of federal leases and permits, including reclamation requirements, can freely nominate, bid upon, and purchase leases. Speculators therefore burden public lands with leases that will never produce oil or gas.

RECOMMENDATIONS:

- Establish criteria for identifying “responsible qualified bidders.” These criteria could be used to limit or prevent participation in the leasing process by companies or individuals: with a history of failing to make timely rental payments; that operate a significant number of inactive wells; that are violating federal or state reclamation requirements on other leases; whose operations are violating federal or state air or water quality standards; that have outstanding well liabilities attached to their company or a subsidiary; or that lack the technical or economic resources to diligently explore for and develop oil and gas resources.
- Require nominees and potential bidders to demonstrate adherence to leading climate emissions and risk disclosure protocols to be eligible to participate.
- Publish and regularly update the list of “Entities in Noncompliance with Reclamation Requirements of Section 17(g) of MLA,” which BLM is supposed to maintain under its Competitive Leases Handbook.⁸²
- Support Representative Lowenthal’s *Transparency in Energy Production Act* (H.R. 1506) and Support Representative Levin’s *Restoring Community Input and Public Protections in Oil and Gas Leasing Act of 2021* (H.R. 1503). These bills would ensure the public knows who is attempting to operate on our public lands and allows for Interior to properly authenticate proposals and operators.

g. Eliminate lease suspension loopholes that allow bad actors to hold on to leases indefinitely.

Current law allows leases to be “suspended”—effectively put on hold—ensuring the leases do not expire even while companies are not paying rent and are not required to make progress on developing energy resources that would require royalty payments. While the leases are suspended, the oil and gas companies retain control of the lands, which prevents them from

⁸⁰ 30 U.S.C. § 226(b)(1)(A).

⁸¹ 30 U.S.C. § 226(g).

⁸² BLM Handbook H-3120-1 *Competitive Leases (P)* (2013), available at: https://www.blm.gov/sites/blm.gov/files/uploads/Media_Library_BLM_Policy_h3120.pdf.

being managed for multiple uses for the benefit of the public—be it for recreation, conservation, renewable energy development or other multiple uses of public lands.

The Wilderness Society’s report *Land Hoarders* includes significant additional details and is attached as Appendix E.

RECOMMENDATIONS:

- Identify and end suspensions that are no longer justified and should have expired years ago.
- Issue new policy and training to inform future lease suspensions, and ensure suspensions are only granted when truly needed and end in a timely manner.
- Issue a new policy requiring NEPA compliance and greater opportunities for public participation, transparency (including annual reporting) and oversight of both new suspension requests and existing suspensions.
- Issue administrative guidance, such as updating Instruction Memorandum No. 2019-007 – Monitoring and Review of Lease Suspensions
- The Government Accountability Office (GAO) should initiate an investigation and produce a report to further define the scope of the problem and remedial actions.
- Support Representative Levin’s *Restoring Community Input and Public Protections in Oil and Gas Leasing Act of 2021* (H.R. 1503). This legislation includes provisions that allot a reasonable time for public and stakeholder input, require shorter lease terms to ensure the leasing agent is working with the most current information, and ensure that other uses are considered for the land in question.

h. Fiscal reforms.

Federal law requires DOI to produce a full and fair return to the public. Yet, compared to how states manage oil and gas leasing, the federal government gives industry at least a third of the value owed to the taxpayers—with billions of dollars lost over time. The current program encourages irresponsible leasing and lacks the transparency necessary for the public to be meaningfully included in land use decisions. The GAO, the government’s financial watchdog, has repeatedly raised concerns that BLM’s fiscal policies are high risk.

BLM has a legal obligation to modernize its revenue-generating policies for onshore oil and gas development to ensure taxpayers are not unwittingly subsidizing damaging climate change. Under FLPMA, BLM must ensure that American taxpayers “receive fair market value of the use of the public lands and their resources.”⁸³ This requirement is also found in the MLA, which demands regular adjustments to royalty and rental rates and minimum bids, in order to “enhance financial returns to the United States.”⁸⁴ Thus, BLM has a clear duty to update its revenue-generating policies and must do so now, given how outdated those policies have become and the significant amount of revenue that is not going to American taxpayers.

Significant additional details are included in a 2017 APA Petition submitted by TWS and other NGO partners, attached to these comments as Appendix B, and two white papers written by Dan

⁸³ 43 U.S.C. § 1701(a)(9).

⁸⁴ 30 U.S.C. § 226(b)(1)(B); *see also id.* §§ 226(b)(1)(A), 226(d) (authorizing royalty and rental rates increases).

Bucks,⁸⁵ *A Fair Return for the American People--Increasing Oil and Gas Royalties from Federal Lands, and Fiscal Responsibility in the Management of Oil and Gas Leases on Federal Lands*, attached to these comments as Appendices C.1 and C.2, respectively.

1. BLM should increase the royalty rate and set a new floor for the rate.

The onshore oil and gas royalty rate is currently 12.5 percent, which has not changed since 1920. All of the major oil and gas producing states in the West provide higher royalty rates than the federal government's onshore rate. For example, Texas has a rate of 25 percent while both North Dakota and New Mexico charge 18.75 percent.

Congress never intended for onshore royalty rates to remain stagnant. That is why onshore royalties are set “at a rate of *not less than* 12.5 percent.”⁸⁶ This rate represents a floor which Interior must adjust upward as oil and gas production rises and to avoid the oil and gas industry enjoying windfall profits that rightfully belong to the American people. For instance, in 2009, Interior raised the offshore royalty rate from 12.5 percent to 18.75 percent in response to rising oil prices.⁸⁷ However, even though onshore oil production has nearly doubled since 2008, the onshore royalty rate has not changed.⁸⁸

Note that as detailed in Section II(b) of these comments, BLM should adopt a climate fee for oil and gas production for any new leasing that occurs, tiered to the social cost of greenhouse gases and capturing full lifecycle GHG emissions costs. One mechanism for adopting a climate fee is through an increased royalty rate. Should BLM choose to adopt a climate fee through an increased royalty rate, BLM should ensure that the increased royalty rate is set at a level that is adequate both to provide a fair return to the public and to address the climate pollution consequences of oil and gas development and use.

RECOMMENDATIONS:

- BLM should increase the onshore royalty rate to a minimum of 18.75 percent to capture fair market value—this should be the floor for an increased royalty rate. BLM should also adopt a climate fee, and one potential method for doing so is to further increase the royalty rate, as detailed in Section II(b) of these comments.
- Support passage of Senator Rosen and Senator Grassley's bill to increase royalty rates, rental rates and minimum bids, the *Fair Return for Public Lands Act of 2021* (S. 624), as well as the passage of Representative Porter's legislation, the *Ending Taxpayer Welfare for Oil and Gas Companies Act of 2021* (H.R. 1517), and Rep. Levin's *Restoring Community Input and Public Protections in Oil and Gas Leasing Act of 2021* (H.R.

⁸⁵ Dan Bucks is the former Montana Director of Revenue and former Executive Director of the Multistate Tax Commission.

⁸⁶ 30 U.S.C. § 226(b)(1)(A) (emphasis added); 43 C.F.R. § 3103.3-1. For non-competitively-issued leases, the royalty rate is fixed at a flat 12.5 percent by statute (30 U.S.C. § 226(c) and 30 U.S.C. § 352 (acquired lands)). Legislation would be required to change the royalty rate for non-competitively issued leases.

⁸⁷ Congressional Research Service, *Mineral Royalties on Federal Lands: Issues for Congress*, 4 (Jan. 2015), available at:

https://www.everycrsreport.com/files/20150119_R43891_3bd50f51ada1b53821153ce674b442bc7df659de.pdf.

⁸⁸ Office of Natural Resources Revenue, Production Data, available at <https://revenuedata.doi.gov/downloads/>.

1503). Among other fiscal reforms, these bills would increase the onshore royalty rate from 12.5 percent to 18.75 percent. Note that as described above, an 18.75 percent royalty rate should be considered the floor for an increased royalty rate.

2. BLM should increase the rental rate and reduce standard lease periods.

BLM has a similar duty to increase rental rates. All federal leases are “conditioned upon payment . . . of a rental *not less than* \$1.50 acre per acre” for the first five years and \$2.00 per acre for the remaining years.⁸⁹ The federal onshore rental rate is currently \$1.50/acre for the first five years and then \$2.00/acre for the next five years; these rates have not been updated since 1987. These rates are well below what is currently needed to get fair market value for the use of public lands and to limit the speculation that is currently plaguing the oil and gas program.

It is also important to look at lease lengths and rental rates charged by states and the private sector because they are better at managing for due diligence. Texas, for example, charges \$5 per acre for its initial 3-year primary lease period, and then increases the rate to \$25 per acre under a lease extension to encourage diligent development.

RECOMMENDATIONS:

- BLM should conduct a rulemaking to increase rental rates at a minimum to \$3.00/acre for the first two years and \$5.00/acre for the next three years, and \$25 per acre for any extension period, which should be limited to two years if development on the lease has begun. (All rates should be indexed to inflation.)
- BLM should adjust the standard lease period to be five years (two years exploratory work and three years development) with the potential for a two-year extension if development on the lease has begun.
- Support passage of Senator Rosen and Senator Grassley’s bill to increase royalty rates, rental rates and minimum bids, the *Fair Return for Public Lands Act of 2021* (S. 624), as well as the passage of Representative Porter’s legislation, the *Ending Taxpayer Welfare for Oil and Gas Companies Act of 2021* (H.R. 1517), and Rep. Levin’s *Restoring Community Input and Public Protections in Oil and Gas Leasing Act of 2021* (H.R. 1503). Among other fiscal reforms, these bills would increase the rental rate from \$1.50/acre for the first five years and \$2.00/acre for the remainder of the lease, to \$3.00/acre for the first five years and \$5.00/acre for the remainder.

3. BLM should increase the minimum bid amount and evaluate all bids with a market value test.

BLM must increase minimum bids, which are encouraging wasteful speculation by industry. Under the MLA, minimum bids must be adjusted to “enhance financial returns to the United States.”⁹⁰ Yet, the minimum bid for a competitive lease is just \$2.00 per acre. This is well-below the level needed to deter companies from purchasing leases for speculative purposes. According to the Congressional Budget Office (CBO), over one-quarter of competitive leases sold for the

⁸⁹ 30 U.S.C. § 226(d) (emphasis added).

⁹⁰ 30 U.S.C. § 226(b)(1)(B).

minimum bid between 2003 and 2012.⁹¹ A separate analysis found that over half of the companies that hold federal leases in the Rocky Mountain states were not even recognized as “active” operators by state oil and gas commissions.⁹² Not only would higher minimum bids help deter these companies from tying up public lands to the detriment of other multiple-use activities, like conservation and outdoor recreation, but they would also generate more revenue for taxpayers—the CBO estimated that raising the minimum bid to \$10 per acre for auctions and requiring the same amount for non-competitive parcels would increase net federal income by an estimated \$50 million over 10 years.⁹³

RECOMMENDATIONS:

- BLM should conduct a rulemaking to increase minimum bids to between \$5.00 to \$16.00/acre and index rates to grow with inflation to help reduce speculative leases. DOI should reestablish procedures for reliably estimating market values to encourage diligent development on 100% of leases. DOI should be directed to evaluate all bids to determine if they represent fair market value and to reject bids that, although above the \$16 minimum, fail a market value test.
- Support passage of Senator Rosen and Senator Grassley’s bill to increase royalty rates, rental rates and minimum bids, the *Fair Return for Public Lands Act of 2021* (S. 624), as well as the passage of Representative Porter’s legislation, the *Ending Taxpayer Welfare for Oil and Gas Companies Act of 2021* (H.R. 1517), which would increase the national minimum bid from \$2.00/acre to \$5.00 or \$10.00/acre and index to inflation.
- Support passage of Representative Levin’s bill to modernize oil and gas policies, the *Restoring Community Input and Public Protections in Oil and Gas Leasing Act of 2021* (H.R. 1503), which would increase the national minimum acceptable bid amounts to \$5 per acre and require the Secretary of Interior to adjust national minimum bid amounts for inflation at least once every four years.

4. BLM should amend and update reclamation bond amounts and requirements to adequately cover cleanup costs.

Orphaned oil and gas wells have been an issue for decades due to insufficient reclamation bond amounts that nearly always fall short of covering the actual cost of cleanup. Without dedicated funding to plug and reclaim them, the delayed and incomplete reclamation of oil and gas wells poses a significant liability for federal and state taxpayers and a growing threat to water resources, air quality, and wildlife habitat. According to a recent analysis, these impacts are profound; orphaned wells cause groundwater contamination and, in 2018, emitted 281 kilotons

⁹¹ CBO, *Options for Increasing Federal Income from Crude Oil and Natural Gas on Federal Lands* at 18 (April 2016).

⁹² Jayson O’Neill, *Rigged: Industry already has the keys to the kingdom*, Western Values Project (June 21, 2017), available at:

<http://westernvaluesproject.org/industry-already-has-the-keys-to-the-kingdom/>.

⁹³ CBO, *Options for Increasing Federal Income from Crude Oil and Natural Gas on Federal Lands* at 32.

of methane—the climate equivalent of burning 16 million barrels of oil.⁹⁴ Research shows that more than a quarter of unplugged wells may be leaking methane, a potent greenhouse gas.⁹⁵

Inactive wells, also known as idle or shut-in wells, are another notorious problem. These wells are no longer producing oil or gas or serving other functional purposes like fluid injection or groundwater monitoring. In theory, many of these wells are just temporarily “turned off,” meaning they are capable of being re-engaged for production. Consequently, operators do not plug and reclaim them. However, in its 2019 report, the GAO identified long-inactive wells as those most at risk of becoming orphaned.⁹⁶ The GAO attempted to calculate how much BLM could be liable for based on the estimated cleanup costs of existing at-risk wells and found that \$46 million to \$333 million in cleanup costs would be needed, and that the vast majority of the wells’ bonds were insufficient to cover these costs.⁹⁷ According to Carbon Tracker’s research, idle wells now outnumber producing wells in most major oil and gas producing states. Thus, these at-risk wells could end up costing taxpayers tens, if not hundreds, of millions of dollars to clean up.

There is a clear need to begin addressing orphaned well cleanup and reclamation, improve the inventory and cataloging of idle and orphaned wells, and create good-paying union jobs to assist in reclaiming these orphaned wells as our country transitions out of the COVID-19 pandemic and into the clean energy economy of the future.

RECOMMENDATIONS:

- Conduct a rulemaking to update bond amounts to the expected cost of reclamation, curtail the use of blanket bonds, and update well definitions and associated regulations.
- Issue new policies that increase oversight of inactive wells and limit the ability of operators to indefinitely delay final reclamation.
- Support passage of Senator Bennet’s *Oil and Gas Bonding Reform and Orphaned Well Remediation Act* (S. 4642). This bill will establish a new fund that will allow states, Tribes, and federal agencies to create jobs by identifying and reclaiming orphaned wells, as well as strengthening federal oil and gas bonding rules.
- Support passage of the *Orphaned Well Cleanup and Jobs Act of 2021* sponsored by Representative Teresa Leger Fernández, which authorizes funds to identify, plug, and reclaim orphaned wells on federal lands, and directs DOI to create and administer a grant program to provide funds to states and Tribes to plug and reclaim wells on Tribal, state, and private lands.

⁹⁴ Environmental Protection Agency, *Inventory of U.S. Greenhouse Gas Emissions and Sinks 1990-2018* (April 13, 2020), available at: <https://www.epa.gov/sites/production/files/2020-04/documents/us-ghg-inventory-2020-main-text.pdf>.

⁹⁵ Hiroko Tabuchi, *Fracking Firms Fail, Rewarding Executives and Raising Climate Fears*, New York Times (October 13, 2020), available at: <https://www.nytimes.com/2020/07/12/climate/oil-fracking-bankruptcy-methane-executive-pay.html>.

⁹⁶ United States Government Accountability Office, Report to Congressional Requesters, *Oil and Gas: Bureau of Land Management Should Address Risks from Insufficient Bonds to Reclaim Wells* (September 2019), available at: <https://www.gao.gov/assets/gao-19-615.pdf>.

⁹⁷ *Id.*

- Support passage of the *Bonding Reform and Taxpayer Protection Act of 2021* (H.R.1505) (Rep. Lowenthal). This bill will set new national standards for financial assurances that better protect taxpayers and ensure timely and complete reclamation of oil and gas wells.

i. Permitting reforms.

1. Ensure permitting incorporates climate change in decision-making processes and public lands are managed for multiple uses.

DOI has the authority to affect where and how development occurs on new and valid existing leases through imposing conditions of approval and other measures available through the APD process. DOI should use this authority to allow permitting only to the extent consistent with multiple use, sustained yield, the emissions management framework (detailed in Section II(a) of these comments), and protection of important conservation values, cultural resources, and other important resources and values. As described in Sections II(a) and (b) of these comments, DOI also has the authority to require that all new fossil fuel development achieve net zero greenhouse gas emissions, including at the development stage.

RECOMMENDATIONS:

- Issue guidance requiring DOI to use all available authorities to ensure public lands are managed for multiple use and the full mitigation hierarchy is applied in permitting decisions, including a requirement that new fossil fuel development achieves net zero greenhouse gas emissions.

2. Create a publicly accessible transparency dashboard to track oil and gas permitting.

There is limited data readily available to the public on the status of APDs for oil and gas development on public lands and waters. While DOI does provide some data on APDs on its oil and gas statistics webpage, it does not include important details such as the number of APDs that have been approved but have not yet been used.⁹⁸

RECOMMENDATIONS:

- DOI should create a publicly accessible transparency dashboard to track oil and gas permitting, including the information currently provided as well as additional details such as the number of APDs that have been approved but have not yet been used.

IV. CURB METHANE EMISSIONS.

Curbing methane emissions is a key component to achieving net zero emissions and combating the deleterious effects of climate change. We strongly urge BLM to support Rep. DeGette's

⁹⁸ See BLM Oil and Gas Statistics, available at: <https://www.blm.gov/programs-energy-and-minerals-oil-and-gas-oil-and-gas-statistics>.

Methane Waste Prevention Act of 2021,⁹⁹ and defend its 2016 Waste Prevention Rule,¹⁰⁰ currently on appeal in the Tenth Circuit Court of Appeals.¹⁰¹ The Rule limits the amount of publicly owned natural gas that is wasted through venting, flaring, or leaking. Though aimed at preventing waste, the Rule would have substantial and immediate climate and public health benefits.

RECOMMENDATIONS:

- Defend the 2016 Waste Prevention Rule on appeal and immediately implement the Rule if it is upheld. Swift implementation of the Rule would ensure substantial and critical near-term reductions in methane waste.
- Support Representative DeGette’s Methane Waste Prevention Act of 2021 (H.R. 1492). This legislation led by Rep. DeGette, would codify long-overdue, widely agreed upon, common-sense standards to reign in excessive waste of vented and flared gas on public lands. By curbing unnecessary venting, flaring, and leaks at oil and gas facilities, this bill will help protect public health, reduce potent greenhouse gas emissions, and recoup millions of dollars owed to the American taxpayers.

V. ARCTIC.

America’s Arctic is critical to combating the climate crisis. It is also bearing some of the worst impacts of climate change. DOI must address the lasting, damaging impacts of onshore and offshore oil and gas development in Alaska. We strongly support the letter submitted by Trustees for Alaska et al. calling for swift independent review of the Coastal Plain Leasing Program in the Arctic National Wildlife Refuge. We also strongly support the letter submitted by the Western Arctic Coalition calling for a new management framework for the National Petroleum Reserve – Alaska (Reserve) focused on meeting climate goals and protecting the remarkable wildlife habitat and biodiversity of the Reserve.

RECOMMENDATIONS:

- As directed by Executive Order 13990, complete independent review of the fundamentally flawed Arctic National Wildlife Refuge Coastal Plain Leasing Program and take swift action to protect these lands sacred to the Arctic Indigenous peoples.
- Ensure protections for the nationally and internationally recognized wildlife and wildlife habitats, wild rivers, subsistence, cultural resources, and wilderness lands and values of the National Petroleum Reserve – Alaska. Expedite review of the recently approved Willow Master Development Plan to assess its legality, climate implications, and consistency with the public interest. Through amending the regulations that apply to the Reserve, DOI should implement a new management direction focused on meeting climate goals and protecting the extraordinary ecological values of the Reserve.

⁹⁹ H.R. 1492, 117th Cong. (2021), available at: <https://www.congress.gov/bills/117/congress/house-bills/1492?q=%7B%22search%22%3A%5B%22H.R.+1492%22%5D%7D&s=1&r=1>.

¹⁰⁰ 81 Fed. Reg. 83,008 (Nov. 18, 2016),

¹⁰¹ *Wyoming v. Department of Interior*, No. 2:16-cv-00285-SWS (D. Wyo. Oct. 8, 2020), *appealed* Dec. 21, 2020, *Wyoming v. U.S. Dep't of the Interior*, Nos. 20-8072 & 20-8073 (10th Cir.).

VI. CONCLUSION.

Thank you for undertaking a critical, comprehensive review of the federal oil and gas program in light of the urgent need to address the climate crisis and reform this severely outdated system. We look forward to continuing to engage with DOI as this process moves forward.

Respectfully submitted,



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Appendices:

- A. Oil and Gas Toolkit
- B. APA petition on oil and gas reforms
- C1. Dan Bucks report: A Fair Return for the American People
- C2. Fiscal Responsibility Report
- D1. Net zero land use planning framework
- D2. Hypothetical application of the net zero framework
- E. TWS Land Hoarders Report
- F. TWS Coal Programmatic EIS scoping comments

APPENDIX A

Oil & Gas Reform Toolkit

FEDERAL OIL AND GAS PROGRAM REFORM TOOLKIT

CHARTING A PATH TO ELIMINATE FOSSIL FUEL DEVELOPMENT ON PUBLIC LANDS AND WATERS WHILE ENSURING A JUST TRANSITION

EMISSIONS MANAGEMENT FRAMEWORK

| ACTION | MECHANISM | REASON | CONNECTION TO ADMINISTRATION PRIORITY |
|---|---|--|--|
| → Establish a GHG emissions management framework to guide DOI's management and energy development decisions at the national, land use planning, leasing, and permitting stages to achieve net zero GHG emissions from fossil fuel development on federal public lands and waters by 2030 and no fossil fuel development by 2050, consistent with and in coordination with efforts to conserve at least 30 percent of U.S. lands and waters by 2030 and ensure a just and equitable transition for affected communities. | → Institute DOI policy to: <ul style="list-style-type: none"> ✓ Develop a measurement protocol for GHG emissions from federal lands consistent with climate science. ✓ Develop a dashboard that will provide the information needed to manage publicly owned energy resources in a manner consistent with climate and other DOI goals. ✓ Develop tools necessary to populate the dashboard, including calculating volumes of fossil fuels and associated upstream and downstream pollution from existing leases, methods to estimate the carbon consequences of nominated and approved leases and reasonably foreseeable development in planning documents, and other key metrics. → Regularly disclose progress toward meeting emissions targets to the public. | → Public lands account for nearly a quarter of the nation's greenhouse gas emissions. → Public lands and waters can and must immediately become a solution to the climate crisis. → DOI has an obligation under FLPMA to manage public land to protect our environment and the public, manage lands for multiple use and sustained yield, and prevent unnecessary and undue degradation. → To know whether DOI is on track to meet its climate goals, it must implement meaningful and sound mechanisms for measuring progress. | → EO 14008: <ul style="list-style-type: none"> ✓ Section 201: "Put the United States on a path to achieve net-zero emissions, economy-wide, by no later than 2050." ✓ Section 208: reconsider oil and gas program in light of climate and other impacts on public lands and offshore waters, adjust royalty rates, and take other action to account for climate costs. |
| → Place a net zero obligation on all new oil and gas development, including new wells on existing leases, through compensatory mitigation using tools such as a climate fee. | → Impose on new or renewed leases upon issuance and should strongly consider a rulemaking that encompasses both new and renewed leases and new wells on existing leases at the APD stage. → Under the MLA, BLM can impose conditions of approval on APDs "to minimize adverse impacts to other resource values." 43 C.F.R. §§ 3101.1-2 & 3101.1-3; see 30 U.S.C. § 226(g). | → BLM has an obligation under FLPMA to manage public land to protect our environment and the public, manage lands for multiple use and sustained yield, and prevent unnecessary and undue degradation. 43 U.S.C. §§ 1701(a)(8), 1702(c), 1732(b). | → EO 14008: <ul style="list-style-type: none"> ✓ Section 201: "Put the United States on a path to achieve net-zero emissions, economy-wide, by no later than 2050." ✓ Section 208: reconsider oil and gas program in light of climate and other impacts on public lands and offshore waters, adjust royalty rates, and take other action to account for climate costs. |
| → Implement a climate fee that accounts for the climate pollution costs of oil and gas development, tiered to the social cost of greenhouse gases. | → Impose a climate fee on new and renewed leases through increased royalty rates or, to encompass new wells on existing leases at the APD stage, as compensatory mitigation. See 30 U.S.C. §§ 226(a), (b)(1)(A), 352; 43 U.S.C. §§ 1701, 1732(a) & (b); 43 C.F.R. §§ 3101.1-2, 3101.1-3, 3103.3-1. | → A climate fee will reduce emissions while raising revenue. | → EO 14008: <ul style="list-style-type: none"> ✓ Section 201: "Put the United States on a path to achieve net-zero emissions, economy-wide, by no later than 2050." ✓ Section 208: reconsider oil and gas program in light of climate and other impacts on public lands and offshore waters, adjust royalty rates, and take other action to account for climate costs. |

| | | | |
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| → BLM should integrate the social cost of greenhouse gases into all its policies, including for oil and gas. | → Issue Instruction Memorandum and integrate social cost accounting via rulemakings. | → Social cost of greenhouse gas is the benchmark methodology to estimate the monetized damages of incremental increases in GHG emissions. | → EO 13990: ✓ Section 5: requiring agencies to capture the full costs of GHG emissions as accurately as possible using social cost estimates. ✓ Section 208: reconsider oil and gas program in light of climate and other impacts on public lands and offshore waters, adjust royalty rates, and take other action to account for climate costs. |
| → Create and maintain a publicly accessible central database that tracks oil and gas leasing, permitting, and production and provides a comprehensive accounting of the GHG emissions associated with fossil fuel development on public lands and waters. | → DOI can create and manage this database or work with another agency to do so. → Support passage of the Transparency in Energy Production Act (TEPA) (H.R. 1506) sponsored by Representative Lowenthal. Directs companies seeking or holding a lease to drill on public lands to track and report the amount of energy production and resulting emissions from federal lands and waters. | → Sound management of GHG emissions requires clear, accurate, and transparent measurement. | → EO 14008: ✓ Section 201: "The Federal Government must drive assessment, disclosure, and mitigation of climate pollution and climate-related risks in every sector of our economy" |
| → Research and consider developing a lease buyback program. | → Develop a program for buying back existing leases with appropriate and effective valuation. → Support legislation and appropriations as needed. | → To achieve climate emissions goals, DOI must significantly reduce emissions on existing wells on existing leases. A properly incentivized lease buyback program would yield co-benefits of freeing land tied up under speculative and non-producing leases. | → EO 14008: ✓ Section 201: "Put the United States on a path to achieve net-zero emissions, economy-wide, by no later than 2050." ✓ Section 208: reconsider oil and gas program in light of climate and other impacts on public lands and offshore waters. |

| LAND USE PLANNING | | | |
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| ACTION | MECHANISM | REASON | CONNECTION TO ADMINISTRATION PRIORITY |
| → Reinstate DOI and BLM mitigation policies and establish a robust mitigation program that requires no net loss of conservation value and full mitigation of climate impacts. | → Reissue and improve Secretarial Order 3330 – Improving Mitigation Policies and Practices of the Department of the Interior; DOI Manual 600 DM 6 – Landscape-Scale Mitigation Policy; BLM Mitigation Handbook H-1974-1; and Solicitor's Opinion M-37039. | → To ensure no net loss of conservation value and fully address impacts to cultural resources, recreation, and other resources and values on public lands. | → EO 14008: ✓ Section 201: "The Federal Government must drive assessment, disclosure, and mitigation of climate pollution and climate-related risks in every sector of our economy" |

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| → When making or revising land management decisions involving fossil fuel development, BLM must prioritize: (1) avoiding new leasing and development and associated emissions to the maximum extent possible and protecting natural and cultural resources from leasing and development; (2) minimizing any emissions that do occur; and (3) offsetting any remaining emissions via increasing terrestrial carbon sequestration and maintaining existing carbon stocks, as well as increasing responsible renewable energy development. | → To ensure progress towards zero emissions, fossil fuel-free public lands by 2050, all relevant NEPA processes should require a no new leasing alternative as well as an alternative that achieves net zero fossil fuel emissions by 2030 ("Net Zero Alternative Framework") within the relevant field office. → Support Senator Bennet's Public Engagement Opportunity on Public Lands Act of 2020 (S. 4641). Prohibits the leasing of any parcel which has not been specifically identified or evaluated in the NEPA documentation for a particular lease sale. | → To reach climate goals, it is critical to implement stringent GHG emissions management at the land use planning stage. → Closing lands to leasing helps protect important conservation and cultural resources, recreation and other resources and values. | → EO 14008: ✓ Sections 204 & 207: align management of public lands and waters to support robust climate action, which includes a commitment to increase responsible renewable energy production on federal lands. |
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| COMMUNITY HEALTH, WELLBEING, AND ECONOMIC IMPACTS | | | |
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| ACTION | MECHANISM | REASON | CONNECTION TO ADMINISTRATION PRIORITY |
| → Create new jobs in fossil fuel dependent places and ensure robust attention to: restoring natural resources and wildlife habitat, parks creation and maintenance; incentivizing sustainable recreation economies; expanding responsible access to nature; and increasing resilience in communities prone to natural disasters and pollution. | → Support legislative solutions and invest in programs that promote this action. | → The federal fossil fuels program has disproportionately impacted both those communities closest to and most dependent upon oil and gas development and communities experiencing the brunt of fossil fuel pollution. → It is time for a just and equitable transition. | → EO 14008: ✓ Section 212: commitment to build a new American infrastructure and clean energy economy. ✓ Section 214: commitment to creating well-paying union jobs, specifically elevating opportunities for women and people of color to be in occupations where they are underrepresented. ✓ Section 215: create a Civilian Climate Corps Initiative, responsible for mobilizing the next generation of conservation and resilience workers and maximizing the creation of accessible training opportunities and good jobs. ✓ Section 217: jobs should include those that "reduce emissions of toxic substances and greenhouse gases from existing and abandoned infrastructure and that prevent environmental damage that harms communities and poses a risk to public health and safety." |

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| | | | <ul style="list-style-type: none"> ✓ Section 218: revitalize the economies of coal, oil and gas, and power plant communities; develop strategies for economic and social recovery; assess opportunities to ensure benefits and protections for workers. |
| → Create public-private partnerships to support local and regional economic planning and establish an orphan well cleanup fund. | → Work with the BLM Foundation to create these opportunities. | → Communities most affected by oil and gas development require urgent attention both to account for pollution impacts and create forward-looking economic opportunities. | → Section 218: revitalize the economies of coal, oil and gas, and power plant communities; develop strategies for economic and social recovery; assess opportunities to ensure benefits and protections for workers. |
| → Assemble an advisory committee representative of diverse, affected stakeholders, including members of frontline and fenceline communities, to consult broadly on land use planning and during all stages of oil and gas development. | → Form the committee under the Federal Advisory Committee Act, 5a U.S.C. § 9. | → Environmental justice communities heavily and negatively impacted by fossil fuels pollution need a strong voice in the future of our public lands. | → EO 14008: <ul style="list-style-type: none"> ✓ Section 218: revitalize the economies of coal, oil and gas, and power plant communities; develop strategies for economic and social recovery; assess opportunities to ensure benefits and protections for workers and seek input from environmental justice communities. |
| → Engage, consider, and implement input from Tribes, the public, frontline and fenceline communities, state and local governments, federal agency partners, and stakeholders, with adequate notice and time for input. | → Conduct robust government-to-government consultation with Tribes. → Hold public meetings and listening sessions that allow full and equitable participation. → Support Senator Bennet's Public Engagement Opportunity on Public Lands Act of 2020 (S. 4641), and Representative Levin's Restoring Community Input and Public Protections in Oil and Gas Leasing Act of 2021 (H.R. 1503). Allot a reasonable time for public and stakeholder input, require shorter lease terms, and ensure that other uses are considered for the land in question. | → It is critical to listen to stories of communities and individuals already experiencing adverse health effects b/c of the acute impacts from the climate crisis and oil & gas development. → The most impacted communities—both those that have historically benefitted from and are adversely impacted by oil and gas development—need clear opportunities to engage in the decision-making process. | → EO 14008: <ul style="list-style-type: none"> ✓ Section 201: successfully meeting climate crisis challenges will "require the Federal Government to pursue . . . a coordinated approach from planning to implementation, coupled with substantive engagement by stakeholders, including State, local, and Tribal governments." |

LEASING & PERMITTING REFORM

LEASING REFORM

| ACTION | MECHANISM | REASON | CONNECTION TO ADMINISTRATION PRIORITY |
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| → Establish an overarching mandate for the oil and gas program recognizing that leasing is discretionary and allowed only to the extent consistent with multiple use, sustained yield, emissions management framework, and protection of important conservation values, cultural resources, and other important resources and values. | <ul style="list-style-type: none"> → Announce the overarching mandate as a clarification under existing authorities. → Consider seeking a Solicitor's Opinion rightfully interpreting FLPMA, the MLA, and NEPA to require this mandate. → Consider codifying the mandate through rulemaking. → Support Senator Bennet's Public Engagement Opportunity on Public Lands Act of 2020 (S. 4641), and Representative Levin's Restoring Community Input and Public Protections in Oil and Gas Leasing Act of 2021 (H.R. 1503). Allots reasonable time for public/stakeholder input, requires shorter lease terms to ensure leasing agent is working with most current information, and ensures other uses are considered. | <ul style="list-style-type: none"> → BLM has an obligation under FLPMA to manage public land to protect our environment and the public, manage lands for multiple use and sustained yield, and prevent unnecessary and undue degradation. 43 U.S.C. §§ 1701(a)(8), 1702(c), 1732(b). → The MLA gives BLM discretion whether to lease. 30 U.S.C. § 226(a). | <ul style="list-style-type: none"> → EO 14008: <ul style="list-style-type: none"> ✓ Section 201: "Put the United States on a path to achieve net-zero emissions, economy-wide, by no later than 2050." ✓ Section 208: reconsider oil and gas program in light of climate and other impacts on public lands and offshore waters. |
| → Require nationwide and state-specific leasing screens, which should be reevaluated and adjusted, as necessary, on an ongoing basis. | → Amend 43 C.F.R. § 3120.1-1 (lands available to competitive leasing). | → Screens are needed to ensure that leases align with resource management plans and the multiple use mandate; ensure protection of important conservation values, cultural resources, and other important resources and values from leasing and development; and align with climate goals and an established emissions management framework consistent with the latest climate science. | <ul style="list-style-type: none"> → EO 14008: <ul style="list-style-type: none"> ✓ Section 201: "We must strengthen our clean air and water protections." ✓ Section 208: reconsider oil and gas program in light of climate and other impacts on public lands and offshore waters. |
| → Require companies and individuals who nominate public lands for leasing to identify themselves and disclose any parties they represent. | <ul style="list-style-type: none"> → Revoke and replace BLM IM 2014-004 (Oil and Gas Informal Expressions of Interest). → Support passage of Sen. Rosen & Grassley's bill The Fair Return for Public Lands Act (S. 624) to impose a lease nomination fee and Rep. Levin's Restoring Community Input and Public Protections in Oil and Gas Leasing Act of 2021 (H.R. 1503), and Rep. Porters Ending Taxpayer Welfare for Oil and Gas Companies Act of 2021 (H.R. 1517) to end anonymous lease nominations and impose a lease nomination fee. | → Ensure a fairer, more open and transparent process. | <ul style="list-style-type: none"> → EO 14008: <ul style="list-style-type: none"> ✓ Section 208: citing need to reform the oil and gas program. |

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| → Limit frequency and scope of lease sales by establishing that leasing is discretionary; sales will be held only when consistent with multiple use, sustained yield, emissions management framework, and protecting vital conservation values, cultural resources, and other important resources and values. | → Amend 43 C.F.R. Part 3120 (Competitive Leases). → Consider seeking a Solicitor's Opinion to provide firm grounding for BLM's authority under the MLA to limit the quantity and scope of lease sales and BLM's authority to declare lands ineligible and unavailable for leasing. | → BLM has an obligation under FLPMA to manage public land to protect our environment and the public, manage lands for multiple use and sustained yield, and prevent unnecessary and undue degradation. 43 U.S.C. §§ 1701(a)(8), 1702(c), 1732(b). | → EO 14008: ✓ Section 208: "Put the United States on a path to achieve net-zero emissions, economy-wide, by no later than 2050" and citing need to reform the oil and gas program. |
| → Significantly constrain noncompetitive lease sales and support efforts to abolish them. | → Amend 43 C.F.R. Subpart 3110 (Noncompetitive Leases) to require a "public interest" determination prior to issuing noncompetitive leases. → Create and maintain a publicly accessible portal for noncompetitive lease offers (pre- and post-sale) and provide the public with at least 30 days to review and comment on noncompetitive lease offers. → Support passage of Leasing Market Efficiency Act of 2020 (S. 4223), and The Restoring Community Input and Public Protections in Oil and Gas Leasing Act (H.R. 15013) (Rep. Levin) which among other reforms would end noncompetitive leasing. | → Would inform whether applicants for noncompetitive leases are "responsible" and "qualified" under 30 U.S.C. § 226(c)(1) and evaluate such factors as the applicant's development history, capabilities, and plans, and compliance history, including whether the applicant has a history of failing to make rental or other payments. | → EO 14008: ✓ Section 208: "Put the United States on a path to achieve net-zero emissions, economy-wide, by no later than 2050" and citing need to reform the oil and gas program. |
| → End speculative leasing by requiring BLM to assess mineral development potential and prohibit leasing of low or no potential lands. | → Issue guidance to close low and no potential lands to leasing in land use plans and not to include them in lease sales. → Amend 43 C.F.R. § 3120.1-1 to prohibit leasing in lands identified in applicable land use plans as having low or no potential for development. To the extent that the applicable land use plan has not identified the development potential of nominated lands, preclude leasing in those lands until that plan is amended and includes this information. → Support passage of Senator Cortez-Masto's End Speculative Oil and Gas Leasing Act (S. 607), which would end the practice of leasing low potential lands by requiring the BLM to assess all lands' mineral development potential before offering those lands for lease and prohibiting leasing on any lands found to have low or no development potential. | → The current system allows land to be offered for leasing regardless of its development potential or the presence of higher and better uses, like wildlife conservation, outdoor recreation, or watershed protection and has resulted in millions of acres of public lands with low or no potential being leased for development. | → EO 14008: ✓ Section 208: citing need to reform the oil and gas program. |
| → Limit participation by bad actors in leasing. | → Establish criteria for identifying "responsible qualified bidders" to be used to limit or prevent participation in the leasing process by companies or individuals: with a history of failing to make timely rental payments; that operate a significant number of inactive wells; | → BLM should prevent individuals and companies with a history of violating the terms of federal oil and gas leases from purchasing or otherwise acquiring new leases. | → EO 14008: ✓ Section 208: citing need to reform the oil and gas program. |

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| | <p>that are violating federal or state reclamation requirements on other leases; whose operations are violating federal or state air or water quality standards; that have outstanding well liabilities attached to their company or a subsidiary; or that lack the technical or economic resources to diligently explore for and develop oil and gas resources.</p> <ul style="list-style-type: none"> → Require nominees and potential bidders to demonstrate adherence to leading climate emissions and risk disclosure protocols to be eligible to participate. → Require nominees and potential bidders to demonstrate they have no outstanding well liabilities attached to their company or a subsidiary. → Publish and regularly update the list of "Entities in Noncompliance with Reclamation Requirements of Section 17(g) of MLA," which BLM is supposed to maintain under its Competitive Leases Handbook. → Support Representative Lowenthal's Transparency in Energy Production Act (H.R. 1506) and Support Representative Levin's Restoring Community Input and Public Protections in Oil and Gas Leasing Act of 2021 (H.R. 1503). Ensures the public knows who is attempting to operate on our public lands and allows for Interior to properly authenticate proposals and operators. | | |
| <p>→ Eliminate lease suspension loopholes that allow bad actors to hold on to leases indefinitely.</p> | <ul style="list-style-type: none"> → Identify and end suspensions that are no longer justified and should have expired years ago. → Issue new policy and training to inform future lease suspensions, and ensure suspensions are only granted when truly needed and end in a timely manner. → Issue a new policy requiring NEPA compliance and greater opportunities for public participation, transparency (including annual reporting) and oversight of both new suspension requests and existing suspensions. → Issue administrative guidance, such as updating Instruction Memorandum No. 2019-007 – Monitoring and Review of Lease Suspensions → GAO should initiate an investigation and produce a report to further define the scope of the problem and remedial actions. → Support Representative Levin's Restoring Community Input and Public Protections in Oil and Gas Leasing Act of 2021 (H.R. 1503). This legislation includes provisions that allot | <p>→ Current law allows leases to be "suspended," ensuring the leases do not expire even while companies are not paying rent and are not required to make progress on developing energy resources that would require royalty payments. Oil and gas companies retain control of the lands, preventing multiple use management for the benefit of the public.</p> | <p>→ EO 14008:</p> <ul style="list-style-type: none"> ✓ Section 208: citing need to reform the oil and gas program. |

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| | a reasonable time for public and stakeholder input, require shorter lease terms to ensure the leasing agent is working with the most current information, and ensure that other uses are considered for the land in question. | | |
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| FISCAL REFORM | | | |
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| ACTION | MECHANISM | REASON | CONNECTION TO ADMINISTRATION PRIORITY |
| → Increase the royalty rate and set a new floor for the rate. | <ul style="list-style-type: none"> → Increase the onshore royalty rate to a minimum floor of 18.75 percent to capture fair market value. A larger increase in the royalty rate beyond 18.75 percent could also be used as a method to capture a climate fee. 30 U.S.C. § (b)(1)(A); 43 C.F.R. § 3103.3-1. → Support passage of Senator Rosen and Senator Grassley's bill to increase royalty rates, rental rates and minimum bids, the Fair Return for Public Lands Act of 2021 (S. 624), as well as the passage of Representative Porter's legislation, the Ending Taxpayer Welfare for Oil and Gas Companies Act of 2021 (H.R. 1517), and Rep. Levin's Restoring Community Input and Public Protections in Oil and Gas Leasing Act of 2021 (H.R. 1503). Among other fiscal reforms, these bills would increase the onshore royalty rate from 12.5 percent to 18.75 percent. Note that as described above, an 18.75 percent royalty rate should be considered the floor for an increased royalty rate. | → The inadequate onshore royalty rate is subsidizing climate pollution and preventing the American people from receiving fair market value for public resources. | <ul style="list-style-type: none"> → EO 14008: <ul style="list-style-type: none"> ✓ Section 208: calling on the Interior Secretary to consider adjusting royalty rates. |
| → Increase the rental rate and reduce standard lease periods. | <ul style="list-style-type: none"> → Conduct a rulemaking to increase rental rates at a minimum to \$3.00/acre for the first two years and \$5.00/acre for the next three years, and \$25 per acre for any extension period, which should be limited to two years if development on the lease has begun. (All rates should be indexed to inflation.) 30 U.S.C. § 226(d). → Adjust the standard lease period to be five years (two years exploratory work and three years development) with the potential for a two-year extension if development on the lease has begun. → Support passage of Senator Rosen and Senator Grassley's bill to increase royalty rates, rental rates and minimum bids, the Fair | → BLM currently receives well below market rates. This subsidizes climate pollution, robs taxpayers of proper value on use of our public lands, and incentivizes speculation, poor management, and bad actors. | <ul style="list-style-type: none"> → EO 14008: <ul style="list-style-type: none"> ✓ Section 208: calling on the Interior Secretary to consider adjusting royalty rates or take other action to account for climate costs. |

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| | <p>Return for Public Lands Act of 2021 (S. 624), as well as the passage of Representative Porter's legislation, the Ending Taxpayer Welfare for Oil and Gas Companies Act of 2021 (H.R. 1517), and Rep. Levin's Restoring Community Input and Public Protections in Oil and Gas Leasing Act of 2021 (H.R. 1503). Among other fiscal reforms, these bills would increase the rental rate from \$1.50/acre for the first five years and \$2.00/acre for the remainder of the lease, to \$3.00/acre for the first five years and \$5.00/acre for the remainder.</p> | | |
| → Increase the minimum bid amount and evaluate all bids with a market value test. | <p>→ Conduct a rulemaking to increase minimum bids to between \$5.00 to \$16.00/acre and index rates to grow with inflation to help reduce speculative leases. Re-establish procedures for reliably estimating market values to encourage diligent development on 100% of leases. Evaluate all bids to determine if they represent fair market value; reject bids that, although above the \$16 minimum, fail a market value test. 30 U.S.C. § 226(b)(1)(B).</p> <p>→ Support passage of Senator Rosen and Senator Grassley's bill to increase royalty rates, rental rates and minimum bids, the Fair Return for Public Lands Act of 2021 (S. 624), as well as the passage of Representative Porter's legislation, the Ending Taxpayer Welfare for Oil and Gas Companies Act of 2021 (H.R. 1517), which would increase the national minimum bid from \$2.00/acre to \$5.00 or \$10.00/acre and index to inflation.</p> <p>→ Support passage of Representative Levin's bill to modernize oil and gas policies, the Restoring Community Input and Public Protections in Oil and Gas Leasing Act of 2021 (H.R. 1503), which would increase the national minimum acceptable bid amounts to \$5 per acre and require the Secretary of Interior to adjust national minimum bid amounts for inflation at least once every four years.</p> | <p>→ Low bids are encouraging wasteful speculation by industry.</p> <p>→ Under the MLA, minimum bids must be adjusted to "enhance financial returns to the United States." 30 U.S.C. § 226(b)(1)(B).</p> | <p>→ EO 14008:</p> <ul style="list-style-type: none"> ✓ Section 208: calling on the Interior Secretary to consider adjusting royalty rates or take other action to account for climate costs. |
| → Amend and update reclamation bond amounts and requirements to adequately cover cleanup costs. | <p>→ Conduct a rulemaking to update bond amounts to the expected cost of reclamation, curtail the use of blanket bonds, and update well definitions and associated regulations. 30 U.S.C. § 226(g).</p> <p>→ Issue new policies that increase oversight of inactive wells and limit the ability of operators to indefinitely delay final reclamation.</p> <p>→ Support passage of Senator Bennet's Oil and Gas Bonding Reform and Orphaned Well</p> | <p>→ Orphaned oil and gas wells have been an issue for decades due to insufficient reclamation bond amounts that nearly always fall short of covering the actual cost of cleanup.</p> <p>→ Without dedicated funding to plug and reclaim them, the delayed and incomplete reclamation of oil and gas wells</p> | <p>→ EO 14008:</p> <ul style="list-style-type: none"> ✓ Section 208: reconsider oil and gas program in light of climate and other impacts on public lands and offshore waters, adjust royalty rates, and take other action to account for climate costs. ✓ Section 217: discussing the need to clean up orphaned and abandoned wells. |

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| | <p>Remediation Act (S. 4642). This bill will establish a new fund that will allow states, Tribes, and federal agencies to create jobs by identifying and reclaiming orphaned wells, as well as strengthening federal oil and gas bonding rules.</p> <p>→ Support passage of the Orphaned Well Cleanup and Jobs Act of 2021 sponsored by Representative Teresa Leger Fernández, which authorizes funds to identify, plug and reclaim orphaned wells on federal lands; directs DOI to create and administer a grant program to provide funds to states and Tribes to plug and reclaim wells on Tribal, state, and private lands.</p> <p>→ Support passage of the Bonding Reform and Taxpayer Protection Act of 2021 (H.R. 1505) (Rep. Lowenthal). This bill will set new national standards for financial assurances that better protect taxpayers and ensure timely and complete reclamation of oil and gas wells</p> | <p>poses a significant liability for federal and state taxpayers and a growing threat to water resources, air quality, and wildlife habitat.</p> | |
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| PERMITTING REFORM | | | |
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| ACTION | MECHANISM | REASON | CONNECTION TO ADMINISTRATION PRIORITY |
| → Ensure permitting incorporates climate change in decision-making processes and public lands are managed for multiple uses. | → Issue guidance requiring use of all available authorities to ensure public lands are managed for multiple use and the full mitigation hierarchy is applied in permitting decisions, including a requirement that new fossil fuel development achieves net zero greenhouse gas emissions. | → Permitting should be consistent with multiple use, sustained yield, emissions management framework, and protection of important conservation values, cultural resources, and other important resources and values. | → EO 14008: <ul style="list-style-type: none"> ✓ Section 201: "Put the United States on a path to achieve net-zero emissions, economy-wide, by no later than 2050." ✓ Section 208: reconsider oil and gas program in light of climate and other impacts on public lands and offshore waters, adjust royalty rates, and take other action to account for climate costs. |
| → Track oil and gas permitting. | → Create publicly accessible transparency dashboard to include information currently provided as well as additional details such as the number of APDs that have been approved but have not yet been used. | → There is limited data readily available to the public on the status of APDs for oil and gas development on public lands and waters. | → EO 14008: <ul style="list-style-type: none"> ✓ Section 201: "The Federal Government must drive assessment, disclosure, and mitigation of climate pollution and climate-related risks in every sector of our economy" |

| METHANE | | | |
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| CURBING METHANE EMISSIONS | | | |
| ACTION | MECHANISM | REASON | CONNECTION TO ADMINISTRATION PRIORITY |
| → Swiftly implement the 2016 Waste Prevention Rule. | → Defend the 2016 Waste Prevention Rule on appeal. | → Curbing methane is a key component to reduce emissions and combat the adverse effects of climate change. → Swift implementation of the Rule would ensure substantial and critical near-term reductions in methane waste. | → EO 14008: ✓ Section 217: discusses the need to reduce methane emissions, which would also support jobs. |
| → Reign in excessive waste of vented and flared gas on public lands. | → Support Representative DeGette's Methane Waste Prevention Act of 2021 (H.R. 1492). | → Curbing unnecessary venting, flaring, and leaks at oil and gas facilities will help protect public health, reduce potent greenhouse gas emissions, and recoup millions of dollars owed to the American taxpayers. | → EO 14008: ✓ Section 217: discusses the need to reduce methane emissions, which would also support jobs. |

| ARCTIC | | | |
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| PROTECTING THE ARCTIC | | | |
| ACTION | MECHANISM | REASON | CONNECTION TO ADMINISTRATION PRIORITY |
| → Complete independent review of the fundamentally flawed Arctic National Wildlife Refuge Coastal Plain Leasing Program and take swift action to protect these lands sacred to the Arctic Indigenous peoples. | → EO 13990 directs immediate action on the Arctic Refuge and is necessary to correct egregious errors and ensure protection of the Coastal Plain. | → The Coastal Plain is sacred to the Gwich'in and critical to the way of life for Indigenous peoples. → The Coastal Plain is the biological heart of the Arctic Refuge, providing critical habitat wildlife. It is crucial to the fight against climate change. | → EO 14008: ✓ Section 208: reconsider oil and gas program in light of climate and other impacts on public lands and offshore waters, adjust royalty rates, and take other action to account for climate costs. → EO 13990: ✓ Section 4: directing review of the Coastal Plain Leasing Program in light of alleged legal deficiencies and placing a temporary moratorium on all federal government activities relating to the Program. |
| → Ensure protections for the National Petroleum Reserve – Alaska (NPR-A). | → Expedite review of the recently approved Willow Master Development Plan to assess its legality, climate implications, and inconsistency with the public interest. → Through amending the regulations that apply to the Reserve, implement a new management direction focused on meeting climate goals and protecting the extraordinary ecological values of the Reserve. | → The NPR-A is recognized nationally and internationally for its wildlife and wildlife habitats, wild rivers, subsistence, cultural resources, and wilderness lands and values. | → EO 14008: ✓ Section 103: consider the implications of climate change in the Arctic. ✓ Section 208: reconsider oil and gas program in light of climate and other impacts on public lands and offshore waters, adjust royalty rates, and take other action to account for climate costs. |

From: [Schedule & M M2](#)
To: [Celine_Robin](#), [Karin_Eberhardt](#), [Alex_Dawson](#), [Ben_Tertiltshausen](#), [Katie_Michael](#)
Cc: [Boris_Gilotti](#)
Subject: Mtg w/ The W ide news Soc e y
Attachments: [1 - 2](#)

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Please submit to scheduling address at BLM_WO_Scheduling@BLM.gov

OFFICE of the DIRECTOR SCHEDULING REQUEST

DATE: 5/4/21

TITLE: Oil & Gas Comprehensive Review Letter

DATES/TIMES: Please see list of our available dates/times at the bottom of the form (per direction from Fran Blasing, we included availability over the next month

DURATION: 1 hour; if a 1 hour meeting is not possible, a ½ hour meeting would also be welcomed.

TELECOMMUNICATION: [Is bridge line needed] We can set up a Teams or Zoom meeting if that's helpful

FROM: Alex Daue and Ben Tettlebaum, The Wilderness Society

CONTACT: Deputy Director Culver, Special Counselor Klein

I. PURPOSE

We are requesting a meeting to discuss key elements of the comments we submitted on the oil and gas Comprehensive Review. These include:

1. Establishing an emissions management framework
2. Requiring net zero emissions from future development
3. Establishing a climate fee
4. Creating a net zero RMP framework
5. Additional leasing and permitting reforms

Time permitting, we would also like to discuss a toolkit we're developing that includes graphic representations of emissions reductions from various policy levers that could be used to achieve net zero fossil fuel GHG emissions from federal lands and waters by 2030. We refer to this toolkit as the Net Zero Wedges Toolkit.

II. BACKGROUND

The Wilderness Society deeply appreciates the leadership of the Biden Administration, the Department of the Interior, the Bureau of Land Management, and the Bureau of Ocean Energy Management in conducting a comprehensive review of the federal oil and gas program. We submitted a letter that provides recommendations for reforming the program to achieve critical, equitable climate solutions, as directed by Section 208 of Executive Order 14008, Tackling the Climate Crisis at Home and Abroad.

III. PARTICIPANTS

The Wilderness Society: Alex Daue, Assistant Director for Energy & Climate; Ben Tettlebaum, Senior Staff Attorney; Katie Meehan, Staff Attorney

IV. BRIEFING MATERIALS [What will be provided]

1. TWS letter on the Oil and Gas Program Comprehensive Review, including an Oil and Gas Program Toolkit
2. TWS Net Zero Wedges Toolkit

Meeting date/time availability (all times mountain):

- Monday May 10: 1-2, 2-3
- Tuesday May 11: 9-10, 10-11
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- Thursday May 13: 2-3
- Friday May 14: 11-12, 12-1, 1-2, 2-3
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- Tuesday May 18: 1-2
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- Tuesday May 25: 9-10, 10-11, 11-12, 1-2
- Wednesday May 26: 9-10, 11-12
- Thursday May 27: 9-10, 11-12
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- Friday June 4: 9-10, 11-12, 12-1, 1-2, 2-3

The requesting ELT member or FC representative is responsible for submitting briefing materials 2 days in advance to BLMbriefinginfo@blm.gov.

[illegible]

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NET ZERO WEDGES TOOLKIT

GETTING TO NET ZERO FOSSIL FUEL GREENHOUSE GAS
EMISSIONS FROM FEDERAL LANDS AND WATERS BY 2030

May 6, 2021

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CONTEXT

The Wilderness Society (TWS) assembled this toolkit to better understand an array of action options to help make our federal public lands and waters a leading part of the climate solution. The aim is to achieve net zero greenhouse gas (GHG) emissions from fossil fuel development on federal public lands and offshore waters by 2030 and no fossil fuel development by 2050 at the latest.¹ The toolkit is the first that we know of to combine existing research across public land's roles in energy and natural systems.

We use “wedge” figures to explore combinations of potential actions across energy and natural systems that aim to reduce and offset GHG emissions stemming from fossil fuel development on federal public lands and waters. This toolkit and the wedge figures set the stage to understand: (1) a range of options to consider across energy and natural climate strategies; (2) the scale of gross federal emissions reduction or offsets from potential actions individually, and, to a large degree, in combination with other actions; and (3) the relative amount of baseline emissions remaining to be addressed by additional actions to align with getting to net zero by 2030.

It is important to understand what this toolkit does not do and know that it will continue to evolve. The order of actions in these wedge figures do not indicate prioritization. Nor do the inclusion of actions indicate an endorsement by TWS of any specific actions. This toolkit does not constitute a complete list of potential actions. Reduction estimates in the toolkit come mainly from existing external research on individual policies. These figures do not show estimates from a single integrated model and, thus, do not fully account for interactions. These figures display gross lifecycle emissions stemming from federal lands and waters, which we refer to as “federal emissions.” These reductions are important for efforts to tackle climate change, and they are also largely under direct control of the Biden administration. It is important to acknowledge, however, that a reduction in federal fossil fuel production alone would lead to a *partial* shift in production from federal to non-federal lands and waters. We include global *net* emission reductions as available in the methodology section. Actions included in this toolkit will continue to expand as new data becomes available and estimates will continue to be refined to further account for potential interactions between actions. It is our hope that the federal government will conduct comprehensive modeling using the extensive data and integrated modeling capabilities at their disposal and will make this data available for public involvement. The input from integrated models is essential for informing a comprehensive plan to pursue actions to meet critical national and global climate goals.

¹ TWS defines “net zero fossil fuel emissions” from public lands and waters as follows: when the lifecycle GHG emissions stemming from fossil fuel development on U.S. federal public lands and waters (full lifecycle – from production sites to burning by end users) over a specified period are balanced by an equal amount of GHG emissions removed from the atmosphere and a combination of responsible offsets that will be phased out as our public lands become free of fossil fuel development. “No fossil fuel emissions by 2050” is defined as no emissions (both GHG and local air pollution) stemming from fossil fuel development on federal public lands and waters, i.e., no fossil fuel development on federal public lands and waters.

This toolkit includes emissions reduction potentials of specific actions estimated by existing research studies and, unless noted, are not estimates derived from nor explicitly verified by TWS staff at this time. TWS provided financial support for independent modeling of a baseline for federal fossil fuel GHG emissions by Apogee Economics and Policy and independent modeling of oil and gas supply side policies by Resources for the Future.

Federal actions to reduce local air pollution stemming from our federal public lands are extremely important to tackle. This particular toolkit includes only GHG emissions directly in its calculations at this time. Local air pollution largely comes from practices used to burn fossil fuels at power plants to generate heat and electricity, in industrial manufacturing, and in transportation. Reducing fossil fuel production stemming from federal public lands and waters has the co-benefit of reducing local air pollution stemming from federal fossil fuels. More can and should be done to incorporate the impacts of potential actions on local air pollution as well as incorporating those costs and benefits into decision making on federal lands.

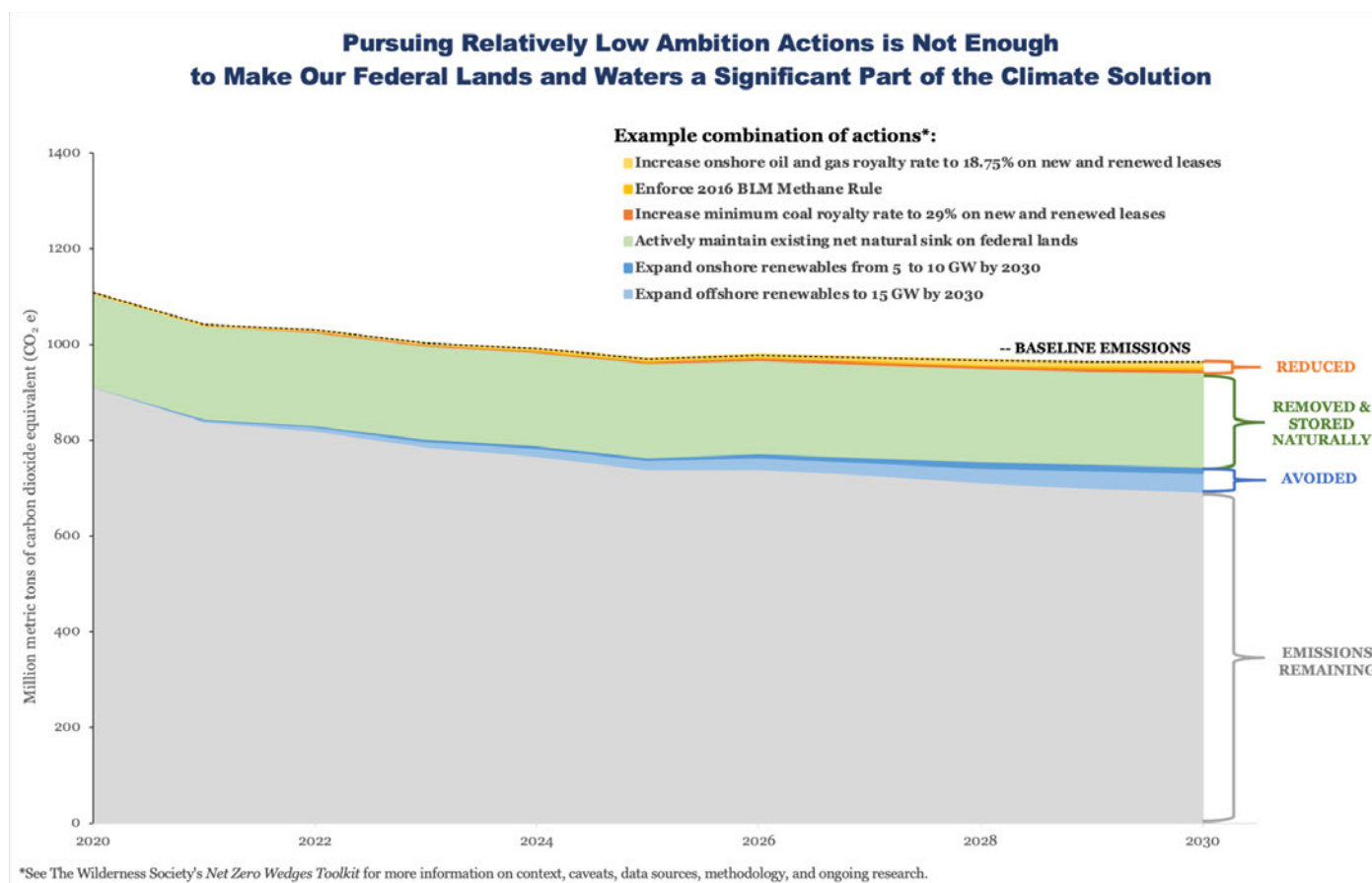
Please see the methodology at the end of this toolkit for more information on data and assumptions. Contact TWS for ongoing research.

EXAMPLE WEDGE FIGURES

Please see p. 2 of toolkit for context and caveats.

A. Relatively low ambition actions on federal lands and waters are not enough

Based on existing data, pursuing only relatively low ambition climate actions that have been considered for years would result in around 690 MMT CO₂e remaining in 2030 and would not put our public lands and waters on a path to get to net zero.



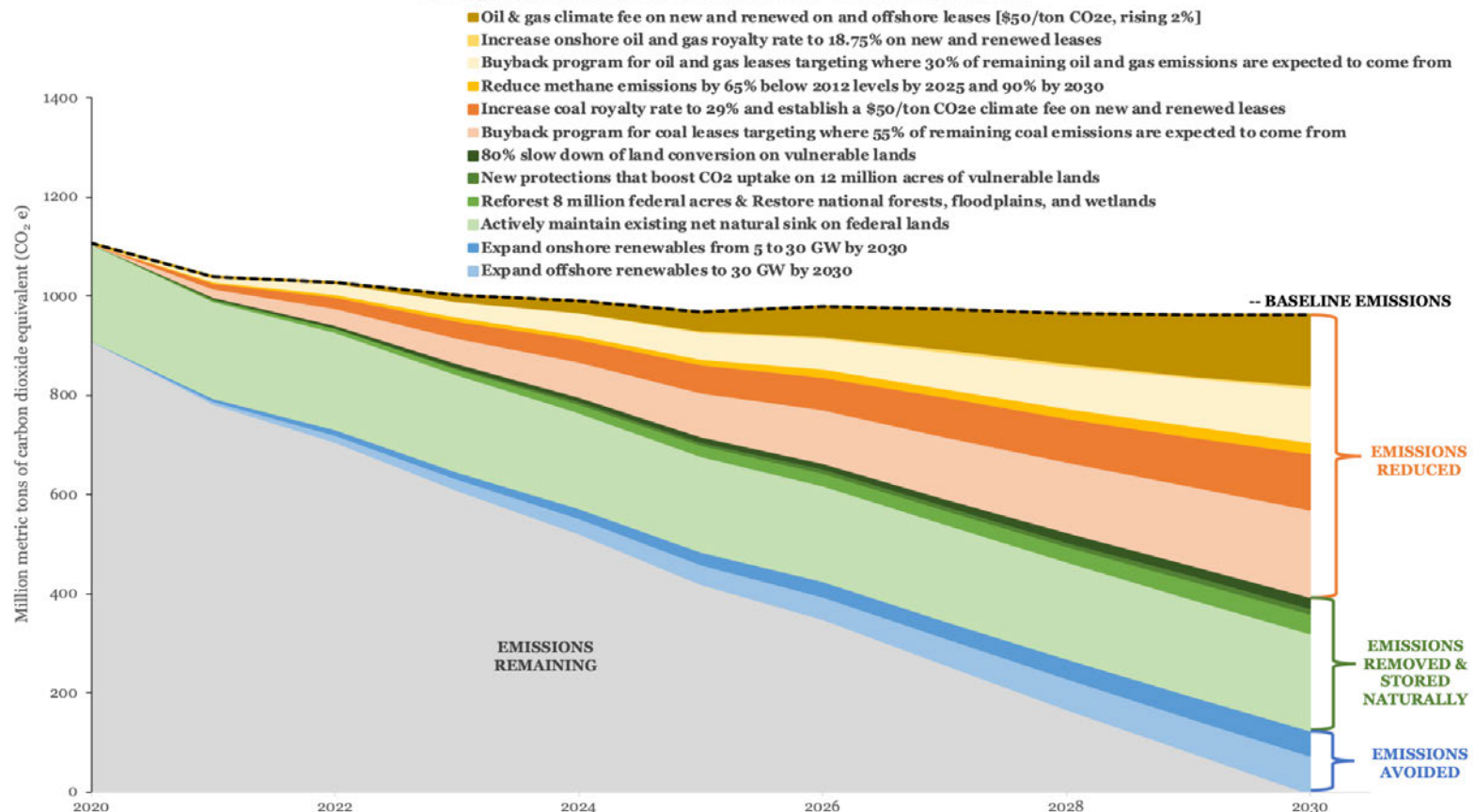
It is likely that there will be new policies at the state and national levels that continue to drive down demand for federal fossil fuel production (especially for coal in the near term) from baseline projected levels. But it is important to also look at what could be achieved by policies solely at the federal level, many under the Administration's control.

B. A combination of higher ambition actions could get us to net zero federal emissions by 2030 even without additional US-wide actions

One hypothetical combination of policies on federal lands and waters that could result in reaching net zero federal emissions in 2030 includes: instituting climate fees such as \$50 per ton of CO₂e for oil, gas, and coal, which would also create significant revenue that could be used for climate mitigation; expanding both onshore and offshore renewables to 30GW; and instituting a voluntary federal lease buyback program that scales down production at a level that aligns with a net zero target. Lease buyback programs should prioritize phasing out extraction where fuels are the most emissions-intensive, where community-involved assessments determine that local economies are most resilient, and should prioritize areas to protect indigenous rights, public health, and areas with high cultural and conservation value.²

Getting to Net-Zero Fossil Fuel Greenhouse Gas Emissions Stemming from Federal Lands & Waters by 2030

Example of one combination of actions* to tackle emissions:



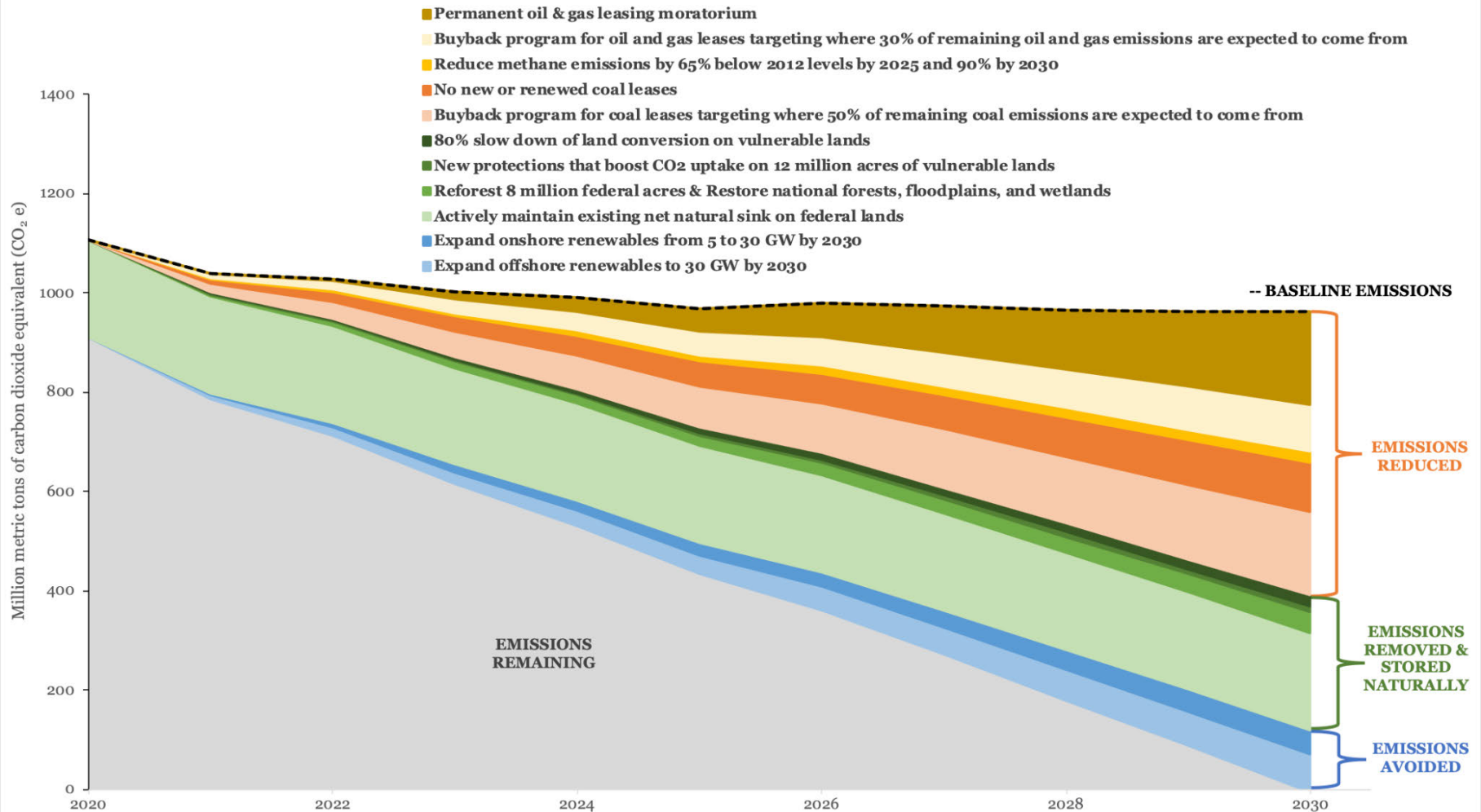
*See The Wilderness Society's *Net Zero Wedges Toolkit* for more information on context, caveats, data sources, methodology, and ongoing research.

² Koski, J., Kartha, S. and Erickson, P. (2019). Principles for aligning U.S. fossil fuel extraction with climate limits. SEI Working Paper. Stockholm Environment Institute, Stockholm. <https://www.sei.org/publications/principles-for-aligning-fossil-fuel-extraction-with-climate-limits/>

C. Alternative combinations of higher ambition actions could also get us to net zero federal emissions by 2030 even without additional US-wide actions

Getting to Net-Zero Fossil Fuel Greenhouse Gas Emissions Stemming from Federal Lands & Waters by 2030

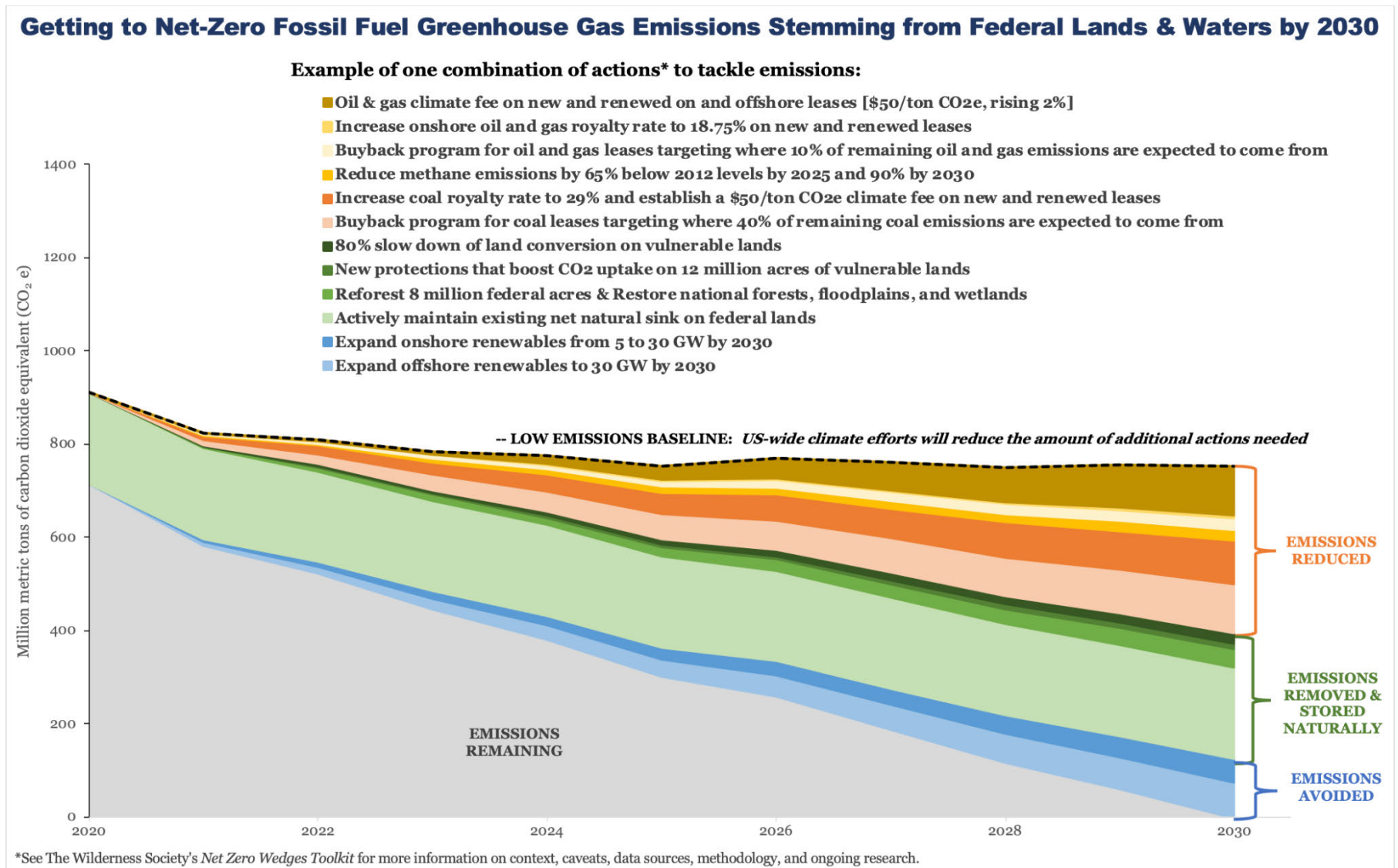
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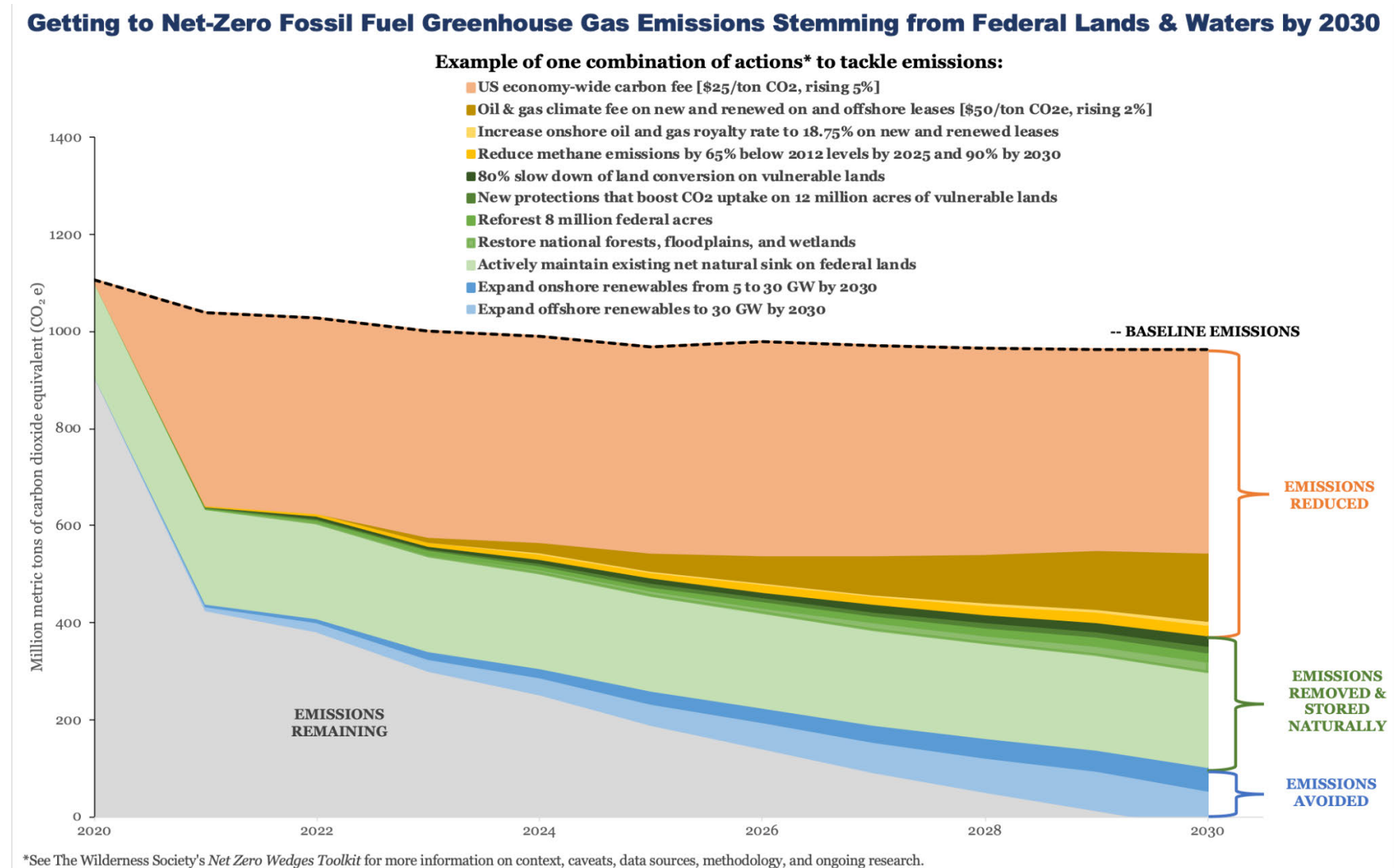
D. State and US-wide climate efforts would reduce the amount of additional actions needed to get us to net zero federal emissions by 2030

With so much climate action occurring right now at state and national levels, it is likely that these other actions will reduce demand for federal production as well. Given this, below we show the estimated reductions from a similar set of high ambition actions on federal lands and waters as Case B, but under a *Low Emissions Baseline* scenario.



E. US-wide climate efforts would reduce the amount of additional actions needed to get us to net zero federal emissions by 2030

To illustrate the impact that prominent nation-wide policy tools would have on reducing the amount and scale of additional actions that would need to occur in order to reach climate goals for federal lands, below we show the projected annual emissions reductions stemming from federal lands and waters that is expected to come from a moderately priced economy-wide carbon fee.



SUMMARY TABLE OF TOOL OPTIONS FOR WEDGE FIGURES

Please see p. 2 of toolkit for context and caveats.

Below is an evolving list of potential actions across energy and natural systems involving our federal public lands and waters. Not all tools listed below are shown in the example wedge figures included in this toolkit. While this is a useful guide, a number of tools are mutually exclusive (e.g., cannot increase base royalty rates for oil and gas leases and also pursue a permanent leasing moratorium). Please contact TWS if interested in seeing a specific combination of policy actions.

The table includes known mechanisms to enact the tool, known legal authority, estimated annual gross federal emissions reductions below baseline in the year 2030, and the research that the emissions reduction estimate is based upon. More information on the data and assumptions used to derive these estimates can be found in the extended methodology section at the end of this toolkit.

| Tools to Tackle Emissions from Federal Lands and Waters | | | | |
|--|---|--|---|---|
| TOOL | MECHANISM | LEGAL AUTHORITY | ESTIMATED FEDERAL REDUCTIONS BELOW BASELINE IN 2030 (MMT CO ₂ e) | EXISTING RESEARCH ESTIMATE IS BASED ON |
| REDUCE EMISSIONS: REFORM FEDERAL FOSSIL FUEL PROGRAMS | | | | |
| Increase on and offshore oil and gas royalty rate to 18.75% or 25% | <ul style="list-style-type: none"> - Impose increased royalty rate on lease issuance or renewal. - Establish royalty rate policy via Instruction Memorandum and in BLM handbook. - Increase royalty rate through legislation, e.g. Sen. Rosen & Sen Grassley's the Fair Return for Public Lands Act of 2021 (S. 264); Rep. | <ul style="list-style-type: none"> - Onshore (competitive new leases and renewals): MLA, 30 U.S.C. § 226(b)(1)(A); 43 C.F.R. § 3103.3-1. - Offshore: OCSLA, 43 U.S.C. §§ 1332(3), 1337; 30 C.F.R. § 560.202. - FLPMA, 43 U.S.C. § 1701(a)(9). - 30 U.S.C. § 352 (applying to leases on acquired land). | <p>6-22</p> <p>Depends if alone or combined with a climate fee: 18.75% alone: 9 25% alone: 22 18.75% with \$50 climate fee: ~6 25% with \$50 climate fee: ~15</p> | <p><u>Prest 2020</u> and <u>Prest 2021</u> supplemental results</p> <p>Also have estimates if 25% increase to base royalty rate only applied to onshore leases.</p> |

| | | | | |
|---|--|--|---|--|
| | <p>Porter's the Ending Taxpayer Welfare for Oil and Gas Companies Act of 2021 (H.R. 1517), Rep. Levin's Restoring Community Input and Public Protections in Oil and Gas Leasing Act of 2021 (H.R. 1503).</p> <p>- Institute increased royalty rate via rulemaking (but existing regulation is sufficient).</p> | | | |
| <p>Charge emissions fee on new and renewed on and offshore oil & gas leases (\$50 or \$100/ton CO₂e, rising 2% annually)</p> | <p>- Impose fee as compensatory mitigation in lease stipulation.</p> <p>- Incorporate into royalty rates.</p> <p>- Issue Instruction Memorandum requiring imposition of emissions fee on new and renewed leases.</p> | <p>- Onshore royalties(competitive new leases and renewals): MLA, 30 U.S.C. § 226(b)(1)(A); 43 C.F.R. § 3103.3-1 & 3101.1-3.</p> <p>- Offshore royalties: OCSLA, 43 U.S.C. §§ 1332(3), 1337; 30 C.F.R. § 560.202.</p> <p>- FLPMA, 43 U.S.C. §§ 1701(a)(8) & (9), 1702(b), (c) & (h), 1732(a) & (b).</p> <p>- MLA, 30 U.S.C. § 226(b)(1)(A).</p> <p>- <i>Ctr. for Biological Diversity v. Nat'l Highway Traffic Safety Admin.</i>, 538 F.3d 1172, 1200 (9th Cir. 2008) (requiring valuation of carbon emissions).</p> <p>- NEPA, 42 U.S.C. §§ 4331(b), 4332(2)(C), (E) & (F).</p> | <p>131-186</p> <p>Depends if alone or in combination with increase to minimum royalty rate: \$50 alone: 131-142 \$100 alone: 186</p> <p>\$50 and 18.75% RR increase combo: 148</p> <p>\$50 and 25% RR increase combo: 145-156</p> | <p><u>Prest 2020</u> and <u>Prest 2021</u> supplemental results</p> <p>Also have estimates if fees only applied to onshore leases.</p> |
| <p>Compensatory mitigation emissions fee at APD stage for existing leases</p> | <p>- Impose fee as compensatory mitigation as a condition of approval on APDs.</p> <p>- Issue Instruction Memorandum requiring imposition of emissions fee on APDs.</p> | <p>- MLA, 30 U.S.C. § 226(b)(1)(A) & (g).</p> <p>- 43 C.F.R. §§ 3101.1-2 & 3101.1-3.</p> <p>- FLPMA, 43 U.S.C. §§ 1701(a)(8) & (9), 1702(b), (c), & (h), 1732(a) & (b).</p> <p>- <i>Ctr. for Biological Diversity v. Nat'l Highway Traffic Safety Admin.</i>, 538 F.3d 1172, 1200 (9th Cir. 2008) (requiring valuation of carbon emissions).</p> <p>- NEPA, 42 U.S.C. §§ 4331(b), 4332(2)(C), (E) & (F).</p> | <p>~8% higher than reductions from emissions fee applied only on new and renewed leases</p> | <p>Based on <u>Prest 2021</u> section 2.2.3</p> |

| | | | | |
|---|--|--|---|---|
| Permanent End to New O&G Leases | <ul style="list-style-type: none"> - Secretarial Order instituting a no leasing policy pursuant to the Secretary's discretion under the MLA. - BLM continually cancels quarterly lease sales in perpetuity because no lands are available for leasing under the MLA. - Rulemaking. - Legislation ending new leasing on federal public lands. | <ul style="list-style-type: none"> - MLA, 30 U.S.C. § 226(a). - FLPMA, 43 U.S.C. §§ 1701(a)(8) & (9), 1702(b) & (c), 1732(a) & (b). - OCSLA, 43 U.S.C. § 1332(3). - NEPA, 42 U.S.C. §§ 4331(b), 4332(2)(C), (E) & (F). | 186 | <u>Prest 2021</u> supplemental results |
| End to New O&G Drilling Permits | <ul style="list-style-type: none"> - Secretarial Order instituting a no new drilling policy pursuant to the Secretary's discretion under the MLA. - Rulemaking. - Legislation ending new leasing on federal public lands. | <ul style="list-style-type: none"> - MLA, 30 U.S.C. § 226(a) & (g). - FLPMA, 43 U.S.C. §§ 1701(a)(8) & (9), 1702(b) & (c), 1732(a) & (b). - OCSLA, 43 U.S.C. § 1332(3). - NEPA, 42 U.S.C. §§ 4331(b), 4332(2)(C), (E) & (F). | No current estimate available | None |
| Federal oil and gas lease buyback program | <ul style="list-style-type: none"> - Develop a voluntary program for buying back existing leases with appropriate and effective valuation. - Legislation to support efforts, including authorization and appropriations. | <ul style="list-style-type: none"> - General modification of contract agreement or as settlement agreement via litigation. - NEPA, 42 U.S.C. §§ 4331(b), 4332(2)(C), (E) & (F). | Scale lease buyback program based on projected emissions remaining to reach net zero by 2030. | None |
| Reduce methane emissions | <ul style="list-style-type: none"> - EPA rulemaking. - BLM rulemaking. - NTL-4A enforcement. - Enhanced guidance via an IM. | <ul style="list-style-type: none"> - 30 U.S.C. § 225. - 43 U.S.C. §§ 1701(a)(8), 1702(b) & (c), 7411(a)(1). - 42 U.S.C. § 7411(b) and (d). - 43 C.F.R. § 3101.1-2. | 4.5-23 | <p>BLM Methane Rule 2016 EA for 4.5 MMT</p> <p>Reduce methane emissions below 2012 levels by 90% by 2030: 23 MMT using TWS' <u>FLEAT 2020 model</u></p> |

| | | | | |
|--|---|---|--|--|
| | <ul style="list-style-type: none"> - Best practices in RMPs and for new leases. - APD COAs. - Legislation, e.g. H.R. 1492 (Rep. Diana DeGette) Methane Waste Prevention Act | | | |
| Increase coal royalty rate to 29% on new and renewed leases | <ul style="list-style-type: none"> - Impose increased royalty rate on lease issuance or renewal. - Establish royalty rate policy via Instruction Memorandum and in BLM handbook. - Increase royalty rate through legislation. | <ul style="list-style-type: none"> - FLPMA, 43 U.S.C. § 1701(a)(9). - 30 U.S.C. § 207. - 43 C.F.R. § 3473.3-2. | 6-8 | Assumes a quarter of <u>CEA 2016</u> impact in year 10 to adjust for updated lease renewal profile and lower demand for federal coal lease. Range depends on if using a low or central baseline. |
| Charge climate fee on new and renewed coal leases (\$50 per ton CO ₂ e) | <ul style="list-style-type: none"> - Impose fee as compensatory mitigation in lease stipulation. - Incorporate into royalty rates. - Issue Instruction Memorandum requiring imposition of emissions fee on new and renewed leases. | <ul style="list-style-type: none"> - FLPMA, 43 U.S.C. §§ 1701(a)(8) & (9), 1702(b), (c) & (h). - MLA, 30 U.S.C. §§ 201, 208, 226(b)(1)(A). - <i>Ctr. for Biological Diversity v. Nat'l Highway Traffic Safety Admin.</i>, 538 F.3d 1172, 1200 (9th Cir. 2008) (requiring valuation of carbon emissions). - NEPA, 42 U.S.C. §§ 4331(b), 4332(2)(C), (E) & (F). | 86-105 | Assumes a quarter of <u>Gerarden, Stock, Reeder 2020</u> impact in year 2030 to adjust for updated lease renewal profile and lower demand for federal coal lease. Range depends on if using a low or central baseline. |
| End issuing new or renewing existing coal leases | <ul style="list-style-type: none"> - Secretarial Order instituting a no leasing policy pursuant to the Secretary's discretion under the MLA. - Rulemaking. - Legislation ending new leasing on federal public lands. | <ul style="list-style-type: none"> - MLA, 30 U.S.C. §§ 181, 182, 201. - Surface Mining Control and Reclamation Act, 30 U.S.C. §§ 1202, 1211(c). - FLPMA, 43 U.S.C. §§ 1701(a)(8) & (9), 1702(b) & (c), 1732(a) & (b). - NEPA, 42 U.S.C. §§ 4331(b), 4332(2)(C), (E) & (F). | 82-100 | Assumes a quarter of the derived 2030 impact of <i>no new leases or renewals</i> scenario from <u>Gerarden, Stock, Reeder 2020</u> to adjust for updated lease renewal profile and lower demand for federal coal lease. Range depends on if using a low or central baseline. |
| Federal coal lease buyback program | <ul style="list-style-type: none"> - Develop a voluntary program for buying back existing leases with | <ul style="list-style-type: none"> - General modification of contract agreement or as settlement agreement via litigation. - NEPA, 42 U.S.C. §§ 4331(b), 4332(2)(C), (E) & (F). | Scale lease buyback program based on projected emissions | None |

| | | | | |
|---|---|--|--------------------------------------|---|
| | <p>appropriate and effective valuation.</p> <ul style="list-style-type: none"> - Legislation to support efforts, including authorization and appropriations. | | remaining to reach net zero by 2030. | |
| REMOVE EMISSIONS: PROTECT AND ENHANCE EXISTING NATURAL SEQUESTRATION AND STORAGE | | | | |
| 80% slowdown of land conversion on vulnerable lands | <ul style="list-style-type: none"> - Best practices in RMPs and new leases. - Administrative withdrawals under FLPMA. - Monument designations under the Antiquities Act. - Amend Forest Plans. - Issue nationwide policy via Instruction Memorandum. - Compensatory mitigation requirement on new leases or at APD stage. | <ul style="list-style-type: none"> - FLPMA, 43 U.S.C. §§ 1701(a)(8), 1702(a), (b), (c), (h), 1714. - NEPA, 42 U.S.C. §§ 4321, 4331, 4332. - 54 U.S.C. § 320301. - 76 Fed. Reg. 3843, 3846–47. - 36 C.F.R. Parts 218, 219. | 22 | <p><u>CAP 2020</u>, based on <u>CSP 2019</u>, <u>Fargione et al 2018</u>, <u>Nature4Climate</u>; and <u>USGS LandCarbon</u></p> |
| New protections that boost CO ₂ uptake on 12 million acres of vulnerable lands | | | 12 | |
| Reforest 8 million federal acres | <ul style="list-style-type: none"> - Best practices in RMPs and new leases. - Administrative withdrawals under FLPMA. - Amend Forest Plans. - Issue nationwide policy via Instruction Memorandum. - Compensatory mitigation requirement on new leases or at APD stage. | <ul style="list-style-type: none"> - FLPMA, 43 U.S.C. §§ 1701(a)(8), 1702(a), (b), (c), (h), 1714. - NEPA, 42 U.S.C. §§ 4321, 4331, 4332. - 76 Fed. Reg. 3843, 3846–47. - 36 C.F.R. Parts 218, 219. | 20 | <p><u>CAP 2020</u>, based on <u>Fargione et al 2018</u> supplementary data; <u>Nature4Climate</u></p> |

| | | | | |
|---|---|--|-------------------------------|---|
| Restore national forests, floodplains, and wetlands | <ul style="list-style-type: none"> - Best practices in RMPs and new leases. - Administrative withdrawals. - Monument designations under Antiquities Act. - Issue nationwide policy via Instruction Memorandum. - Amend Forest Plans. - Compensatory mitigation requirement on new leases or at APD stage. | <ul style="list-style-type: none"> - FLPMA, 43 U.S.C. §§ 1701(a)(8), 1702(a), (b), (c), (h), 1714. - NEPA, 42 U.S.C. §§ 4321, 4331, 4332. - 76 Fed. Reg. 3843, 3846–47. - 36 C.F.R. Parts 218, 219. | 21 | <u>CAP 2020</u> based on <u>Fargione et al 2018</u> supplementary data; <u>USFS 2012</u> for baseline |
| Actively maintain existing net natural land sink | <ul style="list-style-type: none"> - Best practices in RMPs and new leases. - Administrative withdrawals. - Monument designations under Antiquities Act. - Issue nationwide policy via Instruction Memorandum. - Amend Forest Plans. - Compensatory mitigation requirement on new leases or at APD stage. | <ul style="list-style-type: none"> - FLPMA, 43 U.S.C. §§ 1701(a)(8), 1702(a), (b), (c), (h), 1714. - NEPA, 42 U.S.C. §§ 4321, 4331, 4332. - 54 U.S.C. § 320301. - 76 Fed. Reg. 3843, 3846–47. - 36 C.F.R. Parts 218, 219. | 195 | <u>Merrill et al 2018</u> |
| Actively maintain and enhance existing net natural sink for public waters | <ul style="list-style-type: none"> - Best practices in RMPs and new leases. - Administrative withdrawals. - Monument designations under Antiquities Act. | <ul style="list-style-type: none"> - FLPMA, 43 U.S.C. §§ 1701(a)(8), 1702(a), (b), (c), (h), 1714. - NEPA, 42 U.S.C. §§ 4321, 4331, 4332. - 54 U.S.C. § 320301. - 40 C.F.R. § 122.26(a)(9)(i)(C), (D). - 76 Fed. Reg. 3843, 3846–47. - 36 C.F.R. Parts 218, 219. | No current estimate available | Estimates for aquatic sequestration baseline not available |

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|--|---|---|-------|---|
| | <ul style="list-style-type: none"> - Issue nationwide policy via Instruction Memorandum. - Compensatory mitigation requirement on new leases or at APD stage. | | | |
| AVOID EMISSIONS: EXPAND RESPONSIBLE RENEWABLE DEVELOPMENT | | | | |
| Expand onshore renewables from 5 to 30 GW by 2030 | <ul style="list-style-type: none"> - Best practices in RMPs. - Agency permitting prioritization. | <ul style="list-style-type: none"> - 42 U.S.C. § 13311-13317. - 43 U.S.C. §§ 1702(c), (h). - 43 C.F.R. Parts 2800, 2880 | 31-51 | <u>HR 133 2021 spending bill</u> set a target to permit at least 25GW of new renewables on federal land by 2025; continued progress could reach 30 GW by 2030. Assume historic shares by renewable type stays constant: 52% utility scale solar PV, 22% wind, and 26% geothermal. |
| Expand offshore renewables to 30 GW by 2030 | - Agency permitting prioritization. | <ul style="list-style-type: none"> - 42 U.S.C. § 13311-13317. - 43 U.S.C. §§ 1337, 1344(a)(1). - 30 C.F.R. §§ 585.100-585.1019 | 76 | 30 GW offshore wind deployment by 2030 is current <u>Biden Administration commitment</u> |

METHODOLOGY

Baseline Historic and Projected Emissions

Baseline historic (2005-2019) federal fossil fuel emissions: For historic emission calculations we use TWS' Federal Lands Emissions Accountability Tool (FLEAT) results modeled by Apogee EP.³ FLEAT aggregates historic (2005-2019) production from federal lands and waters collected by the Office of Natural Resource Revenue.⁴ The model then creates an emissions profile for each of the five fuel sources [onshore oil, offshore oil, onshore gas, offshore gas, and coal], based on the methodology used in the Environmental Protection Agency's Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990-2018, which includes carbon dioxide, methane, and nitrous oxide.⁵ To calculate downstream emissions, we multiply production volumes by sector specific energy flows from EIA's Annual Energy Review⁶ and apply sector specific emission factors derived by multiplying average annual heat content by fuel type and consuming sector from EIA by EPA's emission factors by gas or carbon content coefficient by fuel type.⁷ To calculate upstream and midstream emissions by fuel type, we scale down EPA's national-level, fuel- and segment-specific emissions data using a ratio of federal production to EIA national production.

Baseline projected (2020-2030) federal fossil fuel emissions: For onshore and offshore oil and gas, we use Prest 2021 supplemental results for baseline projections.⁸ For coal, we use FLEAT 2020 central federal coal production projection estimates. Apogee EP imputes future federal coal production to 2030 via a regularized synthetic control method⁹ using forecasts from the reference case scenario in the EIA's Annual Energy Outlook 2020 as control variables.¹⁰ Same as with historic emissions, we calculate associated lifecycle greenhouse gas emissions based on EPA calculation methods and assumptions employed by the EPA Inventory. We combine FLEAT 2020 predicted coal emissions, with Prest 2021 onshore and offshore oil and gas predicted emission estimates to obtain total projected federal fossil fuel baseline emissions estimates from 2020 to 2030.

Low production alternative baseline: This toolkit focuses on federal actions that are largely under the Administration's control that can reduce emissions, but economy-wide actions such as a clean energy standard for the power sector and higher fuel economy standards have the

³ <https://www.wilderness.org/articles/article/federal-lands-emissions-accountability-tool>

⁴ US Office of Natural Resources Revenue (2020) Calendar year production data (2005-2019). US Department of the Interior, ONRR. https://revenue.doi.gov/downloads/production/calendar_year_production.xlsx

⁵ US Environmental Protection Agency (2020) Inventory of US Greenhouse Gas Emissions and Sinks:1990-2018. US EPA 430-R-20-002. <https://www.epa.gov/ghgemissions/inventory-us-greenhouse-gas-emissions-and-sinks>

⁶ US Energy Information Administration (EIA) (2020) Annual Energy Review. <https://www.eia.gov/totalenergy/data/annual/>

⁷ US EPA (2018) EPA emission factors for greenhouse gas inventories. Modified 9 March 2018.

https://www.epa.gov/sites/production/files/2018-03/documents/emission-factors_mar_2018_o.pdf

⁸ Prest B (2021) Supply-side reforms to oil and gas production on federal lands: Modeling the implications for climate emissions, revenues, and production shifts. Resources for the Future. Working Paper 20-16. Updated March 2021

https://www.rff.org/documents/2872/WP_20-16_Updated.pdf

⁹ Doudchenko N, Imbens G (2016) Balancing, Regression, Difference-In-Differences and Synthetic Control Methods: A Synthesis.

<https://arxiv.org/abs/1610.07748>.

¹⁰ US Energy Information Administration (EIA) (2020a) Annual Energy Outlook 2020. <https://www.eia.gov/outlooks/aeo/>

potential to substantially lower the baseline projected production and thus the baseline emissions.¹¹ To account for the uncertainty of US-wide climate actions that are currently under debate, in some wedge versions we show the estimated reductions from a set of actions using a *Low Emissions Baseline* scenario. The *Low Emissions Baseline* scenario uses FLEAT 2020 low projection estimates for coal and a 25% reduction from Prest 2021 baseline for oil and gas emissions. In turn, we assume a subsequent 25% reduction from estimated annual impacts of oil and gas supply-side actions that are based on Prest 2021.¹²

Baseline ecosystem carbon emissions: For baseline land use emissions we use 2005-2014 annual average ecosystem carbon emissions fluxes (harvesting, wildfire, and other carbon removals due to land use, land-use change and disturbance such as agricultural production and urbanization losses) from Merrill et al 2018.¹³ These emissions are baked into the “maintain existing net natural sink” wedge.

Tools to Reduce Federal Fossil Fuel Emissions

Oil and Gas

Estimates for oil and gas tools are based on Prest 2020 and Prest 2021 supplemental annual results.¹⁴ Increasing royalty rates to 18.75% for new and renewed oil and gas leases would reduce federal emissions by between 16 and 24 MMT of CO₂e on average out to 2050 (or between 4 to 7 annual average global emissions reductions) and would raise an additional \$1 to \$2.1 billion in federal revenues per year compared to business as usual.¹⁵ Increasing royalty rates to 25% for new and renewed onshore and offshore oil and gas leases would reduce federal emissions by between 37 and 57 MMT of CO₂e on average out to 2050 (or between 10 and 17 annual average global emissions reductions) and would raise an additional \$2.6 to \$5.3 billion in federal revenues per year compared to business as usual.¹⁶ Instituting a permanent moratorium on new and renewed onshore and offshore oil and gas leases would reduce federal emissions by between 314 and 460 MMT of CO₂e on average out to 2050 (or between 85 and 147 annual average global emissions reductions), but would reduce annual federal revenues by between \$5.5 and \$11.1 billion per year compared to business as usual.¹⁷

¹¹ For more information on economy-wide standards and methods to achieving Biden’s commitment to decarbonize the electricity sector by 2035, see Goldman School of Public Policy, *2035: The Report*, University of California Berkeley (June 2020), available at: <https://www.2035report.com/>; see also Strokes, L., et al, *A Roadmap to 100% Clean Electricity by 2035*, Evergreen Collaborative (February 2021), available at: <https://www.filesforprogress.org/memos/evergreen-ces-report.pdf>

¹² 25% reduction is in line with the difference between EIA’s Annual Energy Outlook 2021 *Reference* case and *Low oil and gas supply* case for year 2030. <https://www.eia.gov/outlooks/aeo/data/browser/#/?id=1-AEO2021%C2%AEion=0-0&cases=ref2021~lowogs~aeo2020ref&start=2010&end=2050&f=A&sourcekey=0>

¹³ Merrill MD et al (2018) Federal Lands Greenhouse Emissions and Sequestration in the United States — Estimates for 2005–14: US Geological Survey Scientific Investigations Report 2018–5131. <https://doi.org/10.3133/sir20185131>

¹⁴ Prest B (2020) Supply-side reforms to oil and gas production on federal lands: Modeling the implications for climate emissions, revenues, and production shifts. Resources for the Future. Working Paper 20-16. Original paper release September 2020: https://media.rff.org/documents/RFF_WP_20-16_Prest.pdf?_ga=2.8733237.1240995157.1618309948-1103774153.1607126855 and Prest 2021. RFF WP 20-16 updated on March 15, 2021. https://www.rff.org/documents/2872/WP_20-16_Updated.pdf

¹⁵ Prest 2021. Table 1, p.25 and Table A.9, p.65

¹⁶ Prest 2021. Table 1, p.25 and Table A.9, p.65

¹⁷ Prest 2021. Table 1, p.25 and Table A.9, p.65

Another supply-side policy option is to implement a fee per ton of CO₂e that is pegged to production. The amount that a climate fee should be depends on the desired outcomes. A \$50/ton CO₂e fee applied to new and renewed oil and gas leases would reduce annual federal emissions by between 225 and 292 MMT of CO₂e on average out to 2050 (or between 61 to 69 annual average global emissions reductions) and would raise an additional \$2.9 to \$5.9 billion in federal revenues per year compared to business as usual.¹⁸ A \$100/ton CO₂e fee represents a fee that is close to or equivalent to the production and emissions impacts that would come from a permanent leasing moratorium. Prest and Stock 2021 also look at the impact of charging distinct oil and gas climate fees.¹⁹ The highest that they modeled, a \$90/ton CO₂e oil climate fee and a \$50/ton CO₂e gas climate fee would combined have the same impact on emissions reductions as a permanent leasing moratorium.

If the desired policy outcome is to maximize global emission reductions but to not go below business-as-usual federal revenue from the federal oil and gas programs, then a policymaker would choose a \$50 climate fee/ton on gas and a \$70 climate fee/ton on oil.²⁰ This would mean an increase in revenue of about \$400 million per year above BAU and result in around 71-123 MMT CO₂e in average global emission reductions per year out to 2050 (based on leakage rates that translates to 258 MMT CO₂e annual average reduction in gross federal emissions). There are a number of distinct oil and gas carbon fee combinations that would get relatively close to the same amount of global emission reductions without losing money from a BAU scenario, e.g., a fee on gas at about \$15 per ton and a fee on oil around \$80 per ton would still mean an increase in revenue of about \$200 million per year above BAU and result in around 70-123 MMT CO₂e in global emission reductions over 30 years.

To estimate impact of applying a climate fee on all new drilling permits for onshore and offshore oil and gas, we apply Prest's finding that being able to apply the policies modeled in his paper to all new wells would result in around an 8% increase in cumulative emissions reductions compared to federal emission reductions that would come from being able to apply an oil and gas climate fee only to new leases.²¹

Methane

We currently include two options to represent a high- and low-end range of federal methane emission reduction potential that could stem from actions impacting lifecycle methane emissions from oil and gas production coming from federal public lands and waters in 2030. For reference, FLEAT estimates baseline federal lifecycle oil and gas methane emissions in 2030 to total more than 27 MMT CO₂e (using a global warming potential of 25).²²

¹⁸ Prest 2021. Table 1, p.25 and Table A.9, p.65

¹⁹ Prest B. Stock J H. (2021) Climate Royalty Surcharges. NBER Working Paper 28564. Cambridge, MA. <http://www.nber.org/papers/w28564>

²⁰ See tables 4 and 5. Prest B. Stock J H. (2021) Climate Royalty Surcharges. NBER Working Paper 28564. Cambridge, MA. <http://www.nber.org/papers/w28564>

²¹ Prest 2021 section 2.2.3

²² To facilitate comparisons to US-wide emissions, we use the same global warming potentials as the EPA uses for the annual Inventory of US Greenhouse Gas Emissions and Sinks submitted each year to the UNFCCC. For more on why the EPA uses the IPCC AR4 GWP values in the US inventory see: <https://www.epa.gov/ghgemissions/understanding-global-warming-potentials#Learn%20why>

For a high-end estimate we model the methane emissions reductions that would be required to be in line with the goal included in the Methane Waste Prevention Act of 2021 -- reduce lifecycle oil and gas methane emissions in 2025 to levels at least 65% below 2012 levels and in 2030 to levels at least 90% below 2012 levels.²³ We use FLEAT calculations for 2012 lifecycle methane emissions stemming from oil and gas production on public lands and waters (42.8 MMT CO₂e in 2012) and reducing 2025 methane emissions (baseline 2025 expected to be 28.1 MMT CO₂e in 2025) by 65% below 2012 levels by 2025 (65% below 2012 levels by 2025 $[42.8 - (42.8 * 0.65) = 15]$ means reduce expected 2025 levels by 15 MMT. If baseline 2025 methane emissions are 28.1 MMT CO₂e, then a 15 MMT reduction would mean reaching 13.1 MMT in 2025 $[28.1 - 15 = 13.1]$. Then, 90% of 2012 levels by 2030 $[42.8 - (42.8 * 0.9) = 4.3]$ would mean methane emissions would not exceed 4.3 MMT in 2030. (given that baseline projected methane emissions are 27.2 MMT CO₂e, then that would mean reducing baseline methane emissions by at least 22.9 MMT CO₂e in 2030 $[27.2 - 4.3 = 22.9]$).

Emission estimates weigh methane by their 100-year global warming potential.²⁴ FLEAT assumes methane leakage rates based on EPA official inventory methods; these likely underestimate emissions. EPA revised its methane emissions methodology in 2019 to show a 1.1% leakage rate for the natural gas system, which is below top-down estimates of 2.36%.²⁵

The BLM's 2016 Waste Prevention Rule (commonly referred to as the BLM Methane Rule), imposed new regulations on natural gas producers to reduce wasted gas (methane emissions), on federal public lands from venting, flaring, and leaks.²⁶ Due to a series of administrative and judicial interventions, the rule was never fully implemented and on October 8, 2020 a US District Court vacated the vast majority of the rule -- including the parts pertaining to the loss of gas through venting, flaring, and leaks.²⁷ (The effect of the ruling is that venting, flaring, and avoidably/unavoidably lost determinations are subject to NTL-4A.) The Biden administration has announced a clear intention to pursue actions to reduce methane emissions in the US including from federal public lands and waters.

For a low-end range of methane emission reductions, we currently use a proxy that would only address a portion of reduction potential targeting upstream, onshore federal oil and gas production. The 2016 Waste Prevention Rule EA found that upon full implementation the rule would prevent an estimated 4.5 MMT CO₂e of methane emissions per year from oil and gas

²³ Methane Waste Prevention Act of 2021. Introduced in House on 2 March 2021. Sec. 2(a)(1) and (a)(2).

<https://degette.house.gov/sites/degette.house.gov/files/DeGette%20Methane%20Waste%20Prevention%20Act%20210302.pdf>

²⁴ Intergovernmental Panel on Climate Change (2007) TS.2.5 Net Global Radiative Forcing, Global Warming Potentials and Patterns of Forcing. In Climate Change 2007: The Physical Science Basis. Contribution of Working Group I to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change [Solomon, S., D. Qin, M. Manning, Z. Chen, M. Marquis, K.B. Averyt, M. Tignor and H.L. Miller (eds.)]. Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA.

https://archive.ipcc.ch/publications_and_data/ar4/wg1/en/ts2s-2-5.html

²⁵ Alvarez R et al (2018) Assessment of methane emissions from the U.S. oil and gas supply chain. Science. 361, 6398: 186-88.

<http://doi.org/10.1126/science.aar7204>

²⁶ BLM, Waste Prevention, Production Subject to Royalties, and Resource Conservation, 81 Fed. Reg. 83,008, 83,008 (Nov. 18, 2016).

²⁷ Parts vacated included including all of 43 C.F.R. subpart 3179 and the waste minimization plan requirement of 43 C.F.R. §3162.3-1(j). This case is on appeal as of April 2021.

production on federal lands.²⁸ The 2016 EA assumed that the EPA 2016 rule targeting new sources was in place and removed any overlap. As such, a rule that addresses both existing and new sources from oil and gas production on federal public lands (and waters) would reduce more than the 4.5 MMT CO₂e estimated in the 2016 EA. More will be done to improve this estimate based on modeling of new proposed actions, current methane emission projections, and the estimated impact of specific proposed actions in as much as it would entail tighter restrictions or cover more sources that enacted state regulations.

Coal

Between 2005 and 2019, 39% of US coal production came from federal lands. The single largest basin for federal coal production is the Powder River Basin (PRB) in Wyoming and Montana. Coal from those two states made up over 89% of federal coal in 2019 and it is almost entirely surface-mined. The DOI has broad statutory discretion in setting royalty rates for new or renewed leases, although they cannot be changed on existing leases.²⁹ There has been little demonstrated demand for new federal coal leases since 2016 and future demand for new federal coal leases regardless of policy is unclear. Increasing royalty rates or adding a climate fee for federal coal will only be able to reduce emissions if there is demand for new coal leases or still demand for renewed leases. Yet, in 2019, 2020, and 2021 the US Energy Information Administration (EIA) projects that US coal production in the PRB will stabilize unless new regulations are implemented.³⁰

Like for oil and gas, for federal coal we include a number of distinct policy options. Gerarden, Stock, Reeder 2020, estimate a 96.7% decline in PRB coal production and a 13% decline in U.S. power sector emissions in 2030 compared to baseline due to a federal coal climate surcharge set at approximately 100% the value of the social cost of carbon.³¹ Gerarden et al 2020 assumes that policies start to be implemented in 2016 and although original lease terms are 20 years, the authors use linear approximation modeling to apply a federal lease renewal profile and assume that 100% of leases weighted by tonnage would be covered by these policies as of 2025 (year 10). Similarly CEA 2016 uses a 10 year horizon and estimates that increasing federal coal royalty rates to 29% in 2016 would result in a 7% decrease in federal coal production and an annual decrease in US-wide emissions of 32 million metric tons of CO₂ after year 10.³² To approximate what an updated lease renewal profile means as of 2021, we turn to Figure 2 in

²⁸ US Department of the Interior, Bureau of Land Management. (10 Nov 2016). Environmental Assessment: Waste Prevention, Production Subject to Royalties, and Resource Conservation DOI-BLM-WO-WO2100-2017-0001-EA. <https://downloads.regulations.gov/BLM-2016-0001-9128/content.pdf>

²⁹ Title 30, Section 207(a) of the US Federal Code states conditions on federal leases; also see Krupnick, Alan, Joel Darmstadter, Nathan Richardson, and Katrina McLaughlin. 2015. "Putting a Carbon Charge on Federal Coal: Legal and Economic Issues." Resources for the Future Discussion Paper 15-13.

³⁰ US Energy Information Administration (EIA). 2019. Annual Energy Outlook 2019: With Projections to 2050. <https://www.eia.gov/outlooks/aeo/pdf/aeo2019.pdf>.

³¹ Gerarden TD, Reeder WS, Stock JH (2020) Federal Coal Program Reform, the Clean Power Plan, and the Interaction of Upstream and Downstream Climate Policies. American Economic Journal: Economic Policy 12(1): 167–199. <https://doi.org/10.1257/pol.20160246>

³² Executive Office of the President of the United States, Council of Economic Advisers (CEA), The Economics of Coal Leasing on Federal Lands: Ensuring a Fair Return to Taxpayers (Washington, D.C.: June 2016). https://obamawhitehouse.archives.gov/sites/default/files/page/files/20160622_cea_coal_leasing.pdf

Although on p.5 these 32 million metric tons in annual emission reductions are described as net decrease in total nationwide emissions, Table 2 on p. 26 refers to 32 MMTCO₂/year as the "direct reduction from reduced coal use nationwide." Based on the methodology described in the paper, it appears this accounts both for small shifts to nonfederal coal and overall reductions in US coal consumption and reduced emissions due to shifts to other fuel sources for power generation.

Gerarden et al 2020 that shows the federal coal lease renewal profile as of January 2016 based on BLM data compiled by Headwaters Economics. At year 5 (2021 in Gerarden et al 2020 Figure 2), approximately half of the leases weighted by tonnage would have already been readjusted (typically by renewal) and that leaves about half of the remaining leases weighted by tonnage to come up for renewal in the next 15 years. Based on the data in the figure, approximately 95% of leases weighted by tonnage would come up for readjustment by year 14 (2030) and all would come up for readjustment by year 17 (2033). To adjust for the updated approximated federal coal lease renewal profile, we assume that half of the impact of actions estimated by Gerarden et al 2020 and CEA 2016 could be reached by 2030 if policies begin in 2021 rather than 2016.

To improve these estimates, we need to know the actual demand for coal lease renewals (weighted by tonnage) since January 2016, the amount of tonnage remaining that could be covered by these policies, and updated demand for new and renewed federal coal leases. There is a lot of uncertainty about the impact of policies on new federal coal leases with the last new sales reported by DOI being in 2017 and it is difficult to find public data on annual changes in federal lease renewals. Even though our baseline remains based on AEO projections that show demand for coal in the PRB remaining high absent new policies and the numerous uncertainties that we outline above, for now we remain conservative and assume that there is only half of the historic demand for new and renewed federal coal leases. When combining this assumption to account for decreased demand for new and renewed federal coal leases with the updated coal lease renewal profile weighted by tonnage, we assume that these policies that can only be applied to new and renewed federal coal leases would have 25% of the impact in year 10 as what was estimated by Gerarden et al 2020 and CEA 2016. In other words, we assume a 1.75% reduction in 2030 federal coal production due to increasing base royalty rates to 29% (as opposed to the 7% reduction found by CEA 2016) and we assume a 24.2% reduction in 2030 federal coal production due to a climate fee charging the full social cost of carbon added on to royalty rate fees (as opposed to the 97.6% reduction found by Gerarden et al 2020).

To estimate the impact of a policy in which the federal government issues no new coal leases and stops renewing existing federal coal leases, we use Gerarden et al 2020 quantity limit policy scenario that finds a *no new leases or renewals* scenario would result in a 90.43% reduction in PRB coal in 2040 and 15.2% decline in US-wide power sector emissions from a *business-as-usual no surcharge and no CPP* scenario. To derive what that estimate would have been for the impact by year 2030, we apply the 2030 versus 2040 share of PRB production reduction for the *100% SCC surcharge and no CPP* scenario compared to baseline. We find that a *no new leases or renewals* scenario would result in around a 92% decline in PRB coal production in 2030.³³ Again, same as with the other cases that are based on assumed demand for new and renewed federal coal leases as of 2016, we assume only 25% of Gerarden et al 2020

³³ Gerarden et al 2020. Table 6, p.193 for *no new leases or renewals* scenario and derived 12.34% decline in year 2030 based on impact of *100% SCC surcharge and no CPP* case for 2040 in Table 6 vs for 2030 in Table 4. The IPM results found approximately 0.81 of the impact in 2040 would occur by 2030. As such, approximately 12.3% reduction (0.81×0.152) would be estimated for the emissions reductions achieved by 2030 for a *no new leases or renewals* policy.

impact to adjust for an updated lease renewal profile and a lower demand for coal lease readjustments.

To illustrate the impact that prominent nation-wide policy tools would have on reducing projected annual emissions stemming from federal lands, we include an economy-wide carbon fee policy based on EIA's AEO 2020 *\$25 carbon fee* side case.³⁴ We apply the annual percent change to PRB coal production between AEO 2020 *reference case* and AEO 2020 *\$25 carbon fee* side case to the FLEAT 2020 coal baseline. AEO 2020 *\$25 carbon fee* side case assumes economy-wide implementation of a \$25 per MT of carbon dioxide starting in 2021. The fee increases annually by 5% (in real dollars). AEO 2020 assumes that the revenues are distributed back to consumers via lump-sum payments. Although there will be some change to federal oil and gas production as well in the first decade, the majority of the impact of this economy-wide fee is on coal production. We estimate less than a 1% change to the other federal fuel types out to 2030 due to this policy.

Tools to Protect & Enhance the Existing Natural Carbon Sink on Federal Lands

In November 2018 the USGS published a study estimating the net greenhouse gas emissions of federal lands, including ecosystem carbon emissions and sequestration on those lands.³⁵ Merrill et al. (2018) estimates terrestrial ecosystems (forests, grasslands, and shrublands) on federal lands sequestered an average of 195 MMT CO₂e/year between 2005 and 2014 when accounting for interannual flux. For now, we assume that going forward actions that would maintain this existing annual average net natural carbon sink on US onshore federal lands.

Next we include the estimated impact from existing research on what 5 distinct actions could have to enhance the federal onshore natural carbon sink via new protections, reforestation, and restoration. Both the level of actions and resulting impacts are directly pulled from calculations done by Center for American Progress (CAP) reported in 2020 that are specific to actions entirely focused on federal public lands.³⁶ Based on existing data and available research CAP estimates that a combination of five additional actions that can enhance the existing natural sink on federal public lands -75 MMT CO₂e in 2030. Below is an overview of the data and research used for CAP's calculations of each action.

CAP calculations include two actions that require additional protections including: (1) new protections that force land conversion to slow down by 80% on vulnerable lands to avoid conversion of more than 1.2 million acres of forests and other natural areas that otherwise would have been cleared for human use by 2030 and (2) additional land protections that boosts future sequestration potential of the 12 million acres of vulnerable lands. To estimate the emissions

³⁴ US Energy Information Administration (EIA) (2020b) Annual Energy Outlook 2020: Alternative Policies. Released 5 March 2020. https://www.eia.gov/outlooks/aeo/section_issue_policies.php

³⁵ Merrill et al. 2018

³⁶ Richards R. (2020) The Plan for a 100 Percent Clean Future Must Include Saving Nature. Center for American Progress (CAP). 11 August 2020. <https://www.americanprogress.org/issues/green/reports/2020/08/11/489154/plan-100-percent-clean-future-must-include-saving-nature/>

reductions impacts of both these actions that involve additional protections, CAP offers the following explanation of its methodology:

The climate benefits of new protections for lands were calculated in two parts: the quantity of emissions avoided by protecting lands that would be lost to development between now and 2030 and the amount of greenhouse gases sequestered in 2030 by these same lands. Both components are based on observed trends in natural area loss and generalized per-acre estimates for annual sequestration rates and stored aboveground carbon in the United States.

To account for additionality, the only lands considered in calculations were those that can be reasonably expected to be converted for development by 2030, absent new protections. CAP based these calculations on analyses made by Conservation Science Partners³⁷ of natural area loss from 2001 to 2017 and assume that this trend will continue through 2030. It was assumed that the pursuit of a 30×30 goal would not completely offset development patterns, and therefore estimate that only 80 percent of natural area loss will be avoided through new land protections by 2030. This estimate is much lower than the full extent of new protections needed to achieve a 30 percent goal because not all of the land that would be protected in pursuit of a 30×30 goal would have otherwise been lost to development by 2030.

The per-acre estimates of both carbon storage and annual sequestration draw on peer-reviewed research and other publicly available data for ecosystems in the United States.³⁸ CAP generalized these estimates because the specific locations of avoided natural area losses between now and 2030 are unknown.

CAP estimates the impact of reforesting 8 million acres on federal lands -- an amount chosen to reflect the land's historical natural state -- by using peer-reviewed spatial analyses to estimate the baseline area on federal lands that were historically forested but currently have no tree cover.³⁹ The authors base annual sequestration in 2030 on acres that would need to be planted between now and 2030 to reforest 8 million acres, and uses sequestration rates from Fargione et al 2018 supplementary data.

Finally, CAP calculates the net federal emissions reductions of two restoration actions that we include in this toolkit: (1) increasing restoration investments in order to restore at least 6 million

³⁷ CAP 2020 Endnote 9: Conservation Science Partners (2019) Methods and approach used to estimate the loss and fragmentation of natural lands in the conterminous U.S. from 2001 to 2017. Technical report. Truckee, CA. https://www.csp-inc.org/public/CSP_Disappearing_US_Tech_Report_v101719.pdf.

³⁸ CAP 2020 Endnote 28: Sources include online resources and peer-reviewed literature, including Nature4Climate, "U.S. State Mapper," available at <https://nature4climate.org/u-s-carbon-mapper/> (last accessed August 2020); Fargione and others, "Natural climate solutions for the United States" <https://advances.sciencemag.org/content/4/11/eaati869>; U.S. Geological Survey, "LandCarbon," available at https://www.usgs.gov/mission-areas/land-resources/science/landcarbon?qt-science_center_objects=0#qt-science_center_objects (last accessed August 2020).

³⁹ CAP 2020 Endnote 29: Nature4Climate, "U.S. State Mapper," available at <https://nature4climate.org/u-s-carbon-mapper/> (last accessed August 2020); Sample, "Potential for Additional Carbon Sequestration through Regeneration of Nonstocked Forest Land in the United States."

acres of national forests per year, and (2) restoring floodplains and wetlands. CAP bases annual average sequestration estimates for forest and wetland restoration activities from Fargione et al 2018 supplementary data. CAP estimates acreage gained from specific activities based on increases above reported baselines and potential acreage still needing restoration in each of these ecosystems based on reports by the US Forest Service⁴⁰ (65-82 million acres of national forest land need restoration and 2-4 million acres of restoration work each year) and from the US Environmental Protection Agency⁴¹ (around half of remaining US wetlands need restoration).

Tools to Ramp up Responsible Renewables and Aid US Transition to Decarbonized Electricity Grid by 2035

A lot of work has to come from supply- and demand-side actions in order to achieve the rapid transition to a low carbon energy system that is needed to bring US emissions in line with what is needed for a chance to avoid a 1.5°C rise in global temperatures by 2100. Renewable generation projects in the US have to dramatically ramp up in order to meet top climate targets -- to achieve 50-52% below 2005 GHG levels by 2030 (the new US NDC), 100% decarbonization of the US electricity grid by 2035, and net-zero emissions in the US by 2050. According to Princeton's Net-Zero America Project, achieving 100% decarbonization of the US electricity grid by 2035 requires that 60% of the US grid come from wind and solar generation by 2035.⁴² For reference, we are currently at about 10% of the US grid being wind and solar. The Zero Carbon Action Plan found that to achieve Biden's goal of net-zero emissions by 2050 the US will need to add renewable generation capacity by an average of 100 gigawatts every year until 2050 to increase from the 2020 level of 284 GW⁴³ of renewable generation capacity in the US to 3,000 GW by 2050.⁴⁴ This new generating capacity will mostly be from wind and solar.

Achieving this level of renewable energy expansion will require massive actions in the next 10 years and US federal public lands and waters have much to contribute. This toolkit includes various ambitions for renewable generating capacity expansions by 2030 for both onshore and offshore, but it does not explicitly delineate the numerous actions needed to invest in incentives and infrastructure necessary to responsibly expand both onshore and offshore federal renewable generating capacity by 2030. Demand side actions to meet these clean energy priorities include: renewable energy subsidies, massive investment in infrastructure expansion for wind and solar transmission, investment in expansion of electric vehicle charging stations, and emission

⁴⁰ CAP 2020 Endnote 30: U.S. Forest Service, "From Accelerating Restoration To Creating and Maintaining Resilient Landscapes and Communities Across the Nation: Update on Progress From 2012"; U.S. Forest Service, "Increasing the Pace of Restoration and Job Creation on Our National Forests" (Washington: U.S. Department of Agriculture, 2012), available at

https://www.fs.usda.gov/sites/default/files/media/types/publication/field_pdf/increasing-pace-restoration-job-creation-2012.pdf

⁴¹ CAP 2020 Endnote 31: U.S. Environmental Protection Agency, "Wetlands – Status and Trends," available at https://archive.epa.gov/water/archive/web/html/vital_status.html (last accessed August 2020); U.S. Environmental Protection Agency, "EPA Releases Report Showing Nearly Half of Nation's Wetlands in Good Health," Press release, May 11, 2016, available at <https://archive.epa.gov/epa/newsreleases/epa-releases-report-showing-nearly-half-nations-wetlands-good-health.html>

⁴² Princeton University. Net Zero America Project. <https://environmenthalfcentury.princeton.edu/>

⁴³ U.S. EIA. Electric Power Monthly, February 2021, preliminary data for 2020.

<https://www.eia.gov/energyexplained/electricity/electricity-in-the-us-generation-capacity-and-sales.php#:~:text=At%20the%20end%20of%202020,solar%20photovoltaic%20electricity%20generating%20capacity.>

⁴⁴ Sustainable Development Solutions Network (SDSN). 2020. Zero Carbon Action Plan. New York. p.33:

<https://irp-cdn.multiscreensite.com/6f2c9f57/files/uploaded/zero-carbon-action-plan.pdf>

reduction credits or offsets. Supply-side actions, especially for DOI, largely involve increased permitting efficiency and prioritization. A smart from the start approach is crucial to ensuring responsible development on public lands that protects our natural and cultural heritage.⁴⁵

Onshore renewable energy

Less than 5% of the total U.S. solar, wind and geothermal capacity comes from projects on public lands.⁴⁶ As of 2019 there were 96 utility-scale renewable energy projects operating on public lands and these projects had a total generating capacity of 5,041 MW. TWS has assessed that expanding onshore federal renewables by 25 GW from the current 5GW to reach 30GW operating by 2030 is a reasonable goal for responsible federal onshore development. This goal is also consistent with the target included in the government spending bill approved by Congress in December 2020: to permit at least 25GW of onshore renewables on federal land by 2025 through management of public lands and administration of federal laws.⁴⁷ A far less ambitious goal would be to simply reach the 10GW permitting level that was set in 2005.⁴⁸

In this toolkit we assume the share of additional renewable generating capacity by technology type remains constant as the existing 5 GW as documented in a joint report released by TWS and Yale Center for Business and the Environment in May 2020.⁴⁹ The additional 25 GW is assumed to be 52% utility scale solar PV (13 GW), 22% wind (5.5 GW), and 26% geothermal (6.5 GW). We use EPA's AVERT tool to calculate estimated avoided emissions in 2030.⁵⁰ The estimate varies based on where the projects are located.

Offshore renewable energy

For offshore, we include emission reduction estimates from a relatively low goal of achieving 15 GW of offshore renewable generating capacity in federal public waters (meaning in the outer continental shelf (OCS)) by 2030 and a moderate goal of achieving 30 GW in federal public waters by 2030. According to BOEM, the OCS blocks leased as of July 2016 had the potential to support 14.6 GW of commercial wind generation if leases were developed as planned.⁵¹ The Biden Administration set a goal of deploying 30 GW of offshore wind by 2030.⁵²

⁴⁵ Springer N. Daue A. (2020) Key Economic Benefits of Renewable Energy on Public Lands. Yale Center for Business and the Environment and The Wilderness Society. <https://www.wilderness.org/renewableenergyreport>

⁴⁶ *Id.*

⁴⁷ Consolidated Appropriations Act, 2021. Sec. 3104. (b). <https://rules.house.gov/sites/democrats.rules.house.gov/files/BILLS-116HR133SA-RCP-116-68.pdf>

⁴⁸ The Energy Policy Act of 2005 set a goal for DOI to permit 10 GW of renewables by 2010. <https://www.congress.gov/109/plaws/publ58/PLAW-109publ58.pdf>

⁴⁹ Springer N. Daue A. (2020) Key Economic Benefits of Renewable Energy on Public Lands. Yale Center for Business and the Environment and The Wilderness Society. <https://www.wilderness.org/renewableenergyreport>

⁵⁰ US EPA. AVOIDED Emissions and generation Tool (AVERT). <https://www.epa.gov/statelocalenergy/avoided-emissions-and-generation-tool-avert#when>

⁵¹ Bureau of Ocean Energy Management (BOEM) 5 year leasing program EIS 2017-2022: p. 1-12.

⁵² FACT SHEET: Biden Administration Jump Starts Offshore Wind Energy Projects to Create Jobs. <https://www.whitehouse.gov/briefing-room/statements-releases/2021/03/29/fact-sheet-biden-administration-jumpstarts-offshore-wind-energy-projects-to-create-jobs/>

To calculate roughly what these offshore GW targets mean in terms of avoided emissions, we use the same ratio as the BOEM National Offshore Wind Strategy Report, 1 GW = 2.55 million metric tons of CO₂e avoided per year.⁵³

⁵³ BOEM (2016) National Offshore Wind Strategy Report. 2016.
<https://www.boem.gov/sites/default/files/renewable-energy-program/National-Offshore-Wind-Strategy-report-09082016.pdf>