

From: [Chase Huntley](#)
To: [Klein, Elizabeth A](#)
Cc: [Drew McConville](#)
Subject: [EXTERNAL] TWS views on oil and gas review
Date: Monday, April 26, 2021 8:49:41 PM
Attachments: [TWS Comprehensive Review Letter 4 15 21.pdf](#)
[TWS Comprehensive Review Letter Appendices B-F.pdf](#)

This email has been received from outside of DOI - Use caution before clicking on links, opening attachments, or responding.

Hi Liz! Happy spring! I hope you are doing well and settling into the new position. Perhaps of interest to your role on the departmental climate task force, I'm sharing the attached comments we submitted as part of the first round of input on the comprehensive oil and gas review. Our comments emphasize a few key points:

- There should be a net zero target for fossil fuel development on federal public lands, and how it could be done.
- The necessity of protecting the Arctic to that end, pointing to comments submitted on the Refuge and the NPR-A.
- The urgent need to eliminate subsidies to oil and gas developers and to ensure producers are bearing the climate cost.

We included a toolkit of recommendations (Appendix A) at the end of the letter. I've also attached for reference the remaining appendices.

I'd love to connect with you to hear how things are going and, if it would be helpful, to talk further about these issues.

Best,

Chase.

Chase Huntley (*he/him/his*)

Vice President for Strategy

The Wilderness Society | The Wilderness Society Action Fund

p 202-429-2605

m 202-725-7305

Disclaimer

The information contained in this communication from the sender is confidential. It is intended solely for use by the recipient and others authorized to receive it. If you are not the recipient, you are hereby notified that any disclosure, copying, distribution or taking action in relation of the contents of this information is strictly prohibited and may be unlawful.



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://eiti.org/document/transparency-in-transition-climate-change-energy-transition-eiti>.

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,



Alex Daue
Assistant Director, Energy and Climate
The Wilderness Society
Alex_daue@tw.s.org



Ben Tettlebaum
Senior Staff Attorney
The Wilderness Society
Ben_tettlebaum@tw.s.org



Katie Meehan
Staff Attorney
The Wilderness Society
Katie_meehan@tw.s.org

CC:

Laura Daniel-Davis, Principal Deputy Assistant Secretary
Land and Minerals, Department of the Interior

Nada Culver, Deputy Director of Policy and Programs
Bureau of Land Management

Amanda Lefton, Director
Bureau of Ocean Energy Management

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.

→ 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			
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"

<p>→ 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.</p>	<p>→ 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.</p> <p>→ 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.</p>	<p>→ To reach climate goals, it is critical to implement stringent GHG emissions management at the land use planning stage.</p> <p>→ Closing lands to leasing helps protect important conservation and cultural resources, recreation and other resources and values.</p>	<p>→ EO 14008:</p> <ul style="list-style-type: none"> ✓ 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.
--	--	---	--

COMMUNITY HEALTH, WELLBEING, AND ECONOMIC IMPACTS			
ACTION	MECHANISM	REASON	CONNECTION TO ADMINISTRATION PRIORITY
<p>→ 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.</p>	<p>→ Support legislative solutions and invest in programs that promote this action.</p>	<p>→ 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.</p> <p>→ It is time for a just and equitable transition.</p>	<p>→ EO 14008:</p> <ul style="list-style-type: none"> ✓ 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."

			<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
→ 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.

→ 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.

	<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.

	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.		
--	---	--	--

FISCAL REFORM			
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.

	<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.

	<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>	
--	--	--	--

PERMITTING REFORM			
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			
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			
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.

APPENDIX B

APA Petition

**PETITION TO THE DEPARTMENT OF THE INTERIOR AND BUREAU OF LAND MANAGEMENT TO
INITIATE RULE-MAKING AND ISSUE GUIDANCE TO MODERNIZE THE ONSHORE OIL AND GAS
PROGRAM FOR THE BENEFIT OF ALL AMERICANS**

Submitted September 14, 2017

I. Executive Summary

This petition is submitted under the Administrative Procedure Act, which gives citizens the right to request action from a federal agency to issue, repeal or amend a rule, and entitles them to a prompt response. The petition asks the Department of the Interior to reform the fiscal terms and management processes regarding oil and gas leasing to yield the legally-required fair market value return to the American people for the resources they own and to fulfill the Department's multiple use mandate. The proposals made here are intended to maintain oil and gas production from public lands most suitable for that purpose while generating greater revenues and greater public benefits through more productive use of certain lands for other commercial, recreational, and conservation uses.

These beneficial results will result from more rigorous, market-oriented fiscal terms and management practices that ensure public lands are efficiently, productively and appropriately used for public purposes and that the waste and neglect of resources due to speculative holding of chronic, non-producing oil and gas leases are minimized if not eliminated. The proposals will not detract from oil and gas production. To the contrary, the cumulative effect of the proposed changes is to better ensure that economically-feasible, oil and gas leases end up in the hands of diligent and competent producers of oil and gas, and are not held unused by non-producing speculators.

The problem: current practices tie up lands without producing energy or revenues.

Poor, indecisive and inefficient Interior management of oil and gas resources provides hidden subsidies to speculators who do not diligently pursue development. Because Interior often fails to actively manage public lands with dormant oil and gas leases for other public uses, it effectively denies the public—persons, organizations, and companies—the certainty they need to use these lands for beneficial economic, conservation, recreational or other purposes. When the federal agencies leave lands in limbo because of the remote possibility that a long dormant, low-value oil or gas lease might be developed some day, uncertainty reigns, and neither the public nor other industries can make long-term commitments to alternative uses of those lands. The economic, social and environmental benefits of those other uses are thus lost.

Below market royalty and rental rates, low minimum lease bids, inadequate bonds, lengthy and lax lease suspensions, unjustified reinstatements of lapsed leases, and leasing low potential lands encourages speculators to tie up federal lands often for decades—preventing decisions to either expeditiously develop the oil and gas resources for energy or, alternatively, maximize the benefits flowing from other uses of public lands. By subsidizing and enabling dormant leases, current practices tie up lands without producing energy or revenues for the American people and simultaneously preventing those lands from being used for other purposes. Scattered in checkboard fashion across the American West are neglected public lands not utilized for the

greatest good because of Interior's mismanagement and misguided subsidies for non-beneficial uses. Interior's neglect of these lands fails the multiple use standard of federal law.

The solution: charging market rates and discouraging unproductive leasing will yield the right balance of uses and returns.

To provide the greatest benefit to the American public, Interior should incentivize the timely production of oil and gas from public leases by charging market rates at every stage of the leasing and production process, and also decisively managing land and resources to support the most appropriate combination of multiple uses. Federal leases are issued for terms (ten years) that are longer than those used by many states or private parties so the industry already has ample time to develop leased lands. Interior, as manager of all leases of public lands and minerals, should focus on making sure those leases are ended if they are not being used productively and ensure leases are yielding a fair return while they are tying up public lands. Accordingly, this petition asks Interior to more effectively meet the standards of multiple use management and a fair return of revenues to the public by:

1. Charging higher, market-tested royalty rates (such as those used by states and the private sector) instead of the inadequate, subsidy-providing 12.5% rate;
2. Increasing rental rates on federal leases to a level sufficient to incentivize oil and gas production so that the percentage of federal leases that produce energy would rise well-above the current, unsatisfactory levels (e.g. only 50% in Rocky Mountain States);
3. Increasing minimum lease bids, as recommended by the Congressional Budget Office, to deter companies from purchasing leases for speculative purposes only;
4. Updating bonding requirements to reflect current costs associated with reclamation and restoration of lands used for oil and gas production;
5. Reforming lease suspension practices to establish rigorous standards guaranteeing that undeveloped oil and gas leases are either diligently placed into production or cancelled so that the land can be managed for other beneficial uses;
6. Updating lease reinstatement practices to require consistent and higher standards of justification for reinstating lapsed leases, with minimal tolerance for defaults on rental payments; and
7. Stopping the leasing of lands with low potential for oil and gas production and managing those lands for other purposes of greater benefit to the public.

The combination of these policies will generate millions of dollars annually for the American people, as well as states and local communities that benefit from federal oil and gas production. As numerous economic and fiscal studies indicate, higher royalty rates will generate large amounts of additional revenue with negligible impact on production. Indeed, several of the other changes proposed here will ultimately incentivize more timely production of oil and gas from federal lands and minerals, which raises the prospect for a net increase in energy production overall. Finally, and more importantly, a diversity of beneficial uses of federal land will expand as the waste and neglect of lands with dormant, speculative leases decline. Overall, better management of public lands will result in better uses in the right places, including renewable energy, recreation and conservation. More rigorous, decisive and efficient management will

greatly increase the revenues and benefits to the American people from public lands and minerals.

II. Context and Overview

Petitioners request the Department of the Interior (Interior) and Bureau of Land Management (BLM) develop regulations and policies to update the fiscal aspects of its management of onshore oil and gas leasing and development.

On April 15, 2015, BLM issued an Advanced Notice of Proposed Rulemaking (ANOPR) seeking input on potential changes to fiscal policies related to its onshore oil and gas leasing program. As the agency stated: “The anticipated updates to BLM’s onshore oil and gas royalty rate regulations and other potential changes to its standard lease fiscal terms address recommendations from the Government Accountability Office (GAO), and will help ensure that taxpayers are receiving a fair return from the development of these resources.” 80 Fed. Reg. 22148 (Oil and Gas Leasing; Royalty on Production, Rental Payments, Minimum Acceptable Bids, Bonding Requirements, and Civil Penalty Assessments). BLM should follow up on this recognition, as well as similar findings related to other aspects of managing its onshore oil and gas program, to both provide a fair return to the taxpayers who own these resources and also better fulfill its broader obligations as stewards of our public lands. BLM should issue updated policies and commence or continue rulemakings to address these major inadequacies in its onshore oil and gas program.

This Petition identifies two types of policies that need to be updated:

- (1) Revenue-generating policies, which involve payments that are being made but not at sufficient levels to ensure a fair return to the American people and to encourage timely development of resources. These policies include royalty, rental and bid rates.
- (2) Hidden subsidies, which are causing lost revenues needless giveaways to the oil and gas industry and are undermining multiple use management. These policies include bonding rates, lease suspensions, lease reinstatements and leasing low potential lands.

Through the requested rulemaking, Interior and BLM have an opportunity to structure a fiscally responsible oil and gas program that reflects multiple use and sustained yield in the 21st century. BLM must modernize fiscal elements of its oil and gas program to responsibly steward our public lands and ensure a fair return to American taxpayers.

BLM’s onshore oil and gas leasing program has been plagued with economic and environmental problems, stemming from low leasing rates, low royalty rates, low bonding rates and high emissions and gas waste. The Government Accountability Office has repeatedly concluded that “the inflexibility of royalty rates to changing oil and gas prices has cost the federal government billions of dollars in foregone revenues.” GAO-08-691 (Oil and Gas Royalties) at 16. Furthermore, GAO has found that Interior can recoup these revenues with “negligible” impacts on oil and gas production. GAO-17-540 (Oil, Gas, and Coal Royalties) at 16.

Additional systemic problems contribute to BLM's failure to recover revenue for federal resources and ensure producers are diligently developing leased lands. For example, inappropriate use of lease suspensions and unitization allows industry to hold leases indefinitely without production. As of March 2015, there were 3.25 million acres of federal minerals in suspended leases, many dating back to the 1980s and 1990s.¹ Because BLM regularly declines to adopt conservation management for lands encumbered by leases, holding leases in undue suspension is tantamount to removing those lands from multiple use. Similarly, the thousands of idle and orphaned federal wells could be better addressed by sufficient bonding, but instead are risking environmental damage and putting a financial burden on the BLM. Through this rulemaking process, BLM should take the opportunity to address these issues in a way that makes sound economic *and* environmental sense.

BLM is modernizing into an agency that embraces conservation as an integral element of multiple use and sustained yield. As provided in the Federal Land Policy and Management Act (FLPMA), 17 U.S.C. § 1701, et seq., 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.” 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 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.

43 U.S.C. § 1702(c) (emphasis added).

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.” FLPMA, 43 U.S.C. § 1702(h). 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.

BLM's current oil and gas leasing policies recognize that oil and gas development is but one use of the public lands which should be balanced with other multiple uses and considered on equal

¹ Data accessed through LR2000.

ground. Instruction Memorandum 2010-117 explicitly states that in some cases, oil and gas leasing is inconsistent with protection of other public lands resources and values. IM 2010-117 goes on to affirm that, **“Under applicable laws and policies, there is no presumed preference for oil and gas development over other uses.”**

Courts have confirmed the agency’s discretion and obligation to consider protecting environmental values. For example, in *New Mexico ex rel. Richardson v. Bureau of Land Mgmt.*, 565 F.3d 683 (10th Cir. 2009), the court rejected the BLM’s argument that its analysis under the National Environmental Policy Act (NEPA) did not have to include an alternative that closed Otero Mesa to oil and gas drilling because doing so would violate the its multiple use mandate. *Id.* at 710. Noting that “a delicate balancing is required,” the court explained that “[d]evelopment is a *possible* use, which BLM must weigh against other possible uses – including conservation to protect environmental values.” *Id.* (emphasis in original).

BLM’s onshore oil and gas program must be modernized to ensure that the agency is meeting its broader obligations to the American people. Public lands should not be automatically ceded to the oil and gas industry upon demand. Where public lands and minerals are turned over to the oil and gas industry, other resources must be protected and responsible development diligently pursued.

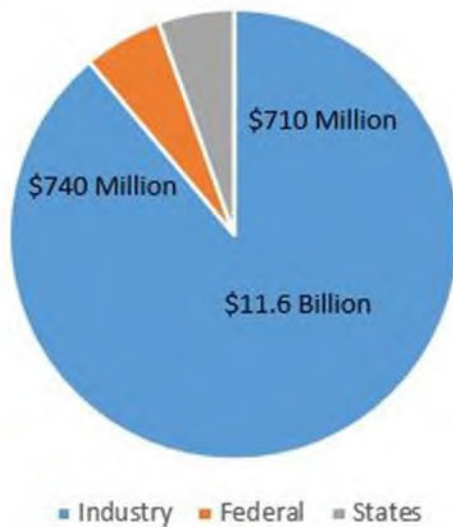
As has been shown by numerous studies, many aspects of the program are outdated and inadequate; key rates have not been updated for decades. Consequently, BLM is conservatively leaving millions of dollars on the table every year that should be compensating the American taxpayer for turning public lands and minerals over to the oil and gas industry. Instead of providing a fair return to taxpayers, oil and gas companies are reaping the benefits of the increased levels of oil and gas production from public resources. State, private and even offshore rates of return are significantly higher, showing that the BLM’s approach can and should be improved.

A recent study found that, due to many of these outdated policies, including royalty rates, the oil and gas industry shares a very small percentage of what they collect from producing federal minerals with taxpayers. In FY 2016, companies developing federal lands and minerals gained some \$11.6 billion selling oil and gas from public lands and minerals, but BLM collected only \$1.4 billion in royalties.² The resulting half of this portion shared with states and counties is thus unfairly decreased, as well; these are unnecessarily small pieces of the pie.

² <https://www.gao.gov/assets/690/685335.pdf>; see also <http://westernvaluesproject.org/rigged-taxpayers-pay-for-big-oil-companies-profits-from-public-lands/>

Federal Onshore Oil and Gas Royalty Revenues

FY 2016



Overall, modernizing the policies that are central to the federal onshore oil and gas program will boost revenues without hindering development while better fulfilling the BLM's legal obligations under FLPMA and the Mineral Leasing Act (MLA), as discussed in more detail below.

III. Interests of Petitioners

All Americans have a vested interest in the management and use of their public lands and minerals. To the extent that these public resources are being turned over to the oil and gas industry, taxpayers are entitled to a fair return. Lands and minerals held by the oil and gas industry generally deprive citizens of the use and enjoyment of public and private split estate lands and resources for hunting, fishing and other types of recreation, solitude, clean air and water, renewable energy development, grazing, and other activities to support their own businesses. BLM's obligations including ensuring this interference with multiple use is justified. The parties submitting this petition are seeking to enforce those obligations, because the current onshore oil and gas program does not fulfill them.

Dan Bucks is an expert in public revenue and land management issues with over forty years of experience in state government administration. Over this period, he advised elected officials on natural resource revenue and growth management policies. He administered Montana's state and local revenue laws for coal, oil, gas, and other minerals. He initiated and oversaw Montana's participation in the joint federal-state mineral auditing program. He actively engaged Interior's policy making processes from 2015 forward on mineral leasing and royalty issues and testified to Congress on such matters. He has been a witness to four decades of changes in energy production on the Northern Plains—from the growth in Powder River Basin coal, to the Bakken oil boom in Bakken and the emergence of commercial wind farms. From this experience, he acquired a deep understanding of the relationship of these changes to the human and natural environment. He served as Director (2005-2013) and Deputy Director (1981-1988) of the Montana Department of Revenue, Executive Director of the Multistate Tax Commission (1988-

2004), Director of Science and Natural Resources, National Conference of State Legislatures (1980-81), Consultant to the Montana Governor's Office (1979-80), Bush Leadership Fellow (1977-1979) South Dakota State Planning Commissioner (1974-77), and South Dakota Director of Executive Reorganization (1971-1974).

The **Powder River Basin Resource Council** ("Resource Council") is a grassroots community conservation and family agriculture organization in Wyoming. Resource Council members live throughout the state of Wyoming, but the majority of them are rural landowners, many of whom live in a split estate situation with federally-controlled minerals underlying their lands. Resource Council members thus have a keen interest in the BLM's management of oil and gas resources.

Marjorie West is a member of the Resource Council. Along with her husband, Bill, Marge owns a ranch on Spotted Horse Creek in the Powder River Basin of Wyoming, where they grow dry land wheat and raise cattle. Her ranch was homesteaded by Bill's father and expanded by the family over the generations. The Wests' ranch includes a combination of private and federal oil and gas, and the family has been living with the impacts of development of these resources since the coalbed methane boom in the early 2000s. Now that coalbed methane has busted, the Wests are dealing with idle and orphaned wells that have been left on their land.

Leland (L.J.) Turner and his family own a 10,000-acre ranch near the town of Wright, Wyoming in the heart of the one of the largest oil and gas fields in the country. L.J.'s grandfather homesteaded the ranch in 1918 and it has been in the family ever since. The ranch currently has sheep and cattle, and is impacted by oil and gas development from a mix of privately owned and federally owned minerals.

The Wilderness Society is the leading conservation organization working to protect wilderness and inspire Americans to care for our wild places. Founded in 1935, and now with more than one million members and supporters, The Wilderness Society is committed to sound management of our shared national lands, which includes recognizing the values of some lands for conservation and recreation, while also continuing responsible energy development.

IV. Policies requiring new rulemakings

A. Revenue-generating Policies

1. BLM has the duty and authority to modernize its revenue-generating policies for onshore oil and gas development.

BLM has a legal obligation under FLPMA, the MLA and related authorities to modernize its revenue-generating policies for onshore oil and gas development. Under FLPMA, BLM must ensure that American taxpayers "receive fair market value of the use of the public lands and their resources. . . ." 43 U.S.C. § 1701(a)(9). 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. . . ." 30 U.S.C. § 225(b)(1)(B); *see also id.* §§ 225(b)(1)(A), 225(d) (authorizing royalty and rental rates increases). 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.

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. . . .” 30 U.S.C. § 225(b)(1)(A) (emphasis added). This rate represents a floor which Interior must adjust upward as oil and 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.³ However, even though onshore oil production has nearly doubled since 2008, the onshore royalty rate has not changed.⁴

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 \$2.50 per acre for the remaining years. 30 U.S.C. § 225(d) (emphasis added). These rates are well below what is currently needed to incentivize oil and gas development, as less than half of the leased acres on public lands are actually producing oil or gas.⁵ As the Congressional Budget Office (CBO) recently explained: “A higher rental fee increases the cost of holding a lease, giving leaseholders an incentive to either explore parcels or return them to the government. In practice, the current incentive is weak because the fees are small relative to the cost of developing a lease.”⁶ Thus, current rental rates are not creating the necessary incentives to maximize revenue from the development of publicly owned oil and gas resources.

Finally, BLM must increase minimum bids, which are encouraging wasteful speculation by companies that are not diligently developing their leases. Under the MLA, minimum bids must be adjusted to “enhance financial returns to the United States. . . .” 30 U.S.C. § 225(b)(1)(B). 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 CBO, over one-quarter of competitive leases sold for the minimum bid between 2003 and 2012.⁷ A separate analysis found that over half of the companies that currently hold federal leases in the Rocky Mountain states are not even recognized as “active” operators by state oil and gas commissions.⁸ Not only would higher minimum bids help deter these companies from locking-up public lands to the detriment of other income-generating activities, like outdoor recreation, but they would also generate more revenue for taxpayers:

³ Congressional Research Service, Mineral Royalties on Federal Lands: Issues for Congress at 4 (Jan. 2015), available at

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

⁴ Office of Natural Resources Revenue, Production Data, available at <https://onrr.gov/About/production-data.htm>.

⁵ BLM, Oil and Gas Statistics, available at [https://www.blm.gov/programs/energy-and-minerals/oil-and-gas/oil-and-gas-statistics#quickset-programs oil and gas statistics](https://www.blm.gov/programs/energy-and-minerals/oil-and-gas/oil-and-gas-statistics#quickset-programs%20oil%20and%20gas%20statistics) 5.

⁶ Congressional Budget Office, Options for Increasing Federal Income from Crude Oil and Natural Gas on Federal Lands at 8, available at https://www.cbo.gov/sites/default/files/114th-congress-2015-2016/reports/51421-oil_and_gas_options.pdf.

⁷ *Id.* at 18.

⁸ Western Values Project, Rigged: Industry already has the keys to the kingdom, available at <http://westernvaluesproject.org/industry-already-has-the-keys-to-the-kingdom/>.

Raising the minimum bid in an auction to \$10 per acre and requiring that same amount to be paid for parcels leased noncompetitively would boost net federal income by an estimated \$50 million over 10 years, CBO estimates. That effect is the net result of increases in federal income from higher bonus bids for some parcels, including all parcels leased noncompetitively, and decreases in rental and royalty income for parcels that attract no bids (though such parcels would have generated relatively little production and royalty income).⁹

For all of these reasons, BLM has an obligation under FLPMA and the MLA to modernize its royalty and rental rates and minimum bids, and to ensure that American taxpayers are receiving a fair return from onshore oil and gas development.

2. BLM's revenue generating policies are woefully outdated and no longer ensure that the American people are receiving fair market value for the use of public lands and resources.

BLM's revenue-generating policies for oil and gas development are woefully outdated, have not kept pace with inflation, and are weaker than equivalent policies for offshore oil and gas development and those used by many western states. As a consequence of these weak and outdated fiscal policies, CBO predicts that taxpayers could miss out on roughly \$1 billion in revenue over the next decade.

BLM has never updated its royalty rates for onshore oil and gas development. They have remained at 12.5% ever since 1920, when Congress first passed the Mineral Leasing Act. Since that time, oil and gas development – along with the oil and gas industry's profits – have grown exponentially. Oil production from onshore oil and gas wells has soared in recent years – more than doubling since 2007.¹⁰ And there are nearly twice as many active wells on public lands – more than 94,000 – as there were 30 years ago.¹¹ Yet, in spite of this surging production, Interior has made little effort to increase royalty rates to ensure that taxpayers are getting their fair share.

Rental rates and minimum bids have also not been updated since 1987, and have not kept up with inflation. According to Taxpayers for Common Sense (TCS), a nonpartisan budget watchdog organization, rental rates

should at the least be raised to follow inflation, and adjusted annually by regulation. According to the Bureau of Labor Statistics inflation calculator, \$1.50 in 1987 is now \$3.12, and \$2.00 is now \$4.17. An immediate increase in rental rates to these levels would not only increase income to ensure fair return to taxpayers, but would also create incentive for timely development rather than speculation on federal leases.¹²

⁹ CBO, Options for Increasing Federal Income from Crude Oil and Natural Gas on Federal Lands at 32.

¹⁰ ONRR, Production Statistics, available at <https://onrr.gov/About/production-data.htm>.

¹¹ BLM, Oil and Gas Statistics, available at <https://www.blm.gov/programs/energy-and-minerals/oil-and-gas/oil-and-gas-statistics>.

¹² TCS, Comments to the Bureau of Land Management (BLM) on the Oil and Gas Leasing; Royalty on Production, Rental Payments, Minimum Acceptable Bids, Bonding Requirements,

TCS recommended similar adjustments for minimum bids. Not only would this generate increased revenues for taxpayers, it would also deter companies from engaging in wasteful speculation.

Interior's failure to modernize the fiscal structure for onshore development contrasts sharply with its approach for offshore development. In 2007, Interior initiated a series of updates to its offshore fiscal policies, "in an effort to ensure a fair return on oil and gas resources."¹³ These included royalty rate increases of 50 percent, escalating rental rates in order "to encourage faster exploration and development of leases" and minimum bid increases "to account for increases in oil prices. . . ."¹⁴ These changes are expected to generate several billion dollars in additional revenue over the next 30 years, and thus far, "demand [has] remained strong for newly offered leases. . . ."¹⁵

Private mineral leases typically have a royalty rate of 18 percent to 20 percent. Several western states have also taken steps to modernize their fiscal policies for oil and gas development, and to ensure that taxpayers are receiving a fair return on the development of publicly owned oil and gas resources. For example, in February 2016, the State of Colorado increased its royalty rate from 16.67 percent to 20 percent.¹⁶ Since then, demand for state leases in Colorado has actually increased by 22 percent, based on the average number of acres leased per sale.¹⁷ State officials agree with this conclusion, which is not limited to Colorado:

according to state officials, there had been no slowdown in interest in new leases as of August 2016. In fact, Colorado state officials said they were unsure whether the higher royalty rate played much of a role in companies' decision making. Additionally, Texas officials told us that over 30 years ago, Texas began charging a 25-percent royalty for most oil and gas leases on state lands, and this increase has not had a noticeable impact on production or leasing.¹⁸

At this point, federal onshore royalty rates are lower than the rates used by every major western oil and gas producing state.¹⁹ Thus, Interior's fiscal policies must be modernized, in keeping with recent changes for offshore development and by several western states.

3. BLM's outdated fiscal policies are costing taxpayers millions in revenue every year.

and Civil Penalty Assessments (June 19, 2015), available at <http://www.taxpayer.net/library/article/comments-to-blm-on-oil-and-gas-rulemaking>

¹³ GAO, Actions Need for Interior to Better Ensure a Fair Return 13 (Dec. 2013), available at <http://www.gao.gov/assets/660/659515.pdf>.

¹⁴ *Id.* at 13-15.

¹⁵ *Id.* at 14.

¹⁶ *Id.* at 21.

¹⁷ Colorado State Land Board, Oil & Gas Auction Information and Results, available at <https://docs.google.com/document/d/1A8yfmfXmcMtx802wRxktdSuzkFeCrF5tE9XT8ms3Qa0/edit>.

¹⁸ *Id.* at 22.

¹⁹ *Id.* at 9.

Raising federal onshore royalty, rental and bid rates to match or exceed federal offshore rates and rates charged on state and private lands would increase overall revenues and receipts generated by the federal onshore oil and gas program. Recent studies find that outdated federal onshore rates are costing taxpayers tens of millions of dollars in revenues every year.

Royalties, rents and bids are the primary source of revenue for the federal onshore oil and gas program. In FY 2016, the Office of Natural Resources Revenue (ONRR) collected \$1.4 million in royalty payments, \$123 million in bonus bids and \$21 million in lease rental payments. Royalties provide the largest share of federal onshore oil and gas receipts.

Recent studies also find that raising the federal onshore royalty rate to levels consistent with state and private lands leases would generate tens of millions of dollars in additional revenues each year. An April 2016 CBO study found that raising the royalty rate to 18.75 percent would increase net ONRR income by \$200 million over the next 10 years, with an identical amount going to the states.

An earlier, 2011 report by Enegis, LLC examined the effect of increasing the royalty rate to 16.67, 18.75 and 22.5 percent. Like the CBO study, the Enegis report found that net revenue would increase in each of the three scenarios, from \$125 million to as much as \$939 million over the next 25 years. Both the CBO and Enegis reports accounted for any decrease in leasing or production that might result from increasing federal rates.

Raising federal onshore rental and bid rates would also increase net revenues. In addition to analyzing royalty rates, the April 2016 CBO Report estimated that raising the minimum bid to \$10/acre (for competitive and non-competitive leases) would increase revenues by \$50 million over the next 10 years. This same study found that increasing the rental rate by \$6/acre/year would generate an additional \$200 million.

Raising the federal royalty, rent and bid rates would significantly increase revenues and receipts generated by the onshore oil and gas program. If these rates were updated to reflect rates charged on state and private lands, the federal onshore program would likely gain at least half a billion dollars in net revenues over the next decade, with similar amounts going to the states.

4. There are significant revenue-related benefits to modernizing the onshore program's fiscal policies.

Updating royalty, rent and bid rates would also confer other, less obvious benefits. ONRR splits half of all royalty, bid and rental revenues with state governments based on where federal leases are located. So state governments, many of which are struggling with budget shortfalls caused by the downturn in energy prices, would realize about half of increased revenues from reforming federal onshore rates.

Increasing bid and rental rates would also discourage speculation and encourage diligent development of federal leases. On average, operators on federal lands drill on only 1 in 10 leases issued by the BLM. At present, there are more than 16,000 unused, non-producing oil and gas leases on federal lands, covering more than 14 million acres. By making it more expensive to

speculate, increasing bid and rental rates would encourage operators to drill and explore these unused leases, putting more leases into production and generating more royalty revenues.

Finally, by discouraging speculation, increasing bid and rental rates would help address opportunity costs associated with public lands oil and gas leasing. In making planning decisions, BLM often declines to manage lands with oil and gas leases for other resources and resource values, even when leases in these areas are unused and non-producing. Raising bid and rental rates would incentivize companies to purchase leases where they actually intend to develop, so that other, un-leased areas could be devoted to other important public lands uses. In this way, increasing bid and rental rates would help reduce opportunity costs associated with speculative leasing.

5. New revenue-generating regulations and policies

BLM should act on its own findings, as well as those of numerous external reviewers, and commence new rulemakings to update its royalty, bid and rental rates.

B. Hidden Subsidies

1. BLM has the duty and authority to update its policies regarding bonding rates, lease suspensions and reinstatements, and leasing low potential lands.

As noted above, FLPMA requires that BLM ensure a fair return for use of public lands and resources. BLM also has an obligation to ensure that the public lands are managed in accordance with principles of multiple use and sustained yield, such that the variety of uses and users of the public lands are given due consideration. Oil and gas leasing and development may not be treated as the dominant use of public lands at the expense of these statutory mandates.

Further, in leasing public resources, oil and gas companies agree to diligently develop those resources while also protecting the other resources of the public lands, while acknowledging the authority of the BLM to require such diligence. As stated in Section 4 of BLM's standard lease terms (Form 3100-011), when leasing public lands:

Lessee must exercise reasonable diligence in developing and producing, and must prevent unnecessary damage to, loss of, or waste of leased resources. Lessor reserves right to specify rates of development and production in the public interest...

In addition, BLM's regulations and guidance set out obligations that require BLM to update these policies, as discussed in detail below.

2. BLM's policies on bonding rates, lease suspensions and reinstatements, and leasing low potential lands are essentially providing subsidies to the oil and gas industry and encouraging the speculative holding of dormant leases.

By not updating and clarifying policies on bonding, lease suspensions, lease reinstatements and leasing low potential lands, BLM is subsidizing the oil and gas industry's costs to hold inactive

leases for excessive periods and to operate on public lands – in spite of the billions of dollars in industry profits from public lands drilling – and undermining the industry’s obligations of diligent development. The failure to update and clarify these policies especially encourages non-active speculators to retain a large share of leases involving substantial land areas in an undeveloped state for years and even decades on end.

(a) Bonding

BLM’s regulations require that bond amounts are to be set:

...to ensure compliance with the act, including complete and timely plugging of the well(s), reclamation of the lease area(s), and the restoration of any lands or surface waters adversely affected by lease operations after the abandonment or cessation of oil and gas operations...

43 C.F.R. § 3104.1(a). BLM’s guidance provides that the regulatory levels are minimums and also for adjusting bonding levels based on different risk factors that may arise on existing leases or existing unit, statewide or nationwide bonds. However, the agency’s practice is to charge the regulatory minimum.²⁰

BLM’s bonding policies have not been updated in almost sixty years. Minimum bond amounts set in statute no longer reflect the true cost of reclamation or inflation and the agency’s review and tracking procedures for determining bond adequacy and the government’s own liabilities fall far short of where they need to be. As a result, orphaned and abandoned wells are left unclaimed while American taxpayers are left to cover the costs of the oil and gas industry’s negligence.

The bond minimum of \$10,000 for individual bonds was last set in 1960, and the bond minimums for statewide bonds—\$25,000—and for nationwide bonds—\$150,000—were last set in 1951. According to a 2010 GAO report, “If adjusted to 2009 dollars, these amounts would be \$59,360 for an individual bond, \$176,727 for a statewide bond, and \$1,060,364 for a nationwide bond.”²¹ Based on inflation alone, current bond minimums are far lower than originally intended. Taking into account the increasing costs of reclamation further highlights the benefits given to oil and gas companies. A report by Inside Energy shows that the cost of reclaiming a single well can cost up to \$527,829 and that some newer, deeper wells may cost more than \$17 million per well to reclaim.²² It is important to note that minimum individual bond amounts are set per lease not per well. With many leases containing multiple pads and multiple wells per pad, that \$10,000 is even more inadequate. A later 2011 GAO report concluded, “Specifically, the minimum bond amounts—not updated in more than 50 years—may not be sufficient to encourage all operators

²⁰ See, e.g., BLM overview of bonding, setting out only the minimum amounts as amounts to be posted. <http://www.blm.gov/es/st/en/prog/minerals/bonds.html>

²¹ GAO-10-245

²² Stephanie Joyce, Wyoming Public Radio and Jordan Wirfs-Brock. (2016, October 17). The Rising Cost Of Cleaning Up After Oil And Gas. Retrieved July 17, 2017, from <http://insideenergy.org/2015/10/01/the-rising-cost-of-cleaning-up-after-oil-and-gas/>

to comply with reclamation requirements.”²³ And BLM field office managers agree. BLM officials interviewed by GAO at 12 of the 16 field offices agreed that these minimum bond amounts are inadequate for managing potential liability.²⁴ This is because the minimum amounts are not sufficient to serve as an incentive to encourage operators to comply with reclamation requirements and the cost to reclaim a well site far outweighs the value of the existing bonds. Unfortunately, this creates a perverse financial incentive for an oil and gas operator to walk away from a well and leave it orphaned, forcing taxpayers to pick up the plugging and reclamation tab.

In addition to staggeringly low bond amounts, the BLM is not properly tracking or reviewing bond adequacy. According to GAO, “limitations with the data system BLM uses to track oil and gas information on public land restrict the agency’s ability to evaluate potential liability and monitor agency performance.”²⁵ To manage potential liability BLM has policies for reviewing bond adequacy and for managing idle wells (wells that have not produced for at least 7 years) and orphan wells (wells that generally have no responsible or liable parties). These policies direct field offices to develop an inventory and rank and prioritize wells for reclamation. According to a 2011 GAO report, “BLM has not consistently implemented its policies for managing potential liabilities.”²⁶ As an example, GAO notes that according to their own survey of field offices, as of 2009 there were approximately 2,300 idle wells that had been inactive for seven or more years. However, Interior databases showed the number of idle wells was nearly double that amount.²⁷ Moreover, states like Wyoming consider a well idle after a lack of production of only one year. Waiting until year seven not only underestimates the number of wells, but also makes it more likely that the oil and gas operator has already abandoned the well site, and the wait makes it more difficult to start collection from a leaseholder or other responsible party.

The 2015 ANOPR referenced above stated: “the intent of any potential bonding updates would be to ensure that bonds required for oil and gas activities on public lands adequately capture costs associated with potential non-compliance with any terms and conditions applicable to a Federal onshore oil and gas lease.” The ANOPR further acknowledged that the current minimums “do not reflect inflation and likely do not cover the costs associated with the reclamation and restoration of any individual oil and gas operation.”²⁸ The current bonding rates and practices allow oil and gas companies to develop public resources without having to post sufficient bonds or otherwise reclaim drilling sites.

(b) Lease suspensions

²³ Government Accountability Office. (2011). Oil and Gas Bonds: BLM Needs a Comprehensive Strategy to Better Manage Potential Oil and Gas Well Liability. (GAO Publication No. 11-292). Washington, D.C.: U.S. Government Printing Office

²⁴ Ibid

²⁵ Ibid

²⁶ Ibid

²⁷ Ibid

²⁸ Ibid

Federal leases already have longer terms than many state and private leases, and are supposed to be terminated at the end of their ten-year terms. Lease suspensions result in companies holding federal lands and minerals for longer (often much longer) time periods without paying rentals or generating energy or royalties.

BLM's current policy guidance governing lease suspensions, set forth in BLM Manual 3160-10, was issued in 1987. The manual does not provide clear direction to BLM for how and when to exercise its discretion to reject lease suspension requests, and therefore the agency routinely grants suspensions that are not warranted or required by law. This has led to an extensive portfolio of suspended leases on federal lands. As of March 2015, there were 3.25 million acres of federal minerals in suspended leases, many dating back to the 1980s and 1990s.²⁹

The manual also does not direct BLM on how to manage currently suspended leases. Without such direction, BLM rarely evaluates the status of actively suspended leases to determine whether suspensions should be lifted, allowing suspensions to remain in place long after the circumstances that originally justified the suspension no longer exist. Thus, the 1987 manual does not provide direction or assurance that BLM holds suspension requests to the high standard set out in the regulations, provides limited terms for suspension and actively monitors and ends suspensions when they are no longer necessary.

This outdated guidance contributes to BLM's failure to recover revenue for federal resources and ensure producers are diligently developing leased lands. Inappropriate use of lease suspensions allows industry to hold leases indefinitely without making rental payments or producing energy. In this way, lease suspensions can allow industry to evade Congressional intent to diligently develop and provide timely and reasonable access to federal oil and gas resources.

The outdated guidance is also inconsistent with BLM's multiple use mandate. Because BLM regularly declines to adopt conservation management for lands encumbered by leases, holding leases in undue suspension is tantamount to removing those lands from multiple use.

(c) Lease reinstatements

BLM's current policy guidance for reinstatements, set forth in BLM Manual Handbook 3108-1, was last revised in 1995. The guidance does not provide clear direction for BLM to evaluate and approve or deny reinstatements to ensure consistency with the Mineral Leasing Act and agency regulations. Oil and gas leases are automatically terminated "by operation of law" if annual rental rates are not paid by the anniversary date of the lease.³⁰ However, the BLM "may" reinstate these leases under several conditions.³¹ By law, the BLM is only to reinstate leases in cases in which the failure to timely submit the rental was "justified" or "not due to lack of reasonable diligence" by the lessee.

²⁹ Data accessed through LR2000.

³⁰ 43 C.F.R. § 3108.2-1

³¹ *Id.* §§ 3108.2-2, 3108.2-3, and 3108.2-4

According to the BLM Handbook, justification can occur if “sufficiently extenuating circumstances or factors beyond the control of the lessee [] occurred at or near the lease anniversary date.”³² BLM’s regulations provide for three types of reinstatements: Class I (reinstatement at existing rental and royalty rates), Class II (reinstatement at higher rental and royalty rates), and Class III (conversions of unpatented oil placer mining claims). However, the agency’s guidance does not clearly direct which type of reinstatement is appropriate, what specific criteria must be met for a reinstatement to be authorized, or when the agency should exercise its discretion to deny reinstatement requests. Due to the outdated guidance, BLM is permitting oil and gas leases that have been terminated to be reinstated without sufficient basis, providing the oil and gas industry with an extra opportunity to retain leases at the expense of diligent development, and frequently in situations where industry has intentionally defaulted on rental payments because of low prices, only to apply for reinstatements when prices increase.

(d) Leasing low potential lands

As shown in a recent analysis conducted by The Wilderness Society³³, more than 90% of minerals managed by the BLM are currently available for oil and gas leasing - an allocation that is clearly not based on reasonably foreseeable development potential or a strategic evaluation of other multiple uses. The root of this problem is outdated planning guidance that leads BLM to make the vast majority of federal minerals available to leasing in land use plans, regardless of the likelihood of development and in conflict with multiple use management and fiscal responsibility.

BLM’s handbook for fluid minerals planning (Handbook H-1624-1) directs BLM to plan for oil and gas development on federal lands in light of where recoverable deposits of oil and gas are most likely to exist. Chapter III of the handbook requires that BLM use development potential to predict where future drilling activity will take place and where impacts from oil and gas development are likely to be focused within a planning area. Using this information, the handbook directs BLM to assign lease stipulations and other management prescriptions to protect competing resources and mitigate unwanted impacts from drilling and development.

However, when faithfully applied, the handbook often produces illogical management prescriptions that result in significant resource conflicts. With respect to management prescriptions, the handbook leads BLM to *open* low and no potential lands to leasing, and, in many instances, applies weaker protections and stipulations in these areas than high potential areas. Since low potential lands are open to leasing with weak stipulations, they are frequently targeted for speculative leasing. In turn, speculative leases in low potential areas often preclude designations and management decisions that might benefit alternative resources, including decisions for protecting wilderness quality lands and conserving wildlife.³⁴

³² BLM Handbook H-3108-1 at 31

³³ *Open for Business* (October 2014), available at <http://wilderness.org/sites/default/files/TWS%20--%20BLM%20report%200.pdf>

³⁴ See TWS Development Potential Technical Report for detailed analysis and case studies: <http://wilderness.org/sites/default/files/Development%20Potential-Technical%20Report%20.pdf>.

BLM Handbook H-1624-1 has not been overhauled since 1990. BLM's guidance for considering and making decisions based on development potential in land use planning must be updated to take a more comprehensive approach to oil and gas allocations.

3. These outdated policies are harming taxpayers and our public lands.

(a) Bonding

Pursuant to 43 CFR 3104.8 "The authorized officer shall not give consent to termination of the period of liability of any bond unless an acceptable replacement bond has been filed or until all the terms and conditions of the lease have been met." According to Onshore oil and Gas Order No. 1 final abandonment will not be approved until "the surface reclamation work required in the Surface Use Plan of Operations or Subsequent Report of Plug and Abandon has been completed..."³⁵ The BLM Surface Operating Standards and Guidelines for Oil and Gas Exploration and Development or "Gold Book" states, "In most cases, this means returning the land to a condition approximating or equal to that which existed prior to the disturbance."³⁶ For a variety of reasons, as noted above, operators may not complete final reclamation or receive approval for final abandonment resulting in an abandoned or orphaned well. A well is considered orphaned when the bond is not sufficient to cover well plugging and surface reclamation and there are no responsible or liable parties to cover the costs. These wells pose serious environmental fiscal threats.

From an environmental standpoint, orphaned wells can leak methane, provide a pathway for surface runoff, brine, or hydrocarbon fluids to contaminate surface water and groundwater, and contribute to habitat fragmentation and soil erosion.³⁷ There are already a staggering number of unreclaimed or improperly reclaimed sites across the country. An assessment of ecological recovery at oil and pads on the Colorado Plateau found that more than half of well pads were below the 25th percentile of reference areas.³⁸

Fiscally speaking, once a well is considered orphaned BLM must use federal dollars to fund reclamation. However, "there is no dedicated budget line item to fund orphaned well reclamation; instead, it is dependent on whatever funds are available from BLM state offices and the BLM Washington office..."³⁹ Additionally, reclamation costs have been found to range from \$300 to \$580,000 per well with newer deeper wells costing as much as \$17 million. A 2010 GAO study showed "as of December 2008, oil and gas operators had provided 3,879 bonds, valued at \$162 million, to ensure compliance with lease terms and conditions for 88,357 wells." That's only \$1,833 per well. For context, the state of Wyoming may be looking at a price tag of between \$14.7 and \$19 million, or an average cost of more than \$100,000 per well to plug its

³⁵ Onshore Oil and Gas Order No. 1 (XII.B)

³⁶ BLM Surface Operating Standards and Guidelines for Oil and Gas Exploration and Development, Ch. 6

³⁷ Ho, J., et al., (2016). *Plugging the Gaps in Inactive Well Policy*. Washington, D.C.: Resources for the Future

³⁸ Nauman, T.W., et al., Disturbance automated reference toolset (DART): Assessing patterns in ecological recovery from energy development on the Colorado..., *Sci Total Environ* (2017), <http://dx.doi.org/10.1016/j.scitotenv.2017.01.034>

³⁹ GAO 2010

newest and deepest wells.⁴⁰ It is for this very reason that Wyoming, along with several other western states, recently increased its bonding rates, which are now several times higher than the federal rates.⁴¹

Outdated requirements are costing taxpayers. The same 2010 GAO report found “For fiscal years 1988 through 2009, BLM spent about \$3.8 million to reclaim 295 orphaned wells in 10 states...” The report also identified 144 orphaned wells in 7 states that need to be reclaimed. The total cost to reclaim just 102 of those wells is estimated at \$1,683,490.⁴² And this problem is not going away. A subsequent 2011 GAO analysis of OGOR data as of July 7, 2010, showed that of the approximately 5,100 wells idle for 7 years or longer, roughly 45 percent, or about 2,300 wells, have not produced oil or gas for more than 25 years.⁴³ Many of those wells may need government resources to be properly plugged and reclaimed, such that the BLM is subsidizing the oil and gas industry at the expense of taxpayers.

(b) Lease suspensions

Lease suspensions, particularly those that are unwarranted, harm US taxpayers primarily in two ways: lease suspensions cheat U.S. taxpayers of rental and royalty payments; and lease suspensions can preclude the BLM’s ability to manage the public lands for multiple uses.

Unmanaged lease suspensions are fiscally imprudent. A federal mineral lease suspension, under the Mineral Leasing Act, tolls the operating and production requirements of a lease, including the obligations to make rental and royalty payments, and extends the primary term of the lease by the length of the suspension – and longer, given the lax enforcement of suspension terms by BLM. As of March 2015, 2.65 million acres of federal minerals were held in suspended leases and not generating rental or royalty payments for the federal government. These suspensions include millions of acres that have been on hold for decades and have already cost taxpayers more than \$80 million in lost rents alone. This practice deprives US taxpayers of revenue that should be paid for holding these public lands in lease.

In addition to being fiscally imprudent, maintaining suspensions that are not justified based on BLM’s regulations interferes with multiple use management. Unwarranted lease suspensions can and do prevent recreation, conservation and other uses from occurring on these lands. For example, in the Proposed Resource Management Plan for the Grand Junction Field Office, the BLM proposed not to manage South Shale Ridge to protect its wilderness characteristics based at least in part on the presence of suspended oil and gas leases.⁴⁴

Unwarranted suspensions granted for ordinary and foreseeable agency delays “relieve [lessees and/or operators] of the consequences of their poorly timed decisions and actions,” while

⁴⁰ Inside Energy 2016

⁴¹ http://trib.com/business/energy/wyoming-raises-bonding-requirements-for-oil-and-gas-wells/article_74fe1dff-3305-5e5d-881a-27a6d6b874c8.html

⁴² GAO 2010

⁴³ GAO 2011

⁴⁴ See [Grand Junction Proposed Resource Management Plan](#) at Appendix F, p. F-6.

inadequate agency oversight of suspended leases allows suspensions to remain in place years after the reason for the suspension has passed. *See Vaquero Energy*, 185 IBLA at 237. These failures are precluding land management opportunities that might otherwise confer valuable benefits to the public at the same time as they deprive the public of valuable tax revenue.

(c) Lease reinstatements

Federal regulations provide that the BLM has discretion in whether to reinstate leases that were terminated for non-payment. Research indicates that the BLM exercises this discretionary authority frequently – there are 703 currently-authorized federal leases covering 530,000 acres that were terminated and subsequently reinstated. More than one thousand leases affecting over one million acres of federal minerals have been reinstated since the year 2000. This indicates there is a widespread pattern of industry failing to pay rents due the US government, and American public, and not being penalized.

Failing to pay rent to the federal government is contrary to the interests of the United States and cheats American taxpayers. Lease reinstatements allow for oil and gas companies to hold publicly-owned lands and minerals for free – and then simply pay back rent penalty-free if and when the BLM completes the process of terminating the lease. This practice comes at significant cost to the American public, who are owed these rental payments and unable to prosecute the lack of payment.

The failure to pay rentals on time also raises a significant question about whether operators are being diligent in the pursuit of development of their oil and gas leases, which is required under BLM regulations and the Mineral Leasing Act. Leases are supposed to have the purpose of insuring “reasonable diligence, skill, and care.”⁴⁵ It can hardly be argued that companies are exercising diligence and care when they are failing to even make rental payments, and are simply speculating in public lands owned by all Americans while they wait for more favorable market conditions. In addition, federal leases contain provisions to ensure the “protection of the interests of the United States” and the “safeguarding of the public welfare.”⁴⁶ The agency’s current guidance for considering and authorizing reinstatements does not achieve either of these directives.

(d) Leasing low potential lands

Application of the current guidance results in land use planning decisions that make low potential areas open to leasing with relatively weak lease stipulations, regardless of the presence of other resources that could be harmed should development happen, and⁴⁷ regardless of whether BLM’s own data show there is low—or even no— potential for oil and gas. This fundamental flaw in BLM’s guidance has led to a current total of 27 million acres leased for oil and gas development, with less than half in production.⁴⁸ A Congressional Budget Office report recently found that, for parcels leased between 1996 and 2003 (all of which have reached the end of their 10-year exploration period), only about 10 percent of onshore leases issued competitively and

⁴⁵ 30 U.S.C. 187.

⁴⁶ *Id.*

⁴⁷ <http://wilderness.org/sites/default/files/Development%20Potential-Technical%20Report%20.pdf>

⁴⁸ <https://www.blm.gov/programs/energy-and-minerals/oil-and-gas/oil-and-gas-statistics>

three percent of those issued noncompetitively actually entered production.⁴⁹ This means 90% of competitively-issued onshore leases never generated royalties for the US government.

As demonstrated in The Wilderness Society's technical report, the practice of making areas with low development potential available to oil and gas leasing frequently leads to these areas becoming encumbered with speculative leases. Since low potential lands have favorable lease stipulations and can be acquired and held for minimal cost, low potential areas are often targeted for speculative leasing, though rarely drilled and developed. Speculative leasing ties up public lands, creates unnecessary public conflict, and generates minimal revenue.

These decisions have real impacts on multiple use management. For example, in the Proposed Resource Management Plan for the Colorado River Valley Field Office, the BLM proposed not to manage the "Grand Hogback Unit" to protect its wilderness characteristics based on the presence of oil and gas leases, stating:

The Grand Hogback citizens' wilderness proposal unit contains 11,360 acres of BLM lands. All of the proposed area meets the overall required criteria for wilderness character... There are six active oil and gas leases within the unit, totaling approximately 2,240 acres. None of these leases shows any active drilling or has previously drilled wells. The ability to manage for wilderness characteristics in the unit would be difficult. If the current acres in the area continue to be leased and experience any development, protecting the unit's wilderness characteristics would be infeasible...⁵⁰

In the Proposed White River Field Office Resource Management Plan Amendment, the BLM acknowledged that oil and gas leases "preclude other land use authorizations not related to oil and gas... in those areas," including authorizations for renewable energy projects, stating: "Areas closed to leasing... indirectly limit the potential for oil and gas developments to preclude other land use authorizations not related to oil and gas (e.g., renewable energy developments, transmission lines) in those areas."⁵¹ As these examples show, oil and gas leases, even when not developed, preclude other uses of the public lands.

Speculative leases are also fiscally burdensome. Leases in low potential areas generate minimal revenue but can carry significant cost. In terms of revenue, they are most likely to be sold at or near the minimum bid of \$2/acre, and they are least likely to actually produce oil or gas and generate royalties.⁵² See Bighorn Basin PRMP (2015) at p. 73 ("Leasing may be based on

⁴⁹ https://www.cbo.gov/sites/default/files/114th-congress-2015-2016/reports/51421-oil_and_gas_options.pdf

⁵⁰ See [Colorado River Valley Proposed Resource Management Plan \(2014\)](#) at Chapter 3, p. 3-135.

⁵¹ See [White River Proposed RMP, Chapter 4](#) at p. 4-498.

⁵² [Center for Western Priorities, "A Fair Share"](#) ("Oil Companies Can Obtain an Acre of Public Land for Less than the Price of a Big Mac. The minimum bid required to obtain public lands at oil and gas auctions stands at \$2.00 per acre, an amount that has not been increased in decades. In 2014, oil companies obtained nearly 100,000 acres in Western states for only \$2.00 per acre... Oil companies are sitting on nearly 22 million acres of American lands without producing oil and gas from them. It only costs \$1.50 per year to keep public lands idle, which provides little incentive to generate oil and gas or avoid land speculation.").

speculation, with leases within high risk prospects usually purchased for the lowest prices.”); White River PRMP (1996) at p. A-7 (“At any given time, most of the acreage that is available for oil and gas leasing in the WRRRA is under lease. . . . Most of the area is leased for speculative purposes and consequently only a small percentage of leases will ever be developed.”). Nonproducing leases generate less than two percent of total revenue generated by the federal onshore system; 90 percent comes from royalties paid on producing leases.⁵³ In terms of costs, leasing in low potential areas requires processing lease nominations, preparing environmental reviews, and resolving protests and resource use conflicts.

In summary, leasing lands and minerals with low potential for oil and gas development – speculative leasing – carries significant costs by precluding BLM from managing for other multiple uses, creating unnecessary public conflict, and wasting agency resources while generating minimal revenue.

4. Updating these policies will benefit taxpayers and the public lands.

(a) Bonding

The benefits associated with updating the BLM’s bonding policies are obvious. If bond minimums are set at an amount equal to the estimated cost of reclamation the government limits the chance it will have to bear the expenses associated with reclaiming orphaned wells. This in turn means that American taxpayers will not be left footing the bill for the industry’s negligence. This will also help deter financially unstable companies or companies that are only interested in speculation from purchasing federal leases. Additionally, proper reclamation of wells pads will help restore federal lands for other uses like recreation and grazing and will help to restore wildlife habitat and limit fragmentation. Improving tracking and review of bond adequacy will also help the government periodically assess liabilities and increase bond amounts or adjust agency practices in response to findings.

A common refrain from the oil and gas industry is that raising bond minimums will discourage development. However, there is little if any evidence of such a result. In fact, many states have higher minimum bond amounts or more practical methods for determining bond amounts but have not seen a decrease in permitting or drilling as a result. For example, Wyoming calculates individual bonds based on well characteristics and depth and California bases statewide bond amounts on the number of wells a company operates. North Dakota, South Dakota, and Utah all have bonding amounts for single wells and all are over \$50,000 and operators continue to drill in those states.⁵⁴

(b) Lease suspensions

⁵³ https://www.cbo.gov/sites/default/files/114th-congress-2015-2016/reports/51421-oil_and_gas_options.pdf, p. 2.

⁵⁴ Western Organization of Resource Councils. Weak Oil and Gas Bonding Will Contribute to Reclamation Crisis. (2016, August 15). Retrieved July 17, 2017, from <http://www.worc.org/weak-oil-gas-bonding/>

Updating the agency's policy governing suspensions would ensure BLM is recovering owed rental payments and returning undeveloped lands to multiple use management. By issuing new guidance that directs BLM to exercise its discretion to reject unjustified lease suspensions and monitor existing suspensions to remove those that are no longer justified, BLM would eliminate a hidden subsidy that is currently available to the oil and gas industry. Agency and public scrutiny of lease suspensions would also ensure that public lands are not removed from multiple use management as a result of oil and gas companies illegitimately holding them in suspended status.

In addition to benefiting the public by managing lease suspensions in a fiscally responsible way and protecting multiple use management, updating the agency's policy governing suspensions would help BLM demonstrate that it is managing oil and gas resources consistent with the Mineral Leasing Act and diligent development requirements.

(c) Lease reinstatements

BLM would prevent oil and gas companies from cheating American taxpayers out of rental payments by ensuring lease reinstatements are appropriately evaluated, issued under the proper classification, and exercising discretion to deny reinstatements when warranted. Updating policy guidance for reinstatements would also ensure the BLM is complying with Section 187 of the MLA. Leases are supposed to have the purpose of insuring "reasonable diligence, skill, and care" and to seek the "protection of the interests of the United States" and the "safeguarding of the public welfare." 30 U.S.C. 187. Updating BLM's guidance for reinstating leases would allow the agency to ensure these directives are being upheld.

(d) Leasing low potential lands

Under current agency guidance, BLM is supposed to use development potential to formulate lease stipulations and management prescriptions that will mitigate conflicts between fluid mineral development and other competing uses. However, in its current form, the guidance leaves low and no potential areas open to leasing with weaker protections than moderate and high potential areas. The result is oil and gas management allocations that leave the door open to future resource conflicts and allow speculative oil and gas leasing in low/no potential areas to limit alternative management decisions. Updating the agency's guidance would allow for BLM to better achieve its objective of mitigating oil and gas conflicts and realize multiple use management.

Limiting leasing in low potential areas conflicts the least with industry objectives and can confer significant public benefits. Low potential lands are the "low-hanging fruit" by which BLM can fulfill other objectives of its multiple-use mission, such as managing for wilderness, wildlife and recreation. Yet, as described above, speculative leases on low potential lands can prevent the BLM from otherwise managing lands for alternative purposes and fulfilling its multiple-use mandate. *See also* White River DRMPA (2012) at p. 4-377 ("... authorized oil and gas uses would likely preclude other incompatible land use authorizations"). In addition, limiting exploration and development on low potential lands necessarily conflicts the least with industry objectives. As discussed in the Bighorn Basin PRMP (2015):

[A]lternatives D and F place additional stipulations on oil and gas-related surface disturbances in the Absaroka Front, Fifteenmile, and Big Horn Front MLP analysis areas for the protection of big game, geologic features, and LRP soils. As a result, alternatives D and F could have additional adverse impacts on oil and gas development in these MLP analysis areas. . . . However, because of the generally low to very low potential for oil and gas development and redundancies with other restrictions on mineral leasing from the management of other program areas, management specific to the MLP is less likely to adversely affect oil and gas development in these areas.

Bighorn Basin PRMP at p. 4-87; *see also* White River DRMP (1994) at p. 4-21 (“Prohibiting development in Class I areas would not affect oil and gas production because oil and gas potential in these areas is low.”).

Eliminating the presumption that all lands, regardless of development potential, should be open to leasing would help ensure that other resources and uses of the public lands, such as wildlife, recreation and water, are on equal footing with oil and gas development. Doing so would also create opportunities to enhance the management of those other resource and uses, particularly in areas with low/no development potential.

5. New regulations and policies are needed to halt hidden subsidies to the oil and gas industry.

(a) Bonding

Common sense reforms are necessary to protect taxpayers and the environment. BLM’s new regulations and guidance should include the following:

- Increase the minimum bond amount. At the very least the minimum should be adjusted to reflect inflation. Using a simple consumer price index (CPI) conversion that would set the individual bond at \$81,000, the statewide bond at \$231,000, and the nationwide bond at \$1,390,000. However, we recommend that bond amounts be set on a case by case basis at an amount that will cover the estimated cost of reclamation. This approach is similar to that employed in federal coal and hardrock mining regulations. Bond amounts could be reviewed periodically and adjusted up for new development on a lease or down for completion of final reclamation of a pad.
- Bond amounts should be set per well. This would bring the regulation in line with current oil and gas drilling practices where operators often drill multiple pads per lease and multiple wells per pad. This is similar to many state regulations. Additionally, bonds should take into consideration the relevant characteristic of a well that might impact reclamation costs; including among other things type, depth and target formation.
- Improve review of bond adequacy and liability tracking. This recommendation mirrors that made by GAO in 2011. BLM must “and improve its data system to better evaluate potential liability and agency performance...”⁵⁵

⁵⁵ GAO 2011

- Improve reclamation standards. In addition to the bonding regulations themselves, BLM's reclamation standards pose a significant issue. BLM's lack of clear reclamation standards has created a piecemeal approach, where standards change from land use plan to land use plan, creating inconsistent reclamation requirements on federal lands. BLM should adopt broad, uniform, performance-based standards that ensure that all wells drilled on federal lands meet acceptable minimum requirements for reclamation. This approach allows operators to employ their considerable resources and expertise to achieve satisfactory reclamation. It will provide a consistent and more flexible standard across field offices to promote better and more frequent reclamation potentially reducing an operator's desire to shirk responsibilities if they find current reclamation requirements too prescriptive or rigid.

(b) Lease suspensions

BLM should issue new guidance for managing suspensions that includes clear direction for considering suspension requests and denying unwarranted suspensions; monitoring existing suspensions on a regular basis and removing those that are no longer justified; and providing for public review of lease suspensions. BLM is currently not holding suspension requests to the high standard set out in the regulations, and revised guidance is necessary to ensure compliance.

- Update criteria for granting suspensions: BLM should issue revised direction for considering suspension requests that includes clear criteria for when the agency does and does not have discretion to grant a suspension request. Pursuant to 43 C.F.R. § 3103.4-4(a), obligations regarding all operations and production of oil and gas leases may be suspended "only in the interest of conservation of natural resources" and obligations regarding either operations or production may be suspended only when "the lessee is prevented from operating on the lease or producing from the lease, despite the exercise of due care and diligence, by reason of force majeure, that is, by matters beyond the reasonable control of the lessee"; and must be justified by the applicant. Revised policy should provide the agency with guidance for implementing these regulations and appropriately considering whether to approve lease suspension requests.
- Establish a monitoring and tracking system for suspensions: A lease suspension is not intended to be unending; BLM requires that a suspension terminates when it is "no longer justified in the interest of conservation, when such action is in the interest of the lessor, or as otherwise stated by the authorized officer in the [suspension] approval letter." 43 C.F.R. § 3165.1(c). BLM's existing manual directs the agency to "monitor the suspension on a regular basis to determine if the conditions for granting the suspension are extant, and should terminate the suspension when it is deemed no longer necessary." BLM Manual 3160-10.3.31.C.3. However, in practice this requirement is not applied through any regular or consistent mechanism. More explicit guidance should direct when and how this monitoring occurs. A verification system to ensure regular oversight including directing state offices to evaluate suspended leases on a quarterly basis and report to DC in a publicly available format should also be incorporated into the suspended lease management strategy.

- *Increase transparency and opportunities for public involvement in lease suspensions and monitoring*: BLM should be required to post documentation of lease suspension requests and decisions, including on its NEPA log, but also in a dashboard available via state office websites. Information on suspended leases, including status and reason for suspension, should also be made public to provide for public oversight and accountability on the length of suspensions in annual oil and gas program reports. A summary of lease suspensions should be included in the BLM's annual reporting of oil and gas statistics, as well.
- *Evaluate need for NEPA review*: Finally, BLM should evaluate whether categorical exclusions are appropriate for individual suspensions, applying the “extraordinary circumstances” criteria, and if any of those criteria are met, then an environmental assessment or environmental impact statement must be prepared.

(c) Lease reinstatements

BLM must update its guidance for evaluating and approving or denying lease reinstatements to ensure oil and gas companies are complying with the directives set forth in the Mineral Leasing Act and that taxpayers are receiving rental payments for leased public mineral resources. The practice of reinstating leases that have been terminated for failure to pay the annual rental fee needs to be evaluated by the BLM and much more stringent provisions for reinstatement should be put in place. By law, the BLM is only to reinstate leases in cases in which the failure to timely submit the rental was “justified” or “not due to lack of reasonable diligence” by the lessee. In updating the agency's guidance, BLM should establish narrow and specific guidelines for when these criteria may be considered to be met.

- *Require evidence of extenuating circumstances and reasonable diligence*: According to the BLM Handbook, justification can occur if “sufficiently extenuating circumstances or factors beyond the control of the lessee [] occurred at or near the lease anniversary date.”⁵⁶ BLM should ensure that any excuse of non-payment of rent is in fact beyond the control of the lessee—any claimed basis for failure to pay on time must be a “causative factor” showing control had been lost.⁵⁷ Failing to pay rent on time also can only rarely be excused as having occurred despite the exercise of reasonable diligence. To claim diligence, a lessee must be able to show they sent the rental “sufficiently in advance of the due date to account for normal delays.”⁵⁸ Lessees seeking lease reinstatements must be required to provide detailed support that they meet these criteria, and only in the rare circumstances in which they are clearly met should reinstatements be authorized.
- *Class I reinstatements should be generally unavailable*: BLM should exercise its discretion to not authorize Class I reinstatements (reinstatement at existing rental and royalty rates), except in the most extraordinary circumstances.
- *Define “inadvertence” to mean “not duly attentive”*: Regarding Class II reinstatements, the failure to pay rent on time should only rarely be excused as having occurred because of inadvertence. Inadvertent means “not duly attentive.” While inadvertence may be

⁵⁶ BLM Handbook H-3108-1 at 31

⁵⁷ *Id.*

⁵⁸ *Id.*

unintentional, it is synonymous with “careless.” This lack of attention should not be readily excused for such a simple task as paying your rent on time. If an oil and gas lease has real value to the operator, certainly they should be attentive enough to pay their rent on time. The failure to pay rent on time is evidence the lease is not valuable to the operator, and therefore leaving the termination in place is justified. The failure to pay rent on time probably signals a general lack of diligence, such as not seriously engaging in actual drilling operations. *See* 43 C.F.R. § 3107.1 (allowing for extension of lease terms if actual, diligent drilling is commenced prior to the end of the primary term).

BLM’s guidance defining when inadvertence can be excused is so broad as to be meaningless. “Inadvertence” is viewed by the BLM to include failure to pay due to carelessness, negligence, an unintentional or accidental oversight, inattention, a mistake, a financial inability to pay timely, or any other reason.” BLM Handbook H-3108-1 at 37. This meaningless view of what constitutes inadvertence must be abandoned. A definition that recognizes inadvertence means “not duly attentive” needs to be put in place. Being careless, negligent, inattentive or not having the financial inability to pay on time are not due reasons to excuse nonpayment.⁵⁹

- *Reinstated leases should not have their terms extended or royalty rates reduced.* The BLM should not extend the terms of the lease or reduce the royalty rate when a lease is reinstated. Reinstatement of oil and gas leases for failure to pay rent should be an exception rather than a rule in the interest of multiple-use management of our public lands.

(d) Leasing low potential lands

BLM should use development potential to plan for oil and gas development on federal lands in ways that mitigate resource conflicts, accommodate multiple uses of public lands without preference, and encourage development in areas that are most economic for oil and gas production. Limiting leasing in areas with low or no development potential would reduce administrative costs, mitigate conflicts between competing resources, and be more faithful to BLM’s multiple-use mandate.

This approach would also be consistent with the MLA, which directs BLM to hold periodic oil and gas lease sales for “lands...which are known or believed to contain oil or gas deposits...” 30 U.S.C. § 226(a); *see also Vessels Coal Gas, Inc.*, 175 IBLA 8, 25 (2008) (“It is well-settled under the MLA that competitive leasing is to be based upon reasonable assurance of an existing mineral deposit.”). These sales are supposed to foster responsible oil and gas development, which lessees must carry out with “reasonable diligence.” 30 U.S.C. § 187; *see also* BLM Form

⁵⁹ The Interior Board of Land Appeals has ruled that being financially unable to pay rent is not considered inadvertent and is, therefore, not grounds for Class II reinstatement. *Dena F. Collins*, 86 IBLA 32 (1985). But BLM policy is nevertheless that “if a lessee does later secure the financial ability and timely files a petition for reinstatement, the petition is to be processed.” BLM Handbook H-3108-1 at 37. BLM should expect that lessees will maintain an ability to meet and abide by their lease terms on a continuous basis; lessees should be ready to pay rent when due, and if they cannot they should be willing to give up the lease and move on to other business opportunities.

3100-11 § 4 (“Lessee must exercise reasonable diligence in developing and producing...leased resources.”).

- BLM plans should set out a framework for oil and gas development that supports closing lands to leasing where development is unlikely to occur: If BLM closes or defers leasing in low-potential areas, and conditions change to make development in those areas more likely, the agency can then complete additional analysis and planning to ensure that development occurs responsibly and accounts for current resource conditions. An updated approach to planning for oil and gas leasing should meaningfully account for development potential and conflicts with other resources.⁶⁰
- Modernize the handbook with an approach that provides for closing lands to leasing and limits leasing in low- or no-potential areas: Updating the handbook would not only support BLM’s obligation to consider managing lands for fish and wildlife, recreation and wilderness values, but also have minimal impacts on industry objectives. In locations like the Ely District in Nevada, where federal minerals are almost 90 percent open to leasing, only 32 wells were authorized over the past 101 years (as of May 21, 2014), even though there are 936 active leases covering just over two million acres of public land.⁶¹ Closing these lands to speculative leasing will not harm responsible oil and gas development.
- Consider basing oil and gas lease sales on a “List of Lands Available for Competitive Nominations,” as authorized by BLM regulations: BLM currently allows the oil and gas industry to nominate any public lands for leasing, which encourages widespread speculation in low potential areas and creates unnecessary conflicts with other multiple uses. This is extremely inefficient and wasteful system for leasing public lands is not the only model available to BLM, however, as current rules also permit BLM to create and utilize a “List of Lands Available for Competitive Nominations.” 43 C.F.R. § 3120.3-1. Such a list would allow BLM to proactively direct industry to areas with better odds of development and with lower resource conflicts, while eliminating areas from consideration that are clearly speculative and unlikely to generate any oil and gas revenues for American taxpayers.

Limiting development in low/no potential areas would allow BLM to minimize the risk of impacts and conflict altogether in areas where development is likely to be minimal in the first place. This practice would also limit speculative leasing practices by the industry, which can foreclose alternative management decisions and burden the BLM with increased administrative costs and conflicts associated with leasing in low potential areas. Under a more strategic approach to making oil and gas allocations in land use planning, lands would be made available for leasing by evaluating both an estimate of oil and gas potential and the conflicts with or

⁶⁰ See TWS No Exit Report for detailed recommendations on an updated approach to making oil and gas allocations in land use planning:

http://wilderness.org/sites/default/files/TWS%20No%20Exit%20Report%20Web_0.pdf

⁶¹ See BLM Nevada Preliminary EA for the Dec. 2015 Oil and Gas Lease Sale, p. 1.4.

potential harm to other resources present on those same lands. We direct BLM to and incorporate by reference the recommendations made in the TWS reports cited above (attached and incorporated herein by reference).

III. Conclusion

This petition is presented under the Administrative Procedure Act, which provides that each agency “shall give an interested person the right to petition for the issuance, amendment, or repeal of a rule”⁶² and the United States Constitution, which protects the right to “petition the Government for the redress of grievances.”⁶³ Interior must respond to this petition “within a reasonable time”⁶⁴ and Interior regulations state that petitions will be given “prompt consideration.”⁶⁵ Courts have found that “a reasonable time for agency action is typically counted in weeks or months, not years.”⁶⁶

The agency must notify petitioners of the denial of a petition, in whole or in part, and with limited exception, a denial must include an explanation on the grounds for denial.⁶⁷ A reviewing court shall compel agency action “unlawfully withheld or unreasonably delayed.”⁶⁸ We request that Interior and BLM respond to this petition and commence both rulemaking and issuance of new guidance in no less than three months of the date of receipt. We also notes that Interior regulations authorize the Secretary to publish this petition in the Federal Register to solicit public comments on the proposed rule-making if those public comments “may aid in the consideration of the petition.”⁶⁹ In light of the BLM’s previous acknowledgment of the need for many of these updates to regulations and policies, and the suitability of a public process, we request that Interior and BLM also public this petition for comment.

The current regulations and guidance underpinning the BLM’s onshore oil and gas leasing program are in dire need of updating. Analyses of these decades-old policies has shown that they are harming the taxpayers that the BLM is obligated to ensure receive the benefits of leasing and the public lands that BLM is obligated to ensure are managed for multiple use and sustained yield. Additionally, updating these rules will help cure widespread violations of the diligent development requirement that is an essential obligation in every federal lease. Updating these

⁶² 5 U.S.C. § 553(e).

⁶³ U.S. Const., amend. I.

⁶⁴ 5 U.S.C. § 555(b)

⁶⁵ 43 C.F.R. § 14.3.

⁶⁶ *In Re: American Rivers and Idaho Rivers United*, 372 F.3d 413, 419 (D.C. Cir. 2004) (internal citation and quotations omitted). *See Midwest Gas Users Asso. v. Federal Energy Regulatory Com.*, 266 U.S. App. D.C. 91, 833 F.2d 341, 359 (D.C. Cir. 1987) (“This court has stated generally that a reasonable time for an agency decision could encompass ‘months, occasionally a year or two, but not several years or a decade.’” (quoting *MCI Telecommunications Corp. v. Federal Communications Com.*, 200 U.S. App. D.C. 269, 627 F.2d 322, 340 (D.C. Cir. 1980))); *Fund for Animals, et. al. v. Norton, et. al.*, 294 F.Supp. 2d 92, 115 (D.D.C 2003) (petitioners are “entitled to an answer within a reasonable amount of time.”) (emphasis in original)

⁶⁷ 5 U.S.C. § 555(e); 14 C.F.R. § 14.3.

⁶⁸ 5 U.S.C. § 706(1). *See Telecommunications Research and Action Center v. F.C.C.*, 750 F.2d 70, 76-77 (D.C. Cir. 1984).

⁶⁹ 14 C.F.R. § 14.4.

policies will not harm the oil and gas industry, which is currently receiving unnecessary subsidies while profiting at the expense of the American public.

APPENDIX

C.1

Dan Bucks

*A Fair Return for the American
People: Increasing Oil and Gas
Royalties from Federal Lands
(2019)*

A Fair Return for the American People: Increasing Oil and Gas Royalties from Federal Lands

**Dan R. Bucks
March 2019**

Introduction

For decades, revenues from minerals extracted from federal lands—minerals owned by the American people—have been among the most important non-tax sources of funding for the U.S. government.¹ These revenues have been substantial even though it is widely believed that the federal government shortchanges the public by charging too little for what they sell and collecting even less than they charge. The federal government is charged with returning to the American people fair market value for the sale of these minerals and is found, too often, to have failed to do so.

There are many parts to the federal mineral revenue story—some quite colorful and notorious. In 1922, Secretary of the Interior Albert Fall accepted bribes to award below value, no bid leases to friends for the production of oil at Teapot Dome in Wyoming and two locations in California. Fall distinguished himself by becoming the first sitting Cabinet official to go to jail. In 1980, Charles B. Thomas, an inspector for the U.S. Geological Survey, stopped a tanker truck coming off the Wind River Reservation with stolen oil that bypassed royalty meters. The discovery triggered investigations revealing years or even decades of oil theft from federal and Indian lands—with major losses never fully recovered for the public or tribes. In 2008, Interior Inspector General Earl Devaney issued three reports detailing a “culture of ethical failure” and a culture of “substance abuse and promiscuity” that permeated the oil and gas royalty-in-kind program. He reported on how oil company employees traded gifts, graft, sex, and drugs with Interior staff for sweetheart “royalty-in-kind” oil and gas deals that cost the American public millions of dollars in lost royalties. Interior Secretary Salazar canceled the royalty-in-kind program and reorganized the entire Minerals Management Service out of existence, but no one was criminally prosecuted to the chagrin of the Inspector General.

Scandals are bright, shiny objects that attract momentary attention. Yet, after the headlines and drama of these sensational episodes fade, the thought and consideration given by officials, the press and the public to federal revenues from natural resources also wanes. That failure to pay attention allows a deeper, more consequential scandal—one that has gone on for every minute of every day for decades—to continue with no corrective action taken. That deeper scandal is the failure of the Department of the Interior (Interior) to collect royalties on natural resources produced from federal lands at rates that return fair market value to the American people. In the nearly hundred years Interior has managed federal minerals, it has not

¹ In recent years, federal mineral revenues have been temporarily eclipsed by interest revenues from bonds purchased by the Federal Reserve in the course of its quantitative easing policy designed to pull the economy out of the Great Recession.

changed even once the standard 12.5% royalty that it charges for oil and gas extracted onshore from federal lands. Meanwhile, royalties charged by other owners have increased, including those collected by states for oil and gas from state-owned lands and even by the federal government for offshore deposits. Texas, for example, charges and receives 25% and has done so for thirty years, with 18.75% increasingly a mid-level rate among the largest producing states.

Royalty rates are not a complicated matter. They are simply the price that owners, in this case governments on behalf of their citizens, charge for oil and gas produced. The royalty rate is the same as a homeowner offering to sell a home for a certain price. The federal government, in effect, offers to sell a home for \$200,000. In contrast, based on current relative royalty rates, most states close the deal for the identical house between \$267,000 to \$320,000. Louisiana sells the house for \$374,000—and Texas gets \$400,000 and has for a long-time.

The question might be asked, “Even if states charge higher prices for oil and gas, are they selling less and reducing production, jobs and economic activity in their states?” The answer is basically no. Economic studies find that even near the highest rates charged by states production would decline by 2% or less—too small to detract from the revenue gains from higher royalty rates. Further, Texas with its highest royalties in the nation remains the largest oil and gas producing state in the nation, with a new boom in production emerging in the Permian Basin within that state.

States are diligent in reviewing and adjusting their royalty rates to ensure their citizens receive a fair return on state minerals. Collectively, they test the marketplace for oil and gas by raising rates and seeing if they secure as much or more production. The states’ diligence stands in contrast to Interior’s failure to ever test in a hundred years the marketplace for higher rates for onshore oil and gas. Interior has not even established, as the U.S. Government Accountability Office (GAO) has urged it do so, a regular process for continuously reviewing and adjusting the royalty rates for federal oil and gas, which is often produced from the same fields as state oil and gas.

In terms of the practical uses of royalty revenues, achieving a fair return from oil and gas is important to managing the effects of the boom and bust cycles of resource extraction, especially on local communities in rural areas. Those states and communities share in the revenues from federal lands. Shortfalls in royalty collections hamper efforts in those communities to protect public health and safety, repair environmental damage, and diversify their economies for long-term resiliency. Finally, unjustified or improper deficits in federal mineral revenue collections contribute to a combination of reduced public services, higher taxes or increased federal debt.

The failure of Interior to collect royalties at a full and fair market value rate is the real scandal. The best evidence is that at the very least the federal government is giving away to oil and gas companies a third of the royalties that ought to be paid to the American people for onshore production. That is happening every moment of every day for every barrel of oil and

cubic foot of natural gas that flows off of federal lands. It is an enormous breach of trust with the American people. For that reason, this report will focus on royalties for onshore oil and gas and the process needed to ensure those royalties are fully and properly collected.

The federal government does deserve credit for increasing federal royalty for offshore production during the Bush Administration. In 2007, royalty rates for deep water oil and gas were increased from 12.5% to 16.67% (to match the existing rate for shallow water production). In 2008, the royalty rate for new offshore leases at all depths was increased to 18.75% where it remains today. The fact that Interior increased offshore royalty rates but has left onshore rates unchanged further highlights Interior's lack of diligence in securing for the public a fair return from onshore oil and gas.

Over the past decade or more, public agencies and non-profit groups have issued several reports evaluating the royalty rate for onshore federal oil and gas. On balance, these studies make a compelling case that Interior should increase the royalty rate for onshore oil and gas above the 12.5% rate and can do so with minimal impact on oil and gas production. The prior studies supporting increases in royalty rates remain fundamentally sound. Beyond updating information to reflect more recent developments, this report does not undertake a new analysis of royalty rates. Instead, it primarily seeks to summarize and refocus attention on the prior findings. In addition, the royalty rate issue will be placed in the context of related issues of determining the proper value of extracted minerals to which the rates are applied. More importantly, in light of continued inaction by Interior in adjusting rates or adequately evaluating potential changes, this report will recommend steps other public officials, agencies and non-profit organizations can undertake to encourage public knowledge and oversight of public mineral revenue issues.

Summary of Findings and Recommendations

This report makes the following findings:

1. States, whose lands are generally held in trust for their public schools, and the federal government have a responsibility to achieve a fair market value return for their citizens on oil and gas produced from their public lands.
2. State governments, collectively, test the market price—the royalty rate—for oil and gas by increasing rates and observing the response in terms of leases secured and oil and gas produced. Thus, state royalty rates reasonably reflect the fair market level for royalties. The federal government has not similarly tested the market price for onshore oil and gas production in over a century, reflecting a lack of diligence in meeting its responsibilities to the public. The untested federal rates are below market value as compared to the market-tested state rates.
3. Federal oversight of natural resource revenue policies and practices is episodic (often prompted by recurring scandals) and fails to regularly engage the broader public. The federal government should establish new mechanisms and procedures to give increased

and continuing attention to these policies and practices with greater opportunities for public participation in the process.

Consistent with the findings above, this report recommends the following actions:

1. As an initial step toward achieving a fair return for the American people, Interior should increase standard royalty rates for new leases for onshore oil production to 18.75% matching both its current offshore royalty rates and the middle range of state royalty rates for onshore oil and gas production. Further changes in the level and structure of federal royalty rates should be considered through the new royalty evaluation process described under items 3, 4, and 5 below. If Interior fails to increase the rate to 18.75%, Congress should adopt that rate by law as the minimum level for new oil and gas leases and mandate Interior to periodically evaluate and report to Congress on potential increases above this minimum.
2. To protect the integrity of natural revenues and prevent royalty payments from being undermined by gaps and loopholes in reporting oil and gas values, Interior should take additional and continuing measures to ensure that oil and gas producers report the full amount and value of their production.
3. Interior should establish, as the GAO has recommended, a continuous process to “evaluate the oil and gas fiscal system as a whole.”² and review policies through these measures:
 - a. Establishing an “Office of Natural Resource Revenue Analysis” to conduct regular and transparent studies of leasing and bid practices, royalty and rental rates, resource measurement practices, valuation policies and methods, and other natural resource revenue topics. The charter and organization of the office should be instituted in a manner that supports the objectivity, independence, and transparency of its work and public participation in its studies and operations.
 - b. Reevaluating the level and structure of its natural resource revenue policies as a whole on a periodic schedule. The process should include incorporating lessons learned from state experiences, with specific attention to keeping federal rates at least consistent with the middle range of state rates. The process should also provide opportunities for active public participation in proposed changes prior to formal adoption.
4. Congress should strengthen its oversight of natural resource revenue policy and practices by establishing a Joint Committee on Natural Resource Revenue to conduct studies of natural resource revenue laws, policies and administration. The structure, duties and operations of this new joint committee would be modeled after the Joint Committee on Taxation, with members drawn from the U.S. Senate Energy and Natural Resources Committee and the U.S. House Natural Resources Committee. The joint committee’s powers should extend to examining confidential records of returns, disputed cases and other matters necessary to evaluate the effectiveness of Interior’s policies and practices.
5. To fulfill the public’s right to know what they are being paid for the minerals they own and further strengthen oversight through well-informed public engagement in natural resource

² U.S. General Accountability Office, “Oil and Gas Royalties: The Federal System for Collecting Oil and Gas Revenues Needs Comprehensive Reassessment,” GAO-08-691, p. 16.

revenue policies, Congress should re-enact transparency laws that require reporting, by lease, of revenues paid, production levels, and mineral values on public lands.

6. As improvements occur in the transparency of federal natural resource revenue systems, state governments should improve the transparency and availability of state natural resource revenue information in a comparable manner.
7. In addition to advocating for substantive improvements in federal royalty policy and administration, non-profit conservation, environmental and public lands management organizations should support increased transparency of natural resource revenue data and evaluate the need for and feasibility of establishing a Natural Resource Policy Center to conduct regular and systematic research on federal and state natural resource revenue policies and administration.

Increasing Royalty Rates for Onshore Oil and Gas Production

From 2007 through 2017, the GAO issued a series of reports focusing on the level and structure of federal oil and gas royalty rates. In its 2008 report, it found that the “inflexibility of royalty rates to change oil and gas prices has cost the federal government billions of dollars in foregone revenues.”³ In the course of its reports, the GAO also noted various comparisons between federal rates and those charged by states and foreign governments.⁴ It generally concluded that the federal rates were among the lowest collected. Those comparisons, while not receiving widespread attention, may have had an impact on the increases in offshore federal royalty rates in 2007 and 2008.

The table below compares the royalty rates in major oil and gas producing states.⁵ The term “top” royalty rates is used because in some states, slightly lower rates are charged on lower quality, “speculative” deposits. Those deposits are not representative of the primary sources of production in the United States, so the top rates are the most relevant ones for policy purposes. To underscore the regular attention states give to their rates, in the last few years Colorado increased its rate from 16.67% to 20%, and New Mexico increased its top rate from 18.75% to 20%. The following are the current onshore rates in major producing states as compared to the federal onshore rate.

³ *Id.*, p. 16.

⁴ For another state/federal royalty rate comparison, see also: Center for Western Priorities, “A Fair Share: The Case for Updating Oil and Gas Royalties on Our Public Lands,” Update, June 18, 2015. Colorado and New Mexico increased their rates since that report was issued.

⁵ The practices of two other major, long-term production states, Alaska and California should be noted. California does not appear to have onshore production of oil or gas on state lands because of the limited extent of those lands. Thus, there is not a relevant state royalty rate. Alaska charges a 12.5% royalty for production from its state lands, but it also levies a higher and more extensive structure of state taxes on oil and gas production. Alaska’s royalties and taxes combined result in a higher governmental share of revenues than what occurs for the federal onshore rate. Thus, listing Alaska’s royalty rate alone would constitute a misleading “apples and oranges” comparison with the other states.

Federal Onshore Royalty Rates Lag Behind State Rates Rates Applicable to New Leases	
Jurisdiction	Top Rate
Texas	25%
Louisiana	23.4%
Colorado	20%
New Mexico	20%
North Dakota	18.75%
Montana	16.67%
Utah	16.67%
Wyoming	16.67%
Federal Onshore	12.5%

States exercise a higher-level of diligence than the federal government does regarding royalties from mineral production on their state lands. Fifteen states, predominantly located in the West, retain state lands.⁶ Except for Texas, whose public lands derive from its unique history, these state lands were granted at statehood by the federal government for the support of public schools. It is the author's experience that issues regarding earnings from state lands attract greater public interest in these states as compared to the earnings from federal lands. That level of public attention may be attributable, in part, to the direct connection between the revenues from state lands and the budgets of local schools throughout a state.⁷ In contrast, federal royalties take a circuitous route through Washington, with about half the revenue returning to the states to be distributed in a variety of ways, not all of which are visible to the public. In addition, state officials and legislators are simply more accessible to the citizens of these fifteen states than federal officials whose responsibilities extend to the entire nation. For these reasons, mineral royalties on state lands get more attention in states than do the same issues for federal lands. That translates into a level of regular and systematic diligence by state officials in managing revenues from state lands that is regrettably absent at the federal level.

States deserve substantial credit for doing a better job than the federal government in securing a return for their citizens from oil and gas produced on public lands. States have tested the market for their oil and gas resources by increasing rates and observing the results. In general, the states discover that higher rates do not reduce production. The GAO has reported this conclusion from state experiences:

Officials from two state offices we interviewed said that the history of increasing royalty rates for oil and gas production on state lands suggests that increasing the federal

⁶ Souder, Jon and Fairfax, Sally, "The State Trust Lands," The Thoreau Institute. Initially, thirty states owned federal lands, but half of these sold their lands and presumably hold the proceeds in trust for their public schools.

⁷ A vivid example of the "state lands for schools" connection is displayed on the website of the Texas General Land Office. See, in particular, the pages associated with "Education" and "Energy" tabs on that site: <http://www.glo.texas.gov/glo-education/index.html> and <http://www.glo.texas.gov/energy/index.html>.

royalty rate would not have a clear impact on production. In particular, officials from Colorado and Texas said that they have raised their state royalty rates without a significant effect on production on state lands. In February 2016, Colorado increased its royalty rate for oil and gas production from 16.67 percent to 20 percent, and, according to state officials, there had been no slowdown in interest in new leases as of August 2016. In fact, Colorado state officials said they were unsure whether the higher royalty rate played much of a role in companies' decision making. Additionally, Texas officials told us that over 30 years ago, Texas began charging a 25-percent royalty for most oil and gas leases on state lands, and this increase has not had a noticeable impact on production or leasing.⁸

Beyond serving their citizens well, state royalty rates provide actual marketplace information on attainable royalty rates. That information is a reasonable guide to setting minimum federal royalty rates.

Proposals to increase royalty rates raise objections from the oil and gas industry that such changes would reduce production. However, there is little evidence to support that viewpoint. In 2017, the GAO reviewed studies on the impact that increasing federal onshore oil and gas royalty rates would have on revenues and production.⁹ It noted that a Congressional Budget Office study found that an 18.75% federal onshore rate would raise revenues on federal lands as new leases were granted and placed in production but would likely have only a negligible effect on production. The CBO estimated that, after subtracting payments to states, federal revenue would increase by \$200 million in the first 10 years as new production phased in, and more in the subsequent decade.¹⁰ Because states receive nearly half of the federal royalties, the CBO estimate means that total royalty payments would be expected to increase by approximately \$400 million over the first decade after the change. A second study by Enegis, LLC, modeled 3 increases in federal royalty rates to 16.67%, 18.75%, and 22.5%. The study found only a small impact on production, ranging from a 0% to a 1.8% decline in oil production across the three scenarios over 25 years, and a 0% to less than a 1.0% decline in natural gas production over the same period. With little or no impact on production, the three scenarios would produce between \$125 million and \$939 million in additional revenue over 25 years.¹¹ Raising the federal royalty rates to match the middle-range of state rates will produce revenue with negligible impact on production, jobs and economic activity. An increase of federal royalty rates to 18.75% would represent a modest step forward.

⁸ U.S. General Accountability Office, "Oil, Gas, and Coal Royalties: Raising Federal Rates Could Decrease Production on Federal Lands but Increase Federal Revenue," GAO-17-540, June 2017, pp 21-22.

⁹ *Id.*, pp. 16-23.

¹⁰ *Id.*, pp. 16 and 22. Recent increases in estimates of future production would appear to make the CBO estimates conservative. New estimates using more current data would be in order.

¹¹ *Id.*, pp. 16-17 and 22-23.

Similar conclusions arise from a recent major study of the impact of state severance taxes on revenues and oil production.¹² The study modeled four dramatically different severance tax regimes ranging from 0% to 12%, 25%, and 25% with a drilling subsidy. Their overall conclusion was as follows:

A key result . . . is that oil production is closely linked to the size of the reserve base and is relatively insensitive to changes in oil prices. This outcome, which is broadly consistent with experience in the U.S. oil industry over the past 50 years, leads to the conclusion that severance tax has little effect on production levels and serves mainly to redirect rents earned in the oil industry to the public sector. Thus, increases in severance taxes or a reduction to subsidies provided to the oil and gas industry may lead to rent taxation and therefore have only marginal effects on the drilling and production of oil . . .¹³

What Chakravorty, et. al. found was that even with very high severance taxes of 25% added to the typical public land royalty payments, production of oil is not significantly reduced. The reverse was also true: lower taxes or subsidies for drilling did not produce material increases in production. This outcome also supports a more important conclusion that current royalties are failing to return to their owners what they are owed: the full and fair value of the unproduced resource. In this study, even the highest severance taxes are simply returning a remaining portion of the intrinsic value of the unproduced resource to the public.¹⁴ That is because even the highest taxes added to royalties do not significantly affect production. Producers still receive sufficient after-tax income to cover their costs of production including normal profits, which is the maximum they should receive.

No portion of the value of the unproduced oil and gas should go into excess profits of oil and gas producers over and above their production costs and a normal profit. That is because producers do nothing to create the wealth embodied in the raw, unproduced oil and gas. The multiple studies showing that higher royalty or tax rates can increase revenues without reducing production prove that the current low rates allow oil and gas producers to capture wealth they did not create. The result is that producers unjustly secure excess profits that ultimately benefit the largest shareholders of oil and gas companies and executives whose compensation is tied to stock options.

Current federal royalties are too low to return fair value to the American people who are the owners of this resource. Raising royalties will reclaim wealth that is now improperly gained by oil and gas companies. Higher royalties will not affect production, but will reduce the

¹² Chakravorty, Ujjayant, et. al. "State Tax Policy and Oil Production: The Role of the Severance Tax and Credits for Drilling Expenses," in Gilbert E. Metcalf, ed., *U.S. Energy Tax Policy*, Cambridge University Press, pp. 305-337.

¹³ *Id.*, p. 306.

¹⁴ This sentence and the preceding one translate into less technical terms the quote in the Chakravorty study concerning severance taxes redirecting "rent" from the oil industry to the public. "Economic rent" is supposed to be paid to the original owners for the value of the unproduced oil and gas and not to the oil industry. Thus, the redirection is proper and justified.

excess profits of oil and gas companies and the resulting inflated, unearned income of their major shareholders and top executives. This effect on wealthy shareholders and top executives explains the intensity of corporate lobbying against increases severance taxes and royalties. However, oil and gas lobbying claims that increases in royalties or taxes will decrease production, jobs, and economic activity are not valid. Policies setting royalties below market levels simply subsidize shareholders and executive pay at the expense of the public.

The recent dramatic increase in oil and gas production in the United States also supports the conclusion that the size and nature of a resource deposit and the ability based on current technology to tap that deposit are the real factors that determine output. From 2008 through 2018, crude oil production in the United States essentially doubled. Production has now matched the previous peak in 1970 and is expected to reach even higher, record levels in 2019 and 2020. Indeed, the U.S. is expected to become the world's largest oil producing nation. Natural gas has also boomed. The increased production is largely attributable to fracking technology increasing oil and gas production in both old and new deposits. In particular, fracking led to the development of oil from the Bakken Formation primarily in North Dakota and also Montana. Fracking is also producing huge increases from the redevelopment of the Permian Basin in Texas and New Mexico. All these states charge higher royalties than the federal government, with Texas the highest at twice the federal rate and New Mexico not far behind. The lesson from the history of U.S. oil and gas production is clear. Geology and technology determine the amount of production, not royalty or tax rates.

Interior, by leaving in place for a century a 12.5% royalty rate, has failed the American people and has facilitated the transfer of enormous wealth that belongs to the public to wealthy shareholders and top executives of oil and gas companies. That failure needs to end. The median rate of state royalties in the table above is 19.375%. Increasing the federal onshore rate to 18.75% to match the federal offshore rate would be a conservative first step for Interior to begin doing justice for the American people and the states and communities responsible for responding to and managing the effects of oil and gas production. The rate would apply to new leases issued after the rate change. After this initial rate change, further increases in royalty levels should be thoroughly analyzed and considered with a firm goal of fully guaranteeing that the public is paid the fair market value for unproduced oil and gas.

If Interior fails to increase the rate to 18.75%, Congress should establish by law that rate as minimum royalty for new oil and gas leases on federal lands. Further, that law should mandate Interior to periodically evaluate and report on Congress on possible increases in rates above this minimum.

There are other proposals for changing royalties such as sliding rate scales in relation to oil and gas prices, the quality or location of the resources, or the timeliness of production undertaken. Consideration of additional rate increases beyond 18.75% and these more sophisticated ideas should occur after the federal policy-making process regarding natural resources revenues is strengthened through improved analysis, oversight, transparency, and

public participation in decision-making as recommended later in this report. The time is long since past when Interior should be left with developing royalty policy on its own.

However, before moving on to a discussion of revitalizing and opening up the natural resource policy process, this report will briefly note the need to restore the integrity of the oil and gas royalty base—the quantity and value of the resource to which royalty rates are applied. No amount of royalty rate increases or restructuring can make up for understatements in the amount and value of oil and gas produced.

Restoring the Accuracy and Integrity of the Federal Royalty Base

Royalty payments, especially if rates are increased, can be undermined by gaps, loopholes, and weaknesses in determining the amount and value of oil and gas produced. There are at least three areas of chronic problems that need to be solved if the public is to receive a fair return. Each could be the subject of a report on their own. They will be summarized here simply to note additional issues that need urgent and effective attention. These issues include (a) problems with measurement of oil and gas production, (b) understatement of the value of natural gas through non-arm's length sales and the bundling of deductible and non-deductible costs, and (c) the waste of methane gas through leaks and flaring and the failure to collect royalties on such gas.

The GAO has long identified Interior's management of oil and gas as one of the governmental programs it monitors as a "high risk" of abuse or failure. One of the continuing reasons the GAO classifies the program as a high risk is because it is concerned about deficiencies in Interior's methods of ensuring accuracy in the measurement of natural gas produced for royalty purposes. While the GAO cites some progress made by Interior, that progress is still not sufficient to fully resolve these problems.¹⁵

In 2007, the Bush Administration's Royalty Policy Committee took note of long-standing issues that non-arm's length sales of natural gas (and also coal) and the bundling of deductible and non-deductible costs created difficulties in valuing natural gas for royalty purposes.¹⁶ These problems include circumstances where companies, by selling gas at below market prices to their captive affiliates, can undervalue the gas in calculating royalties. They also include cases where costs for items that are deductible and non-deductible are bundled together, creating situations where deductions from value can be overstated. Either circumstance results in shortchanging the public.

The Bush committee recommended that Interior remedy these problems by proposing new rules by the end of FY 2008—just nine months after the recommendations were made.

¹⁵ U.S. General Accountability Office, "High-Risk Series: Progress on Many High-Risk Areas, While Substantial Efforts Needed on Others," February 2017. See p. 141 on deficiencies in the accuracy of measuring natural gas produced.

¹⁶ Subcommittee on Royalty Management, "Report to the Royalty Policy Committee: Mineral Collection from Federal and Indian Lands and the Outer Continental Shelf," U.S. Department of the Interior, December 17, 2007, p. 72-73.

Instead it took nine years for Interior to adopt new rules that tightened up the royalty rules to prevent this loss of revenue by the public. Those rules took effect on January 1, 2017, but were suspended by the Trump Administration in late February 2017 and repealed a few months later. So, these problems of properly accounting for the value of natural gas for royalty purposes continue today.

Perhaps the costliest gap in the oil and gas royalty base occurs with the waste of methane that is flared and vented or leaked in the course of producing oil and gas. Producers not only waste this valuable resource but also fail to pay royalties on it—even though it is part of the minerals extracted. This problem is further aggravated by the fact that methane is potent greenhouse gas. Interior adopted new rules in 2016 to reduce methane waste and improve the payment of royalties. However, the Trump Administration delayed those rules and then replaced them with weaker standards in 2018. The 2018 rule is estimated to cost the public up to \$80 million in lost royalty revenue over ten years.¹⁷

This and other problems that erode the royalty base and shortchange the public have generally persisted for a long time. As in the case of royalty rates, Interior has not been diligent in correcting these problems. Further, the shield of secrecy surrounding royalty valuation has hampered the ability of Congress and the public to hold Interior accountable for failing to seek or implement solutions that ensure the accuracy and integrity of the federal royalty base. Indeed, the secrecy prevents the public from knowing the extent of revenues it is losing to gaps, loopholes and weaknesses in the royalty system. The secrecy and lack of oversight needs to end.

Achieving Effective Public Oversight of Natural Resource Revenue Policies

The GAO in its reports on federal oil and gas also struck a recurring theme that runs that Interior does not adequately and regularly evaluate the oil and gas fiscal system. It stated,

Interior does not routinely evaluate the federal oil and gas fiscal system as a whole, monitor what other governments or resource owners worldwide are receiving for their energy resources, or evaluate and compare the attractiveness of the United States for oil and gas investment with that of other oil and gas regions. As a result, Interior cannot assess whether or not there is a proper balance between the attractiveness of federal lands and waters for oil and gas investment and a reasonable assurance that the public is getting an appropriate share of revenues from this investment.¹⁸

Interior might note in response that at various times it has convened advisory committees on royalty policy including in the Bush Administration and again in the current one. The Bush-era committee was thoroughly focused on details and produced over 100

¹⁷ Taxpayers for Common Sense, “Issue Brief: Methane Waste on Federal Lands,” at <https://www.taxpayer.net/article/methane-waste-on-federal-lands>.

¹⁸ GAO-08-691, *Supra* at note 3, p. 20.

recommendations, mostly quite valuable as individual pieces. However, the committee's recommendations may have been a case of "missing the forest for the trees." It did not produce the kind of overall assessment of the level and structure of royalty policies that the GAO seems to be recommending.

The Trump Administration's Royalty Policy Committee is still operating. It is subject to criticism of being overbalanced in representing oil, gas and coal producers. Interior's formation of this committee is even subject to an ongoing court challenge. The committee, with little or no expert analysis, recommended reducing the 18.75% offshore royalty rate. That recommendation was then quickly rejected by then-Secretary of the Interior, Ryan Zinke. A final evaluation of this committee is premature until it completes its work. However, there are few signs that it will satisfy the GAO specification as an overall assessment of the oil and gas fiscal system.

The use of advisory committees is episodic and uneven instead of being a process that is continuous and consistent in the scope of analysis, with expertise and knowledge accumulating and improving as it proceeds over time. Further, the administrative staff of Interior typically staffs the episodic reviews through committees. That both interrupts the regular management and operation of mineral management function, but also carries the risk of unconscious bias in favor existing practice.

Thus, it would be better to develop a specific unit in Interior—an Office of Natural Resource Analysis—with the charge of developing a framework for evaluating natural resource revenue policies at three levels: as a whole in its entirety, in its major components and in specific details as needed. At the mid-level of analysis, the office would conduct regular and transparent studies of leasing and bid practices, royalty and rental rates, resource measurement practices, valuation policies and methods, and other natural resource revenue topics. On an established schedule, the office would also conduct a higher-level periodic assessment of the fiscal system as a whole, including the structure and level of royalties as compared to states and other governments. Again, as stated previously, narrow and detailed issues would be examined as they arise. Regardless of the stage or level of analysis, the office would ideally incorporate lessons learned from state experiences, with attention to keeping federal rates at least consistent with the middle range of state rates.

Part of a framework of evaluating natural resource policies will involve the development of consistent series of data and analytical tools that would be continuous but also improved over time. The objective would be to systematically accumulate and improve a body of knowledge and expertise on natural resource revenue policy. That would replace the current process that appears to jump from one episode or policy crisis to another using different tools and information at different times in a disorganized manner.

This office would be charged with working with the public in as open a manner as possible using advisory committees, public workshops and listening sessions and other methods of participation as appropriate. Standards and procedures need to be established to support

the independence and objectivity of this office and insulate it from criticism as being subject to undue influence of any kind. The transparency recommendations below would reinforce these efforts.

Congress also needs to strengthen its oversight of Interior's natural resource revenue policies. It should build its own independent capacity to evaluate these policies. It should establish a Joint Committee on Natural Resource Revenue to conduct studies of natural resource revenue laws, policies and administration. The structure, duties and operations of this new joint committee would be modeled after those of the Joint Committee on Taxation. The membership of the joint committee would be bipartisan and drawn from the U.S. Senate Energy and Natural Resources Committee and the U.S. House Natural Resources Committee. The joint committee's powers should extend to examining confidential records of returns, disputed cases and other matters necessary to evaluate the effectiveness of Interior's policies and practices.

Congress should also require an annual report on the natural resource revenue system from Interior. That report would be subject to public hearing by the respective House and Senate Committees. Whether Congress goes further and uses its increased capacity to delve more deeply into revenue issues cannot be guaranteed. However, the process would be improved if Congress would empower the public to engage more effectively in natural resource revenue issues.

Congress should serve the public by providing for greater transparency in royalty information. The American people who own the minerals on federal land are not informed of the amount of royalties they are paid on federal leases or the production amounts and values on which those royalties are based. By keeping this information secret, the public is effectively disenfranchised in the natural resource revenue process. In response to an international movement, the Extractive Industries Transparency Initiative, other nations are providing enhanced royalty and tax information to their citizens. As of today, U.S. citizens can discover how much U.S.-based companies have paid to the government of Nigeria in various taxes and royalties on a project level basis. However, U.S. citizens cannot have access to the same information about the same company payments to the U.S. or state governments on a project or lease basis. That is a disgrace that should be rectified.

Congress actually enacted a law—the bipartisan Cardin-Lugar provisions in the Dodd-Frank Act—requiring disclosure of royalty and lease payments on a detailed basis. It charged the Securities and Exchange Commission (SEC) with developing technical rules to implement that law. The SEC did so, largely only repeating the law itself and adding an administrative reporting process. However, as one of the first actions by Congress in 2017, with the support of the new Administration, those largely ministerial rules were overridden by Congress. The law is still on the books, but the disapproval action under the Congressional Review Act now makes it virtually impossible for the SEC to implement it. The Trump Administration then followed this action with a formal removal of the U.S. from the Extractive Industries Transparency Initiative.

Congress should reverse this action and enact new legislation requiring reporting of governmental payments for resource extraction and production amounts and values on a lease-level basis. The public has a right to know what is being paid for the minerals they own and why. Without that information, the public is prevented from effectively participating in natural resource revenue decisions. The policy field is inevitably tilted in favor of oil and gas and other extraction companies to the detriment of the public interest.

Organizations interested in natural resource revenue policy should support this and other transparency measures as a priority basis. States should join in adopting their own improved transparency measures. The result would be to empower the public as the vital means to ensuring accountability by Interior for collecting the full and fair amount of royalties and other revenues for the American people.

Conclusion

For a hundred years, the federal government has shortchanged the American people, Indian tribes, and resource-dependent states and communities by failing to charge royalties at a rate that returns to the public full and fair value for the oil and gas deposits they own. Interior has neglected to evaluate and adjust royalty rates on a regular basis, even though they have an example set for them by state governments on how to do so.

Congress has provided insufficient and uneven oversight to federal minerals management. Worse yet, the federal government has kept secret from the American people information about what they are paid in revenues on each lease and the values and production used to calculate those revenues. The failure of Congress to conduct effective oversight and to provide the public with information necessary for effective participation in federal mineral policy discussions has contributed to the ongoing negligence that plagues the management of federal minerals.

Oil and gas production is rising to record levels in the United States, which means that if royalty rates are left the same, the public will lose even more of the revenue to which it is entitled. Past estimates of increased revenue from raising federal royalty rates are now likely too conservative. Rising production makes it all the more urgent that the federal government increase its rates to a level comparable to state rates.

Beyond that initial increase, the federal government needs to engage in a systematic process of evaluating and adjusting federal mineral revenue policies on regular, diligent and determined basis. Most importantly, Congress needs to welcome the American people into the discussion of federal mineral policies and empower the public to participate through transparent information on the operation and outcomes of current policies. All of this and more are necessary to achieve fiscal justice, accountability and transparency for the American people with respect to the minerals that they own.

Dan R. Bucks is the former Montana Director of Revenue and former Executive Director of the Multistate Tax Commission. The Wilderness Society provided support for the preparation of the report. However, the analysis, judgments, and conclusions of this report are entirely those of the author.

APPENDIX C.2

Dan Bucks

*Fiscal Responsibility in the
Management of Oil and Gas
Leases on Federal Lands
(2020)*

A thin vertical line is positioned on the left side of the page, extending from the top of the title area down to the bottom of the page.

FISCAL RESPONSIBILITY IN THE MANAGEMENT OF OIL AND GAS LEASES ON FEDERAL LANDS

Dan Bucks

May 2020

Acknowledgments

I appreciate greatly the support of The Wilderness Society in making this report possible. Given its scope, the report benefitted from contributions by several members of the society's staff. Chase Huntley provided the leadership to enable the undertaking of this project. Juli Slivka and Alex Daue suggested the fiscal responsibility theme and helped develop the range and contours of the report. Further, Alex also supplied comments on the report that significantly improved its analysis and clarity. Will Fadely furnished information on current federal policy events and served as a sounding board for my perspective on the history of the oil and gas program. Nada Culver, a former society staff member, helped expand my understanding of the federal oil and gas program through joint work on a petition to the Department of the Interior in 2017.

I am deeply indebted to Laura Zachary of Apogee Economics and Policy who made invaluable contributions in multiple ways to this report. She provided organizational support and research assistance, suggested ideas, designed graphics for the historical timeline table in the report, and conducted extensive editorial support throughout the project. Most of all, I appreciate her key advice and insights at various stages in the project.

I am thankful to my wife, Jane, who suggested avenues of inquiry and helped keep me up to date on new developments concerning fossil fuels, renewable energy, Interior policies, and public land management issues.

This vital support made the report possible. However, all of the judgments and conclusions of the report are entirely my own.

Table of Contents

ACKNOWLEDGMENTS.....	0
TABLE OF CONTENTS	0
EXECUTIVE SUMMARY	1
1. INTRODUCTION.....	4
2. PRINCIPLES AND STANDARDS FOR FISCAL RESPONSIBILITY IN FEDERAL LANDS MANAGEMENT.....	5
GOVERNMENT’S DUAL RESPONSIBILITY TO THE PUBLIC IN MANAGING FEDERAL RESOURCES.....	7
ENERGY DOMINANCE ON PUBLIC LANDS IS A FISCALLY IRRESPONSIBLE STRATEGY	8
CRITERIA FOR FISCALLY RESPONSIBLE DECISION MAKING FOR FEDERAL LANDS	9
FISCAL RESPONSIBILITY AND THE ELEPHANT IN THE ROOM: CLIMATE CHANGE	11
3. THE CONTINUING CRISIS OF FISCAL IRRESPONSIBILITY IN THE FEDERAL OIL AND GAS PROGRAM.....	13
FAILURE TO ATTAIN FAIR MARKET VALUE FOR THE PUBLIC IN REVENUES FROM FEDERAL OIL AND GAS RESOURCES	13
<i>Sweetheart Deals: Losses for the American People Become Capital Gains for Speculators and Windfall Profits for Oil and Gas Companies.....</i>	14
A BRIEF HISTORY OF FRAUD, ABUSE AND SPECULATION IN THE FEDERAL OIL AND GAS PROGRAM	15
SERIOUS FISCAL PROBLEMS REMAIN DESPITE 1987 REFORMS.....	17
<i>Non-competitive bids, minimum lease bid rates and rental rates</i>	17
<i>Lease parcel nominating.....</i>	21
<i>Length of lease</i>	22
<i>Lease suspensions</i>	23
<i>Royalty rate.....</i>	24
CONCLUDING NOTE ON THE CRISIS OF FISCAL IRRESPONSIBILITY.....	25
4. ACHIEVING FISCAL ACCOUNTABILITY TO THE PUBLIC FOR VALUE LOST AND DAMAGES INCURRED.....	26
ACCOUNTING FOR THE REDUCED VALUE OF MULTIPLE USES OF FEDERAL LANDS.....	27
COMPENSATING THE PUBLIC FOR ENVIRONMENTAL AND SOCIAL COSTS FROM OIL AND GAS ACTIVITY	30
5. RECOMMENDATIONS TO ACHIEVE A FULL AND FAIR RETURN FOR THE AMERICAN PEOPLE	33

Executive Summary

The Department of the Interior's management of oil and gas resources on public lands is a disaster. For a century, the federal oil and gas program has been plagued by scandal and mismanagement under administrations led by both political parties. When evaluating the program's current practices against the requirements of federal law and objective standards for fiscal responsibility, the federal oil and gas program is flunking.

Federal law requires the Department of the Interior (Interior) to produce a full and fair return to the American people from the oil and gas resources they own.¹ The law also requires Interior to manage federal lands to support using each parcel of land for multiple, beneficial uses. Finally, the law requires the Interior to protect the public from environmental and social harm due to oil and gas production. Interior does none of these things well.

In fiscal responsibility terms, these legal requirements mean that Interior should strive to achieve the following goals when making decisions regarding federal lands:

1. Collect the right amount of revenues due from oil and gas activities on federal lands to provide the public a fair market value return;
2. Protect the public from the loss of value caused by oil and gas leases reducing or interfering with multiple uses—recreation, cultural uses, clean air and water, abundant wildlife, renewable energy and other sustainable activities—on those lands; and
3. Prevent the public from bearing environmental and social costs—such as climate change—arising from oil and gas development on federal lands.

Instead, as compared to how states manage oil and gas on their public lands, the federal government gives away to oil and gas companies and speculators at least a third of the value owed to the American people—with billions upon billions of dollars lost over time. Oil and gas leases on federal lands prevent the public from fully enjoying the benefits of tens of millions of acres of land suitable for recreation, renewable energy, wildlife habitat and more. Even leases issued in the 1940s that have produced no oil or gas are limiting public use of federal lands. The loss of value from diminished multiple uses of federal lands has not been tallied but is enormous. Finally, the federal government adds financial burdens to American taxpayers by mismanaging oil and gas development on publicly owned land and by subjecting the public to increasingly serious risks from climate change including threats to public health. At least a portion of the risks to human civilization from accelerating climate change can be calculated using the social cost of greenhouse gases, and these financial costs also ought to be incorporated into a fiscally responsible federal oil and gas program.

This report reviews studies of the federal oil and gas program stretching back over decades and extending to the present. It identifies how mismanagement and failure to achieve

¹ Onshore and offshore oil and gas leasing also require that the government receive “fair market value” or “fair return” on the minerals. See 43 U.S.C. § 1701(a)(9) (2012) (onshore leases)

legal requirements and reasonable policy goals are embedded in every element of the program. In the past, Congress and Interior have struggled with partial and piecemeal attempts to reform the oil and gas program. The results have merely been to move problems from one area of activity to another as companies exploit remaining loopholes more to secure improper gains at the public's expense. Thus, the best way the oil and gas program can be redeemed to meet the requirements of the law and sound fiscal and environmental policy is for the entire program to be rebuilt from beginning to end. That comprehensive reform requires that a new oil and gas program should be built on a foundation of (a) establishing the public interest as the focal point of federal land and minerals management and firmly aligning Interior and industry's responsibilities with the interests of the public, (b) greatly expanding public transparency and (c) enhancing congressional oversight.

If a complete overhaul of the federal oil and gas program cannot be achieved all at once, then Congress should enact fundamental changes to establish the primacy of public over private interest on federal lands and greater transparency and oversight along with as many other specific recommendations outlined in this report as are feasible. Congress should then continue an incremental process of adopting the remaining reforms. The fundamental changes are critical first steps. Making the public interest the focus of federal land and minerals management and providing for greater transparency and oversight can motivate, propel and inform the continuing process of reforming the oil and gas program and can help safeguard the public interest against administrative error and industry exploitation as Congress proceeds with this work.

This report explores how the federal oil and gas program can be rebuilt to serve the public. In deep detail, it shows how Congress can require Interior to finally return full and fair value to the public from federal lands by pursuing the three goals described above.

The means of accomplishing those goals are largely known. In the first instance, they involve adopting lease terms and leasing procedures for ensuring that as nearly as possible lease bids, rental rates and royalties reflect the fair market value for oil and gas. These steps involve increased levels of minimum lease bids, rental rates per acre, and royalty rates. It also involves more rigorous, sophisticated and transparent leasing processes. To help remedy past losses for the public that were captured by speculators, a 90% tax on capital gains from speculative trading of federal oil and gas leases will reclaim value due to the public because of the failure of past and current leasing practices to achieve fair market value. All these steps are designed to secure market value for the public and prevent that value from being lost to speculators.

Secondly, the methods of reform also involve steps to achieve fiscal accountability to the public for value lost and damages incurred from the federal oil and gas program. Fiscal accountability begins with reforming the lease selection and management process to minimize the loss of alternative public uses of the land to oil and gas activities. These steps should also involve securing at the leasing stage the option value due to the public for uncertainties in future oil prices and environmental and social costs from oil and gas production. Further, the value of the loss of multiple uses due to oil and gas leasing should be determined and a charge per acre assessed throughout the life cycle of a lease in order to reclaim that value for the public. The environmental and social costs during production of oil and gas should also be established and a

charge per volume of oil and gas production added to royalties in order to reimburse the public for the costs imposed on them.

Third, because of rapidly changing developments regarding climate change and the beneficial potential of renewable energy development, an energy planning analysis should be conducted prior to each decision to lease parcels for oil and gas development. The purpose would be to determine whether renewable energy leasing or oil and gas leasing is the more desirable use to the public for the parcels in question. The renewable energy analysis would follow or otherwise be coordinated with the screening to avoid important environmental or cultural resource conflicts that is required prior to leasing for energy purposes of any kind.

Finally, at every stage of the oil and gas leasing program, transparency and public participation need to increase as much as possible. The public has a right to know what they are being paid and why for the resources they own. They deserve to know how development on federal lands is proceeding, who is conducting that development and on what terms. They deserve the opportunity to present viewpoints on matters that affect them as much as possible. Most importantly, greater transparency and public participation will improve decision-making, the fiscal responsibility and integrity of the federal oil and gas leasing program, and the results attained by the public from the lands they own.

Congress also needs to protect the public interest by conducting regular analysis and oversight of the results achieved for the public from the use of federal lands. While immediate problems with the oil and gas program can and should be addressed by Congress, the reach and focus of its oversight of Interior needs to extend to a comprehensive view of the outcomes of this program for the American people.

There are more than adequate options available for changing the federal oil and gas program to serve the public interest. What is missing is the political will to act to reform the federal oil and gas program. That will emerge if the public understands and insists on the changes that need to be made. This report seeks simply to provide the public with some of that understanding.

1. Introduction

Largely without their knowledge, over the past century the American people have incurred enormous waste, loss, and harm from improper management of the federal oil and gas resources they own. The public has been shortchanged billions upon billions of dollars in mineral revenues improperly diverted away from public treasuries and into oil and gas company profits. The American people are denied the full benefits of recreation, conservation, wildlife habitat and other sustainable uses on over 25 million acres of federal land leased for oil and gas purposes—which is true even for the 12.5 million acres with no producing wells. Greenhouse gas emissions from oil and gas production on federal lands are accelerating global warming—already producing visible consequences in the present and threatening civilization in the future.

These worrisome trends accumulated over the last century and reached a point of urgent and serious concern that required action long before the current administration took office. Indeed, some reform steps had been taken or were under active discussion before 2017. Now, the “energy dominance” strategy of the Trump Administration has sidetracked earlier progress towards reform and aggravated the problems of waste, loss and harm caused by federal oil and gas policies. In pursuit of this energy dominance, even minimal standards of fiscal accountability and integrity, environmental protection, management for multiple use, and diligent development are being cast aside. National monuments are shrunk and “ring-fenced” with new leases for oil and gas, coal and uranium extraction—with pipelines and other mineral transport systems to follow. Alternative sustainable uses of the land are ignored in a rush to turn federal lands into energy production zones. It needs to be emphasized, however, that all of the measures for reform recommended in this report were needed long before the Trump administration pursued energy dominance. If anything, the current events help to bring into sharp focus the need for and urgency of achieving major reforms in federal oil and gas policy to serve the public interest.

Section 2 presents the conceptual framework and operational criteria for fiscally responsible decision making in federal lands management. It emphasizes the need to turn Interior’s management of federal lands on its head. Instead of too often wrongly serving industry, as it has historically, Interior needs to serve preeminently the interests of the American people. Further, to resolve what has proven to be the intractable conflict between private and public interests on federal lands, the role of industry for future federal mineral leases needs to be recast as that of a fiduciary responsible for serving the public interest. Further, it describes four criteria that serve as a guide to designing recommendations to translate the goals of fiscally responsible management of public lands and minerals into achievable action. In addition, it examines the increasing importance of accounting for the economic and social impacts of climate change.

Section 3 summarizes the nature and impact of the mismanagement in the federal oil and gas program which constitute the ways in which the federal government denies the American people a full and fair return on their publicly owned resources. Every stage of the federal oil and gas lease process—from the lease terms to be offered, through the various leasing steps, to the collection of royalty—is fraught with problems of fiscal irresponsibility. At each point, the public is denied the full value of the resources they own, and lessees improperly gain that value instead. Further, to varying degrees, lessees can exploit the weaknesses at multiples stages in combination with each other to maximize private gains at the public expense. This section

reviews key parts of the history of fiscal irresponsibility in the federal oil and gas program throughout the last century as background for identifying and analyzing problems that continue to permeate the program as it exists today. Overall, it measures the degree to which the financial terms of oil and gas leasing fall short of criteria 1 and 2 for fiscal responsible management of federal resources.

Section 4 outlines how broad concerns about environmental and social impacts can be transformed into practical fiscal actions to remedy or mitigate those effects. It describes the rationale and relevant facts concerning achieving fiscal accountability to the public for value lost (criteria 3) and damages incurred (criteria 4) from the federal oil and gas program. The section outlines fiscal measures to encourage producer decisions that better serve the public interest.

Finally, Section 5 presents the reform recommendations for the federal oil and gas program to achieve a full and fair return for the American people and that the program properly serves the public's fiscal interest. This report recommends necessary changes that Congress needs to pursue to end the long-standing fiscal problems in federal oil and gas management and to ensure that the American people receive a full and fair return on their resources. It is a sequel to an earlier report that focused on how taxpayers are short-changed by the federal onshore royalty rate of 12.5%, which is set far below market value as compared to state royalty rates that average around 19%.² The prior report recommended increasing the royalty rate for onshore oil and gas immediately to 18.75%, adopting new procedures and institutions for evaluating further changes in the future, and greatly increasing public reporting and transparency of royalties. That report also briefly identified problems associated with the measuring and valuing oil and gas production for royalty purposes.

The recommendations included in both this report and the prior royalty report are based on an identification of several, fundamental deficiencies in the federal oil and gas system that prevent the attainment of a full and fair return for the American people from the minerals they own. In the past, whenever widespread deficiencies have been exposed in federal minerals management, Congress or the Executive Branch have placed a moratorium on new leasing to provide the time and space for implementing changes to correct the problems. A well-tailored moratorium with specific exceptions for maintaining production within existing oil fields combined with the huge surplus of non-producing federal oil and gas leases will prevent any significant impact on oil or gas production. Indeed, continuing to issue leases for a system that is known to be broken and harms the interests of the American people is entirely indefensible.

2. Principles and Standards for Fiscal Responsibility in Federal Lands Management

The history of the failure of the federal oil and gas program to serve the public interest is summarized in Figure 1 and detailed in Section 3 of this report. Beginning in the 1920s and extending past the middle of the 20th century, the program can be seen as aimed at subsidizing

² Bucks, Dan, "A Fair Return for the American People: Increasing Oil and Gas Royalties from Federal Lands," *The Wilderness Society*, March 2019.

the extraction of public oil and gas resources in service of private profit. There was no major conflict between the public interest and the private interest, because the latter was effectively preeminent. This period was characterized by both recurrent scandals of fraud, theft and other abuses regarding these minerals and official policies and administrative practices that failed to achieve a market value return to the public for the minerals they owned.

By the end of the 1960s and as a part of a general awakening of environmental concerns, the problems of environmental, social and cultural damage created by subsidized extraction of minerals from federal lands became more apparent. Those problems included a recognition that minerals production on federal lands degraded and crowded out other valuable public uses and benefits from those lands. Further, the extent to which the public was shortchanged on the sale of minerals to the private sector became increasingly clear through scandals that continued through the early 1980s. The cumulative result of all these issues was the enactment of new environmental and federal multiple use land management laws and fiscal reforms from the late 1960s into the mid-1980s. This period of reform can be seen as one of grafting regulatory corrections to serve public goals onto a continuing system of subsidized extraction of public oil and gas for private gain.

This melding of two contrary systems with each other has failed. Fraud and abuse continue within the federal minerals system. The Minerals Management Service established in the 1980s as the primary instrument of administrative reform was abolished only a decade ago having been engulfed once again in major scandal. The American people continue to be shortchanged as oil and gas resources are still sold to the private sector at less than market value. Environmental, social and cultural damages proceed at an unacceptable level—with accelerating climate change now posing daunting consequences for humankind. The promise of multiple uses of federal lands continues to be unfulfilled to the detriment of communities and the natural world. In the conflict between regulatory reform to benefit the people and the subsidized extraction of public oil and gas for private gain, private gain remains triumphant.

It is long past the time for fundamental reform in the oil and gas program. That reform needs to proceed by making the public interest the preeminent and undisputed focal point of the management of oil and gas resources on federal lands. That means, first of all, recognizing that the American people are the **owners** of federal lands held by the US government. That means that federal lands must be used and managed for the benefit of the public as a whole—and certainly cannot be used or managed in ways that result in harm to the public. The federal government and, in particular, the agencies assigned direct responsibilities for managing these resources are, in effect, **trustees** whose duty is to ensure these lands are managed for the benefit—and not the detriment—of their owners who are also citizens of the nation. Individual parties, such as extractive industry corporations, that are provided opportunities to extract resources from these lands should be defined, in the context of future leases, as **fiduciaries** who have a primary duty, in conducting their activities, to serve the interests of the American people.³

³ While the idea of lessees serving as fiduciaries may be new to discussions of minerals production on federal lands, it is well to note that there is a long-standing history of governments requiring businesses to serve as fiduciaries—especially to avoid widespread abuses of the public. Real estate agents have long been required to serve as

As a fiduciary, whenever production companies operating on federal lands encounter a conflict between a duty to serve the public and their duty to their shareholders or investors, the duty to the public would prevail. If a production company fails to fulfill its fiduciary duty to the public, it is the clear duty of the trustee, the federal government, to intervene and act to ensure that the interests of the public as the owners of the resource are protected.

Redefining in this manner the roles and responsibilities of the public, Interior, and industry regarding federal oil and gas resources is necessary to ensure that the management of those resources and land under which they are found serve the public interest. The public, instead of being bystanders who are short-changed by both Interior and industry, would become central participant and primary beneficiaries. Interior would no longer be caught in a balancing act between diffuse interests of the public and the private interests of a powerful industry. Industry would know that for future lessees their activities on federal land would be required to align squarely with the public interest before considerations of private gain.

Government's dual responsibility to the public in managing federal resources

The federal government is in the position of being both a sovereign accountable to citizens in a democracy and a trustee of property owned by those citizens collectively. This dual responsibility heightens the level of duty to the public that federal agencies must exercise in the management of federal lands to preserve that property and its value and avoid even negligible harm to the public in its use. For that reason, actions that federal agencies take with regard to use of federal lands will need to exceed the expectations set for private owners of comparable land and resources. Those expectations for private owners are set, in part, by federal regulations that establish a tolerable level of harm that private owners may impose on other members of the community. In the case of federal lands, it should be expected that federal agencies exceed the standards of federal regulations on private owners and act to prevent even negligible, instead of tolerable, harm to the public. This conclusion also means that federal agencies may hold private parties operating on federal lands to achieve higher standards of practice than if those private parties were operating on private lands.

In simplest terms, this enhanced level of duty that federal land management agencies owe to the citizenry means that a federal agency cannot sell or transfer resources from the land for less than fair market value. Doing so would irresponsibly and arbitrarily diminish the value of these assets to their public owners. Stated differently, federal agencies have no authority to give gifts of public resources to private parties through below market sales. It also means that federal agencies have a duty to minimize harmful pollutants arising from use of federal lands to the maximum degree possible. So, federal agencies have a duty to minimize greenhouse gas emissions to the maximum degree feasible from federal lands even if such requirements have not yet been established for comparable activities on private lands. Otherwise, the federal agencies would fail to meet the “no negligible harm” duty that they owe to the public owners of these

fiduciaries and, more recently, so have investment advisors. In fact, the enforcement of the fiduciary role of investment advisors was recently strengthened in the wake of the Bernie Madoff financial scandal.

lands. There is no authority for federal agencies to knowingly allow federal lands to be used in ways that harm the citizenry, including future generations.

Understanding this simple and fundamental relationship among the owners, trustees and fiduciaries for federal lands should provide clarity to decision-makers regarding how public lands and resources should be managed and ensure a clear and undiluted focus on serving the public interest. Regrettably, throughout the past century the federal government has repeatedly failed to honor or fulfill its duty to the American people as illustrated by the examples in Figure 1 and discussed in Section 3.

The high level of duty owed to the public can be translated into practical terms using standards of fiscal responsibility. Fiscal responsibility in the management of resources means that the American people who own these resources receive a full and fair return on each amount of oil and gas produced from federal lands undiminished by harm caused to the public. Before defining what a “full and fair return” means, it is helpful to first understand what it does not mean.

Energy Dominance on public lands is a fiscally irresponsible strategy

A “full and fair return” does not mean attempting to increase total federal oil and gas revenue through the Trump Administration’s “energy dominance” strategy. Under that strategy, the administration has expanded careless, mass leasing of federal lands for oil and gas at bargain basement prices without regard to current market demand for leases or alternative, beneficial uses of the land. It has shrunk monuments to open more lands to extractive industries. It has increasingly converted lands intended for multiple use into zones dedicated to private profits from energy speculation and subsidized production. It has weakened protections for the environment and public health in the use of federal lands. Moreover, the administration has implemented this strategy while denying the public access to information that could be used to hold the administration accountable for its actions.

While the Trump Administration has pursued this strategy in a sweeping and relentless manner, each of the actions undertaken in the name of energy dominance have existed to varying degrees for the nearly 100 years that Interior has managed public lands for the American people. Thus, the building blocks for the energy dominance strategy are deeply embedded in long-term Interior practices.

These energy dominance actions impose fiscally irresponsible consequences on the public:

- They wrongfully deny the American people the full amount of revenues due them from their minerals by improperly transferring a share of the public’s value to oil and gas speculators and fossil fuel companies.
- They prevent the public from securing the full benefit of public lands that would flow from other beneficial uses limited or encumbered by oil and gas speculation and production.

- They impose unacceptable harm on society through damaged landscapes, increased disease, shortened lives, and accelerated climate change.

Overall, these actions are a kind of secret theft from the public—a theft of revenue, of lost value from other productive uses, and of the health of people and the planet.

Criteria for fiscally responsible decision making for federal lands

Measuring only the total revenue going into the federal treasury from oil and gas conceals this secret theft from public view. Different metrics—both broader and more detailed—are needed to determine whether federal oil and gas policies are fiscally responsible and attain a full and fair return for the public. As such, this report recommends the following criteria to measure attainment of a full and fair return on these public minerals.

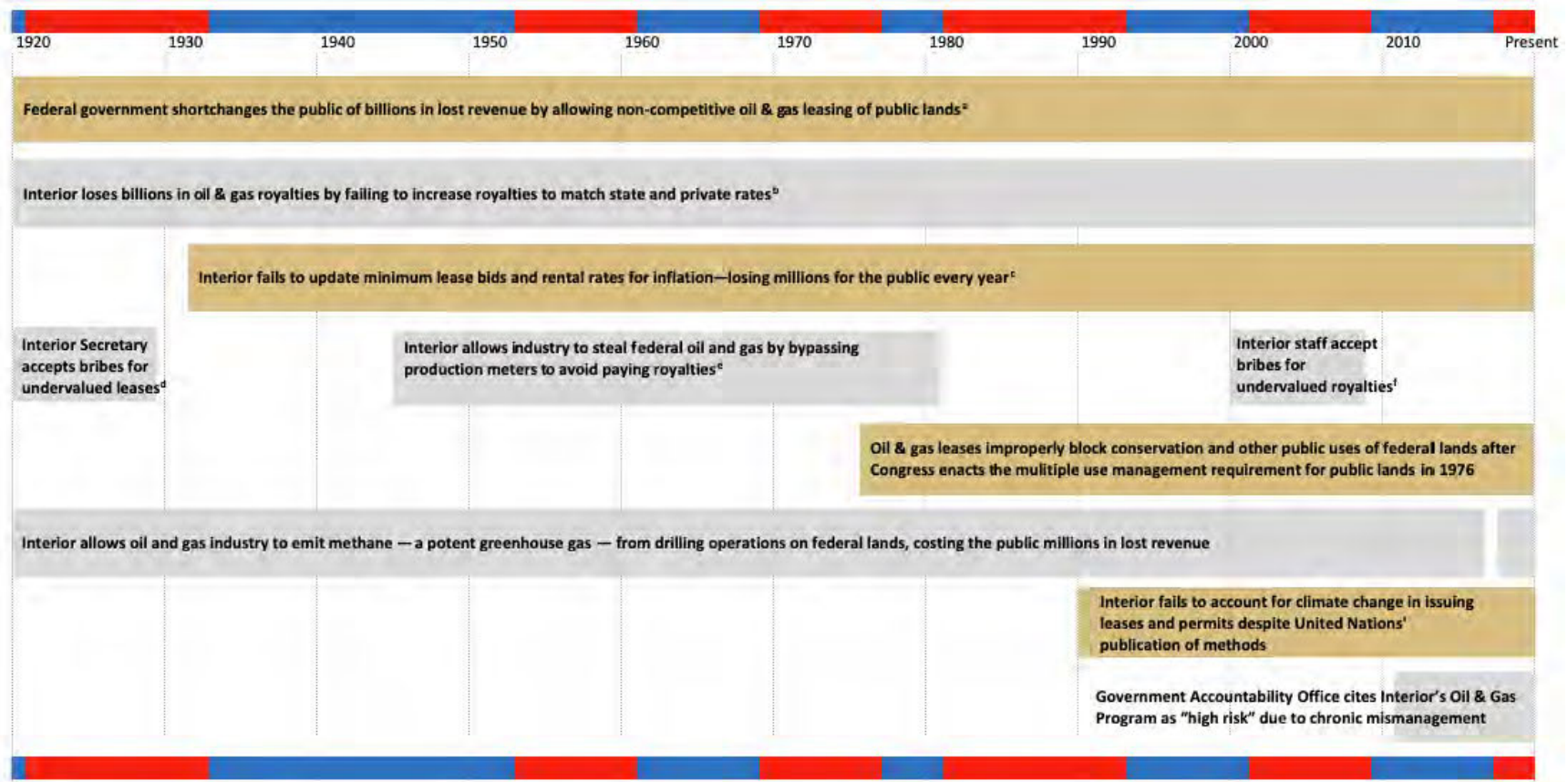
Criteria 1. The amount of lease bonus bids—the payment for the rights for given periods to explore and develop oil and gas resources—should encompass the full value of such rights and be determined through competitive processes designed to attain as feasibly as possible the market value for such rights.

Criteria 2. The payment for the value of minerals (royalties) equals the fair market value for all material produced, accurately measured, with any allowable deductions strictly construed and limited to their market value.

Criteria 3. After actions are taken to minimize the negative impacts of oil and gas activities on other beneficial uses of the federal lands, the public should be compensated for the value lost from the benefits of alternative uses of the lands foregone due to the presence of oil and gas leases and to production from those leases over and above market value payments.

Criteria 4. Society is either fully compensated for or protected by regulation from harm caused by the extraction, processing, transportation and use of the oil and gas produced from federal lands.

Figure 1. Under both democratic and republican leadership, Department of the Interior has shortchanged the American public with fiscally irresponsible management of the federal oil and gas program.



Note: (a) 1920-Present; (b) 1920-Present -- Despite states charging royalties on state oil and gas at rates averaging around 19% and Texas charging 25% with no adverse effects on production on jobs, Interior continues to charge royalties on federal onshore oil and gas at only 12.5%, a below market rate unchanged for a century that has cost the American people billions of dollars in lost revenue.; (c) 1932- Present; (d) 1920-1929 -- Secretary of the Interior Albert Fall betrayed his duty to the American people when he took bribes and sold oil leases in Wyoming (Teapot Dome) and California to his friends for below market value.; (e) 1945-1981 -- Interior allowed oil companies to steal crude oil from federal and Indian lands by bypassing production meters, secretly trucking the oil out, and avoiding paying any royalties—an egregious theft from the American people and Indian tribes that continued up to 1981.; (f) 2000-2008 -- Interior Inspector General uncovered the “sex, drugs, and gifts” scandal in the oil and gas royalty in-kind program where staff exchanged favors with industry staff for sweetheart royalty deals that cost the public millions of dollars of lost royalties.

Fiscal responsibility and the elephant in the room: climate change

Some observers may wonder why a report on oil and gas leasing would seemingly focus on fiscal responsibility instead of climate change. On an emotional level climate change is an issue that, for some, has a sense of urgency and drama. In contrast, the idea of “fiscal responsibility” carries with it all the excitement of reading an audit report or filling out a tax return. Reviewing numbers in a spreadsheet documenting benefits and costs will never compete on a scale of passion and poignancy with images of violent hurricanes, raging wildfires, disappearing glaciers, record flooding in middle of the country, and rising seawater in coastal communities—all of which are increasingly threatening the lives and livelihoods of people as climate change intensifies.

Damages from a changing climate already has and will increasingly incur significant financial costs on individuals and public institutions. The problems created by climate change for the health and well-being of people, the natural and built environments on which humans require for survival, and the organizational systems of modern life directly affect the fiscal capacity and integrity of our society. There is zero separation between climate change and fiscal responsibility. Accounting for an action’s contribution to climate change, that will incur large costs to the public, is essential for fiscal responsibility. Every new, catastrophic wildfire or category 5 hurricane prompted by rising greenhouse gas emissions creates impacts that need to be paid for. Accounting for these costs at the outset is key in order to ensure fiscally responsible decision making and correct for a market failure. Further, in the long-term, what could be more fiscally irresponsible than humans continuing to engage in activities that will, over the long term, destroy human civilization and all its means of support?

Secondly, the current state of law controlling the management of federal oil and gas resources makes it mandatory that the impacts of climate change be considered and integrated into decision-making regarding these resources. Over the past five years, several courts have issued rulings blocking actions taken by federal land managers to issue leases or permits for fossil fuel development on grounds that the agencies had failed to adequately evaluate and account for the impact of those projects on climate change.⁴ That is the current state of the law. Unless this consistent pattern of judicial decision-making changes, climate change must be considered in designing an improved federal oil and gas system.

Finally, for the immediate task of evaluating and improving the federal oil and gas system, the good news is that the methods of achieving fiscal responsibility provide the key, analytical tools for curtailing and ultimately preventing human-caused climate change arising from oil and gas activities. To understand this point, it is useful to imagine some federal land

⁴ The following cases resulted in the court either vacating or enjoining government action to issue leases or permits for fossil fuel development on the grounds that the agencies had failed to adequately evaluate and account for the impact of those projects on climate change.

High Country Conservation Advocates v. U.S. Forest Service, 52 F. Supp. 3d 1174 (D. Colo. 2014)

Montana Envtl. Info. Ctr. v. U.S. Office of Surface Mining, 274 F. Supp. 3d 1074 (D. Mont. 2017)

Western Org. Res. Councils v. BLM, 2018 U.S. Dist. LEXIS 49635 (D. Mont. Mar. 26, 2018)

Wild Earth Guardians v. Zinke, 368 F. Supp. 3d 41 (D. D.C. 2019)

Dine Citizens Against Ruining Our Env't v. Bernhardt, 923 F.3d 831 (10th Cir. 2019)

managers responding to the court decisions mandating climate change analysis for leasing decisions by saying, “How is it possible for us to account for the climate change effects of a single oil and gas lease when the greenhouse gas emissions from this lease will only be an infinitesimal fraction of total emissions worldwide?” The answer is that federal land managers can account for climate change impacts by using the tools of accounting. Experts have begun making estimates of the “social costs of carbon”—the damages in monetary terms arising from carbon emissions. Those estimates of monetary damages can be used either in cost/benefit analyses aimed at determining whether a project should proceed or as the basis for extra charges to be paid to the American people when production occurs. Translating carbon or other harmful emissions into fiscal terms creates the practical means of bringing climate analysis to bear on land management decisions for each specific fossil fuel project. In short, focusing on fiscal responsibility creates effective means of addressing climate change and other forms of societal harm.

Thus, this report will fully consider—as both the courts and practical reality require—the contribution to climate change as one of the four integral criteria for fiscally responsible decision-making for federal lands.

3. The Continuing Crisis of Fiscal Irresponsibility in the Federal Oil and Gas Program

The previous section provided a conceptual framework to guide reform of the federal oil and gas program. This section summarizes both the past history and key contemporary evidence that justifies major reform of the federal oil and gas program. While mismanagement of federal oil and gas resources—and the lands under which they lie—are coming into sharp focus in the current administration, the elements of failure have been present for decades. This section summarizes the elements of mismanagement which together constitute the ways in which the federal government denies the American people a full and fair return on the mineral resources they own, including:

1. The failure to attain fair market value for the public in revenues from federal oil and gas resources,
2. The loss of value for the public from alternative, beneficial uses of federal land overlying oil and gas deposits, and
3. Failure to include the cost of damages to the public and the environment imposed by federal oil and gas production.

Worse yet, these three failures reinforce each other and multiply the damage done to the public interest. Leasing oil and gas lands at below-market value and failing to require full payment for damages from production, shortchanges the public and creates windfall profits for oil and gas companies and speculators. It also increases the extent of federal lands leased and held for speculation. That in turn, encumbers larger amounts of federal land with oil and gas leases and limits the public's ability to use those lands for other purposes. Current federal oil and gas policies and practices create a damaging, downward cycle of revenue losses for the American people, greater environmental damage, and less public use of federal lands for beneficial and sustainable purposes. This section will summarize the nature and impact of this injurious process.

Failure to attain fair market value for the public in revenues from federal oil and gas resources

The American people receive revenues from federal oil and gas resources via three streams: lease payments for the right to extract mineral resources, rental payments for surface access to lands leased for oil and gas production, and royalties to pay the public for the value of the oil and gas actually produced. All three of these revenue streams fail to generate market value for the public. Lease sales are not structured to achieve market value, and rental fees are set at arbitrarily low levels. Minimum lease bids and rental fees have not even been updated for inflation—meaning they are falling even further below market value each year. Worse yet, lease suspensions are too often granted that allow lessees to avoid paying any rent at all—shortchanging the public and further encouraging speculation. Interior's negligent administration of lease suspensions is part of its general failure to enforce diligent development requirements on lessees. Finally, federal royalty rates are set far too low to ensure a market return to the public, and some amounts and value of production escape royalty payments entirely. Overall, the federal

government has failed to ensure a market value return for the oil and gas owned by the American people.

Sweetheart Deals: Losses for the American People Become Capital Gains for Speculators and Windfall Profits for Oil and Gas Companies

When the public is denied the full value of the oil and gas they own, that value does not disappear. That value is transferred to others who have no rightful claim on it. What is taken from the public becomes unjustified capital gains for oil and gas speculators or windfall profits for oil and gas companies that accrue primarily to their wealthy owners and top executives. Most assuredly, selling the public's oil and gas at below market value does not result in increased development.⁵ Indeed, it may often only stimulate speculative trade in oil and gas leases that generates dubious gains for its miniscule participants at the expense of the public.

Speculation in oil and gas leases has a special appeal. Securing federal leases on the cheap and reselling them for a profit requires less capital and involves much less risk than actually exploring, developing and producing from a lease. Under current Securities and Exchange Commission rules, companies can stockpile speculative leases to enhance their balance sheets and potential takeover prices without reselling the leases.⁶ Speculation can only occur when the price for the resource—lease bids, rental rates, royalties, and other terms—are set too low by the federal government. When speculation in federal oil and gas leases exists to any significant degree it is clear evidence that the federal government is shortchanging the public by charging the purchasers too little for oil and gas resources.

Speculation in federal oil and gas leases has a long history.⁷ That fact is an indicator that federal mismanagement of the public's oil and gas has deep and long roots that remain in place today. Periodically, efforts are made to reform the federal oil and gas program to help ensure the public receives a fair return for their resources. The continued existence of speculation in federal oil and gas resources indicates that that goal has not been attained.

The challenges and difficulties in attaining a fair return for the public cannot be fully appreciated by simply taking a snapshot of current practices and developing limited recommendations that address what appear to be the pressing problems of the moment. That approach has been taken in the past. It has resulted in incomplete action that allows other problems to persist that undermine the reform effort as those who seek quick profits at the public's expense exploit the remaining weakness of the federal oil and gas system. In some cases, well-intentioned reform efforts have opened up new loopholes or glitches that become vehicles for transferring the value of oil and gas resources owed to the public improperly into private hands.

⁵ Bucks, Dan, "Written Testimony Before the Subcommittee on Energy and Mineral Resources, Committee on Natural Resources, U.S. House of Representatives," September 24, 2019, p. 4. Also, Bucks, *supra*, note 1, at pp. 7-8.

⁶ DeSantis, Mark K., "Oil and Gas Companies Gain by Stockpiling America's Federal Land," Center for American Progress, August 29, 2018.

⁷ Mayer, Carl J. and George A. Riley, *Public Domain, Private Dominion: A History of Public Mineral Policy in America*, Sierra Club Books, San Francisco, 1985, pp. 282-287. This book is the most comprehensive history of mineral policy on federal lands extending up to the early 1980s.

This report takes a longer, historical view of the problems in the federal oil and gas program with the goal to identify all of the elements of that program that deny a fair return to the public. It will also reveal why piecemeal and partial reforms do not yield successful results. Indeed, the picture that emerges from this longer view is that weaknesses or mismanagement of the oil and gas program are ingrained in virtually every part of it. That picture, in turn, leads to the conclusion that the program, if it is to properly serve the public interest, needs to be revised on a thoroughly comprehensive basis. Fixing only certain parts of the program will not work. All openings that allow private greed to undermine the public interest must be closed if a full and fair return for the public is to be achieved. So, this report will turn now to a summary of key parts of the history of the oil and gas program as a background for analyzing features of the program as it exists today.

A Brief History of Fraud, Abuse and Speculation in the Federal Oil and Gas Program

Historically, speculative leasing combined with widespread fraud and corruption in granting leases was a major problem for most of the twentieth century. While the 1920 Mineral Leasing Act ostensibly required competitive leasing as the normal practice, by the early 1980s only 3% of all leases were being granted through a competitive process.⁸ At that time, 97% were issued noncompetitively through a dual system: an “over the counter” first come, first served filing for leases on lands not previously leased for oil and gas, and a lottery system for previously leased lands. Mayer and Riley reported that “In practice, almost all public oil land is leased through the lottery.”⁹

GAO and Federal Trade Commission studies in the 1970s concluded that noncompetitive leases did not obtain fair market value for the public. Moreover, the lottery system was rife with fraud and corruption. Mayer and Riley noted that in 1979 “. . . John Deans, the special agent in charge of law enforcement for BLM, reported that over 80 percent of all lottery applications were fraudulent.”¹⁰ Some lottery applicants fronted for parties ineligible to participate—often oil and gas companies. Lottery filing services swindled applicants out of fees inflated on the basis of false claims of guaranteed winnings. The failure to achieve fair market value in leasing and the reports of fraud in the lottery system led President Carter’s Secretary of the Interior, Cecil Andrus, to suspend oil and gas leasing.

Deans’ investigatory efforts, working with U.S. attorneys, achieved convictions against 11 oil companies, oil officials and private brokers, including Eason Oil, an I.T.T. subsidiary, Koch Industries of Wichita, KS, and Chorney Oil of Denver.¹¹ These cases were apparently just the tip of a much larger iceberg. The prosecutor in these cases concluded that the fraudulent activities were “industrywide.”¹² However, prosecution of further cases involving a hundred oil companies were reportedly allowed to languish until a BLM audit after the Reagan

⁸ *Id.* p. 198, note 146.

⁹ *Id.* p. 198.

¹⁰ *Id.* p. 198

¹¹ Tom Barry, “The Great Onshore Oil Lottery,” *The New York Times Magazine*, October 11, 1981.

¹² *Id.*

Administration came into office. Deans and other investigators resigned from Interior charging BLM supervisors with stifling the investigations.¹³

The fraud in the oil and gas lottery grabbed headlines and congressional interest. The fraud was also an indicator of a deeper problem of oil and gas being leased for speculative purposes instead of production. Mayer and Riley analyzed quite effectively how the combination of (a) offering leases at below market prices with low rental rates, (b) lax or no enforcement of due diligence requirements, and (c) long-lease periods of ten years contributed to speculation instead of development of oil and gas resources.¹⁴ They highlighted, in particular, that long-lease terms have no counterpart in the private leasing market. Long-term leases offered at below market prices grant lessees more time and latitude to sell the leases at a profit without incurring costs of development. In contrast, if lessees were required to pay market value for leases of a shorter term, such as three to five years, their only avenue to earning a profit from the lease is to explore and develop the lease on an expeditious basis. The irony is that supposed “pro-industry” leasing practices actually discourage diligent development.

As of the early 1980s, Mayer and Riley described the consequences of federal policies that encouraged speculation over development as follows:

Oil industry advocates argue that government has locked up the public lands, hindering energy production. In fact, energy production is stagnating because corporations are not producing on public lands they already hold. By 1982, only 5 percent of the onshore public lands leased to oil companies were producing oil and gas. Petroleum corporations currently control 126 million acres of onshore public land—an area four times the size of New York State—that they are not producing on.¹⁵

The public exposure of fraud in the lottery system for oil and gas leases late in the Carter Administration prompted Secretary of the Interior Cecil Andrus to suspend all onshore oil and gas leasing and to recommend to Congress that it replace the lottery system with competitive leasing. However, that initial impetus for reform stalled under the Reagan Administration when the new DOI Secretary James Watt expanded leasing dramatically and lobbied against major changes in federal leasing laws. Watt’s tenure ended in 1983 and congressional efforts at reform ultimately produced the Federal Onshore Oil and Gas Leasing and Reform Act of 1987

The 1987 law abolished the lottery system and required all onshore oil and gas leases to be offered first competitively before being leased noncompetitively. Ending the corrupt lottery system substantially eliminated the rampant fraud associated with it, but it did not fully address or end the deeper problem of leasing oil and gas on lax, below market value terms that invite speculation instead of production.

¹³ *Id.*

¹⁴ Mayer and Riley, *supra*, pp. 282-287.

¹⁵ *Id.*, p. 283.

Serious Fiscal Problems Remain Despite 1987 Reforms

Non-competitive bids, minimum lease bid rates and rental rates

The 1987 law required Interior to offer leases first through a competitive process; approximately 56% of leases and acreage are now issued competitively. There are, however, serious questions about how competitive that process and its results really are. In addition, noncompetitive leasing is still significant, covering approximately 44% of total leases and acreage on average from 2016 through 2018.¹⁶ Thus, Federal oil and gas leasing for speculation instead of development remains a major problem.

In a study of speculation in federal oil and gas leases, Taxpayers for Common Sense (TCS) has reported that as of the end of FY 2016, more the half of all federal acreage set aside for oil and gas leasing was tied up in non-producing leases, limiting other potential uses.¹⁷ TCS further reported that during the prior 30 years, oil and gas production has occurred on only one-quarter of all acreage leased for oil and gas drilling.¹⁸ As will be discussed below, this continuing problem of lease speculation can be traced to the persistence of below market lease rates, lax leasing procedures, long lease periods, and a failure to plan and manage for diligent development of oil and gas resources.

When Congress enacted its 1987 leasing law requiring competitive bidding first before any noncompetitive leasing negotiations, it established a uniform minimum lease bid of \$2 per acre. It did so because BLM had previously been required, as a prerequisite for competitive leasing of a parcel, to establish a minimum market bid level for each lease being offered. Estimating the market value of oil and gas deposits is a complex task, but it is one that the private sector, by necessity, undertakes to various degrees. However, according to Mayer and Riley, the Interior essentially “shot itself in the foot” in terms of making workable estimates of the value of federal and gas resources. Interior obstructed its own work by being unwilling to require the oil and gas industry to report to it sufficient geological, production and market information to establish minimum market values for lease parcels. After describing details of the Interior’s information failures, they concluded as follows:

In the end it is the department’s view of itself as a companion of industry, not a strict regulator, that explains its lax view toward information management. Proper stewardship of the nation’s commonwealth requires accurate information—to determine the costs and benefits of exploitation versus conservation, to assure fair market value for leased minerals, to plan America’s energy policy, and to protect national security. The Department of the Interior, by refusing to require basic data from industry and by failing to verify the information it does have, has relinquished these responsibilities to the very industry it is supposed to regulate.¹⁹

¹⁶ BLM Public Land Statistics 2016, 2017 and 2018. Averaged over these three years, noncompetitive leases comprised 44.47% of total oil and gas leases and 43.51% of total acreage under lease.

¹⁷ Taxpayers for Common Sense, “The Cost of Speculation in Federal Oil and Gas Leases,” October 3, 2017, p. 1.

¹⁸ *Id.*, pp. 6-7.

¹⁹ Mayer and Riley, *supra.*, p. 282.

Congress was anxious to end the fraud and corruption associated with the lottery leasing system by expanding competitive leasing. Perhaps sensing the futility of changing Interior's relationship with industry to enable reliable and regular estimates of oil and gas values, Congress settled on the uniform minimum bid procedure as the quickest avenue to ditching the lottery and replacing it with competitive leasing. So, the 1987 leasing amendments established a \$2 per acre minimum lease bid. It also set \$1.50 per acre as the rental rate for the first five years of a lease, and \$2 per acre as the rate for the second five years. While Interior was authorized to increase these rates beginning two years after the 1987 law, it has refused to do so. Under the 1987 law, if a parcel is offered for leasing under the competitive procedure, but it is not successfully leased, it becomes eligible for noncompetitive leasing for which no lease bid payment is required.

Because Interior has neglected to update the 1987 lease and rental rates, the already below market rate values have also deteriorated in real terms due to inflation. Today, those two 1987 dollars are worth only 87 cents. The initial \$1.50 per acre rental fee, also set in 1987, is now worth only 65 cents. There is no excuse for Interior's failure to regularly update bid levels and rental rate for inflation, because as their value in real terms decline, the American people are shortchanged more and the incentive for lessees to speculate instead of produce oil or gas increases.

Adjusting the 1987 minimum lease bid of \$2 for inflation would yield a minimum bid level of \$4.55 an acre in 2019 dollars. Similarly, the rental rate for the first five years would change from \$1.50 to \$3.40 an acre, and the rental rate for the second five years would increase from \$2 to \$4.55.²⁰

Adjusting these rates for inflation alone would likely not be enough to discourage speculation in federal oil and gas leases. As TCS reports, the low minimum bid level, which is far below the market value for viable leases, is another key factor that enables industry to hold leases for speculative purposes. Using Congressional Budget Office (CBO) data for leases issued between 1996 and 2003, only 8% of parcels leased for \$10 per acre or less were developed as compared to 25% of parcels leased for more than \$10 per acre.²¹ Updating for inflation since 1999, the midpoint of the TCS study period, the \$10 bid level would be over \$15 per acre today. It would be even higher if an oil and gas development rate greater than 25% was set as the desired objective.

If a minimum bid rate of \$15 an acre seems high compared to the current minimum bids, it should be understood that the bid rates on federal leases that have any serious prospects for productive oil and gas development are much higher. The average competitive onshore oil and gas bids for the most recent years available were as follows:

²⁰ These numbers, rounded to the nearest five cents, were calculated from the US Inflation Calculator at <https://www.officialdata.org> as of November 2019. H.R. 4364 introduced in the 116th Congress, 1st Session, would make similar inflation adjustments rounded to the nearest whole dollar of \$5 per acre for the minimum lease bid, and \$3 and \$5 per acre for rental rates in the first and second five year periods, respectively, of federal oil and gas leases.

²¹ Taxpayers for Common Sense *supra* at note 15, p. 3.

Total Competitive Federal Oil and Gas Leases Issued Annually—FY 2016-2018				
Source: BLM Public Land Statistics: 2016, 2017 and 2018—Total Competitive Leases				
Fiscal Year	Competitive Leases Issued	Acreage	Accepted Bonus Bid Amounts	Average Bid/Acre
2016	439	457,159	\$ 55,680,133	\$ 121.80
2017	743	906,281	\$ 295,180,123	\$ 325.70
2018	1,019	971,080	\$ 274,487,625	\$ 282.66

These average amounts include, of course, leases paying only the \$2 bid minimum. Further, the top bids are typically several times the average amount indicated above. A minimum bid of \$15 per acre to help weed out the most speculative leases is modest in relation to bids for parcels with real production potential.

The federal rental rates are arbitrarily low. That is true even if they were adjusted for inflation and rounded to the nearest dollar (per pending legislation) to \$3 per acre in the first five years of a lease and \$5 in the second five years. Even after this adjustment—a step that should occur—the new rates should be further evaluated to determine if they reasonably correspond to rental rates for land access and exploration charged by states and the private sector. 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.

Beyond setting more realistic minimum bid values and rental rates to help reduce revenue losses and lease speculation, it is also time for Congress to restore authority to Interior to reject bids above the minimum but lower than market value. The restoration of this authority should be accompanied by a mandate to Interior to reestablish procedures for reliably estimating market values. There are at least two methods, and perhaps others, for fulfilling such a mandate. One is to require Interior to require sufficient reporting from the oil and gas industry to enable the agency to make workable estimates of market value for parcels.²² That estimating process can be refined over time through statistical analysis of rates of bid acceptance or rejection, information from subsequent resales of lease rights and other information.

The second method of establishing market value is to reform the structure of the competitive bidding process and conduct statistical analysis to better achieve market results. As will be described in more detail in the recommendations (Section 5), Interior could design “inter-tract” leasing procedures that effectively require potential leaseholders to bid against each other for leases in similar or common production areas. Bids would be accepted only to the degree they exceed a percentage level below the median of bids for common areas, with that percentage below the median determined from analyses of leases that attain an acceptable rate of development.

²² The information required from industry should also include additional items necessary to determine the level of speculation on prior federal oil and gas sales, such as reports on the terms of each resale of a federal lease. That would enable the Interior to continuously evaluate the degree to which it is successful in attaining market value in the leasing program.

These two methods to implement market value bids above the statutory minimums may also be coordinated or used in combination, and there may be additional methods that Interior can use to establish acceptable bid levels that reasonably achieve market value. The important point is it is essential to establish policies and institute specific practices that seek to attain market value for each lease sale.

Noncompetitive leases, by definition, fail to achieve fair market value for leases and do not require any lease bid payment at all. Thus, noncompetitive leases are even more likely to be held for speculative purposes. According to TCS, only 3% of such leases issued in the 1996-2003 period were developed.²³ That finding highlights the detrimental impact of noncompetitive leasing on the public interest. Indeed, with noncompetitive leases generating almost no production and no lease bid revenues, it is clear that such leasing only serves speculative purposes. Worse yet, such leasing blocks other beneficial uses of these lands of value to the public, thus yielding public harm instead of public benefit. There is more than enough reason for Congress to eliminate the option of noncompetitive leasing of federal oil and gas lands.

The existence of the noncompetitive leases with no bid payments required has inspired efforts by potential lessees to maneuver parcels offered competitively into the noncompetitive track. That manipulation of the leasing process calls into question an obscure change Congress made in onshore leasing practices in the 1987 leasing act. Congress switched competitive onshore leasing from sealed bids into an open auction. That change unfortunately has been exploited by those seeking oil and gas leases as a tool to switch an offered parcel from competitive to noncompetitive leasing to enable acquisition of the parcel for a zero-bid cost.

New York Times reporters, Eric Lipton and Hiroko Tabuchi, have described how oil speculators ask the BLM to post parcels for leasing auctions and, after BLM agrees, sit back during auctions hoping that no one else bids on the parcels. If there are no bids, the speculators who prompted the auction then approach BLM to grant a noncompetitive lease in exchange for only a \$75 filing fee and the first year rent at \$1.50 an acre, but bypassing any bonus bid payment.²⁴ Manipulating a lease offer out of the competitive process into the noncompetitive procedures is possible only because the oil speculators can monitor the bidding process in real time.²⁵ If federal law switched back to sealed bids, speculators could not force parcels into noncompetitive leasing and skip out on the payment of the minimum lease bid. In addition, open bidding tends to reduce what lessees pay in bonus bids even if the parcel remains in the

²³ *Id.*, p. 3.

²⁴ Eric Lipton and Hiroko Tabuchi, “Energy Speculators Jump on Chance to Lease Public Lands at Bargain Rates,” *The New York Times*, November 27, 2018.

²⁵ Interior conducts lease auctions over the internet. Companies interested in securing leases participate in the auctions. Companies that nominated parcels for speculative purposes monitor the bidding on those parcels as the auction proceeds. If no other parties bid on a parcel they nominated, the speculative companies refrain from bidding. Once the competitive auction closes with no bids, these speculators can then secure the lease through the noncompetitive process as early as the next day or up to two years after the lease auction occurred. While it is possible that a last-minute auction bid by another party could block the speculator that nominated a parcel from securing it noncompetitively, the maneuver typically works well—especially if Interior offers a large number of parcels for lease at the same time. Before internet auctions, Interior conducted lease sales through open, in-person auctions where members of the public could observe the process. Ironically, by moving lease sales to the internet and limiting participation to parties interested in bidding, Interior has blocked the public from observing these auctions and spotting potentially speculative activity as it occurs.

competitive process. If interested parties see little interest in a parcel, they can safely reduce their own bids. A sealed price enhances competition and requires bidders to more likely bid at prices closer to or at market rates. The Congressional Budget Office (CBO) estimates that a return to sealed bidding will yield an estimated \$100 million increase in revenue over 10 years by more consistently achieving fair market value results in leasing auctions.²⁶

Lease parcel nominating

The process by which decisions are made to offer parcels for leasing is also skewed in favor of speculation and against careful management of the public lands for the public interest. A substantial portion of the parcels for lease are those that have been proposed for leasing by private parties. As can be seen in the energy speculators article by Lipton and Tabuchi, the impetus for these private nominations of lease parcels is often purely private profit from speculative gains. That motivation for lease nominations generally runs counter to maximizing public benefits from multiple uses of the land on a sustainable basis and in accordance with applicable environmental and other standards. It is Interior's responsibility to ensure lease parcels meet these public interest requirements, but as discussed later in this report, there is no evidence that it consistently and effectively fulfills that responsibility.

Interior also insufficiently screens private lease nominations for suitability and feasibility of proposed parcels for oil and gas production and for the likely ability of bidders to pursue development. In its analysis of speculative leasing of federal oil and gas, Taxpayers for Common Sense found that parcels isolated from existing production and infrastructure or that were leased by companies without exploration or production experience were more likely to result in speculation instead of production.²⁷ While several decades ago, lax leasing practices may have been undertaken based on the need to explore new resource deposits, that argument is not compelling in contemporary circumstances. With advanced knowledge of onshore oil and gas resources in hand, an ample surplus of public lands already leased for development, and a need to reduce society's dependence on fossil fuels due to climate change, leasing without applying strong suitability and feasibility criteria to proposed parcels no longer makes sense.

Effective screening of leasing nominations would also evaluate the parcels for compatibility with other uses of the land and likelihood of adverse environmental, public health or other societal impacts. While those matters may have been generally considered in resource management plans for federal land areas, specific parcels proposed for leasing should be evaluated for their compatibility with these public interest standards before being offered in a lease sale. Without parcel-specific analysis of these issues at the leasing stage, the goals of the resource management plans can be undermined by the private profit interest that motivates lease nominations. Indeed, as will be explored in more detail in subsequent sections, reconciling these private interests with the public interest can be achieved by incorporating into lease terms compensation for the lost value from alternative public uses of the land and the social costs of carbon and the other emissions with general adverse consequences. Those policy mechanisms

²⁶ Congressional Budget Office, "Options for Increasing Federal Income from Crude Oil and Natural Gas on Federal Lands," April 2016, pp 20-21. This CBO report cites substantial economic literature on bidding processes in support of its conclusions.

²⁷ Taxpayers for Common Sense, *supra* at note 15, p. 3.

can be implemented if appropriate multiple use, environmental, and public health issues are considered at the time Interior decides to offer leases for sale.

Length of lease

Another feature of current federal oil and gas lease terms that encourages speculation is the 10-year length of the lease period. Mayer and Riley emphasized in their book written in the 1980s that a 10-year lease term discouraged due diligence in development and encouraged lessees to hold leases for speculative purposes. The more time allowed for speculative games, the more the games will be played. Unfortunately, current observers have overlooked this length of lease topic. The GAO, however, in written testimony to Congress in September 2019, noted that most producing states in the West have shorter lease terms for their public lands than does the federal government.²⁸ Only Montana has a primary lease term of 10 years. Colorado, New Mexico, North Dakota, Utah, and Wyoming offer 5-year primary lease periods, and Texas and Oklahoma offer 3 years. As documented in the earlier royalty report, state practices deserve deference because states exercise a greater level of diligence than does the federal government in ensuring a fair return from public oil and gas resources. In light of state experience and the historical evidence, the federal government should significantly shorten its primary lease period to support development instead of speculation.

Beyond the 10-year lease term, there is other evidence that Interior does not actively manage oil and gas leases for diligent development, even though legally required to do so. The chronically high proportion of non-producing leases is one major indicator of Interior too often mismanaging for speculation instead of development. Other evidence of this problem arises from formal studies. Mayer and Riley's 1985 history of the oil and gas program concluded that "... the department seldom enforced 'diligence' clauses."²⁹ They also note that in 1974 Interior commissioned a study by NASA to review its oil and gas practices.³⁰ On the issue of due diligence, the NASA study stated:

There is a requirement in the laws, regulations, and leases for 'diligent development and production' The Division essentially takes no cognizance of the requirement' In dealing with the 'diligent development' requirement have had to make a choice between two favorites: development and production vs. accommodation of industry. They appear to have chosen to accommodate industry.³¹

Accommodating industry in this context means allowing companies discretion to speculate instead of develop oil and gas resources, with the public shortchanged in the process.

²⁸ GAO. 2019. Statement of Frank Rusco, Director of Natural Resources and Environment. "Federal Energy Development: Challenges to Ensuring a Fair Return for Federal Energy Resources." Testimony Before the Subcommittee on Energy and Mineral Resources, Committee on Natural Resources, House of Representatives. 24 Sept. 2019. GAO-19-718T. <https://www.gao.gov/assets/710/701616.pdf>.

²⁹ Mayer and Riley, *supra.*, at note 5, p. 283

³⁰ National Aeronautics and Space Administration and a support team from Martin-Marietta Corporation, "Onshore Lease Management Program Study for the U.S. Geological Survey," December 20, 1974.

³¹ Quoted in Mayer and Riley, *supra.*, at note 5, p. 287. Mayer and Riley report that the Interior was so stung by this NASA study criticism that it never formally released the study.

Over thirty years later in 2008, the GAO examined Interior’s diligent development efforts again and concluded that Interior “does less to encourage development of federal leases than some state and private landowners.”³² The GAO report recommended that Interior develop a strategy encouraging faster development of oil and gas leases on federal land.³³ Among other items, GAO suggested that Interior examine state methods involving shorter lease periods or faster acceleration of rental or royalty rates to higher levels during lease periods to encourage production. In particular, the GAO noted (as discussed above) that Texas increases its rental rate per acre from \$5 per acre to \$25 per acre when a lease is extended beyond its primary lease period of three years—a substantially greater acceleration of rates than current federal practice. There is no evidence of Interior implementing a diligent development strategy in response to the GAO recommendation.

Lease suspensions

To the contrary, even more serious evidence of Interior’s neglect of diligent development standards arises from its lax management of lease suspensions. Under lease suspensions, lessees retain their lease rights, but are exempt from any rental payments and are not required to make progress on developing the oil and gas resource. In a groundbreaking 2015 study of lease suspensions, The Wilderness Society documented that 3.25 million acres of federal leases were held in suspension, which amounted to almost 10% of the federal lands under lease by the oil and gas industry.³⁴

Many of these suspensions have been in effect for decades, and in acreage terms, 30% of the 3.25 million acres had been suspended for more than 25 years. TWS found that 32% of the suspensions were between 20 and 75 years old, 25% between 6 and 19 years old, and 43% were less than 5 years old.³⁵ When the GAO reviewed the management of lease suspensions in 2018, it discovered a similar pattern of the age of oil and gas lease suspensions still in effect.³⁶

There are circumstances that justify lease suspensions—some being short-term such as severe weather conditions that hamper lease operations, and others longer-term such as environmental reviews or litigation over the compliance of the lease with laws or regulations. However, both The Wilderness Society and the GAO report numerous problems of Interior inconsistently granting suspensions, failing to record the reasons, and to monitor and review if the suspensions are still justified. The Wilderness Society also notes that the suspensions are granted in private with no public disclosure or review that could help the BLM ensure that suspensions properly comply with the law and the terms under which they were granted.

³² U.S. Government Accountability Office, “Oil and Gas Leasing: Interior Could Do More to Encourage Diligent Development,” GAO-09-74, October 2008, p. 27.

³³ *Id.*, p. 28.

³⁴ The Wilderness Society, “Land Hoarders: How Stockpiling Leases is Costing Taxpayers,” Dec. 15, 2015.

³⁵ *Id.*, p. 4.

³⁶ U.S. Government Accountability Office, “BLM Could Improve Oversight of Lease Suspensions with Better Data and Monitoring Procedures,” GAO-18-411, June 2018, p. 17. As of 2018, the GAO found that 24% of the suspension were more than 30 years old, 5% between 20 and 30 years, 7% between 10 and 20 years, 42% between 3 and 10 years, and 23% less than 3 years. The GAO reported total suspended lease acreage at 3.4 million acres, up from the 3.25 million acres reported by the Wilderness Society in 2015.

Suspensions grant lessees cost-free extensions of leases with no responsibility to proceed with development. Interior's lax administration of suspensions has a number of negative effects. It provides lessees with a means of evading the diligent development requirement and encourages lease speculation by granting lessees a cost-free extension of leases with no responsibility to proceed with development. Second, it denies to the American people rental and royalty revenues. Finally, lax suspension administration imposes on the public a loss of value from alternative beneficial uses of federal because suspensions often limit multiple uses of the affected lands, contrary to law.

The lease suspension process needs to be thoroughly revised. The process of granting suspension should become transparent, with public notice of suspension requests, opportunity for public comment, and notification of Interior's decision. Suspensions should be time-limited, with suspensions automatically expiring at set times. Requests to extend suspensions should require extraordinary justification, and decision-making on such requests should require public participation. Records of suspensions and dates of expiration should be available through the internet. Interior's problems of record-keeping and monitoring suspensions need to be resolved promptly, and Interior should be required to review and take action on all prior suspensions by a date certain.

Royalty rate

The current federal royalty rate is also a major flaw in the oil and gas program. This rate, which is far too low, is a primary source of lost revenue for the public. It encourages speculative leasing because below market royalty rates allow speculators to include future royalty payments to themselves as part of the sales prices for leases as they are sold and resold among traders.

As documented in the preceding royalty report, the federal royalty rate of 12.5% is much lower than rates charged by state governments for oil and gas on federal lands. For the primary oil and gas producing states among in the West and South, the median state royalty rate is 19.375%.³⁷ Colorado and New Mexico have increased their top royalty rates in recent years to 20%. For Louisiana, state leases negotiated in the last forty years, have average rates above 23%. Texas, the largest oil producing state, has levied a 25% royalty rate for over thirty years. Even the federal government raised its offshore oil royalty to 18.75% in 2008. Given the existing range of governmental royalty rates, 18.75% can be considered the minimum rate that should be charged to be consistent with attaining market value returns for the public. Research studies and the practical experience of states like Colorado, New Mexico, Louisiana and Texas indicate that increasing the federal onshore rate to 18.75% to match its offshore rate will not reduce oil and gas production or jobs to any measurable degree.³⁸

By charging only 12.5% for onshore oil and gas instead of 18.75%, the federal government gives away to fossil fuel companies, for no justifiable reason, one-third of the value of all the onshore oil and gas produced on federal lands—value that should go to the public instead. In one dramatic example based on New Mexico's experience, Taxpayers for Common

³⁷ Bucks, *supra* at note 1, p. 9.

³⁸ GAO. 2017. "Oil, Gas, and Coal Royalties: Raising Federal Rates Could Decrease Production on Federal Lands but Increase Federal Revenue". GAO-17-540 (Washington, D.C.: June 20, 2017). The title is misleading. The report shows that increasing royalty rates will significantly increase revenues but only negligibly affect production, if at all.

Sense estimated that in the ten years from FY 2009 through FY 2018, taxpayers lost \$5.2-\$5.5 billion in federal royalties because of the outdated 12.5% rate. Because federal oil and gas revenues are shared with states, New Mexico state taxpayers bore over \$2.5 billion of this loss because the federal government does not levy an 18.75% royalty.³⁹

In addition to royalty revenue losses due to below market royalty rates, the American people also lose royalty revenues due to underreporting of production or value. The GAO has placed federal oil and gas administration on its list of “high risk” programs for several reasons, including concerns that Interior does not adequately ensure that natural gas production is fully measured and valued. In other words, some unknown portion of federal gas production is likely to be underreported. There are also long-standing issues that royalty calculation loopholes allow companies to underreport the full value of natural gas produced. Finally, there is the multi-faceted issue of wasted methane gas—gas that is vented, flared or leaked into the atmosphere. About half of that gas is not reported for royalty purposes when it should be because it is part of the value of production from oil and gas wells. Total estimates for revenue loss due to these three factors are not available. However, the existence of these revenue losses only makes more conservative the estimates of revenue losses attributable to royalty rates that are set below market value.

Concluding Note on the Crisis of Fiscal Irresponsibility

Every stage of the federal oil and gas lease process—from the lease terms to be offered, through the various leasing steps, to the collection of royalty—is fraught with problems of fiscal irresponsibility. At each point, the public is denied the full value of the resources they own, and lessees improperly gain that value instead. Further, to varying degrees, lessees can exploit the weaknesses at multiple stages in combination with each other to maximize private gains at the public expense. In addition, if even one or a few gaps in guaranteeing full value for the public remain, pressure will inevitably rise to enlarge those gaps and continue the process of shortchanging the public.

Thus, curing the problems of fiscal irresponsibility in the federal oil and gas system requires as thorough a set of reforms as possible. Developing broad and effective reforms of the oil and gas program will require a pause in the issuance of most leases to enable an examination and adoption of wide-ranging measures to ensure the program serves the public interest. Once key problems in the oil and gas program are effectively addressed and enhanced transparency and oversight mechanisms are installed, leasing can resume with the confidence that a full and fair return will be achieved for the American people.

³⁹ Taxpayers for Common Sense, “New Mexico’s Boom That Cost Billions: How Federal Oil & Gas Policies Fail Taxpayers,” June 25, 2019.

4. Achieving Fiscal Accountability to the Public for Value Lost and Damages Incurred

This section turns to consideration of the objectives of reclaiming value lost by the public from alternative beneficial uses forgone when lands are leased for oil and gas production (criteria 3) and compensating the public for environmental and social damages, including climate change, caused by oil and gas production and related activities (criteria 4). The purpose here will be to describe the rationale and relevant facts concerning these objectives and to outline in general the means for achieving them. That discussion will include a general consideration of how the lost value and damages might be quantified and converted into fiscal measures to encourage producer decisions that better serve the public interest.

Before considering the details of these items, some questions that might be asked on this subject include: (a) Why should federal oil and gas activity bear these costs when oil and gas activity on state, local or private land does not?, and (b) Won't these requirements for compensation for lost value from alternative uses and for damages from oil and gas activity disadvantage production on federal lands as compared to other lands?

The response to the first question has already been given in substantial part in section 2 on principles and standards for fiscal responsibility. The federal government, in the management of federal lands, is not simply a government responsible for the general welfare of the public. In the case of federal lands it also is the trustee of the lands whose duty it is to serve the interests of the land owners, the American people. That means, in particular, that it cannot as a trustee knowingly cause more than negligible harm to the public in the management of the lands. Requiring compensation for the loss of value from alternative beneficial uses and for environmental or social costs imposed on the public is not simply consistent with, but required by the federal government's trustee role.

Beyond the trustee responsibility of the federal government, this compensation is required under the laws that specify that the public is to receive a fair return on the oil and gas resources it owns and that public lands will be managed for multiple use. Even if the federal government were to finally secure a market level return on bid, rental and royalty revenues, it cannot turn around and diminish that financial return by imposing on the public an uncompensated loss of value due to environment harm or hindering alternative uses of the land. If the federal government imposes these types of uncompensated losses of value, it would fail to achieve a fair return to the public. In addition, if the federal government fails to fully account for losses of value in multiple uses due to oil and gas leasing, it would be tantamount to declaring that the federal multiple use requirements do not apply to lands leased for oil and gas purposes.

Given the fair return and multiple use requirements of federal law, the second question concerning the risk of a shift of production from federal to state or private lands becomes largely irrelevant. Empirically, it is far from clear that such a production shift would occur if the federal government were to fully comply with its own laws regarding oil and gas activity on federal lands and require compensation for multiple use losses and environmental damages to the public. However, even if such a production shift would occur, that would be an entirely, acceptable result. The federal government is not in competition with either private owners or the states to

secure oil and gas production at their expense. Nor is the federal government responsible for maximizing oil and gas production from federal lands. The federal government is simply responsible for fulfilling the laws governing the management of federal lands and the securing of a fair return from minerals produced on those lands.

The argument on behalf of maximizing production may have had more relevance before the enactment in the 1970s of federal multiple use requirements (FLPMA), the National Environmental Policy Act, and strengthening of various environmental laws. Those laws combined with the contemporary understanding of the impact of fossil fuels on climate change and public health and the emerging potential of renewable energy as a substitute for fossil fuels, render a “maximize oil and gas production” perspective obsolete and even irresponsible.

Finally, in its trustee role for federal lands, the federal government may develop forward-looking policies and practices that become, in part, a model for new legislation applying to all oil and gas production throughout the United States. That, in particular, could be the case with regard to measures seeking to reduce greenhouse gas emissions.

Accounting for the Reduced Value of Multiple Uses of Federal Lands

The BLM states that “Land with oil and gas leases are available for other multiple-use purposes. After oil and gas development is complete, the BLM requires reclamation of the land to return all land to multiple-use.”⁴⁰ In practice, multiple use is given short shrift once leasing occurs. Proposed resource management plans are replete with evidence of how the issuance of oil and gas leases, even if production does not occur, reduces and hinders alternative beneficial uses of the lease lands.⁴¹ Reclamation of oil and gas lands is often inadequate, causing an even more permanent loss of public uses of the affected federal lands. Under multiple use requirements for federal lands, these are not an acceptable or lawful result.

The impact of oil and gas leasing on alternative uses can be expected, in part, because of scarce Interior resources to allocate to developing and managing multiple uses. For example, if an office has a given set of dollars to use to develop recreational resources—campgrounds, visitor centers, trails, roads and the like—it is more likely to allocate those resources on land that is not populated by oil and gas leases as opposed to lands that are not. Otherwise, years later when oil and gas development occurs, the investment in recreational infrastructure will likely

⁴⁰ See: <https://www.blm.gov/programs/energy-and-minerals/oil-and-gas/leasing/land-use-planning>.

⁴¹ For example, Taxpayers for Common Sense, *supra* at note 15, p. 1 refers to non-producing oil and gas leases “. . . locking out other potential uses.” The Wilderness Society, *supra* at note 30 states that suspended leases “. . . can preclude BLM’s ability to achieve its multiple use mandate.” These types of conclusions that find that mere oil and gas leasing without production impairs multiple uses is quite common in the public literature. In the Proposed Colorado River Valley RMP (2015) at 3-135, BLM decided against managing lands for protection of wilderness characteristics in the Grand Hogback lands with wilderness characteristics unit based specifically on the presence of oil and gas leases, even though the leases were non-producing. Similarly, in the Proposed Grand Junction RMP (2015) at 4-289 to 4-290, BLM expressly stated that undeveloped leases on low-potential lands had effectively prevented management to protect wilderness characteristics on over 100,000 acres. As seen in Proposed White River Resource Management Plan at 4-498, the presence of leases can also limit BLM’s ability to manage for other important, non-wilderness values, like renewable energy projects.

have been wasted. The same is true if land is to be managed for endangered species recovery, siting of alternative energy facilities and so forth. Beyond these management issues, oil and gas companies may prefer to be free of having their potential access to the leases complicated by competing uses and may lobby Interior and elected officials to discourage active, multiple use management. Fulfillment of the multiple use standard requires more than mere statement of potential availability for other uses. It requires action by Interior to facilitate, achieve or and manage land in support of those other purposes.⁴² That is why conservation and other public interest groups assert that oil and gas leasing encumbers public lands or reduces its availability for alternative uses.

The BLM prepares resource management plans and conducts NEPA analyses aimed at serving multiple uses and protecting the environment. These procedures are helpful and constructive and can produce oil and gas lease stipulations and conditions of approval for drilling permits intended to protect resource values and mitigate adverse environmental impacts. How effective all these measures are on a case by case basis, however, is not clear. BLM's use of these procedures frequently draw litigation—often successful—that indicates these practices are not uniformly successful. Further, there are limits to the effectiveness of the regulatory sideboards contained in lease stipulations and conditions of approval. They cannot anticipate all the circumstances and impacts that will occur with development. Their implementation is subject to interpretation and potential disputes with lessees. Finally, their effectiveness will be typically dependent on continued monitoring and enforcement by the BLM, which can vary over time depending on staff budgets and expertise. The effectiveness of the current methods of fostering multiple use and protecting the environment would all be improved by adding the fiscal tools for serving these purposes as proposed in this report. Those fiscal tools will encourage oil and gas companies to make decisions that better align with and even support multiple use management and environmental protection.

Interior's resource management plans are also not as definitive, precise and certain in guiding development as some may think. In practice, the plans are flexible as evidenced by their accommodation of changing leasing policies adopted by different Administrations. The BLM was able to interpret these plans to facilitate significantly different levels of leasing activity undertaken by the Obama and Trump Administrations within a relatively short period of time. Further, the lax administration of lease suspensions and the impact of those suspensions on limiting or impairing multiple uses means that resource management plans are not applied consistently in all relevant BLM decision-making.

Given the limitations of current practices and the failure, after decades, to actually ensure multiple use on lands leased for oil and gas, the federal government should employ additional methods to implement this policy requirement. One such tool would involve adding to the base

⁴² A few examples illustrate this point. Protection or recovery of threatened or endangered species on lands leased for oil and gas cannot occur without BLM applying rules and active monitoring of activity to those lands—even if no oil and gas activity is underway. The same is true for preserving archeological resources on leased lands from unauthorized disturbances or theft by fortune hunters. Protecting watersheds from pollution and runoff caused by mineral exploration activity will not occur in the absence of rules, management and monitoring by the BLM. The list can go on and on. BLM's website can declare an "availability" for multiple uses of lands leased for oil and gas, but that is a hollow statement that, in the absence of sufficient action by BLM for each leased parcel, does not fulfill the requirements of the law for multiple use management.

rental rate additional charges per acre to cover the loss of value to the public from reduced availability for alternative beneficial uses of the federal land.⁴³ Unlike the base rental rate, however, this additional charge for loss of alternative uses would apply during every period of the oil and gas lease from its issuance through any suspensions, exploration, development, production and reclamation. That is because the conflicts with other uses can occur throughout every stage of a lease. This additional charge will contribute to providing a fair return for the American people. It also provides incentives for oil and gas companies to lease tracts with less valuable alternative uses or to accommodate some alternative uses at various stages of a lease.

Impairing or reducing multiple uses by oil and gas leasing can have costly impacts on society. Several of the alternative beneficial uses of federal land involve recreation. Recent research by the U.S. Department of Agriculture, Economic Research Service, found that in nonmetropolitan counties the greatest growth in personal income per person from 2010-2017 occurred in recreation-based economies. Income growth in recreation counties significantly outpaced those dependent on farming, mining, manufacturing, or government activities.⁴⁴ Interfering with recreation uses on federal lands creates lost opportunities for income growth in rural areas. Further, the failure to use federal lands leased for oil and gas for protecting endangered or threatened species reduces biodiversity and produces a variety of ecological, economic and human consequences. Renewable energy is an increasingly attractive use of federal lands as its cost declines, reliability improves, and environmental value grows. Renewable energy, properly screened for environmental or cultural resource conflicts, deserves full attention in any calculations of value lost to oil and gas leasing. [See Box 1.]

⁴³ For a version of this proposal, see: Hein, Jayni Foley, “Harmonizing Preservation and Production,” Institute for Public Integrity, NYU School of Law, June 2015, pp. 18-19.

⁴⁴ Pender, John, Thomas Hertz, John Cromartie, and Tracy Farrigan, “Rural America at a Glance, 2019 Edition,” U.S. Department of Agriculture, Economic Research Service, Economic Bulletin 212, November 2019.

Box 1. Renewable energy is a key example of why the American people should be compensated for the loss of value from an alternative use if oil and gas leasing and associated activities hinder that use.

The potential for expanding renewable energy on federal lands should be fully recognized and accounted for if lands are leased for oil and gas production and interfere with this low-emission alternative form of energy. A host of technological developments are dramatically increasing the benefits of renewable energy. It is not simply that wind and solar equipment is becoming more efficient. Advances in battery and other storage technologies and improvement to electrical grid technology are making renewable energy more reliable and stable. Research into agrivoltaics—the integration of agriculture with solar power—is finding that well-designed installations can provide multiple, synergistic benefits by increasing food production, decreasing irrigation water use, and boosting solar panel performance all at once.* Finally, the value of renewable rises as evidence of the risks of climate change gets more worrisome. The Interior’s focus on leasing lands for oil and gas imposes a rapidly rising cost to society to the degree that leasing hinders the development of renewable energy.

* National Renewable Energy Laboratory, “Benefits of Agrivoltaics Across the Food-Energy-Water Nexus,” U.S. Department of Energy, News & Features Stories, September 11, 2019, at <https://www.nrel.gov/news/program/2019/benefits-of-agrivoltaics-across-the-food-energy-water-nexus.html>.

Interior needs to undertake research into the value lost from reduced availability for alternative uses of federal lands due to oil and gas leases. The results of that research should be converted into additional rental charge per acre—a “loss of multiple use charge”—over and above the standard rental rate. As noted before, this charge would apply throughout the oil and gas life cycle on any given parcel. It would vary during that time, however, to the degree of interference with other uses changes. The “loss of multiple use charge” will include only those uses for which reliable research can be completed and translated into a quantitative annual charge per acre.

Compensating the Public for Environmental and Social Costs from Oil and Gas Activity

Oil and gas leasing and production activities impose a wide variety of damages (or “negative externalities”) on society that are not otherwise paid for by oil and gas producers. They extend from large scale impacts such as greenhouse gas emissions to more localized impacts such as oil spills and toxic runoff from lease parcels, inadequate reclamation, or deterioration of public roads from exploration activities. The current federal oil and gas revenue system does not provide mechanisms for compensating the public for these damages, but it should.

The primary means of compensating for damages from large scale, adverse environmental impacts caused by oil and gas production and use would involve adding to royalty payments an additional charge for the costs to society stated in dollars per barrel of oil and cubic foot of natural gas produced. This is essentially a charge for the “social cost of carbon” for which

estimates have been developed. An additional amount would be added for the climate change impact of methane emissions, which are 84 times as potent a greenhouse gas measured over 20 years, and a similar charge for any other universal and uniform damages caused by of other pollutants.⁴⁵

With regard to local environmental and social costs imposed by oil and gas activity and that vary by lease, Jayni Foley Hein has suggested BLM convert “. . . projections found in site-specific assessments and environmental impact statements, required by NEPA into ‘externality adjustments’.”⁴⁶ These adjustments would be calculated separately for each lease and added to amounts due to royalty payments. While Hein has suggested calculating these “externality adjustments” in terms of a percentage of the value of the oil and gas, it would appear to be more appropriate to determine these payments at dollar rates per barrel or cubic foot of product. That is because the adverse impacts largely are function of the volume of production instead of the value of the product.

There are also local environmental and social costs that arise before production begins during the exploration and drilling stages. These costs arise from disturbing the land, using materials with adverse effects on the land, weakening public roads, and endangering public health and safety. These costs can likewise be derived from site-specific assessments and environmental impact analyses and, on a lease by lease basis, converted into additional charges per acre of lease. These amounts would be added to the rental payments during these periods since there are no royalty payments due during the periods prior to production.

Inadequate reclamation of wells after production ceases is a known problem that Congress needs to address. Bonding requirements and reclamation procedures are inadequate to guarantee full and proper reclamation of non-producing wells to prevent adverse impacts to the environment and public health and safety.

Finally, a body of research literature, at least one U.S. Circuit Court decision, *Center for Sustainable Economy v. Jewell*, 779 F.3d (D.C. Cir. Mar. 6, 2015), and some Department of the Interior policies for offshore oil and gas leasing have developed the idea of an “option value” charge that should be added to minimum onshore lease bids, but is not captured at present. Option value arises from the decisions by the government to issue leases in the face of uncertainty concerning future prices for oil and gas and environment and social impacts that may arise from their production and use.⁴⁷ Advocates for this approach argue that failing to account for option value fails to account for the present economic benefit of delaying a decision to lease and thus results in undervaluing the oil and gas resource at the time of the lease sale.⁴⁸

⁴⁵ U.S. EPA snapshot. January 2017. “The Social Cost of Carbon”
https://19january2017snapshot.epa.gov/climatechange/social-cost-carbon_.html

⁴⁶ Hein, *supra* at note 42, p. 23.

⁴⁷ *Id.*, pp. 13-17, and references in footnotes 103-124, pp. 30-31. Also see, Michael A. Livermore, “Patience is an Economic Virtue: Real Options, Natural Resources, and Offshore Oil, 84 University of Colorado Law Review 581 (2013) for a useful and thorough introduction to the idea of option value in public resource management.

⁴⁸ *Id.*, p 17

Jayni Hein, Joy Kim and Sam Smith have recently issued a new report that explains in helpful terms how option value can be factored into BLM land use planning and lease sales.⁴⁹ They also highlight the importance of option value in resolving problems that leasing low-potential lands pose for both harming the environment and shortchanging taxpayers. The report enhances an understanding of option value by presentation how option value methods could have been applied in actual cases, including the Artic National Wildlife Refuge, the Badger-Two Medicine area (Montana), the Boundary Waters Canoe Area Wilderness, and the Chaco Culture National Historical Park. Overall, the idea of securing option value and the methods of calculating that value in specific cases should be considered by Congress for inclusion in future legislation reforming the federal oil and gas system.

⁴⁹ Hein, Jayni, Joy Kim and Sam Smith, “Look Before You Lease: Reducing Fossil Fuel Dominance on Federal Lands by Accounting for Option Value,” Institute for Public Integrity, NYU School of Law, January 2020

5. Recommendations to Achieve a Full and Fair Return for the American People

The current federal onshore oil and gas leasing program fails to achieve any of the reasonable public goals that applies or should apply to it.

- It fails to guarantee a full and fair market value in lease bids, rental payments and royalties.
- It fails to ensure diligent development of oil and gas resources.
- It fails to adequately preserve other beneficial uses of the public lands as required under the standards of multiple use or, in the alternative, to provide full compensation to the public for the loss or reduction of those uses.
- It fails to compare the relative benefits and costs of leasing the same lands for renewable energy development as compared to leasing them for oil and gas purposes and to make sensible decisions based on that analysis.
- It fails to prevent harm to the public from pollution, other adverse environmental and social costs, and acceleration of global warming or, in the alternative, to provide full compensation for that harm.
- It fails to guarantee that public land used for oil and gas production are adequately restored after production ceases.
- Finally, it fails to sufficiently inform and engage the public in decision-making for the lands they own or to serve their interests above all others in the management of these lands and resources.

Thus, in terms of serving the public interest, the federal onshore oil and gas program is a disaster. It needs to be fundamentally and thoroughly revised. As in past cases when major flaws in federal minerals management have been identified, the program cannot be allowed to continue to issue oil and gas leases on a “business as usual” basis while it is being restructured and reformed. Accordingly, the following recommendations and sequence of events should be undertaken by Congress and the Department of the Interior as soon as possible.

1. Congress should enact a moratorium on new federal onshore oil and gas leases until the Executive Branch completes implementation of reforms of the oil and gas leasing program to achieve a full and fair return to the American people, including minimizing the value foregone from alternative beneficial uses of the land and the costs of damages to the public from oil and gas production. The moratorium will cease when Congress determines that the Executive Branch has completed the necessary studies, promulgated rules and revised administrative practices for oil and gas leases required under the moratorium law to implement a new oil and gas leasing system.

The moratorium should be carefully designed to allow for limited, new oil and gas leases to be issued competitively to experienced oil and gas producers as necessary to maintain operating conditions in current, producing oil and gas fields. These limited leases will be referred to here as “transitional leases” and would only be offered on terms during the period of the moratorium until Interior completes work on a new leasing program and Congress lifts the moratorium.

2. The following changes in law or rules should not await future implementation, but would become effective on the starting date of the moratorium and would apply to transitional leases and, with modifications, would also apply to future leases after Congress lifts the leasing moratorium:
 - a. *Fiduciary responsibility of leaseholders for future federal oil and gas leases.* Either Interior by rule, if possible, or Congress, if necessary or desirable, will adopt a requirement that lessees for future oil and gas leases have a fiduciary responsibility to act in the public interest in the conduct of all of its leasing activities, including but not limited to all of its financial and operational responsibilities for such leases. As a fiduciary, lessees would be required to resolve conflicts between the private interest and the interest of the public in favor of the latter. Further, Interior should adopt sufficient rules and procedures to require disclosure by the lessee of information to ensure that the lessee is fulfilling its fiduciary responsibilities.
 - b. *Minimum bid to prevent speculation and support diligent development.* Congress should increase the current minimum bids to \$15 per acre, an amount necessary to prevent speculative activity and encourage diligent development. Further, Congress should require the Interior Secretary to adjust this minimum bid level biennially for inflation. However, Interior would be directed to evaluate all bids to determine if they represent fair market value and to reject bids that, although above the \$15 minimum, fail a market value test.
 - c. *Lease term for transitional leases.* Recognizing that transitional leases, located within existing oil fields, would not require extensive exploratory work, their lease term would be set at three years with the potential for a two-year extension if development is underway. This reduced lease term is intended to encourage diligent development. The rental rate would be set at \$5 per acre for the first three years and \$25 per acre during an extension. This pattern of rates is comparable to the practices of the State of Texas and is also intended to spur diligent development. The \$5 per acre rental rate is also comparable to an inflation adjusted rate of the current second five year period of federal leases. The law would require Interior to adjust rental rates for inflation biennially. (Note: Future, post-moratorium leases would be for five years to provide an initial, two-year exploratory period with a lower rental rate for that period.)
 - d. *Minimum onshore royalty rate to more nearly reflect market value.* Congress should set the minimum onshore royalty rate for leases at 18.75%. This rate matches the federal offshore rate and more nearly approaches market value royalty rates as best indicated by the 19.375% median of state public land royalty rates. Further, Congress should require Interior to compile data annually on the median top state royalty rates weighted by volume of oil and natural gas production and to evaluate increasing the federal onshore rate to conform to this median state rate through by rule or congressional action. This adjustment process

is intended to be permanent and apply beyond the resumption of leasing after the moratorium.⁵⁰

- e. *Public registry of qualified bidders to improve transparency, integrity and diligent development.* Interior would establish a public registry of companies qualified to nominate and bid on parcels for oil and gas leasing. For the transitional period—when the purpose of leasing will simply be to maintain current production—only companies experienced in due diligent oil and gas production on federal lands would be qualified to bid on leases. However, firms with a track record of serious or recurring violations of standards for exploration or production could be excluded from bidding even in the transition period. After the transition period, Interior should expand standards for qualifying bidders to allow entry of new firms that demonstrate the necessary technical expertise and access to capital to successfully conduct diligent production on federal lands in compliance with all applicable federal requirements. Importantly, although lease brokers would continue to be able to provide services to qualified companies in managing the bidding process, they would no longer be eligible to bid and become leaseholders for themselves. That change would reduce speculative leasing and potential abuses of the leasing process, achieve public transparency to enhance oversight of federal leasing, and support enforcement of the existing acreage limits on the holding of federal leases. Overall, establishing a process of qualifying potential leaseholders reduces speculation and supports diligent development in compliance with federal requirements.
- f. *Specific conditions for transitional leases.* Interior would accept bids for transitional leases only within established areas of existing production and within sufficiently close proximity to existing, producing wells such that only minimal, new infrastructure would be required. Further, nominations would include a publicly available justification as to why the proposed lease would be essential to maintaining existing operations. Interior would evaluate the sufficiency of the justification for leasing the nominated parcel and conduct all other resource planning analysis, site specific assessments, and NEPA evaluations before deciding to offer any nominated parcel for leases.
- g. *Sealed bidding, transparency, and requirement for rejecting below market value bids.* Interior would be required to conduct all leases through a sealed bid process, as a means of more likely achieving market value. All bids would be opened and disclosed publicly after the close of the bidding. Interior will evaluate the highest bids for their adequacy in relation to market value information. During the transition period, the relevant market value information would include a comparison with prior lease bids in the area of the parcels offered for lease. Interior would be required to reject any bid that it determines to not achieve market value.

⁵⁰ See Bucks, *supra*, at note 1, the prior report on federal royalty rates that discusses this recommendation in greater detail.

- h. *Noncompetitive leasing abolished.* Congress should repeal and prohibit noncompetitive leasing because it is inherently incapable of achieving fair market value for the public, invites manipulation of the leasing process, and results in speculation instead of production.
 - i. *Reform of the lease suspension process.* Congress should allow Interior to grant lease suspensions under only carefully defined circumstances and should limit lease suspensions to three years or less. Further, a suspension should be granted only after public notice and an opportunity for public comment prior to a decision. All lease suspensions, the rationale for the suspension, and their terms should be maintained as a public record.
 - j. *Reform of oil and gas reclamation bonding and procedures.* Congress should reform the reclamation process for oil and gas wells by requiring bonding sufficient to realistically cover the costs of reclamation and shall provide for maximum feasible transparency and public participation in developing bonding regulations and implementing reclamation plans.
 - k. *Ensure that the American people know what they are paid for the resources they own.* Congress should reverse its action in 2017 overturning the SEC rules, implementing the Cardin-Lugar provisions of the Dodd-Frank Act, on transparency in extractive industry payments to governments. Further, the Department of the Interior should be required to rejoin the Extractive Industries Initiative. The American people do not receive information that they have a right to know on the amounts they are paid on the oil and gas resources they own. It is scandalous that they are denied this information, when it is available in other nations. Requiring transparency in the oil and gas revenues will substantially improve the level of fiscal responsibility and integrity of the federal oil and gas system.⁵¹
3. Congress should require the Department of the Interior to establish a new, competitive onshore oil and gas leasing system that ensures the consistent receipt of fair market value for the public from oil and gas; preserves alternative beneficial uses of the land or reimburses the public for losses of the value of those uses; specifically compares and substitutes, when superior on a cost-benefit basis, renewable energy leases for oil and gas leases (including screening for environmental and cultural resource conflicts); and minimizes harm to the public in all major forms. Further, to the maximum degree possible, the new onshore oil and gas leasing system should maximize transparency and public participation throughout the process. Unless specifically noted otherwise, the changes enacted at the outset of the moratorium described above will continue forward and apply under the new onshore leasing program
- a. Interior should propose to Congress the establishment of oil and gas production regions based on geologic basins for oil and gas, shared infrastructure, common

⁵¹ *Id.* The prior royalty report provides additional discussion justifying this action.

environmental characteristics, and other relevant factors. Interior shall develop a report evaluating and ranking the regions for their:

- i. Suitability and potential for oil and gas development,
 - ii. Value, on average, of alternative beneficial uses for federal lands in those regions,
 - iii. Suitability and potential for renewable energy development, especially such development that is co-located and compatible with agricultural and other sustainable uses, and
 - iv. Risks of environmental and social harm to the public from oil and gas production.
- b. Congress may authorize funds from the federal share of any revenues arising from oil and gas leases to be used by Interior to defray costs of developing the new leasing system including but not limited to the expert analysis and studies required for that purpose.
- c. Interior would design a fair market value leasing system that would operate within production regions, whenever and however those regions might be approved for new leasing by Congress, as follows:
 - i. *Threshold conditions for tracts to qualify for leasing.* Interior would offer for leasing tracts evaluated as most suitable for oil and gas development, that minimize value foregone from the loss of alternative beneficial uses, that are not better suited to renewable energy development (see below), and that are subject to conditions that minimize harm to the public, including the prevention of methane gas waste. Interior should be required to develop analytical methods, rules and procedures to effectively and consistently apply these conditions.
 - ii. *Basic starting points for minimum bids, lease periods, rental and royalty rates.* The basic lease terms, before adjustments described here and in items iii through v below, would be continued forward from the transitional lease period. These terms would include the \$15 per acre minimum bids subject to adjustment biennially for inflation and the minimum royalty rate of 18.75% or more if adjusted through the permanent and continuous royalty review process describe above. The standard lease period would be five years with the potential for a two-year extension if development on the lease has begun. The three-year limit for lease suspensions and procedures for management of suspensions would continue as described above. The rental rate would be \$3 per acre for the first two years, \$5 per acre for the next three years, and \$25 per acre for any extension period. These rates would be updated for inflation by Interior biennially.

- iii. *Incorporation of option value into lease bids.* Interior would evaluate during the moratorium period and develop analytical methods, rules and procedures for increasing the \$15 minimum bid level to incorporate the option value of a lease to account for uncertainties related to future oil and gas prices and environmental and social costs. This measure is another step toward achieving a full and fair return to the public and providing a financial incentive for potential lease bidders to incorporate public interest objectives in their private decision-making.
- iv. *Charge for loss of value from diminished multiple uses over the life cycle of the lease.* Interior will, through appropriate research, establish the average value forgone from alternative, beneficial uses of lands in each region for conservation, recreation, wildlife habitat, alternative energy development and other uses due to oil and gas leasing. Further, Interior will establish rules to calculate and add site-specific estimates of additional lost value from multiple uses as identified for the lease parcel in site specific assessments and NEPA evaluations. The average value lost per region over the lease period plus the site specific additional losses of value will be translated into a per acre amount due and payable either with the lease rental payments as a charge for the loss of value from diminished multiple uses. However, unlike rental payments, this charge will continue to be due and payable on a periodic basis during lease suspensions and reclamation of the production site because the loss of multiple use continues through the entire life cycle of the oil and gas activity, including those time periods. The established amount of charge for the loss of value from diminished multiple uses will be included in lease terms at the time leases are offered for public sale.

As in the case of incorporating option value in lease bids, the charge for loss of use of value from diminished multiple uses is a step toward achieving a full and fair return to the public and providing a financial incentive for potential lease bidders to incorporate public interest objectives in their private decision-making.

- v. Congress should require Interior to establish charges per barrel of oil and cubic foot of natural gas payable with royalties when oil or gas production occurs to reimburse the public for the production-related adverse environmental costs to society from (a) carbon and methane emissions and other national or global impacts applicable to all oil and gas leases and (b) local environmental and social impacts identified for specific leases. The charges applicable to all leases should be based on established studies of these costs combined with further analysis Interior may judge necessary. Interior should also be required to identify local environmental and social costs on a lease by lease basis from site specific assessments and environmental impact analyses. All identified environmental and social costs of production, whether global or local, should be converted to

charges per volume of oil or gas produced. The additional charge for environmental and social impacts will be included in lease terms at the time leases are offered for public sale.

Compensating the American people for major environmental and social costs imposed on them by oil and gas production is another essential step in ensuring a full and fair return from federal oil and gas resources. It also provides another financial incentive for potential lease bidders to incorporate public interest objectives in their private decision-making.

- vi. Congress should require Interior, prior to offering any tracts for oil and gas development, to analyze such tracts for their suitability and potential for renewable energy development, including development that can be integrated with agricultural or other sustainable uses. Interior should compare the relative total benefits and costs to society, including impacts on global warming, from using those tracts for either type of energy development. Interior will hold public meetings and hearings of its findings from its comparison on the different energy development options for these tracts and will issue a decision choosing the best course of action for each tract.

This step is necessary given the:

- overarching importance to society of reducing the pace of climate change,
- evolving knowledge concerning human-caused climate change and its impacts, and
- rapid changes in the technology of renewable energy systems and their declining costs.

Without an explicit energy planning step as recommended here, the implications of changing climate and energy conditions will not be applied on a timely and effective basis to choices being made for the use of federal lands for various energy purposes. Failing to do so can have serious, if not disastrous, consequences for humankind.

- vii. *Public registry of qualified companies to nominate and bid on parcels.* The public registry of bidders described under the transitional lease section would continue as described with one modification. It should be modified for the post-moratorium period to include (a) companies that have produced oil and gas in the prior five years even if they are not currently producers and (b) new companies that have not produced oil and gas, but have sufficient business plans, staff expertise, access to capital, and other characteristics indicating the companies are prepared to pursue diligent development of federal oil and gas leases. During the moratorium Interior should adopt the rules and procedures for certifying this expanded

category of qualified companies. Congress should require that the rules include provisions for removing from the registry of qualified bidders any companies that fail to fulfill requirements for diligent development, timely and accurate revenue reporting and payment, lease operation, reclamation, or other material lease conditions.

- viii. *Flexible leasing schedule.* Interior would offer tracts on a flexible schedule to accumulate sufficient tracts for lease offerings to create the conditions for effective competition among bidders.
- ix. *Sealed bidding.* Interior would receive bids for tracts offered for oil and gas leasing on a sealed bid basis with bids publicly disclosed at the close of bidding as describe above.
- x. *Advanced procedures for attaining market value for lease bids.* The statutory minimum is primarily a matter of judgment. Advanced procedures exist to better achieve market value. These procedures can be used to establish an “effective minimum bid” that is above the statutory minimum. Option values would also be incorporated into this effective minimum bid. Interior would be charged with implementing either one or a combination of two broad processes to set an effective minimum bid above the statutory level: (a) an “inter-tract leasing” system and/or (b) establishing minimum market value bids for each parcel. Regardless of which approach Interior would use, Congress should require Interior to require sufficient reporting from the oil and gas industry of information necessary for analyzing the market value of leases. Such information could include industry valuations of oil and gas deposits, data on the purchase and resale of leases, and other relevant information. This data would typically be proprietary and held confidential by Interior.

Under the market-oriented “inter-tract leasing” system, the bidding process is structured to use competition to establish the fair market value of leases in a defined area. Prospective lessees would bid competitively against each other for specific leases from among a group of leases in a production area defined by common characteristics. For any single bidder to successfully secure a lease it desires, its bid for that specific lease must exceed the effective minimum bid level established through the leasing process for bids on all offered leases throughout the production area. Moreover, none of bidders in the process will know in advance the dollar amount fo the effective minimum bid, because the amount is an outcome of the bidding itself. Periodic Interior analysis of development rates on previously leased parcels would establish a percentage level below prior median bids that yielded a satisfactory rate of actual development. When the sealed bids are opened, Interior would accept those that exceed the sum of (a) the option values plus (b) the dollar amount at the acceptable percentage below the median bid in this specific auction in the production

area. This sum would be the “effective minimum bid” for that auction in the production area, unless that amount is less than the statutory minimum adjusted for inflation and option values, in which case the adjusted statutory minimum becomes the effective minimum bid for that auction. Because bidders would not know in advance the effective minimum bid, they would be offered a second round opportunity to secure a lease if they were willing to increase their bid to that level as established in this auction as noted in item xi. below.

The second approach of Interior establishing an effective minimum value for each lease parcel would be based on Interior making estimates from detailed analysis of its data and reported industry information. Interior would estimate the effective minimum market value, including option value, for each parcel to the extent this estimate exceeds the adjusted statutory minimum bid. To encourage competition in bidding, Interior would again not disclose the effective minimum bid in advance of the auction. The primary risk in this approach is that if an estimated value is too low, Interior may accept a below-market value lease. If it is too high, however, the situation can be corrected either by bidders increasing their bids in the second round leasing process described below or by Interior holding another lease auction with a lower, but still undisclosed, estimated value.

Interior could use a combination of approaches to establish an effective minimum bid value for each parcel. Where it employs inter-tract leasing, the value estimates can be a check on the reasonableness of the bidding results. Where Interior receives too few bids to have confidence in inter-tract leasing, it can decide to use its estimates of value instead.

- xi. *Second round leasing of parcels with failed bids.* For a short period after an auction, such as a month, qualified bidders would be able to lease any tracts in the area for which bids were rejected because they were below the effective minimum bid level for that auction. If two or more bidders express interest in the same rejected tract, Interior would solicit sealed bids and accept the highest bid above the effective minimum for that tract. If all bids are equal, Interior will be authorized to draw lots to award the bid—again at or above the effective minimum. This second round leasing opportunity is justified because it enables bidders to correct their prior inadequate bids to meet the previously undisclosed, but now known, effective minimum bid levels established through the prior competitive processes as yielding a fair market value return to the American people. The non-disclosure of the effective minimum bids in the first round is necessary to ensure maximum competition in bidding. However, after the auction and once the minimum bid is known there should be no barrier to a qualified bidder meeting or even exceeding the now established market

value for a lease that Interior offered on terms that meet applicable environmental and multiple use standards.

- d. Once Interior has completed the implementation steps for the fair market value leasing system, Congress will evaluate the readiness of Interior to operate the new system and the analysis, required under item a. above, ranking production regions on factors affecting their desirability or not for oil and gas development. Congress may take whatever action it deems appropriate in reinstating leasing for one or more production regions on a schedule of its determination. It may also modify the boundaries and number of production regions as it sees fit.
- e. Congress should establish a buyout program for unexpired leases issued before the effective date of the leasing moratorium that have not produced oil or gas for ten years or more. Congress should consider authorizing funds from the federal share of any oil and gas or renewable energy leases for this purpose.
- f. Congress should levy a capital gains tax at a rate of 90% on speculative gains from trading federal oil and gas leases to recoup revenue improperly lost to the American people due to defective leasing procedures. Speculative gains from federal oil and gas leases are the result of Interior failing to secure a full and fair return for the American people at the time leases were issued. That lost value for the public should largely be reclaimed and can be through this capital gains tax proposal that would be levied under both individual and corporate income taxes. The 10% that would not be reclaimed would be a fair reimbursement for lessee costs for investing in leases. The tax would yield future revenues primarily from the trading of past and current oil and gas leases. Assuming that value lost to speculation in the future will be reduced through the new leasing system recommended above, the yield of the tax should decline with the expiration of old leases over time. If the new leasing system fails to meet expectations, this capital gains tax would remain as a backstop to recapture value for the public lost through any continued deficiencies in federal oil and gas leasing.

APPENDIX D1

Net Zero Framework



**GNARLY TREE
SUSTAINABILITY
INSTITUTE**

11 September 2020

Framework Report

**Achieving Net Zero Fossil Fuel Greenhouse Gas Emissions
via Federal Land Use Planning**

Client: The Wilderness Society



Executive Summary

The following document describes a framework for Bureau of Land Management (BLM) field offices to use in developing and considering a planning alternative to achieve net zero greenhouse gas (GHG) emissions stemming from fossil fuel development on DOI-managed federal lands by 2030. It details a process by which BLM offices should consider a hierarchy of measures to avoid, minimize, and then offset GHG emissions from oil and gas development, and it provides an accounting approach that can be used to assess how the selected measures contribute to achieving the net zero objective.

BLM offices should consider the measures in a stepwise approach, first prioritizing avoidance of GHG emissions through limits on the amount of allowable fossil fuel development leasing; then implementing requirements and limitations to minimize the emissions from developments that are allowed to proceed; and finally offsetting remaining emissions through increases in terrestrial carbon stocks within the planning area, generation of renewable energy, and purchase of market offsets. Specific measures in the hierarchy are summarized in Table 1.

In evaluating each measure, BLM offices should quantitatively evaluate the resultant net GHG emissions for the planning area in each year of the planning period using two concurrent modeling approaches:

1. A disaggregated estimation of GHG emissions from fossil fuel development based on the number of new and active wells; quantity of infrastructure needed per new and active well; direct construction and operations emissions per well and per unit of infrastructure; quantity of oil or gas produced; and indirect emissions from downstream utilization per unit of oil or gas produced.
2. A terrestrial stock model that projects changes in the terrestrial carbon stock in the planning area based on management actions (including inside and outside of areas that are leased for fossil fuel development).

There are a number of factors that BLM offices must consider in developing the two approaches, including important synergies and tradeoffs between them. Such considerations include: the manner and magnitude of impacts under new versus existing leases; degree of uncertainty in the direction and magnitude of expected impacts; the effect of timing in implementation of different actions (e.g., if innovation is expected to reduce unit emissions or increase unit productivity); the potential direction and magnitude of anticipated and unanticipated indirect effects including leakage inside and outside the planning area; short-term losses of terrestrial stocks for the construction of additional renewable energy infrastructure; and others.

For each year, the net GHG emissions for the planning area are calculated as the fossil fuel development GHG emissions (modeled using the first approach) *minus* the magnitude of the increase in terrestrial carbon stock (relative to the previous year; modeled using the second approach) *minus* credits from renewable energy generation and market offsets. In cases where the terrestrial carbon stock is projected to decrease for a given year, the net GHG emissions equal the fossil fuel development GHG emissions *plus* the magnitude of the decrease *minus* credits from renewable energy generation and market offsets. BLM offices should select the mix of avoidance, minimization, and offsetting measures that achieve zero net emissions across the planning area.

Table 1: Summary of Framework Measures for Net Zero Alternative

Measure	Description of Effects Relative to No Action Alternative
<i>1. Avoidance</i>	
1.i. Eliminate new fossil fuel development leasing	The number of new and active wells under new leases would decrease to zero, eliminating all GHG emissions from new leases.
1.ii. Impose location-based limitations on fossil fuel development leasing	The number of new and active wells would decrease, and the quantity of infrastructure needed per well would decrease as a result of siting wells in areas where they would be closer to existing road networks; terrestrial stock emissions would also be reduced since development would be focused in areas where adverse terrestrial impacts would be lessened.
1.iii. Conduct option value analysis to identify areas available for fossil fuel development leasing	The number of new and active wells under new leases would decrease, while the quantity of fuel produced per well would increase since wells would be sited in areas with the highest productivity likelihoods; terrestrial stock emissions may also be reduced if development is prioritized in areas where adverse terrestrial impacts would be lessened.
<i>2. Minimization</i>	
2.i. Delay fossil fuel development leasing	The number of new and active wells would decrease in the short term, with development being shifted to later in the planning period; impacts to terrestrial stocks from land clearing for construction of wells and infrastructure would also be shifted to later years.
2.ii. Impose phased fossil fuel development leasing and permitting	The number of new and active wells and the average quantity of infrastructure needed per well would decrease in the short term but may increase in later years; impacts to terrestrial stocks from land clearing for construction of wells and infrastructure would also decrease in the short term and increase in later years.
2.iii. Require technology-based measures on fossil fuel development leases	Unit emissions from well and/or infrastructure construction and/or operations would be decreased across the planning period depending on requirements imposed; terrestrial stock emissions may also be decreased depending on requirements.
2.iv. Enable option for additional restrictions on fossil fuel development leases	Unit emissions from well and/or infrastructure construction and/or operations would be decreased across the planning period depending on requirements imposed at permitting stage; terrestrial stock emissions may also be decreased depending on requirements identified at permitting stage.
<i>3. Offsetting</i>	
3.i. Manage planning area for carbon sequestration	Terrestrial carbon stocks across the planning area (including outside of fossil fuel developments) would be increased as a result of management actions that prevent carbon losses and promote carbon sequestration.
3.ii. Increase renewable energy generation within planning area	Generation of renewable energy within the planning area would reduce the need for generation of energy using fossil fuels in the vicinity of the planning area.
3.iii. Purchase accredited carbon offsets or fund offsetting actions	Market offsets representing carbon emission reductions or increased carbon sequestration (with priority to credits generated in the region) would be purchased to offset remaining emissions above net zero.

Contents

- 1 Introduction 1**
- 2 Background and Objectives 2**
- 3 Baseline Development 6**
- 4 Net Zero Alternative Development 9**
- 5 Hierarchy of Net Zero Measures 12**
 - 5.1 Avoidance Measures12**
 - 5.2 Minimization Measures.....14**
 - 5.3 Offsetting Measures.....17**
- 6 Carbon Accounting Considerations 20**
 - 6.1 Number of New and Active Wells22**
 - 6.2 Well Construction and Operations Emissions.....23**
 - 6.3 Indirect Emissions24**
 - 6.4 Road Construction and Operations Emissions24**
 - 6.5 Terrestrial Carbon Sequestration.....25**
 - 6.6 Renewable Energy Generation and Market Offsets.....26**
- 7 References 28**

1 Introduction

This document lays the foundation for the Department of the Interior (DOI) to achieve net zero greenhouse gas (GHG) emissions from fossil fuel developments on DOI-managed federal lands by 2030. Under this approach, “net zero fossil fuel emissions” are considered to be achieved when:

the lifecycle GHG emissions stemming from fossil fuel development on U.S. federal public lands and waters (from production sites to burning by end users) are balanced by an equal amount of emissions offset over a specified period through net increases in terrestrial carbon stocks within the planning area, responsible renewable energy generation within the planning area, and purchase of market carbon offset credits from accredited sources.

This definition of net zero emissions encompasses all GHGs, as well as the full lifecycle of fossil fuel activities resulting in the release of emissions, from exploration to final consumer use.

This document describes a framework for Bureau of Land Management (BLM) field offices to use in developing and considering a planning alternative (hereafter the Net Zero Alternative) to achieve this goal during its land use planning processes under the National Environmental Policy Act (NEPA) and the Federal Land Policy and Management Act (FLPMA). Using this approach, BLM offices should consider a hierarchy of avoiding, minimizing, and then offsetting GHG emissions from oil and gas development within BLM managed lands. The framework may be utilized by individual field offices to inform land use planning processes and may also be scaled up to reflect a national-level strategy or expanded to encompass additional development such as coal extraction on federal lands.

The rest of this document is organized as follows:

- Section 2 presents a high-level overview of the relevant BLM planning processes and details the objectives of the framework;
- Section 3 summarizes BLM’s approach to establishing baselines for its land use plans and identifies the types of baseline accounting required for the development of a Net Zero Alternative;
- Section 4 describes the process by which BLM could develop a Net Zero Alternative;
- Section 5 presents the hierarchy of measures that should be considered by BLM offices in developing the Net Zero Alternative;
- Section 6 presents guidance on important carbon accounting considerations; and
- Section 7 provides references.

An accompanying appendix document and spreadsheet present a stylized example Net Zero Alternative for a hypothetical planning area that illustrates how the approach would work.

Emissions related to coal development are a major contributor to GHG emissions on federal land. While many of the methods proposed in this framework may be useful to address emissions related to coal development, the framework focuses specifically on oil and gas development.

2 Background and Objectives

FLPMA establishes requirements for how BLM manages the public resources under its control. Resource Management Plans (RMPs) form the basis for all management actions conducted by BLM field offices, which are tasked with implementing FLPMA's principles of multiple use and sustained yield. The RMPs translate these principles into management goals and objectives, including land use allocations suitable to the particular natural and social characteristics of each planning unit. In developing RMPs, BLM offices aim to balance natural and cultural resource protection with other uses such as outdoor recreation, livestock grazing, forestry, and mineral extraction.

Underlying BLM's goals and objectives is FLPMA's requirement that the Secretary of the Interior "take any action necessary to prevent unnecessary or undue degradation of the lands."² BLM must comply with its multiple use mandate, including considering the present and future needs of the American people, providing for the long-term needs of future generations, and ensuring the "harmonious and coordinated management of the various resources without permanent impairment of the productivity of the land and the quality of the environment" considering the relative values of the resources.³ It is national policy that BLM should manage the public lands in a manner that will protect them, including air and atmospheric values.⁴ In recognition of the environmental components of the multiple use mandate, courts have repeatedly held that development of public lands is not required, but must instead be weighed against other possible uses, including conservation to protect environmental values.⁵

In developing RMPs, BLM offices are required by NEPA to develop and evaluate a set of alternatives that reflect the planning priorities and multiples uses for the area under consideration. They must consider all reasonable alternatives, including a "no action" alternative that represents a continuation of the existing RMP and typically serves as a baseline for evaluating other alternatives. As part of the alternatives analysis, BLM must consider a range of options for reducing and offsetting climate change impacts and GHG emissions.⁶ As one part of the agency's efforts to consider climate change impacts, BLM offices account for GHG emissions associated with fossil fuel development under each alternative, usually under the umbrella of air resources within the RMP.

The specific method employed in GHG accounting varies across BLM offices. Typically GHG emissions are measured or estimated separately for "direct" and "indirect" emissions, with direct emissions encompassing those generated from well development and mineral extraction (upstream), while indirect emissions

² 43 U.S.C. § 1732(b).

³ 43 U.S.C. § 1702(c).

⁴ *Id.* at § 1701(a)(8).

⁵ See, e.g., *New Mexico ex rel. Richardson v. BLM*, 565 F.3d 683, 710 (10th Cir. 2009) ("BLM's obligation to manage for multiple use does not mean that development *must* be allowed Development is a *possible* use, which BLM must weigh against other possible uses including conservation to protect environmental values, which are best assessed through the NEPA process." (emphasis in original)); *Wilderness Workshop v. BLM*, 342 F.Supp.3d 1145, 1166 (D. Colo. 2018) ("the principle of multiple use does not require BLM to prioritize development over other uses" (internal quotations and citations omitted)).

⁶ 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).

include end-usage (downstream) emissions. Refinement-related emissions (midstream) are sometimes considered to be direct, while in other cases they are indirect. In some cases, BLM offices have included only direct emissions in their GHG accounting, arguing that once the fuels leave the planning area they are beyond the control of BLM. However, in recent years the majority of analyses have included consideration of both direct and indirect emissions.

During the upstream phase, emissions are estimated for the following types of activities: road construction/maintenance, transportation vehicle use, mineral extraction, oil flaring, and construction and operation of wells, as noted in BLM's recent Air Resources Technical Report (BLM, 2019a). During the midstream phase, oil and gas processing emissions are estimated from locations/activities such as natural gas compressor stations and pipelines, gas plants, and petroleum refining. Lastly, end-use/downstream emissions typically emanate from combustion of oil and gas products in the transportation, electricity generation, industrial, and residential sectors.

BLM offices use a variety of models and methodologies to estimate these emissions, some more rigorous than others. For example, since tracking where and how fossil fuels are ultimately being used downstream is very complex, BLM offices typically estimate downstream emissions through simple approaches such as the application of emissions factors per unit of fuel extracted.⁷ For modeling upstream and midstream emissions, some offices utilize the CARMMS (Colorado Air Resource Management Modeling Study) 2.0 tool, which combines predicted air quality models with estimated oil and gas well developments to generate a range of potential emissions (pursuant to low, medium, and high development scenarios) within a specified region. Others also use BLM's Emissions Inventory Tool, a web-based emissions inventory that can generate estimated emission inventories on a project basis.⁸ In some cases, offices take a simpler approach, using emissions factors or simple per-well emissions estimates developed by other BLM offices or outside sources such as the Environmental Protection Agency or American Petroleum Institute to model all direct and indirect emissions.⁹

The focus of GHG modeling is typically on fossil fuel development, although BLM offices sometimes additionally model carbon emissions or carbon sequestration rates associated with other activities. For example, the Carlsbad RMP (BLM, 2018) included estimated emissions from livestock grazing under the No Action Alternative (based on enteric fermentation and manure management) and descriptions of how the emissions may compare under other alternatives. The Bering Sea – Western Interior RMP (BLM, 2019c) included discussions and comparisons of the potential emissions impacts of different land use activities including timber harvest, vehicle access, wildland fire management, and mineral development, but did not comprehensively quantify the expected emissions under different alternatives.

The objective of the framework described in this document is to provide a resource to BLM offices to support incorporating a Net Zero Alternative in RMPs. In following the approach described, BLM offices will improve on the existing practices described in this section in two key ways:

⁷ BLM (2019a) uses emissions factors of 0.43 metric tons (MT) CO₂/barrel for oil; 0.054717 MT CO₂/thousand cubic feet for natural gas; and 13.7 pounds CO₂/gallon for propane and butane.

⁸ Such as the Royal Gorge Field Office in its Draft RMP for the Eastern Colorado area (BLM, 2019b).

⁹ For example, the Carlsbad Field Office's 2018 draft RMP for the Pecos District in New Mexico (BLM, 2018).

1. They will develop an alternative that is explicitly designed to avoid, minimize, and offset GHG emissions from fossil fuels and enhance carbon sequestration across planning areas to achieve net zero emissions; and
2. They will modify their current modeling approach to account for changes in carbon stocks across the planning area, beyond exclusively providing the relatively simple informational GHG modeling around fossil fuel development.

The Trump Administration has issued executive and secretarial orders that seek to prioritize energy development over other uses for BLM resources included in FLPMA’s multiple use-sustained yield management. However, these orders cannot preempt the congressional mandate that EISs on proposed plans consider “appropriate alternatives to recommended courses of action...which involves unresolved conflicts concerning alternative uses of available resources.”^o More specifically, FLPMA requires RMPs to employ “the principles of multiple use and sustained yield” and “weigh long-term benefits to the public against short-term benefits.” It limits BLM’s management solely to actions that are consistent with the “principles of multiple use and sustained yield” except for tracts dedicated to specific uses under other provisions of law. In particular, BLM “shall...take any action necessary to prevent unnecessary or undue degradation” of its lands.²

Federal regulations implement the congressional mandate under NEPA to consider a range of alternatives, which cannot be excused by executive and secretarial orders. A 2020 Council on Environmental Quality rulemaking deleted the previous requirement that agencies consider “all” reasonable alternatives to a proposed action. But it retains the basic mandate that agencies evaluate reasonable alternatives and briefly discuss the reasons for eliminating other alternatives.³ The legality of the final rule is being challenged in a number of federal lawsuits brought by national and regional environmental justice, outdoor recreation, public health, and conservation organizations, as well as by twenty-seven state attorneys general, territories, cities and agencies.⁴ Additionally, unless courts determine that the 2020 elimination of “all” overturns the pre-regulatory caselaw interpreting NEPA itself, comparative alternatives analysis will remain the “linchpin” RMP EISs.⁵ A Net Zero Alternative is a specific objective within the authority of the agency, and not speculative; as such, it is a reasonable alternative that must be considered.

^o 42 U.S.C. §4332(2)(E).

43 U.S.C. §1712(c).

² 43 U.S.C. §1732(b).

³ 40 C.F.R. § 1502.14.

⁴ *Alaska Community Action on Toxics v. CEQ*, No. 3:20 cv 05199 (N.D. Cal. July 19, 2020); *Wild Virginia v. CEQ*, No. 3:20 cv 00045 NKM (W.D. Va. July 29, 2020); *Environmental Justice Health Alliance v. CEQ*, No. 1:20 cv 06143 (S.D.N.Y. Aug. 6, 2020); *State of California v. CEQ*, No. 3:20 cv 06057 (N.D. Cal. Aug. 28, 2020).

⁵ *Monroe County Conservation Council, Inc. v. Volpe*, 472 F.2d 693, 697 (2d Cir. 1972). The key case on the range of alternatives is *Vermont Yankee Nuclear Power Corp. v. Natural Resources Defense Council*, 435 U.S. 519 (1978), which affirmed the Nuclear Regulatory Commission’s decision not to consider an energy conservation alternative to the licensing of a nuclear power plant. The Supreme Court endorsed a “rule of reason” for determining what alternatives an EIS must consider. In the case of a licensing decision, the NRC’s obligations were fairly narrowly focused on national security and public health/safety. Also, the energy conservation alternative had not been studied by anybody in detail and encompassed a “virtually limitless range of possible actions and developments.” *Id.* at 552. In contrast, crafting an RMP under the MUSY principle is anything but narrow under 43 U.S.C. §1712, quoted above.

This rest of this framework document is focused on the specific carbon accounting methods needed to develop a credible Net Zero Alternative at the level of the planning area. For more information about the justification and legal basis for the development of this approach, see *A Roadmap to Net-Zero Emissions for Fossil Fuel Development on Public Lands*, a recently published article discussing this issue (Gibbs Pleune et al., 2020).

3 Baseline Development

In carbon accounting, there are three general approaches to baselines:

- **Absolute zero** in which carbon emissions are measured relative to no fossil fuel development within the planning area;
- **Historic baseline** in which carbon emissions are measured relative to the emissions levels in a specific year; and
- **Projected baseline** in which carbon emissions are measured against a projected future scenario, often known as “business as usual” or BAU.

In developing RMPs, BLM typically uses the projected baseline approach by utilizing the No Action Alternative, which represents continuation of the prior RMP and associated management approaches, as the baseline from which the impacts of other alternatives are evaluated. The Reasonably Foreseeable Development Scenario (RFDS) represents a critical component of the No Action Alternative. The RFDS provides a baseline projection of fossil fuel development activity⁶ for the planning area, based on the best available information regarding the petroleum geology; past, present, and future oil and gas activities; and protected and/or potentially affected resources of concern. The RFDS also relies on relevant economic, technological, physical, infrastructure, and transportation assumptions and projections. For example, it may consider how projected changes in oil prices will affect the market for leases and how changes or disturbances in adjacent land tracts could impact development (BLM, 2003). The RFDS is used to estimate the GHG emissions and other impacts of the various NEPA alternatives, including the No Action Alternative.

For the purposes of developing a Net Zero Alternative, BLM offices will need to use the absolute zero baseline approach with the goal that net carbon emissions (carbon emissions less carbon capture, renewable energy generation, and market offsets) equal zero. For land-use related emissions, the emissions (or alternatively, capture) in a given year are simply the decrease (or alternatively, increase) in carbon stocks in the ecosystem.

There are some important considerations in the baseline development that are critical to BLM’s ability to appropriately plan and evaluate net zero GHG emissions. As described in Section 2, BLM typically uses a tool such as CARMMS to model fossil fuel development GHG emissions in the No Action Alternative, aligning it with the development scenario (low, medium, or high) that best matches with the RFDS trajectory. However, for the purposes of developing the Net Zero Alternative, it will be necessary to model emissions from oil and gas development activities at a more disaggregated level, which will enable the relevant BLM field office to evaluate the effects of specific avoidance and minimization measures. This disaggregated approach, used to evaluate potential measures in the construction of the Net Zero

⁶ While they most frequently pertain to the speculation of oil and gas developments, in rare instances RFDSs can be used to predict other forms of development (BLM, 2008).

Alternative, is not meant to replace the landscape-level modeling performed in CARMMS and other models used for RMP analysis (following the development of the alternatives).⁷

First, under this disaggregated approach, the baseline scenario should separately account for emissions from existing leases and their developments and estimated emissions from new leases that are predicted pursuant to the No Action Alternative's RFDS. For the purposes of evaluating different measures that can contribute to the net zero goal, it is important to be able to attribute each unit of emissions to existing or new leases. This approach will preserve BLM's ability to evaluate the impacts of measures that apply to these lease categories differently.

Second, the modeled emissions need to be sensitive to fluctuations in key variables that would be expected to change when applying the Net Zero Alternative measures. Specifically, BLM offices should accommodate variations (between scenarios and on a year-to-year basis) in the following variables:

- Number of new wells;
- Number of active wells;
- Emissions from well construction (per well);
- Quantity of road construction needed per new well;
- Emissions from road construction (per mile);
- Quantity of oil/gas produced annually (per well);
- Annual emissions from well operations (per well);
- Annual emissions from road operations (per well).

Additionally, data on active wells (and anticipated retirement dates) under existing leases, planned development of new wells on existing leases, and existing and projected infrastructure at the outset of the planning period will be needed.

A simplified calculation of the emissions from oil or gas development in a planning area under a new or existing lease for a given year is shown in **Equation 1**:

$$C = [W_n \times (E_n + (I_n \times M_n))] + [W_a \times (E_a + (I_a \times M_a) + (Q_a \times D_f))] \quad (1)$$

Where:

C = Carbon equivalent emissions (tons CO₂e) for a given lease scenario and year

W = Number of new wells

⁷ Note that the framework's accounting approach could be further developed and refined to replace the existing RMP alternatives analysis modeling approach.

- E = Construction emissions per new well (tons CO₂e), excluding terrestrial impacts⁸
- M = Average number of miles of new roads needed per new well
- I = Construction emissions for roads per mile (tons CO₂e), excluding terrestrial impacts⁸
- W_a = Number of active wells
- E_a = Annual well operations emissions (tons CO₂e) per active well
- M_a = Average number of active road miles per active well
- I_a = Annual operations emissions (tons CO₂e) per active road mile
- Q_a = Annual quantity of fuel produced per well
- D_f = Downstream and mid-stream emissions per unit of oil

This calculation would be carried out separately for oil and gas developments under existing leases and expected new leases under the No Action Alternative. The sum of the resultant emissions estimates will serve as the basis from which emissions reductions will be measured under the Net Zero Alternative on a year-by-year basis. Section 6 provides additional details on how each input variable can be developed by BLM offices.

BLM offices should also develop a baseline estimate of the existing terrestrial carbon stocks at the outset of the planning period as well as expected changes in carbon stocks for each year in the planning period under the management actions projected under the No Action Alternative. The offices can utilize existing modeling approaches such as that described by the U.S. Geological Survey's recent GHG inventory of federal lands (USGS, 2018), which is further described in Section 6.5. This carbon stock inventory will serve as the baseline from which terrestrial carbon emissions (e.g., from fossil fuel development construction, logging, etc.) and sequestration (e.g., from reforestation, improved management practices, etc.) will be measured in developing the Net Zero Alternative.

For each year, the GHG emissions modeled using Equation 1 minus the magnitude of the increase in terrestrial carbon stock (relative to the previous year) yields the net GHG emissions for the planning area. In cases where the terrestrial carbon stock is projected to decrease, the net GHG emissions equal the fossil fuel emissions from Equation 1 plus the magnitude of the decrease.

⁸ Terrestrial impacts are accounted for in a separate model; see Section 6.5.

4 Net Zero Alternative Development

After developing the No Action Alternative, calculating the associated disaggregated emissions estimates, and estimating the baseline existing terrestrial carbon stocks, BLM offices should initiate a systematic approach to identifying the mix of measures that will achieve net zero GHG emissions within the planning area and the planning period. This approach entails a stepwise process of considering a sequence of potential measures and adopting those that a) are suitable for the particular planning area and b) contribute toward meeting BLM's purpose and needs (beyond achieving net zero GHG emissions) in its planning criteria for the RMP under development.

BLM offices should follow a sequence of considering avoidance, minimization, and offsetting measures in devising a Net Zero Alternative, which entails:

1. Prohibiting oil and gas leasing across the entire planning area;
2. Prohibiting oil and gas leasing in some regions of the planning area;
3. Imposing measures that will, to the maximum extent, lessen the GHG emissions and other environmental impacts from developments that are allowed to proceed;
4. Identifying land management strategies on non-developed lands to maximize carbon sequestration rates to counteract the remaining emissions;
5. Facilitating increased responsible renewable (solar, wind, or geothermal) energy generation within the planning area;
6. Requiring the purchase of credible carbon offset credits or funding of offsetting activities outside the planning area, equivalent to at least the amount of remaining emissions above net zero.

Section 5 of this document details a hierarchy of available measures following this progression, including a detailed description of each measure and key considerations in determining whether it is appropriate for a given set of circumstances. BLM offices should proceed through that hierarchy in the order presented and, using the carbon accounting principles described in Section 6, conduct a cumulative emissions impact analysis in a stepwise manner to identify the mix of measures that will achieve a net zero outcome.

To accomplish this, BLM offices will need to recalculate estimated emissions in each step of the process, as they incorporate each of the measures to different degrees. Through this recursive layering and recalculating approach, emissions will decrease relative to the No Action Alternative (Section 3). Specifically, to estimate the oil and gas development emissions and the reductions relative to the No Action Alternative, the offices will use Equation 1 starting from the same set of assumptions as they used to model the No Action Alternative emissions. From there, they will consider how each of the avoidance and minimization measures would affect the variables in the equation each year in the planning period. For example, if measure 1.i (prohibiting all new leases) is adopted, then the variables W_n and W_a for oil and gas under new leases will both be set to zero and the emissions will be recalculated. If measure 1.ii (location-based limits on leasing) is adopted instead, then both W_n and W_a for oil and gas under new leases will be decreased but not set to zero.

At the same time, BLM offices will need to model changes to terrestrial carbon stocks across the entire planning area, inside and outside of fossil fuel development areas, in each year of the planning period. Because fossil fuel developments involve emissions from terrestrial stocks (e.g., from clearing trees or other vegetation for well or infrastructure construction, soil disturbances, etc.) and because some of the avoidance and mitigation measures will affect the magnitude of those impacts, BLM offices should also model the changes in carbon stocks as they consider implementation of each measure. For example, under measure 1.ii (location-based limits on leasing), terrestrial emissions from the construction of wells and associated infrastructure may be decreased if the location limits reduce development on the most impactful sites across the planning area.

For each measure in the hierarchy, Section 5 provides a description of the reasoning, magnitude, degree of certainty, and use of the potential variable impacts in Equation 1 and terrestrial stock modeling impacts. Section 6 provides additional detail on the construction of the relevant variables in Equation 1, guidance on terrestrial carbon stock modeling, and important considerations in their plan-specific development.

After BLM offices have evaluated all of the avoidance (Section 5.1) and minimization (Section 5.2) measures, the carbon accounting pursuant to Equation 1 and the terrestrial stock model will yield a year-by-year estimate of fossil fuel GHG emissions (and associated changes in terrestrial stock) across the planning period. These emissions represent the amount of carbon that must be offset, so the next step is for BLM offices to systematically evaluate potential offsetting measures. They will model the changes in terrestrial stock associated with those measures, starting from the changes that are expected to be realized under the projected fossil fuel development, as mitigated by the avoidance and minimization measures already considered.⁹

Similar to the avoidance and minimization measures, BLM offices should consider each of the offsetting measures (Section 5.3) in order of priority. The first objective of the offsetting measures is to increase carbon sequestration within the planning area. After that, BLM offices should consider increasing renewable energy generation within the planning area (to offset emissions generated by fossil fuel burning plants outside the planning area). Lastly, offices should require the purchase of market offsets which fund increased sequestration or reduced emissions outside of the planning area, to balance the remaining GHG emissions from the planning area.

While the avoidance and minimization measures are specifically aimed to mitigate the emissions associated with oil and gas development within the planning area, the offsetting measures incorporate actions and impacts that may occur across the entire the planning area, including outside the fossil fuel developments or outside of the planning area altogether. Specifically, the measure to increase terrestrial carbon sequestration within the planning area has both an action and an impact that is confined to the boundaries of the planning area. Renewable energy development, on the other hand, has actions within the planning area (generation of renewable energy) and impacts outside the area (reduction of fossil fuel energy generation). Market offsets, the last resort under the net zero framework, have both actions and impacts that occur outside the boundary of the planning area.

The accounting approach for evaluating offset measures utilizes only the modeled changes in terrestrial carbon stocks, since it is based on changes in the carbon stocks across the planning area (rather than the

⁹ Assuming some fossil fuel development is allowed to occur in the planning period, the terrestrial stock change estimates will be negative at this point; in other words, after considering avoidance and mitigation measures but before considering offsetting measures, the changes in terrestrial stocks will contribute to the emissions that need to be offset.

quantification of emissions associated with specific actions). It does not rely on Equation 1, which is limited to estimating emissions from fossil fuel developments. Instead, BLM offices will need to conduct a comprehensive inventory of carbon stock across the planning area each year relative to the carbon stock in the prior year and evaluate how its management actions and projections will affect the amount of carbon that is sequestered. Potential approaches to conducting, projecting, and tracking such an inventory are described in Section 6. In cases where the carbon stock increases across the planning area relative to the prior year (including consideration of all fossil fuel development and avoidance, mitigation, and offsetting measures), the net increase would count against the fossil fuel development emissions remaining after implementation of avoidance and minimization measures. In cases where the carbon stock decreases relative to the prior year, the net decrease would be added to the emissions, requiring additional offsetting measures.

As such, to maximize the net increase in carbon stocks, BLM offices should consider management practices that would a) reduce the loss of carbon stocks through existing land use patterns and practices (beyond the avoidance and minimization measures that affect terrestrial impacts directly associated with fossil fuel development); and b) increase terrestrial carbon sequestration. Measure 3.i addresses these approaches and should be prioritized by BLM offices.

At the same time, BLM offices may consider development of renewable energy in the planning area (measure 3.ii). From an accounting perspective, these measures operate in much the same way as the purchase of an offset credit. They act to avoid emissions that would have occurred were the same electricity generated from fossil fuel-fired power plants in the region. Therefore, once the balance of net onsite emissions is estimated, the reductions from renewable energy generation are subtracted to further reduce the emissions attributed to the planning area.

Evaluation of changes in terrestrial carbon stocks in the planning area under these first two offsetting measures should be considered concurrently and cumulatively (as opposed to avoidance and minimization measures which are considered in a more stepwise fashion) since there may be synergies or tradeoffs between them. For example, development and operation of renewable energy infrastructure could necessitate some land clearing and associated terrestrial carbon releases, even as it advances emission credits within the area through renewable energy generation. As such, the carbon stock in each year of the planning period should be modeled with consideration of all management plans in the area, with careful evaluation of tradeoffs in potential alternative strategies.

Finally, as a last step in developing the Net Zero Alternative, BLM offices will quantify the remaining emissions above zero. For each year, this is calculated as the emissions remaining after avoidance and minimization measures minus the net increase in the carbon stock. BLM offices should then institute market offset purchasing requirements (measure 3.iii) to balance in-area emissions with reductions or additional sequestration from outside of the planning area, with credits for local projects (i.e., in the vicinity of the planning area) being prioritized to the extent possible.

After the development of the Net Zero Alternative and the RMP, BLM offices should track their GHG emissions and terrestrial stocks on an ongoing basis to ensure continued progress toward the net zero goals. This will also enable BLM offices to improve their planning and Net Zero Alternatives developing in future planning as well, since this tracking will facilitate increased knowledge about the effectiveness and indirect effects of different measures. In implementation, BLM offices should also consider stipulations under which it can reserve the ability to change lease and permitting terms if its tracking indicates that the planning area is not meeting the GHG emissions targets.

5 Hierarchy of Net Zero Measures

This section presents a menu of avoidance, minimization, and offsetting measures that should be considered by BLM offices in developing the Net Zero Alternative, as described in Section 4. For each measure, the section provides a brief characterization of what the measure entails and, for avoidance and minimization measures, describes which key variables in Equation 1 would be changed in evaluating the impact. Table 3 at the end of this section provides a summary of the relationship between the avoidance/minimization measures and the variables.

Absent specific stipulations in leases, BLM offices are generally obligated to allow some exploration and development activities to occur under existing leases. However, BLM has the authority and discretion to adopt protective measures for both new and existing leases. BLM offices should apply these measures to new leases and, to the extent possible, to existing leases as well. Specifically,

such reasonable measures as may be required by the authorized officer to minimize adverse impacts to other resource values, land uses or users not addressed in the lease stipulations at the time operations are proposed. To the extent consistent with lease rights granted, such reasonable measures may include, but are not limited to, modification to siting or design of facilities, timing of operations, and specification of interim and final reclamation measures.²⁰

BLM also has authority to include these measures as conditions of approval (COAs) attached to drilling permits approved for existing leases.² As such, the measures described in this section consider the extent to which existing leases may be affected in addition to new leases.

5.1 Avoidance Measures

Measures to avoid emissions of GHGs from fossil fuel development on public lands should be considered a first priority.

1.i Eliminate new fossil fuel development leasing

Fossil fuel development GHG emissions may be avoided through the prohibition of all new leasing within the planning area; in other words, this measure would make all remaining unleased lands within the planning area unavailable for future leasing. In all cases, a no-leasing alternative should be included and considered within the development of an RMP.

Under a no-leasing scenario, fossil fuel development would continue in the planning area until new and/or active wells operating under existing leases become unproductive, but no new leases would be offered or issued after the start of the planning period. GHG emissions from fossil fuel development would be gradually phased out, after which no minimization or offsetting measures would be needed to address remaining emissions.

²⁰ 43 C.F.R. § 3101.1 2.

² Yates Petroleum Corp., 176 IBLA 144 (2008).

The relevant variables in accounting for this measure are the number of new wells (W_n) and the number of active wells (W_a) under new leases which is set to zero for each year in the planning period. Under this measure, this assumption will result in zero emissions under new leases. This measure would also affect the terrestrial stock model by eliminating terrestrial emissions associated with clearing land for developments under new leases.

Emissions under existing leases will not be directly affected.²²

1.ii Impose location-based limitations on fossil fuel development leasing

If new leases continue to be issued in the planning area, BLM offices should consider imposing stringent location-based limitations on fossil fuel development leases, which they may do to reduce GHG emissions and for any site-specific reason. This measure expands on the existing practice of prohibiting development in areas that are designated for conservation of resources and prohibit leasing by law including wilderness areas and wilderness study areas. Specific offices may have additional classifications subject to leasing prohibitions including Areas of Critical Environmental Concern, areas surrounding and connecting wild and scenic rivers, national monuments, recreation areas, scenic trails, and other special designations.

Under this measure, location-based prohibitions could be expanded for additional considerations, prohibiting new leases on areas that:

- would only be accessible by construction of roads through wilderness-quality lands or other sensitive areas;
- have high carbon stocks or sequestration potential;
- lack infrastructure for capturing, transporting, and marketing produced gas; or
- qualify for special designation status, including, but not limited to, lands that are of importance or concern to sovereign Native American Tribes, areas that contain important cultural resources, wilderness-quality lands, and proposed Areas of Critical Environmental Concern.

For new leases, the relevant variable adjustments (relative to the No Action Alternative) in accounting for this measure each year are:

- number of new and active wells (W_n and W_a) would decrease over the entire planning period; and
- average number of miles of new roads needed per new well and the number of active road miles per active well (M_n and M_a) would decrease over the entire planning period as a result of siting wells in locations where they would have lower impact and be closer to existing road networks.

This measure may also have the effect of reducing terrestrial emissions in the planning area under the terrestrial stock model, since development will be prioritized in areas where adverse terrestrial impacts would be lessened. For example, prohibiting leasing in areas that would require construction of roads through wilderness areas would result in fewer trees being cut down to accommodate development.

²² See Section 6.1 for a discussion of potential leakage considerations between new and existing leases within the planning area.

For existing leases, BLM offices should consider how location-based factors could affect decisions of whether to permit wells in specific sites, such as disallowing the construction of new wells in areas with high carbon stocks or sequestration potential. As such, in modeling terrestrial stocks in areas that are under existing leases, BLM offices may make similar adjustments to modeling assumptions but to a lesser degree and accommodating additional uncertainty about the extent of such restrictions in practice.

1.iii Conduct option value analysis to identify areas available for fossil fuel development leasing

After consideration of prohibiting all leases and prohibiting leases in land cover categories, BLM offices should next consider conducting an option value analysis (Hein et al. 2020) to distinguish between the highest priority areas for leasing and those that have high option values and, therefore, should not be leased. Specifically, this analysis would identify the highest value areas for fossil fuel development, closing all other areas to leasing. Based on the results, BLM offices would prohibit leasing on lands that have low potential for oil and gas development, have the highest conflicts with other resources and values, or require additional infrastructure development to support development (i.e., lands that are distant from existing development). The greater the uncertainty surrounding the costs and benefits of development, and the higher the rate of irreversibility, the greater the option value of not leasing is likely to be, which should further limit land available for leasing.

This measure could be used together with measure 1.ii.

For new leases, the relevant variable adjustments (relative to the No Action Alternative) in accounting for this measure each year are:

- number of new and active wells (W_n and W_a) would decrease over the entire planning period; and
- quantity of fuel produced per well (Q_a) would increase for the whole planning period.

Similar to measure 1.ii, BLM offices should consider how location-based factors could affect decisions of whether to permit wells in specific sites under existing leases. As such, in calculating emissions under existing leases, BLM offices may adjust the same variables but to a lesser degree (particularly with respect to the number of wells) and accommodating additional uncertainty about the extent of such restrictions in practice.

5.2 Minimization Measures

Where fossil fuel leasing and development is allowed, the following measures should be carefully considered to minimize emissions to the extent possible while meeting development targets. These measures may be applied to development on new leases going forward. In some cases, the measures may also be applied to existing leases (such as by attaching conditions to drilling permit issuances at the site-specific level). Careful consideration of all potential minimization measures is particularly important, given a) that development is likely to continue at least in the short term given the productivity and untapped inventory of wells under existing leases, and b) the opportunity for federal leasing to demonstrate best practices for minimization across a region, which could encourage better practices on private lands as well.

2.i Delay fossil fuel development leasing

After avoidance measures, the first minimization measure that should be considered by BLM offices is to delay fossil fuel development leasing by set time periods and establish a regular frequency for reevaluation. This measure will avoid emissions in the short term and lessen the magnitude of those emissions later in the planning period assuming that technologies and processes for controlling GHG emissions from fossil fuel development (including well construction and operation, transportation, and eventual combustion) and efficiency associated with fossil fuel extraction will improve over time. While the same amount of oil may ultimately be extracted and consumed under this approach, it will result in fewer overall emissions.

This measure could be used together with measures 1.ii and/or 1.iii.

For new leases, the relevant variable adjustments (relative to the No Action Alternative) in accounting for this measure each year are the number of new wells (W_n) and the number of active wells (W_a), which will decrease in the short term. The increased efficiency of extraction and the reduced unit emissions over time will be important to the impact of this measure; however, these assumptions are universal across accounting for all measures and will not need to be adjusted further specific to evaluating this measure.

This measure may also affect the terrestrial stock model by delaying the terrestrial emissions associated with land clearing for well or infrastructure construction (relative to the No Action Alternative).

2.ii Impose phased fossil fuel development leasing and permitting

Under this measure, BLM would not delay all leases but would implement a phased approach to leasing parcels, with more accessible (i.e., closer to existing infrastructure) and less impactful parcels being leased earlier in the planning period. Similar to delaying lease sales (measure 2.i), implementing a phased leasing approach will push some of the fossil fuel development activities to later in the planning period when emissions impacts may be somewhat lessened by technology and methodology innovations. It could also accommodate an adaptive management cycle under which minimization efforts (e.g., under measures 2.iii and 2.iv) are delivering the emissions reductions expected, enabling experimentation, monitoring, reevaluation, and adjustments in approaches to maximize the effectiveness and efficiency of the measures utilized.

This measure could be used together with measures 1.ii and/or 1.iii; it could also be used together with measure 2.i, in which case the initiation of the phased leasing would be delayed, and impacts shifted further back in the planning period.

For new leases, the relevant variable adjustments (relative to the No Action Alternative) in accounting for this measure each year are:

- number of new and active wells (W_n and W_a) would decrease in the early years of the planning period (to a lesser extent than under measure 2.i) but increase in later years; and
- average number of miles of new roads needed per new well and the number of active road miles per active well (M_n and M_a) would decrease in the early years but increase in later years.

This measure may also affect the terrestrial stock model by reducing terrestrial emissions from construction in early years and increasing them in later years.

2.iii Require technology-based measures on fossil fuel development leases

Under this measure, BLM offices would require certain technology-based measures for all development under new leases to reduce GHG emissions from well and/or infrastructure construction and/or operation. This could be accomplished by including a stipulation (not subject to exceptions, waivers, or modifications) in all leases. While such conditions would be applied at the parcel level, in some cases tailored to the specific site characteristics, BLM offices can use the RMP to provide guidance on how this will be carried out across a planning area and implemented on the ground.

Specific measures that could be required include prohibiting venting and flaring of natural gas, requiring capture of emissions associated with well drilling, utilizing satellites or more sensitive infrared cameras to detect and address methane leaks, earlier replacement of pumps and other devices, use of alternative or advanced capture technologies, air quality stipulations, and others.

This measure could be used together with any other measure, depending on the coverage.

For new leases, the relevant variable adjustments (relative to the No Action Alternative) in accounting for this measure each year are:

- Construction emissions per new well (E_n) and per new road mile (I_n); and
- Operations emissions per active well (E_a) and per active road mile (I_a).

Each of these variables, or any combination of them, may be decreased over the planning period depending on the technological requirements imposed. This measure may also have an indirect effect of reducing the number of wells, or even the number of new leases if it increases the costs of development to a point where some share of wells would no longer be profitable.

This measure may also affect the terrestrial stock model, reducing terrestrial emissions relative to the No Action Alternative, since technology-based requirements could serve to add protections against land clearing at the development site.

This measure would apply only to new leases, as it occurs at the leasing stage; as such, no effects would be modeled for existing leases under this measure.

2.iv Enable option for additional restrictions on fossil fuel development leases

In addition to imposing technology-based emissions control requirements at the stage of leasing, BLM could require that any leases issued under a relevant RMP include provisions that preserve their ability to impose additional measures at the permitting stage, stage, or to delay or deny proposed development as needed to adaptively manage.

This measure could be used together with any other measure, depending on the coverage.

For new leases, the relevant variable adjustments (relative to the No Action Alternative) in accounting for this measure each year are:

- Construction emissions per new well (E_n) and per new road mile (I_n); and

- Operations emissions per active well (E_a) and per active road mile (I_a).

Each of these inputs, or any combination of inputs, may be decreased over the planning period depending on the technological requirements imposed.

This measure may also affect the terrestrial stock model, reducing terrestrial emissions relative to the No Action Alternative, since technology-based requirements could serve to add protections against land clearing at the development site.

Since the specific requirements would not be imposed at the leasing stage, the magnitude of potential decreases to these inputs has a higher degree of uncertainty at the planning stage. This measure may also have indirect effects of a) reducing the number of leases if uncertainty around what requirements may be increases the costs of development to a point where some share of wells would no longer be profitable, or b) reducing the number of wells under leases if the requirements imposed at the permitting stage increase costs such that wells become unprofitable.

BLM offices may also be able to impose conditions on new developments under existing leases, which could yield reductions in the same variable as under new leases. Given the agency's discretion to impose and enforce these requirements, the modeled reductions under existing leases should be less than those under new leases to account for increased uncertainty in implementation. On the other hand, revoking waivers to stipulations on leases may yield greater opportunities to impose GHG minimization measures. To achieve these greater reduction opportunities, BLM offices should consider an open, public process before granting waivers, track the waivers that it ultimately grants, limit waivers to drilling restrictions, and closely monitor compliance with remaining restrictions.

5.3 Offsetting Measures

After avoiding and minimizing fossil fuel development emissions to the extent possible, BLM offices should consider measures to counteract the remaining emissions through increases in terrestrial carbon sequestration, reduction of non-fossil fuel emissions within the planning area, and, if needed, purchase of accredited carbon offsets from outside of the planning area.

3.i Manage planning area for carbon sequestration

First, BLM offices should consider ways to increase the net carbon sequestration within the planning area (including unleased areas). Carbon sequestration would be maintained or increased by adopting land management practices that minimize carbon loss from the ecosystems within the planning area (e.g., by stopping deforestation, by soil nutrient management, and by stopping wetland loss) and increase carbon sequestration in natural and healthy landscapes. Table 2 provides a partial list of such management practices that are relevant to some land uses within BLM planning areas.

In accounting for these management practices, BLM offices should utilize the terrestrial stock model. Any net increase in carbon stock at the end of a given year (relative to last year's ending stock) would count against the fossil fuel emissions remaining after accounting for all avoidance and minimization measures. Importantly, in accounting for carbon stock changes under this measure, BLM offices will need to concurrently evaluate actions under measure 3.ii, since construction and operation of renewable energy infrastructure in the planning area may affect carbon stocks.

Table 2: Land Management Practices to Conserve or Increase Carbon Stocks

Land Type	Conservation of Stock	Expansion of Stock
Forest	<ul style="list-style-type: none"> Modified harvesting practices Preventing deforestation Sustainable forest management Disease and pest management Prevention of soil erosion 	<ul style="list-style-type: none"> Reforestation Forest restoration Modified management (e.g., fertilization, improved stocking, species mix, extended rotations) Restoration of eroded soils
Rangeland and Grasslands	<ul style="list-style-type: none"> Improved grazing systems Disease and pest management Prevention of soil erosion 	<ul style="list-style-type: none"> Afforestation Change in species mix, including woody species Restoration Fertilization Irrigation Restoration of eroded soils
Source: Richards et al. (2006); Fei et al. (2019); NAS (2019)		

3.ii Increase renewable energy generation within planning area

BLM offices may also consider measures to increase responsible renewable energy generation within the planning area. In considering such options, BLM offices should weigh important tradeoffs and site such development in lands that have low terrestrial carbon sequestration potential and are lower impact to conservation and cultural resource values. As noted under measure 3.i, this measure may affect the potential for terrestrial carbon sequestration even as it generates longer-term potential emissions credits. Offsets would be calculated by measuring GHG emissions that would be avoided were the electricity to be produced by fossil fuel-fired power plants in the region. See Section 6.6 for additional discussion of accounting for renewable energy generation credits.

3.iii Purchase accredited carbon offsets or fund offsetting actions

To address remaining emissions after all other measures have been implemented to the extent allowable, BLM offices should purchase accredited carbon offsets, fund offsetting actions on other federal lands (e.g., abandoned well cleanups), or require developers to purchase accredited carbon offsets. For instance, BLM could include a stipulation that requires developers to purchase the offsets as a condition of approval on their master development plan or application for permit to drill.

For each year, the quantity needed to attain net zero would be equal to the remaining emissions from fossil fuel development activities (the Net Zero Alternative emissions calculated using Equation 1 after accounting for avoidance and minimization measures) minus net increases in carbon stock calculated under measure 3.i minus emission credits generated by renewable energy under measure 3.ii.

Table 3: Summary of Carbon Accounting Variables Affected by Avoidance and Minimization Measures

Equation 1 Variable	Potential Effects of Avoidance and Minimization Measures Relative to No Action Alternative						
	1.i	1.ii	1.iii	2.i	2.ii	2.iii	2.iv
Number of wells (W_n and W_a)	Zero (new leases)	Decrease	Decrease	Decrease (early years)	Decrease (early years)		
Emissions per well construction (tons CO ₂ e) (E_n) ^a						Decrease	Decrease
Average miles of new road needed per new well (M_n)		Decrease			Decrease (early years)		
Emissions from road construction (tons CO ₂ e per mile) (I_n) ^a						Decrease	Decrease
Annual direct operations emissions per well (tons CO ₂ e) (E_a)						Decrease	Decrease
Average miles of active road needed per active well (M_a)		Decrease			Decrease (early years)		
Annual road operation emissions (tons CO ₂ e per mile) (I_a)						Decrease	Decrease
Quantity of fuel produced per active well (Q_a)			Increase				
Downstream/midstream emissions per unit of fuel (tons CO ₂ e) (D_f)							
Terrestrial carbon emissions ^b	Decrease	Decrease	Decrease	Decrease (early years)	Decrease (early years)	Decrease	Decrease
1.i Eliminate fossil fuel development leasing 1.ii Impose location based limitations on fossil fuel development leasing 1.iii Conduct option value analysis to identify areas available for fossil fuel development leasing 2.i Delay fossil fuel development leasing 2.ii Impose phased fossil fuel development leasing and permitting 2.iii Require technology based measures on fossil fuel development leasing 2.iv Enable option for additional restrictions on fossil fuel development leases Notes: a. Emissions from well and infrastructure construction exclude carbon releases associated with clearing the land, which are accounted for in a separate terrestrial stock model. b. Terrestrial carbon emissions are estimated in a separate terrestrial stock model, apart from Equation 1 which is limited to emissions from fossil fuel development.							

6 Carbon Accounting Considerations

As described in Sections 3 and 4, BLM offices will use **Equation 1** to estimate the No Action and Net Zero Alternative fossil fuel development emissions and quantify the effects of the avoidance and minimization measures identified in Sections 5.1 and 5.2.

$$C = [W_n \times (E_n + (I_n \times M_n))] + [W_a \times (E_a + (I_a \times M_a) + (Q_a \times D_f))] \quad (1)$$

Where:

- C = Carbon equivalent emissions (tons CO₂e) for a given lease scenario and year
- W = Number of new wells
- E = Construction emissions per new well (tons CO₂e), excluding terrestrial impacts²³
- M = Average number of miles of new roads needed per new well
- I = Construction emissions for roads per mile (tons CO₂e), excluding terrestrial impacts²³
- W_a = Number of active wells
- E_a = Annual well operations emissions (tons CO₂e) per active well
- M_a = Average number of active road miles per active well
- I_a = Annual operations emissions (tons CO₂e) per active road mile
- Q_a = Annual quantity of fuel produced per well
- D_f = Downstream and mid-stream emissions per unit of oil

Each of the avoidance and minimization measures will affect a different combination of the variables in Equation 1, with differing magnitudes and levels of uncertainty depending on the specifics of the measures implemented and the planning area or sites being targeted. Often, BLM offices will need to conduct underlying calculations to estimate each of the variables for each year in the planning period. For example, the construction emissions per new well (E_n) will depend on many different factors, such as the site characteristics of a typical well that is expected to be constructed and as the technological measures implemented by the developer. As BLM offices consider and model each measure in the hierarchy, they will need to construct the mix of variable values to reflect realistic assumptions for each lease type (new or existing) and each year in the planning period.

After using Equation 1 to calculate the remaining fossil fuel development GHG emissions under the avoidance and minimization measures, BLM offices will need to consider measures to further reduce net emissions through terrestrial sequestration, renewable energy, and the purchase of market offsets. This will entail additional emissions (and sequestration) modeling, separate from the Equation 1 calculations.

Some considerations in carbon accounting are overarching and applicable across all measures, activities, alternatives, and models, including:

²³ Terrestrial impacts are accounted for in a separate model; see Section 6.5.

- **Global warming potential (GWP).** In all cases, BLM offices should use consistent GWP values to put all emissions estimates and comparisons in terms of CO₂ equivalence (i.e., CO₂e) based on most recent values provided by IPCC. Table 4 provides the GWP values from the 5th assessment report.
- **Timing.** The timing of leasing, emissions, measures, and impacts is a key consideration as well. For example, it is important to account for the time horizons between the initial leasing, construction of wells (at which point there will be construction emissions), and the eventual reclamation of the affected land (at which point carbon sequestration could increase in the parcel).
- **Innovation.** The emissions rates and production rates (per well and per road mile) should not be static over the planning period; in contrast, technological improvements would be expected to increase efficiency and reduce unit emissions over times, such that a well or road constructed later in the planning period would have lower emissions than one earlier in the planning period, while each well would produce higher quantities of fuel.
- **Uncertainty.** It will be important to address the sometimes substantial uncertainties involved with projecting GHG emissions under baseline and alternative scenarios. In cases where the magnitude of potential changes in the variables relative to the No Action Alternative have higher uncertainty, BLM offices should use conservative assumptions. For example, if BLM offices plan to impose technology-based requirements at the development stage rather than at the leasing stage, then there may be a higher degree of uncertainty around the emissions reductions that will be achieved; the impacts to the emissions variables under measure 2.iv should be modeled to be smaller than those under measure 2.iii, because there is a higher degree of certainty in achieving the emission reductions under the latter.
- **Indirect effects.** Table 3 above summarizes the direct effects of the avoidance and minimization measures; in other words, these are the reasons for implementing them and are under the control of BLM offices. However, BLM offices should also consider, to the extent reasonable, potential indirect effects on the variables that may arise from developers' actions in response to the measures. To some extent, the indirect effects are complex and challenging to model; however, in some cases it may be appropriate to include reasonable consideration for such effects when there is sufficient certainty. Some examples are provided in the subsections below.

The remainder of this section identifies key carbon accounting considerations that BLM offices should account for in modeling emissions over the planning period under the No Action Alternative and under different combinations of measures for the Net Zero Alternative broken out by variable- or activity-specific considerations.

Table 4: Global Warming Potential from 5th IPCC Assessment Report

Greenhouse Gas	100-year time horizon	20-year time horizon
Carbon Dioxide (CO ₂)	1	1
Methane (CH ₄)	28	84
Nitrous Oxide (N ₂ O)	265	264
Select Hydrofluorocarbons (HFCs)	4-12,400	<1-10,800

Greenhouse Gas	100-year time horizon	20-year time horizon
Sulfura Hexafluoride (SF ₆)	23,500	17,500

6.1 Number of New and Active Wells

In calculating Equation 1 for each management scenario, BLM offices will need to estimate the number of new and active wells for each year in the planning period and separately under existing and new leases. There are important considerations in developing this variable across the planning period.

First, the number of new wells (W_n) and the number of active wells (W_a) are separate but related variables. A new well one year will be an active well in subsequent years (for the duration of the expected productive well lifetime). Additionally, a well could be counted as both a new well and an active well in a single year if it is constructed and becomes active within that year. Since the variable W_n is used to calculate construction emissions and variable W_a is used to calculate operations emissions, counting the same well as both would not double-count its emissions. In such a scenario, BLM offices should consider the duration of time in which the well will be active. For example, if a well is expected to be active for six months of a particular year, then it should be counted as 0.5 wells toward the variable W_a for that year.

The numbers of new and active wells are key variables that may be affected by several measures:

- Measure 1.i (eliminate new leasing) would decrease the variables to zero under new leases;
- Measures 1.ii (impose location-based limits) and 1.iii (utilize options value analysis) would decrease the variables, but not to zero;
- Measure 2.i (delay leasing) would decrease the variables in the early years of the planning period, essentially shifting development later relative to the No Action Alternative; and
- Measure 2.ii (imposed phased leasing and permitting) would decrease the variables in the early years of the planning period, balanced by increases in the later years (with the overall average across the planning period equivalent to the average without the measure).

In addition to the measures that directly impact the well count variables, BLM offices may want to consider how other measures could indirectly affect them. For example, if offices implement technology-based requirements on new leases or permits (under measure 2.iii or 2.iv), it may cause developers to reduce the number of wells that they develop due to increased unit costs.

Another consideration is that the number of wells under new leases and existing leases may not be independent from one another. If BLM offices implement measures that will reduce the number of wells allowable under new leases, developers may respond by increasing development under existing leases. As such, decreases in the variables W_n and W_a under new leases may be accompanied by increases (likely of a lesser magnitude) in the same variable under existing leases. This is related to a broader leakage issue in which reducing development within federal lands may increase development outside of federal lands. While this broader leakage issue is beyond the scope of the framework (which is restricted to consideration of emissions directly connected to planning areas), within-area leakage is a relevant consideration for BLM offices in constructing their Net Zero Alternative.

6.2 Well Construction and Operations Emissions

Construction of new oil and gas wells entails substantial emissions associated with machinery used for earth-moving activities, transportation of heavy equipment, and truck traffic. These emissions are represented by the variable E_n in Equation 1. Note that E_n does not encompass terrestrial stock emissions, such as from the removal of trees, brush, or other vegetation or from soil disturbances, as these impacts are encompassed under the broader terrestrial carbon stock model (see Section 6.5).

BLM's *Air Resources Technical Report for Oil and Gas Development in New Mexico, Oklahoma, Texas, and Kansas* (2019a) provides an example of a per-well estimate of the CO₂e emissions associated with well construction, including pad construction (fugitive dust), heavy equipment combustive emissions, commuting vehicles, and wind erosion. The report notes that the construction and completeness phases for oil and gas wells is approximately 30 days and are expected to account for the largest share of direct emissions due to earth-moving activities, heavy equipment use, and truck traffic.²⁴ Additionally, the completion of natural gas well construction often includes direct venting of methane, a substantial source of GHG emissions in construction.

Variable E_a represents the direct annual per-well operations GHG emissions in tons CO₂e after well construction is complete. Direct emissions from well operations on-site are expected to be less than the emissions associated with construction, depending on the extent to which there is ongoing venting, flaring, and unmanaged leaking.

In applying the E_n and E_a variables in Equation 1 for each year in the planning period, BLM offices should apply reasonable assumptions regarding how technological innovations could affect per-well emissions. These variables may decline to some extent over the planning period even without intervention under the Net Zero Alternative, including under the No Action Alternative. This consideration is important to capture and could have implications even for measures that do not directly decrease this variable. For example, measure 2.i (delay development leasing) would not directly affect E_n , but if the construction emissions per well are expected to decline over the planning period due to technological innovations, then this variable will contribute to decreased overall emissions under measure 2.i because well construction will be delayed to a later time when the emissions will be lower.

Beyond decreasing over the planning period without implementation of any measures, the E_n and E_a variables may be directly affected by measures 2.iii (require technology-based measures in leasing) and 2.iv (enable requiring technology-based measures in permitting), which would yield a decrease by utilizing specific technologies or prohibiting particularly emissions-intensive practices (such as methane flaring).

In adjusting the variables over the planning period to account for the measures, BLM should make conservative assumptions in cases where there is relatively high uncertainty. For example, if BLM offices decline to impose conditions at the leasing stage under measure 2.iii, but enable imposition of additional restrictions at the later permitting stage under measure 2.iv, then emission reductions may be more uncertain since it will depend on later permit-specific decisions. As such, the emission reductions under measure 2.iv may be similar to those under measure 2.iii but modeled as a lesser magnitude of reduction.

²⁴ For details on the per well calculations, see Appendix H of BLM (2019a).

On the other hand, BLM offices may later waive environmental-protection stipulations that are written into leases. This is enabled by the fact that, while BLM consistently involves the public in developing lease stipulations and involves the public to some extent on drilling permit requirements, it generally does not involve the public in (or systematically track) decisions about whether to grant a request to exempt a well or lease from a stipulation (GAO, 2017). While such waivers are an operational issue that is difficult to control via RMPs given existing requirements and practices, BLM offices may need to temper modeled emissions reductions expected to occur under measure 2.iii due to the possibility that such waivers may later be implemented.

6.3 Indirect Emissions

Upstream emissions resulting from well operations within the planning area are included in the variable E_a described above. Indirect emissions, represented by the variable D_f in Equation 1, include those occurring midstream and downstream. BLM (2019a) provides national emission factors as summarized in Table 5. These emission factors are based on national data and are not expected to be affected by any of the planning area-level avoidance or minimization measures.

Table 5: Indirect Emissions Factors from BLM (2019a)

Fuel	Emission Factor	Source
Oil	0.43 tons per barrel	EIA (2006)
Gas	0.054717 tons per Mcf	EPA (2016)
Natural gas liquids	13.7 pounds per gallon	EIA (2006)

The indirect emissions are dependent on the quantity of fuels produced by active wells; in Equation 1, the indirect emission factors (D_f) are multiplied by the relevant quantity unit of the fuel. In estimating this per-well variable (Q_a), BLM offices should consider how continued innovation and efficiency improvements over the planning period may affect well productivity. Even without any intervention, Q_a may increase over the planning period due to developers’ implementation of measures to improve their own efficiency. As such, BLM offices should use reasonable assumptions of efficiency improvements in calculating Equation 1 for the No Action Alternative, and before consideration of any specific measures under the Net Zero Alternative.

Additionally, the variable Q_a could be directly impacted by measure 1.iii (conduct option value analysis) since the approach will prioritize development in areas that have the highest likely productivity.

6.4 Road Construction and Operations Emissions

Variables M_n and M_a represent the number of miles that are associated with each new and active well, respectively. For the purposes of calculating fossil fuel development emissions using Equation 1, road miles are used as a proxy for all supporting infrastructure (which would also encompass pipelines, compression stations, etc.) within the planning area. Additionally, the emissions associated with each mile of road – represented by the variables I_n and I_a – are assumed to be universal across the planning area. This approach may oversimplify the nuances associated with infrastructure emissions. As such, BLM offices may consider that M_n/M_a instead represent a unit of infrastructure and I_n/I_a represent the average emissions associated with each unit across the planning area.

BLM (2019a) describes the findings of a road committee formed by the Farmington Field Office together with representatives of the oil and gas industry. The committee estimated that the average length for a new road to accommodate a new well is approximately 800 feet. In using the road mileage approach, BLM offices should consider all aspects of road construction in estimating I_n , including the emissions associated with truck and other equipment, but excluding terrestrial impacts such as clearing trees or brush. These terrestrial stock emissions are encompassed under the broader terrestrial carbon stock model (see Section 6.5).

In estimating road operations emissions (variable I_a), BLM offices must account for road maintenance as well as traffic on the roads to visit the wells. For example, BLM (2019a) assumes that each road requires 6 hours of maintenance approximately once per year. Road usage is assumed to be 50 miles round-trip five times per year using a light truck for production and check-ins.

The avoidance and minimization measures that may directly affect the variables M_n and M_a are:

- Measure 1.ii (impose location-based limits) would reduce the road mileage needed to support development, since it would prioritize development in areas that are already in close proximity to roads; and
- Measure 2.ii (impose phased leasing and development) would reduce the road mileage in the early years of the planning area, balanced by increases in the later years (with the overall average across the planning period equivalent to the average without the measure).

Additionally, measures 2.iii (require technology-based measures in leasing) and 2.iv (enable requiring technology-based measures in permitting) could yield a decrease in road construction and operations emissions (I_n and I_a) by utilizing specific technologies or prohibiting particularly emissions-intensive practices.²⁵

6.5 Terrestrial Carbon Sequestration

Accounting for measures that affect terrestrial carbon stocks will necessitate a separate approach from the application of Equation 1. Specifically, BLM offices will need to model the existing terrestrial carbon stock across the planning area at the outset of the planning period, then model changes in that carbon stock for each year based on potential management scenarios. For each year in the planning period, a net increase in the terrestrial carbon stock within the planning area will count against the remaining emissions from fossil fuel development (i.e., the sum of emissions under existing and new leases calculated using Equation 1). A net decrease in carbon stocks relative to the prior year will be added to the emissions that need to be offset by subsequent measures. This approach is separate from the application of Equation 1 used to assess the fossil fuel development emissions impacts of avoidance and minimization measures relative to the No Action Alternative, as described in Sections 6.1 through 6.4.

There are a number of existing modeling approaches that BLM may adapt to conduct this analysis of carbon stocks. For example, the USGS published a report of federal lands GHG emissions and sequestration over the period 2005 to 2014 (Merrill et al. 2018). That study relied on spatially explicit data on land uses across

²⁵ For example, BLM (2019a) notes that the need for well site visits during production is reduced by remote solar powered telemetry systems that transmit well production data to a central office.

the conterminous U.S. – broken out by forests, grasslands, shrublands, wetlands, and agricultural areas – overlaid on federal lands spatial data at a 1 square kilometer resolution. For each ecosystem type, the authors estimated net sequestration by calculating the gross primary productivity and respiration rates and then accounted for land use changes and disturbances over the analysis period. The authors found that “[c]arbon sequestration on Federal lands was highly variable over time, owing primarily to interannual variability in climate and weather, long-term increases in CO₂ fertilization, and variability in [land use land change] and disturbances.”

The methods used by Merrill et al. (2018) represent a retrospective analysis of carbon sequestration across all Federal lands, and as such is not directly applicable for BLM offices’ development of Net Zero Alternatives in planning stages. Rather, the offices will need to conduct forecasting of sequestration based on anticipated land use changes and management practices within the boundaries of the specific planning area. This entails modeling of some factors that will be relatively predictable and controllable by the offices, including rates of logging, deforestation, afforestation, conversion of land to/from rangeland or agriculture, and wildland preservation. BLM offices will adjust these factors to determine how terrestrial sequestration rates will change under different potential management approaches. They may utilize some of the general approaches from the USGS model – such as application of typical productivity and respiration rates for different land use categories – in developing their projections.

BLM offices will also need to account for the impact of management actions within specific land use categories to determine the magnitude of increases (or decreases) in sequestration rates. For avoidance and minimization measures, these changes will occur within areas of fossil fuel development; for offsetting measures, these changes will occur primarily outside of those areas. For example, under measure 3.i, BLM offices may implement reforestation in areas that have been previously logged or degraded. For the affected parcel, this action can be expected to result in increases in carbon stocks on that parcel each year. Measures may also act to mitigate carbon stock losses that may have otherwise occurred. For example, another potential action under measure 3.i is to prevent soil erosion and protect against invasive pests. These management actions will reverse or mitigate terrestrial carbon emissions that would otherwise detract from the net increase in carbon stocks in the planning area. BLM offices should use the best available science to estimate the impacts of each potential management approach on carbon stock increases and decreases for each parcel in the planning area on a year-by-year basis.

At the same time, BLM offices will need to account for the terrestrial stock impacts of all other management actions that may occur under the alternative; for example, if BLM offices increase renewable energy generation capacity under measure 3.ii, it would likely entail some carbon stock emissions in the construction phase as land is cleared for infrastructure.

There will also be substantial uncertainties in the modeling. For example, as noted by Merrill et al. (2018), much of the variability in actual carbon sequestration is driven by variation in climate and weather conditions and unpredictable and uncontrollable disturbances such as fire or pest outbreaks. BLM offices should account for this uncertainty by a) conducting sensitivity analyses and estimating carbon flows under a variety of potential scenarios, and b) making conservative assumptions about the amount of sequestration that may be expected under the selected management actions.

6.6 Renewable Energy Generation and Market Offsets

From an accounting perspective, renewable energy generation credits operate in much the same way as market offsets, in that they function to avoid emissions that would have occurred if electricity were

generated using fossil fuels but count against emissions associated with the planning area. Renewable energy generation inside the planning area, for example, enables avoidance of fossil fuel generated energy outside of but in the vicinity of the planning area. This can yield credits for avoided emissions since renewable energy generation entails substantially lower GHG emissions compared with alternatives. For example, the Energy Information Administration (EIA, 2020) estimates that one kilowatt-hour (kWh) of electricity generated from coal is associated with 2.21 pounds of CO₂e emissions; for natural gas the emissions factor is 0.92 pounds/kWh, while it is 2.11 for petroleum. As such, displacing energy generated by fossil fuels in the vicinity of the planning area through the generation of renewable energy in the planning area can contribute to offsetting the remaining GHG emissions in the planning area.

BLM offices should account for these credits by first projecting, for each year in the planning period, the amount of energy (megawatt-hours, or MWh) that is likely to be generated by new and existing renewable energy within the planning area. Then, they should determine the typical GHG emissions associated with conventional energy sources in the region on a per-MWh basis. Multiplying that region-specific energy emissions factor by the renewable energy generation amount in the planning area yields an emissions credit that can be applied to offset the remaining emissions (after accounting for avoidance, minimization, and terrestrial carbon sequestration measures).

If the net zero emissions target is not achieved, remaining emissions for the planning area should be offset through the purchase of accredited market offsets. Market offsets will function much the same way as renewable energy credits in that they can be used to offset in-area emissions through out-of-area emission reductions. Unlike renewable energy generation, on the other hand, market offsets fund renewable energy, energy efficiency, carbon capture or sequestration, or other projects that may occur outside the planning area. As such, they should be considered a last resort for BLM offices to meet the net zero objective.

7 References

- Bureau of Land Management (BLM). 2020. Farmington Mancos-Gallup Draft Resource Management Plan Amendment and Environmental Impact Statement.
- Bureau of Land Management (BLM). 2019a. Air Resources Technical Report for Oil and Gas Development in New Mexico, Oklahoma, Texas, and Kansas.
- Bureau of Land Management (BLM). 2019b. Royal Gorge Field Office: Draft Eastern Colorado Resource Management Plan & Environmental Impact Statement. BLM/CO/PL-19/003.
- Bureau of Land Management (BLM). 2019c. Bering Sea – Western Interior Resource Management Plan and Environmental Impact Statement. BLM/AK/PL-19/004+1610+A020.
- Bureau of Land Management (BLM). 2018. Draft Resource Management Plan and Environmental Impact Statement: Carlsbad Field Office, Pecos District, New Mexico. BLM/NM/PL-18-01-1610.
- Bureau of Land Management (BLM). 2012. Resource Management Plan Alternative Development for Livestock Grazing. Instruction Memorandum 2012-169.
- Bureau of Land Management (BLM). 2008. National Environmental Policy Act Handbook. H-1790-1.
- Bureau of Land Management (BLM). 2003. Interagency Reference Guide: Reasonably Foreseeable Development Scenarios and Cumulative Effects Analysis For Oil and Gas Activities on Federal Lands in the Greater Rocky Mountain Region.
- Crocker, K. and J.F. Glover. 2018. Reasonable Foreseeable Development Scenario for Oil and Gas Activities: Mancos-Gallup RMPA Planning Area, Farmington Field Office, northwestern New Mexico. United States Department of the Interior, Bureau of Land Management.
- Energy Information Administration (U.S. EIA). 2020. Frequently Asked Questions (FAQs): How much Carbon Dioxide is Produced per Kilowatthour of U.S. Electricity Generation: available at: <https://www.eia.gov/tools/faqs/faq.php?id=74&t=11>
- Energy Information Administration (EIA). 2006. Carbon Dioxide Coefficients. Retrieved from Energy Information Agency (EIA) Volume 2, Energy: <http://www.eia.gov/tools/faqs/faq.cfm?id=7&t=7> (as cited in BLM, 2019a).
- Environmental Protection Agency (EPA). 2016. Greenhouse Gas Equivalencies Calculator. Retrieved from U.S. Environmental Protection Agency: <https://www.epa.gov/energy/greenhouse-gases-equivalencies-calculator-calculations-and-references> (as cited in BLM, 2019a).
- Fei, S., R.S. Morin, C.M. Oswalt, A.M. Liebhold. 2019. Biomass Losses Resulting from Insect and Disease Invasions in U.S. Forests. Proceedings of the National Academies of Science.
- Government Accountability Office (GAO). 2017. Oil and Gas Development: Improved Collection and Use of Data Could Enhance BLM’s Ability to Assess and Mitigate Environmental Impacts. Report to the Ranking Member, Committee on Natural Resources, House of Representatives. GAO-17-307.
- Gibbs Pleune, J. J.C. Rupple, and N. Wolff Culver. A Roadmap to Net Zero Emissions for Fossil Fuel Development on Public Lands. Environmental Law Reporter (9-2020): 10734-10743.

- Hein, J., J. Kim, and S. Smith. 2020. Look Before You Lease: Reducing Fossil Fuel Dominance on Public Lands by Accounting for Option Value. Institute for Policy Integrity, New York University School of Law.
- Merrill, M.D., B.M. Sleeter, P.A. Freeman, J. Liu, P.D. Warwick, and B.C. Reed. 2018. Federal Lands Greenhouse Gas Emissions and Sequestration in the United States: Estimates for 2005-14. U.S. Department of the Interior and U.S. Geological Survey Scientific Investigations Report 2018-5131.
- National Academies of Sciences, Engineering, and Medicine. 2019. Negative Emissions Technologies and Reliable Sequestration: A Research Agenda. Washington, DC: The National Academies Press.
- National Research Council (NRC). 1989. Land Use Planning and Oil and Gas Leasing on Onshore Federal Lands. The National Academies Press.
- Richards, Kenneth R, R Neil Sampson, and Sandra L Brown. 2006. *Agricultural & forestlands: US carbon policy strategies*. Pew Center on Global Climate Change Arlington.
- Salazar, K. 2009. Order 3289: Addressing the Impacts of Climate Change on America's Water, Land, and Other Natural and Cultural Resources. Department of the Interior.

APPENDIX D2

Net Zero Framework Hypothetical



**GNARLY TREE
SUSTAINABILITY
INSTITUTE**

11 September 2020

Appendix: Example Net Zero Alternative Development

**Achieving Net Zero Fossil Fuel Greenhouse Gas Emissions
via Federal Land Use Planning**

Client: The Wilderness Society



Introduction

The report *Achieving Net Zero Fossil Fuel Greenhouse Gas Emissions via Federal Land Use Planning* describes a framework for Bureau of Land Management (BLM) field offices to use in developing and considering a planning alternative to reach net zero greenhouse gas (GHG) emissions stemming from fossil fuel development on DOI-managed federal lands by 2030. It details a process by which BLM offices should consider a hierarchy of measures to avoid, minimize, and then offset GHG emissions from oil and gas developments, and it provides an accounting approach that can be used to assess how the selected measures contribute to achieving the net zero objective.

This accompanying appendix demonstrates the application of the net zero carbon accounting framework described in that report through the development of an illustrative Net Zero Alternative (Alternative Z) as applied to a hypothetical planning area. Application of the framework to the hypothetical case serves to illustrate the types of measures that could move a planning area to net zero carbon emissions over a planning period as well as the types of carbon accounting that will be required for the supporting analysis. An accompanying spreadsheet includes all of the assumptions calculations described in this appendix and is used to generate the GHG emissions estimates shown.

It is important to note that the assumptions and variable values used do not represent recommended or even realistic inputs to an actual application of the framework; rather, they are placeholders intended only to demonstrate how the framework execution works.

This stylized hypothetical planning area includes a mix of land uses, land covers, resources, and leasing statuses so as to provide enough variation to illustrate important carbon accounting issues, practices, and considerations. At the same time, much of the extraneous detail has been stripped away to avoid distraction from the key issues. For example, there is no natural gas extraction in the hypothetical because it would not introduce any new carbon accounting or planning concepts beyond what is demonstrated via oil extraction.

The remainder of this appendix contains the draft approach to the example Net Zero Alternative using the approach of a typical RMP, including a general description of Alternative Z, the relevant land uses and decisions, the management actions that will be used to attain the goals of the alternative, and a summary of the GHG emissions under the No Action Alternative and Net Zero Alternative.

Summary of Planning Area and Alternative Z

The emphasis in Alternative Z will be on the management of all resources within the planning area to attain net zero emissions of greenhouse gases (GHGs), with a focus on avoiding and minimizing GHG emissions from fluid fossil fuel development. Alternative Z works under the assumption that some strategic leasing will continue under this alternative, together with development limitations to minimize emissions from the development that is projected to proceed. It is necessary to offset the associated emissions to attain net zero emissions. In other words, emissions are minimized to the extent possible, then remaining emissions are balanced by offsetting actions including net increases in terrestrial carbon sequestration, renewable energy generation, and accredited market offset purchases.

Within the planning area, the landscape is divided into categories that are distinguished by current use, potential use and type of modeling that is required for the analysis of changes in carbon stocks. Land uses are defined pursuant to existing land use or wildland categorizations, level of accessibility, fossil fuel extraction potential, and carbon sequestration potential. Within the planning area, there are several different land categorizations that are relevant for assessment and management directives under Alternative Z.

- **Currently leased** (3,000 acres)
 - Parcel 1: Contains 100 wells, each 20 years old; decreasing output, currently 10 barrels/day, expected to become uneconomical within 5 years; 2 miles of road maintenance required; lease is 8 years old; degraded forestland/scrubland.
 - Parcel 2: Contains 150 wells, each 5 years old, increasing output, expected to become uneconomical in 20 years; 5 miles of road maintenance required; lease is 5 years old; there is mature forest on 20 percent of the land area.
 - Parcel 3: Contains no wells, capacity for up to 100 economic wells using newly developed technology, no roads in place, would require new road and road maintenance; area is mature mixed forest.
 - Parcel 4: Contains no wells, capacity for up to 100 economic wells using newly developed technology, roads in place, would require no new road or road maintenance; area is barren land.
- **Parcel 5, mature forest** (1,000 acres): Capacity for up to 100 economic wells, requiring 5 miles of new road for development through mature forest
- **Parcel 6, degraded forest/scrubland** (1,000 acres): Capacity for up to 200 economic wells, requiring 5 miles of new road for development; degraded forest/scrubland
- **Parcel 7, protected wildland area** (10,000 acres): This area comprises 10,000 acres, near mature forest, slowly increasing carbon stock; used solely for outdoor recreation that has little impact on habitat, biodiversity or carbon sequestration levels.

- **Parcel 8, degraded herbaceous land** (5,000 acres): This area was leased as grazing land until five years prior to the beginning of the planning period; it has very low carbon stocks, low biodiversity or habitat value. It is located near electricity transmission lines.
- **Parcel 9, unmanaged evergreen forest** (5,000 acres): This area was clear cut 20 years before the beginning of the planning period; it is undergoing natural regeneration at a very slow rate of growth.

The landscape-level goals of Alternative Z for the planning area include:

1. Bring GHG emissions stemming from federal lands in line with emissions reductions needed to avoid a 1.5 degree C rise in global temperatures by 2100.
2. Move toward eliminating emissions of GHGs from continued fossil fuel extraction.
3. Reduce the adverse effects of climate change on all resources.
4. Restore, maintain, protect and improve resource conditions and ecosystem functions to increase the rate of natural carbon sequestration.
5. Restore, maintain, protect, and improve resource conditions and ecosystem functions to promote healthy and balanced plant and animal communities of native species, maintain and restore the distribution, diversity, and complexity of watersheds.
6. Enhance collaborative relationships with adjacent land owners, federal and state agencies, tribes, communities, other agencies, and other individual and organizations as needed to attain and monitor healthy ecosystems, maximize efficient resource utilization, and minimize adverse impacts from recreational, extractive, and agricultural practices.

Consideration of Potential Measures Under Alternative Z

In developing Alternative Z, BLM carefully considered the mix of approaches that could be used to reduce GHG emissions from fossil fuel development, enhance carbon sequestration across the planning area, and protect ecosystem functions and use values throughout the planning area while upholding the multiple use and sustained yield mandate for BLM managed lands. In assessing the measures, BLM compared the likely changes in fossil fuel development GHG emissions and terrestrial carbon stocks to the actions forecasted under the No Action Alternative, which include:

- *Continued operation of wells on currently leased parcels*, which is expected to involve retirement of 50 wells in Parcel 1 in year 5 and the remaining 50 in year 6 followed by natural regeneration of forestland/scrubland; and retirement of 50 wells in Parcel 2 each year in years 13 to 15 followed by regrowth of affected forest acreage.
- *Unrestricted development on currently leased parcels*, which is expected to result in approximately 200 new wells being constructed between years 1 and 10 of the planning period, including 100 wells in Parcel 3 with well and road construction through mature mixed forest and 100 wells in Parcel 4 with well construction in a barren area.

- *Sale of new fossil fuel development leases*, which is expected to result in construction of approximately 100 wells in mature forests in Parcel 5 over years 1 to 4 and construction of approximately 200 wells in degraded forestland/scrubland in Parcel 6 over years 5 to 12.
- *Continued recreational use management* on Parcel 7 which will maintain its protection as wildland.
- *Inactive management of unleased parcels*, including Parcels 8 and 9 which contained degraded herbaceous land and unmanaged evergreen forests, both of which experienced past disturbances and are undergoing slow to no terrestrial carbon stock growth.

The following subsections describe each of the measures considered by BLM, summarizes the extent to which it was adopted for the planning area, and characterizes the impacts to modeled GHG emissions. For a summary of GHG emissions under the No Action and Net Zero Alternatives, see the *Summary of Emissions* section. An accompanying spreadsheet shows the detailed calculations.

Eliminate new fossil fuel development leasing

First, BLM considered making all unleased land (including Parcels 5 through 9) within the planning area unavailable for future fossil fuel development leasing. This would have the effect of avoiding all GHG emissions associated with potential future leases. However, it would also curtail development on unleased parcels that have high likelihood of oil production and low terrestrial carbon sequestration potential. Additionally, this measure would not curtail continued development under parcels that are under existing leases and may in fact increase lower-efficiency and higher-emissions development under existing leases since additional high-value parcels would no longer be available.

As such, BLM did not adopt this measure under Alternative Z and will continue to offer some lands for new fossil fuel development leasing.

Impose location-based limitations on fossil fuel development leasing

BLM considered imposing limitations on the areas where new fossil fuel development leases may be made available. First, the existing wildland area (10,000 acres) is already excluded from leasing. Beyond that area, however, there are additional parcels where fossil fuel development leasing would entail relatively high carbon emissions due to site-specific characteristics. Specifically, Parcel 5 contains mature forests which would be significantly disturbed through fossil fuel development, and Parcel 9 contains 5,000 acres of currently unmanaged evergreen forests, which has a high potential for carbon sequestration.

BLM adopted this measure under Alternative Z, prohibiting fossil fuel development leasing in Parcels 5 and 9. In modeling the impacts of this measure, BLM adjusted the expected number of new wells by 25 each year for years 1 to 4, eliminating the expected wells on Parcel 5 relative to not implementing this measure. This would also substantially reduce the terrestrial stock emissions that would be expected to result from development on Parcel 5, since it is currently made up of mature forests, which BLM adjusted for in the terrestrial stock model.

Conduct option value analysis to identify areas available for fossil fuel development leasing

Next, BLM conducted preliminary option value analyses to identify the areas that have the highest degree of certainty around well productivity and limiting new well development to those areas. Based on best available geological surveys, approximately half of the projected new wells on Parcel 6 would be

constructed in areas that have a high degree of uncertainty around the expected productivity. Given this uncertainty and the terrestrial impacts associated with developing wells and roads in that area, it would be reasonable to restrict development on Parcel 6 to the remaining areas that have a high degree of certainty regarding well productivity.

Additionally, given the existing lease on Parcel 4, BLM is able to impose additional constraints on development permits based on potential site impacts and other factors. Based on best available geological surveys, BLM expects that 40 percent of the projected wells on that parcel have a high degree of uncertainty around the oil production levels.

BLM adopted this measure under Alternative Z, subdividing Parcel 6 into areas that may and may not be developed. In modeling the impacts of this measure with respect to Parcel 6, BLM adjusted the expected number of new wells under new leases from 25 to 14 each year for years 5 to 12. Additionally, BLM adjusted the expected productivity of each well from 4,000 barrels per year to 4,400 barrels per year to reflect the higher degree of certainty around productivity rates. With respect to the impact on Parcel 4, BLM adjusted the expected number of new wells under existing leases from 20 per year for years 1 through 10 to 16 per year.

Delay fossil fuel development leasing

BLM considered delaying new fossil fuel development leasing, which would have the effect of postponing new development to allow for improvements in emissions reductions capabilities, thereby reducing the emissions associated with the construction and operation of wells. Given that BLM assumed emissions rates associated with well construction and operations will decrease by approximately two percent annually and that road construction and emissions will decrease by approximately one percent annually under the No Action Alternative, this measure would reduce emissions associated with developments solely by delaying them.

BLM adopted this measure under Alternative Z, delaying all development under new leases by ten years.

Impose phased fossil fuel development leasing and permitting

BLM considered imposing phasing requirements under all new leases, which would prioritize earlier leasing in areas that are more accessible and less impactful. Although this would not ultimately affect the number of wells that are constructed under the planning period, it would delay development of some of the wells until later when emission control capabilities are assumed to be improved (as with the previous measure). It could also accommodate the BLM's implementation of an adaptive management approach, adjusting requirements to maximize the effectiveness and efficiency of the measures utilized.

BLM adopted this measure under Alternative Z, further adjusting the timing of well construction under new leases; rather than assuming that there would be 14 new wells each year during years 14 to 20, BLM assumes that there will be 4 well in year 14, increasing to 20 wells by years 19 and 20. BLM also assumed that the number of miles of road needed per well would be 0.05 in years 14 to 16, 0.10 in year 17, and 0.15 in years 18 to 20 (rather than 0.10 in all years).

Require technology-based measures on fossil fuel development leases

BLM could require certain technology-based measures for developments under new leases to reduce GHG emissions from well and/or infrastructure construction and/or operation in the planning area. Specifically, BLM has identified several measures that are likely to reduce emissions from well construction and operation compared with ongoing developments under existing leases, including improved monitoring technologies to identify leaks and advanced capture technologies. Additionally, there are some construction techniques that could mitigate terrestrial impacts of road construction to some extent; however, BLM has determined that the majority of emissions associated with road operations are attributable to truck traffic, on which BLM will not impose constraints.

As such, BLM has adopted this measure under Alternative Z and will impose specific technology-based emissions limitations on all new fossil fuel development leases. These limitations will reduce emissions from well construction and well operations and will reduce impacts to terrestrial stocks from road construction. Further, BLM will monitor compliance with these limitations and will reserve the right to revoke operations permits in cases of noncompliance.

In modeling the impacts of this measure, BLM assumed that well construction-related emissions under new leases would decrease from 1,200 tons CO₂e/well to 880 tons CO₂e/well in year 1. For well operations under new leases, BLM assumed that annual emissions would decrease from 56 tons CO₂e/well to 42 CO₂e tons/well in year 1. For both construction and operations emissions, BLM maintained the assumption that emission rates would decrease by 2 percent each year. BLM also modeled some reduction in terrestrial stock emissions from road construction.

Enable option for additional restrictions on fossil fuel development leases

BLM also considered enabling additional future restrictions on fossil fuel developments, leaving decisions about further limitations to the permitting stage. In this way, BLM may choose to impose further technology-based limitations on well construction and operations permits, as well as authorizations associated with road construction and operations. Because these future limitations are not known at this time, it is difficult to project the type or magnitude of impacts that may occur as a result of this measure. There may be technological innovations during the planning period that will substantially reduce emissions, and by enabling additional restrictions at the permitting stage, BLM reserves the ability to realize the benefits of such innovations in the planning area.

Additionally, BLM may be able to impose some restrictions on new developments under existing leases based on new technology availability or information about on-site impacts. Existing leases accommodate reasonable measures in permitting decisions to minimize adverse impacts to resource values. If substantial improvements in emissions control technologies are realized during the planning period, BLM can impose restrictions on well construction and operations under existing leases in addition to new leases. This also applied to strategies to reduce the terrestrial impacts of development construction and ongoing operations under existing leases in addition to new leases.

As such, BLM adopted this measure under Alternative Z, and will include stipulations in all leases that it can impose requirements at the permitting stage reflecting new technologies or information about impacts to resources on-site. Due to the high degree of uncertainty around improvements that may occur, BLM modeled the impact of this measure conservatively, assuming that it may be able to impose restrictions to achieve the following reductions starting in year 10:

- Under new leases:
 - Well construction emissions would be reduced from approximately 730 tons CO₂e/well to 650 tons CO₂e/well and well operations emissions would be reduced from approximately 35 tons CO₂e/well to 26 tons CO₂e/well.
 - Road construction emissions would be reduced from approximately 370 tons CO₂/mile to 260 tons CO₂e/mile and road operations emissions would be reduced from approximately 150 tons CO₂e/mile to 120 tons CO₂e/mile.
- Under existing leases:
 - Well construction emissions would be reduced from approximately 1,100 tons CO₂e/well to 860 tons CO₂e/well and well operations emissions would be reduced from approximately 50 tons CO₂e/well to 46 tons CO₂e/well.
 - Road construction emissions would be reduced from approximately 680 tons CO₂/mile to 480 tons CO₂e/mile and road operations emissions would be reduced from approximately 230 tons CO₂e/mile to 140 tons CO₂e/mile.

BLM also assumed that some terrestrial stock emissions from construction of wells and roads may be avoided starting in year 11 and accounted for this adjustment in the terrestrial stock model.

Further, BLM expects that this measure may reduce the number of wells that are constructed by developers under both new and existing leases as a result of higher costs and uncertainty around what the specific requirements will be. This represents an indirect effect of BLM's actions under this measure but could materially impact the emissions from fossil fuel development, particularly if developers forgo construction in areas that would have the highest emissions impacts (and therefore have the highest control costs). As such, BLM assumed that the number of new wells under new and existing leases would decrease by approximately 20 percent each year after year 10.

Manage planning area for carbon sequestration

After avoiding and minimizing fossil fuel development GHGs to the maximum extent under the measures described so far, BLM estimates that remaining development under new and existing leases will result in annual GHG emissions ranging between approximately 300,000 tons CO₂e and 500,000 tons CO₂e, with peak emissions around year 4 (after which wells under existing leases will retire and emissions will decline somewhat). See Table 1 and the accompanying spreadsheet for details. To offset these remaining emissions, BLM considered a variety of actions.

First, BLM considered ways to increase the net carbon sequestration within the planning area, primarily on parcels outside of fossil fuel development leasing, and identified several active and passive management approaches that could conserve the existing stock (reducing terrestrial emissions) and expand the stock (increasing terrestrial sequestration).

Note that this does not have a substantive impact on existing leases, since BLM does not project further new development under existing leases after year 10.

As such, BLM adopted this measure under Alternative Z. Specifically, management approaches under this alternative include:

- Maintenance of Parcel 5 (mature forest) and Parcel 7 (protected wildland) to maintain existing stock and prevent disturbances (such as disease, invasive pests, or deforestation) and minimize soil erosion and other degradation;
- Limited restoration of Parcel 8 (degraded herbaceous land) to restore previously eroded soils and increase generation of natural vegetation;² and
- Reforestation of Parcel 9 (unmanaged evergreen forest) to increase rate of growth and carbon sequestration through actions including improved stocking and species mix.

BLM accounted for these measures using the terrestrial carbon stock model and will continue to adjust the model and its management actions on an ongoing basis to reflect conditions and disturbances in the planning period and ensure continued progress toward maximizing carbon sequestration.

Increase renewable energy generation within planning area

The planning area does not currently have any renewable energy infrastructure and does not generate any associated credits that could offset the remaining emissions. As such, BLM considered the extent to which renewable energy could be responsibly developed within the planning area to begin generating such credits without substantial adverse terrestrial effects.

In considering potential management approaches to Parcel 8, BLM determined that it is unlikely to be attractive for fossil fuel development leasing (including under the No Action Alternative). At the same time, it does not contain any remarkable habitat or biodiversity values and is not historically forested. Until approximately 5 years before the start of the planning period, the parcel was leased as rangeland and has some associated degradation to the soils and natural vegetation. BLM considered afforestation on this parcel, which would increase the terrestrial carbon stock in the planning area. However, given the parcel's historical land cover and its proximity to existing electricity transmission lines, BLM determined that the optimal management approach to balance responsible renewable energy development and terrestrial sequestration is to develop solar energy infrastructure on the parcel. At the same time, BLM will implement best practices to restore and protect soil and vegetation on the site alongside the development.

As such, BLM adopted this measure under Alternative Z, beginning development of solar fields in year 1, with expected capacity increases in years 3 and 11. BLM accounted for this measure by calculating the GHG emissions that will be avoided by displacing the need for equivalent electricity to be produced by fossil fuel-fired power plants in the region.

Purchase accredited carbon offsets or fund offsetting actions outside planning area

Finally, after estimating the emissions associated with fossil fuel developments and the credits from net increases in terrestrial stocks and renewable energy generation, BLM determined that the expected

² BLM considered afforestation on this parcel; however, alternative uses of the land were determined to better optimize available resources; see discussion under *Increase renewable energy generation within planning area*.

management will result in some GHG emissions above net zero. Net emissions range from approximately -20,000 tons CO₂e (year 15) to 300,000 tons CO₂e (year 4) depending on the mix of development projected.

BLM determined that it will be necessary to require the purchase of accredited market offsets to address these remaining emissions. BLM must ensure that accredited market offsets are purchased for each unit of fuel that is produced from all wells that are brought into operation after the start of the planning period. Based on the quantity of fuel that is expected to be produced under Alternative Z, credits must be purchased equivalent to 0.25 tons CO₂e for every barrel of oil that is produced from new wells for years 1 to 4, increasing to 0.35 tons CO₂e for years 5 to 9, and 0.43 tons CO₂e thereafter.

Summary of Projected GHG Emissions

Table 1 below summarizes the projected net GHG emissions under the No Action Alternative and Alternative Z. Detailed calculations and assumptions can be found in the accompanying spreadsheet.

Table 1: Summary of Net GHG Emissions Under No Action Alternative and Alternative Z (metric tons CO₂e)

Year	No Action Alternative			Alternative Z				
	Fossil Fuel GHG Emissions	Change in Terrestrial Carbon Stock	Net GHG Emissions ^a	Fossil Fuel GHG Emissions	Change in Terrestrial Carbon Stock	Renewable Energy Credits	Market Offset Credits	Net GHG Emissions ^b
1	499,175	-80,000	579,175	461,015	200,000	10,000	0	251,015
2	570,059	-80,000	650,059	480,519	200,000	10,000	14,308	256,211
3	639,821	-80,000	719,821	499,204	200,000	20,000	28,044	251,161
4	708,497	-80,000	788,497	517,098	200,000	20,000	41,224	255,874
5	693,661	-10,000	703,661	453,033	200,000	20,000	75,413	157,620
6	681,647	-10,000	691,647	391,115	200,000	20,000	92,381	78,734
7	749,777	-10,000	759,777	409,616	220,000	20,000	108,640	60,977
8	816,896	-10,000	826,896	427,369	220,000	20,000	124,211	63,157
9	883,040	-10,000	893,040	444,398	220,000	20,000	139,117	65,281
10	948,268	-10,000	958,268	439,126	240,000	20,000	188,434	-9,307
11	964,900	-6,000	970,900	435,041	240,000	30,000	205,183	-40,143
12	979,357	-6,000	985,357	426,575	240,000	30,000	201,080	-44,504
13	896,880	5,000	891,880	350,813	240,000	30,000	197,058	-116,245
14	801,613	7,500	794,113	279,796	240,000	30,000	193,117	-183,321
15	709,757	10,000	699,757	231,550	220,000	30,000	208,889	-227,338
16	687,668	10,000	677,668	247,875	220,000	30,000	223,167	-225,292
17	666,353	10,000	656,353	262,868	220,000	30,000	236,045	-223,176
18	645,785	10,000	635,785	275,597	220,000	30,000	247,609	-222,012
19	625,935	10,000	615,935	286,895	220,000	30,000	257,943	-221,048
20	606,776	10,000	596,776	296,091	220,000	30,000	267,126	-221,035
a. No Action Alternative net emissions calculated as fossil fuel GHG emissions minus change in terrestrial carbon stock.								
b. Alternative Z net emissions calculated as fossil fuel GHG emissions minus change in terrestrial carbon stock minus renewable energy credits minus market offset credits.								

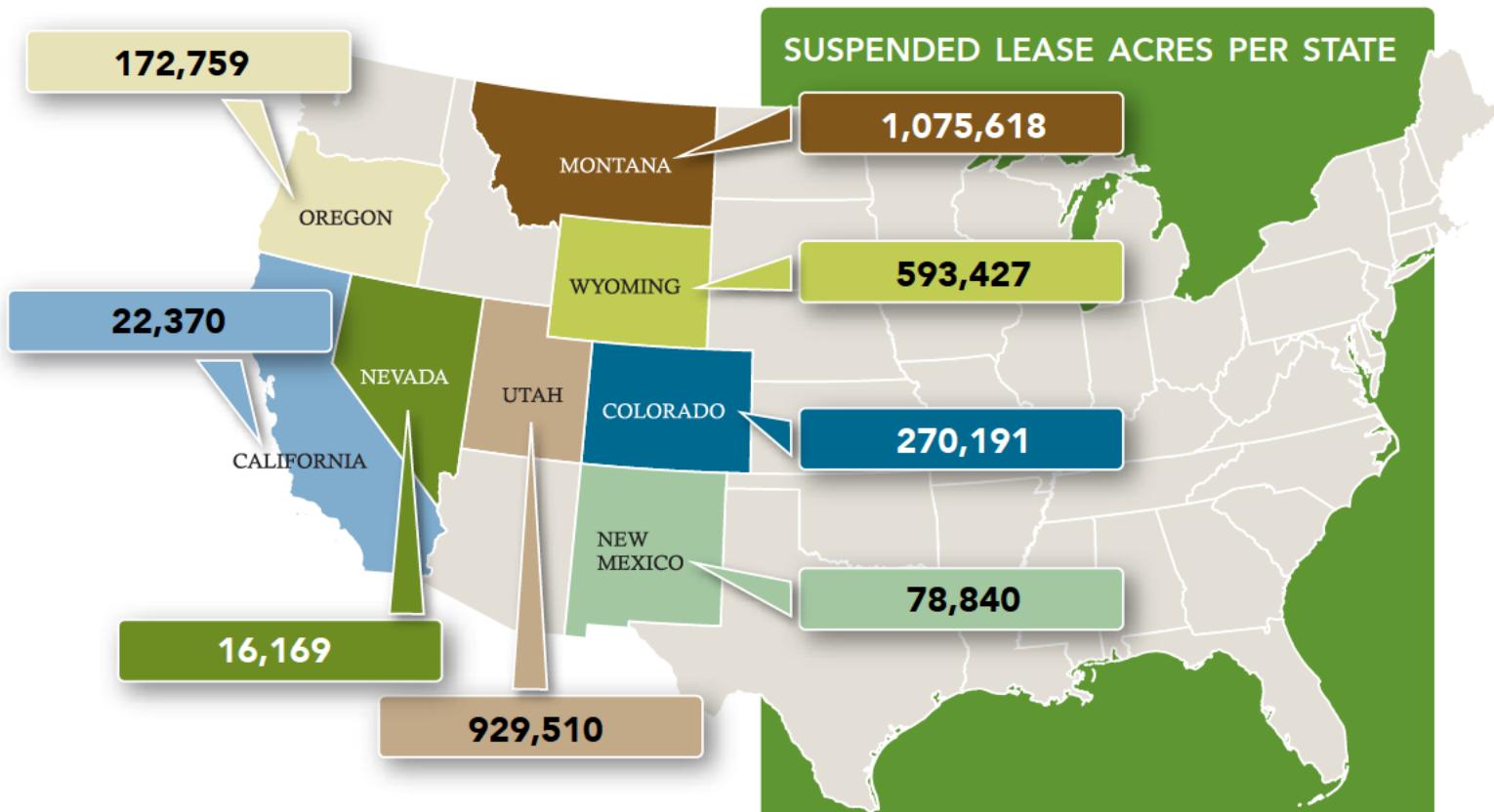
APPENDIX E

TWS Land Hoarders



LAND HOARDERS:

How Stockpiling Leases is Costing Taxpayers



Oil and gas companies are supposed to develop the public land leases they are privileged to hold in a timely manner, or give them up. These lands have been set aside under energy leases for the benefit of the American taxpayer. However, oil and gas operators have made a habit of exploiting loopholes known as “suspensions.” These companies effectively take the control of the lease out of the hands of public officials, and off the books—by stockpiling leases. This land hoarding must be addressed to protect America’s taxpayer and our public lands.

Current law allows leases to be “suspended”—effectively put on hold—ensuring the leases do not expire even while companies are not paying

While SUSPENSIONS can be a useful (even necessary) tool, current suspensions include millions of acres that have been on hold for decades and have already cost taxpayers more than \$80 million in lost rents alone.

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 being managed for multiple uses for the benefit of the public—be it for recreation, conservation or possibly development by other companies.

The Wilderness Society has reviewed decades of suspension justifications and found that while leases may be appropriately put on hold to allow for thorough environmental review of proposed development, the Bureau of Land Management's (BLM) current approach to granting and managing lease suspensions is flawed, raising a number of concerns:

- Lease suspensions are cheating U.S. taxpayers of rental and royalty payments.
- Lease suspensions can allow industry to evade Congressional intent to diligently develop and provide timely and reasonable access to federal oil and gas resources.
- Lease suspensions can preclude the BLM's ability to achieve its multiple-use mandate.

We recommend immediate action to address these problems and ensure lease suspensions are appropriately applied in the future:

1. The BLM must identify and end suspensions that are no longer justified and should have expired years ago.
2. The Government Accountability Office (GAO) should initiate an investigation and produce a report to further define the scope of the problem and remedial actions.
3. The BLM should issue new policy and training to guide future lease suspensions and ensure suspensions are only granted when truly needed and managed to ensure they end in a timely manner.
4. The BLM should also issue a new policy requiring greater opportunities for public participation, transparency (including annual reporting) and oversight of both new suspension requests and existing suspensions.

Millions of acres are subject to unjustified lease suspensions that receive little or no oversight once granted.



Photo: Paul Lowry - flickr

WHAT ARE LEASE SUSPENSIONS?

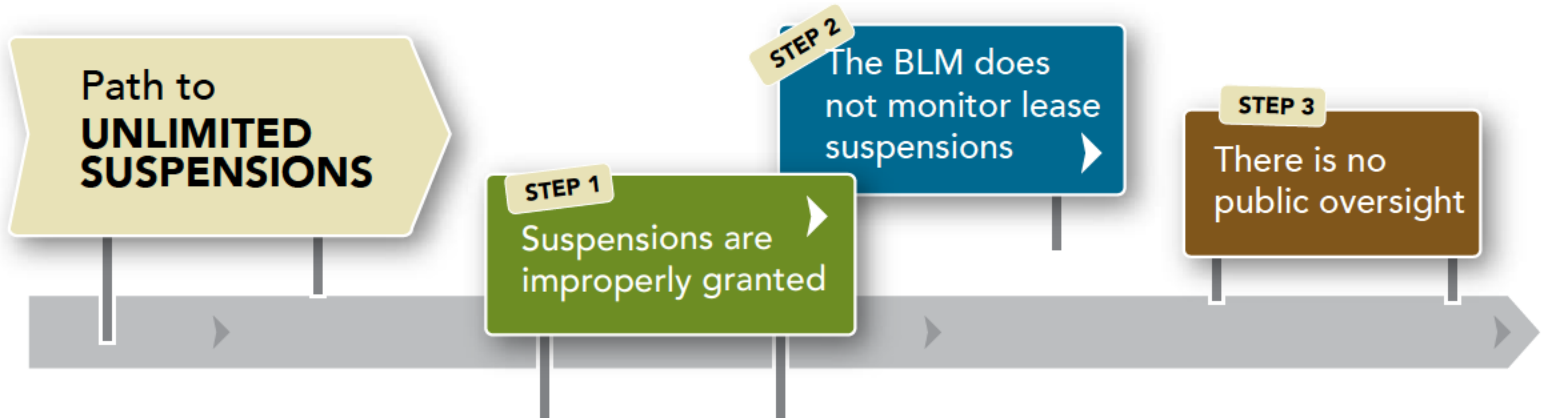
Suspensions of oil and gas leases can be used to extend the life of federal mineral leases beyond their primary terms (which is ten years), even when the lessee has not made efforts to develop these resources or produced any oil or gas. A federal mineral lease suspension, under the Mineral Leasing Act, "tolls" (effectively puts on hold) the operating and production requirements of a lease, including the obligations to make rental and royalty payments, and extends the primary term of the lease by the length of the suspension. The BLM may either "direct" that a lease be suspended or, upon review of an application submitted by a lessee, "assent to" a request for a suspension.

A suspension may be granted only where suspending operations and production would be "in the interest of conservation of natural resources."

The phrase "conservation of natural resources" has been broadly construed, and provides for suspension of onshore oil and gas leases either:

- (1) because use of the lease has been precluded by an act, omission, or delay by a federal agency, such as denying the lessee "timely access" to the property; or
- (2) in the interest of conservation, which can mean preventing either damage to the environment or loss of mineral resources.

Millions of acres of public lands sit in limbo under suspended leases, and can remain that way for decades. The BLM routinely grants suspensions, in many cases for questionable reasons. Overall, the BLM fails to actively manage and monitor them to ensure suspensions are lifted as circumstances change or conflicts are resolved.¹



Congress never intended lease suspensions to remain in place for decades – this undermines Congressional intent for diligent development of leased lands.

Congress intended for leased lands and minerals to be developed and to generate energy and income for the benefit of the public. Where development is not diligently pursued, leases were to expire so that lands can be subject to other uses, including development by other potential operators.

The Mineral Leasing Act of 1920 (as amended) outlines statutory obligations for oil and gas operators on our public lands. These obligations include due diligence requirements and royalty payments to facilitate energy development and provide a return to U.S. taxpayers. The Mineral Leasing Act provides for suspension of leases in specific circumstances and is clear that suspensions are to be lifted when those circumstances are no longer present. In the absence of the specific circumstances detailed in the Mineral Leasing Act, where lessees are holding leases longer than the statutory term without exercising due diligence and without rental or royalty payments, Congressional intent is subverted.

Suspended leases cover millions of acres and can remain off the books for decades.

Suspended oil and gas leases occupy a significant amount of federal minerals. BLM data acquired by The Wilderness Society in April 2015 show 3.25 million acres of federal leases held in suspension.²

This is nearly 10% of the total federal minerals currently under lease by the oil and gas industry.

Utah alone has nearly one million acres of federal leases currently held in suspension. Many suspended leases have been under suspension for decades. Of the 3.25 million acres of federal leases currently in suspension, 30% have been in suspension since before 1990.

New Mexico has dozens of suspended leases dating back to the 1960s-70s – with \$1,315,640 lost on leases that have been suspended since before 1980. However, suspensions are continuing to pile up, with 30% of the lease suspensions in New Mexico applied for and granted in the last five years – and across the West 47% of the suspensions occurred in the last five years. The data indicate leases frequently remain in suspension well after the circumstances that originally justified the suspension are no longer in place and that this problem is only continuing to grow.

Habitual hoarders: the oil and gas industry stockpiles leases and approved drilling permits

Our findings on the abuses of lease suspensions are consistent with industry patterns. The oil and gas industry stockpiles leases without developing them and obtains Approval for Permits to Drill (APDs) not being used. Through the end of fiscal year 2014, there were more than 20 million acres under lease that were not being developed and almost 6,000 approved permits to drill that were not used. Leaving leases in limbo should come to an end.³

DATE WHEN CURRENT LEASES ENTERED INTO SUSPENSION

1940-1995 32%

1996-2009 25%

2010-2015 43%

The BLM lease suspension decisions are made without disclosure or public review

Suspension requests and decisions are handled without formal review under the National Environmental Policy Act (NEPA). As a result, the company applying for the suspension is the only party involved in the process. Moreover, the BLM does not generally publish its decisions or the terms of suspensions providing the public little opportunity to engage in what amounts to an extension of the lease term. Involving the public in suspension requests can ensure that the public interest is properly weighed against the interests of the oil and gas operator requesting the suspension. Further, providing the public with current information about the status of suspended leases can also aid in the proper administration of those leases and ensure that the BLM and the industry are complying with the terms of suspension agreements.

The BLM routinely grants suspensions that may not be justified under its own policies.

The BLM has a guidance manual⁴ that sets out specific criteria governing when it should grant suspensions. In general, suspensions based on delayed approvals for development should be limited to situations where the delay is abnormal or not happening to other operators. In short, suspensions should not be granted simply because an operator has failed to seek a permit in a timely manner or because of other foreseeable delays. Unfortunately, our review found that the BLM does not adhere to its own standard, instead granting last minute requests by companies to suspend leases simply because they have failed to make sufficient efforts until their leases are close to expiration. For example:

- In Colorado, the BLM granted four lease suspensions for an APD filed at 5:03 p.m. on the first day of the month the leases were set to expire.⁵
- In Colorado, three leases⁶ were granted suspensions to allow for NEPA review associated with an application for permit to drill (APD). Although the associated APD was received by the BLM approximately thirty-five days before lease expiration, and a suspension request letter was filed only four days after the APD, the BLM granted a suspension “due to an unforeseeable administrative delay,” which is clearly contrary to applicable legal standards.⁷

- Similarly, in Utah, a lease⁸ was suspended based on a Notice of Staking (NOS)—a form completed prior to drilling—received approximately thirty-five days prior to lease expiration even though the BLM’s guidance requires evidence that such activity “has been stopped by actions beyond the operator’s control.”⁹

The BLM does not adequately monitor or evaluate suspended leases to determine whether suspensions are still justified.

The BLM is required to monitor suspensions to determine if the circumstances used to justify the suspension still exist and to lift suspensions when they do not.¹⁰ However, our review found that the BLM does not actively monitor suspended leases or even have a system for setting a schedule to do so. As a result, once suspended, leases are likely to remain suspended unless and until the oil and gas operator decides it would like to develop the lease. Our review of selected BLM records in several western states disclosed numerous examples of active lease suspensions where the circumstances that originally justified the suspensions were no longer in place, so the suspensions should have ended – but they have not. For example:

- In Wyoming, four leases¹¹ were suspended effective June 1, 1994. Although the stated justification for the suspension expired three years later, in 1997, it was not until 2004 that the BLM terminated the suspensions for three of the leases, and the suspension for one of the leases appears to still be in place.
- In Utah, six leases¹² were suspended in September 1998. Although the justification for the suspension ended in 2005, the BLM failed to lift the suspensions in a timely manner and the leases have since been granted new suspensions related to litigation. Had the BLM lifted the suspensions, the leases would have expired before any further suspensions could have been requested.
- In Colorado, a lease¹³ was suspended effective July 1, 2011, with approximately two months remaining of its primary term.¹⁴ The suspension order provided that the suspension would last no later than August 30, 2012, yet the suspension still remains in place. Of course, had the suspension been timely lifted, the lease would have since expired. Similarly, the suspension for another Colorado lease granted until September 1, 2014, was not lifted, although if it had been, the lease would have since expired.¹⁵
- In Michigan, three leases were suspended effective September 1, 2003. Under the terms of the order granting the suspensions, the suspensions should have been terminated no later than November 30, 2006. Yet, the BLM did not affirmatively lift the suspensions until more than two years later, after the lessee requested confirmation that the suspension was still in effect.¹⁶

CASE STUDY: South Shale Ridge



Western Colorado's South Shale Ridge is a Citizen Proposed Wilderness Area, previously included in Rep. Diana DeGette's Colorado Wilderness Act and recognized by the BLM for its wilderness characteristics. In addition to the exceptional wilderness qualities of South Shale Ridge, the area contains many other conservation values including endangered species habitat, recreation opportunities and scenic resources.

In 2004, the BLM prepared an Environmental Assessment (EA) to lease the remaining unleased lands in South Shale Ridge. The same day that the final EA was issued, the BLM also issued a Notice of Competitive Lease Sale that included sixteen parcels within the boundaries of the South Shale Ridge. The lease sale was conducted as scheduled on November 10, 2005, and all of the parcels in the South Shale Ridge area were leased. A number of conservation groups challenged both

the EA and the leases issued pursuant to the EA, ultimately bringing a lawsuit.

In 2007, a federal district court in Colorado held that the BLM had violated both NEPA and the Endangered Species Act (ESA) in issuing leases on South Shale Ridge. The court's decision prohibited the BLM from issuing new leases until the agency conducts NEPA analysis considering leasing with a "no surface occupancy" stipulation and engages in new consultation with the Fish and Wildlife Service under the ESA regarding the Colorado hookless cactus.

Following the court's ruling, the BLM has treated the invalidated leases as "suspended." However, the BLM has yet to act upon the litigation outcome by either conducting additional analysis or canceling the leases.

In August 2015, the BLM released its final Grand Junction Resource Management Plan, and declined to protect the wilderness characteristics of South Shale Ridge. The BLM's justification for not protecting South Shale Ridge and other lands with wilderness characteristics was that they "fall within the portion of the Grand Junction Field Office with known potential for natural gas development, and are largely leased for oil and gas development; or provide motorized and mechanized use opportunities. Under the Preferred Alternative and its corresponding travel management plan the manageability of these areas for wilderness characteristics would be compromised by valid existing rights, and/or motorized and mechanized use and these areas would be managed for other resources and resource uses."¹⁷

The BLM is treating the suspended leases in South Shale Ridge as valid existing rights that preclude managing the area for its wilderness characteristics, despite the fact that a federal court invalidated the leases eight years prior and the BLM has not moved forward with environmental analysis on the suspended leases in that time. The leases are precluding multiple use management of South Shale Ridge, while not generating energy or revenue for the U.S. taxpayers who own those minerals.

The high cost of hoarding: PROBLEMS ARISING FROM LEASE SUSPENSIONS

Suspension of federal leases can serve legitimate purposes, such as giving the BLM time to conduct thorough environmental review of proposed projects and development without causing delays to leaseholders. However, the BLM's current approach to lease suspensions interferes with the BLM's multiple use mandate by keeping lands from other uses; cheats U.S. taxpayers of income from leasing and development; undermines Congressional intent for diligent development of public resources; and prevents the public from performing its important oversight role.

Lease suspensions can preclude the BLM from achieving its multiple-use mandate.

Suspended leases can foreclose alternative land management options, such as allocating lands for conservation, recreation or other multiple uses. For example, the presence of oil and gas leases, regardless of whether the leases are or have ever been in production, is often cited to justify the BLM's decisions not to manage lands to protect their wilderness characteristics or other values in resource management plans. In the case of South Shale Ridge in Colorado, this decision is based explicitly on suspended leases, showing the impacts to multiple use management.

Lease suspensions are cheating U.S. taxpayers of rental and royalty payments.

Lease suspensions allow the oil and gas industry to hold on to public lands and minerals without making rental or royalty payments, sometimes for decades.¹⁸ Currently, 2.65 million acres of federal minerals are held in suspended leases and not generating rental or royalty payments for the federal government. While it may be appropriate for the BLM to exempt operators from paying rent or royalties in certain justified situations, leases that have been suspended for an unnecessary amount of time are costing U.S. taxpayers. Virtually all leases that have been suspended since before 1990 are not generating rental or royalty payments, meaning that taxpayers have not seen income from nearly one million acres of federal minerals for at least the past twenty-five years.



\$82,225,149
lost over the life of
oil and gas leases
currently suspended

Photo: Varodrig-Wikimedia Commons

Looking at only rental payments that should have been paid on these leases, approximately \$82 million has been lost to the American taxpayer. In addition, the American public did not receive either the benefit of the energy that should have been generated from development or the royalty payments owed on revenue that would also have been generated.

The system must and can be fixed: OUR RECOMMENDATIONS

Looking at some of the 3.25 million acres of leased lands under suspension, The Wilderness Society found many of these suspensions were not justified and yet lasted decades—depriving the American public of both compensation for leasing and use of these lands for other activities.

Our research has identified the sources of these problems as:

- Suspensions are granted when they are not justified;
- Once suspensions are in place, they are not actively monitored or reviewed, so suspensions are not lifted – keeping leases in place and preventing other uses;
- The BLM does not disclose the initial suspensions or status, so there is no public oversight or tracking to serve as a check on agency and industry actions.

America has a vested interest in how our public lands are managed. Suspensions are routinely granted without any public notification or opportunity for comment, and are continued without a forum for the public to engage with the agency when suspensions are no longer justified and should be lifted. Public oversight can and should perform a check to ensure suspensions are only granted with proper justification and are managed to ensure suspensions are ended in a timely manner.

Right now, it's too easy for industry to get leases into suspension and to keep them there, to the detriment of other multiple uses and American taxpayers. Nonetheless, our research indicates that mismanagement of lease suspensions could be greatly reduced with targeted policy reforms and more public transparency, including:

- **Review and lift suspensions on all leases where there are no valid reasons to continue suspension; cancel all those that have expired.** The BLM should take immediate action to address problematic lease suspensions by cleaning up records, lifting unnecessary and expired suspensions and issuing expiration notices on leases that should have expired by the terms of applicable suspension agreements.

To accomplish this task, the BLM should immediately initiate a task force or direct state offices to review all suspended leases. Review should be prioritized based on the age of suspensions and leases located in areas undergoing resource management plan revisions or amendments.

- **Congress should request a GAO investigation to identify and recommend remedy for the underlying problem.** This research should address, among other things, how frequently suspensions are inappropriately issued, how frequently suspensions are continued or extended for improper amounts of time due to lack of monitoring and oversight and whether public oversight could assist in avoiding these problems in the future.
- **The BLM should issue new policy to guide application of lease suspensions to ensure these types of problems do not continue.** The BLM need not wait on the results of this study to address some known problems with the practice of suspended leases. The BLM should issue revised direction for considering suspension requests that includes clear criteria for when the agency does and does not have discretion to grant a suspension request. This guidance should also clarify when the agency should exercise its discretion to approve or deny a suspension request and establish a monitoring and tracking system for suspensions. A verification system to ensure regular oversight including directing state offices to evaluate suspended leases on a quarterly basis and report to DC in a publicly available format should also be incorporated into the suspended lease management strategy.
- **The BLM should increase transparency and opportunities for public involvement in lease suspensions and monitoring.** The BLM should be required to post documentation of lease suspension requests and decisions, including on its NEPA log, but also in a dashboard available via state office websites. Information on suspended leases, including status and reason for suspension, should also be made public to provide for public oversight and accountability on the length of suspensions in annual oil and gas program reports.

A summary of lease suspensions should be included in the BLM's annual reporting of oil and gas statistics, as well. Finally, the BLM should evaluate whether categorical exclusions are appropriate for individual suspensions, applying the "extraordinary circumstances" criteria, and if any of those criteria are met, then an environmental assessment or environmental impact statement must be prepared.

1 A more detailed discussion of our findings is presented in the **attachment**: "How the hoarding of our public lands and minerals was allowed to happen." (<https://wilderness.org/sites/default/files/Suspension%20White%20Paper%20Appendix%20-%202012-8.pdf>)

2 Through Fiscal Year 2014, approximately 35 million acres are under lease. http://www.blm.gov/style/medialib/blm/wo/MINERALS_REALTY_AND_RESOURCE_PROTECTION_/energy/oil_gas_statistics/data_sets.Par.69959.File.dat/summary.pdf

3 Through Fiscal Year 2014, less than one-third of leases are currently in production (http://www.blm.gov/style/medialib/blm/wo/MINERALS_REALTY_AND_RESOURCE_PROTECTION_/energy/oil_gas_statistics/data_sets.Par.69959.File.dat/summary.pdf) and close to 6,000 approved to permits to drill have not been used (http://www.blm.gov/style/medialib/blm/wo/MINERALS_REALTY_AND_RESOURCE_PROTECTION_/energy/oil_gas_statistics/data_sets.Par.86452.File.dat/AAPD%20Report%20approved_apd_not_drilled_9_30_2014.pdf).

4 Manual 6310-10, Suspensions of Operation and/or Production.

5 Lease Nos. COC-65852, 65853, 65854, 65848.

6 Lease Nos. COC-77607, 67608, and 67609.

7 **See *Vaquero Energy, Inc.***, 185 IBLA 233, 237 (2015) ("Lessees and/or operators are responsible for timely filing required plans and necessary applications and cannot reasonably assume the Secretary will grant a suspension of operations...merely to relieve them of the consequences of their poorly timed decisions and actions."); **Harvey E. Yates Co., et. al**, 156 IBLA 100 (2001) ("...a BLM delay in approving an APD does not equate to an order suspending drilling or production."). We recognize that agency guidance materials provide that suspensions should not be granted for APDs filed within 30 days of lease expiration. **See** BLM Manual H-3160-10, § 2.C. However, given the volume of suspensions granted for APDs filed within months of lease expiration, and the foreseeability of agency delays related to permit processing, suspension requests should generally also be rejected for APDs filed within 6 months of lease expiration. **See** BLM, "Average Application for Permit to Drill (APD) Approval Timeframes: FY2005-FY2014" **available at** http://www.blm.gov/wo/st/en/prog/energy/oil_and_gas/statistics/apd_chart.html (showing that, in FY 2014, BLM needed an average of 94 days to process complete APDs, and operators took an average of 133 days to cure deficiencies in their initial APD submissions).

8 Lease No. UTU-75121.

9 Manual 3160-10, § 3.31.A.3.

10 Manual 3160-10.

11 Lease Nos. WYW-097254, WYW-108053, WYW-113997 and WYW-106143

12 Lease Nos. UTU-64921, 70849, 70887, 70888, 70889 and 71401.

13 Lease No. COC-065227.

14 The lease had been committed to the Secret Canyon Unit before its suspension, but the Unit never drilled its initial obligation well. The Unit was itself subsequently suspended under § 25 of its unit agreement, but this suspension would not act to suspend COC-065227. **See** Draft BLM Handbook H-3180-1-Unitization, § II(J)(1) ("Suspensions under Section 25 apply onto the unit requirements and will not serve to extend leases that would otherwise expire."), p. 23 ("Extensions granted for meeting unit drilling requirements do not toll the running of lease terms. Thus, depending on the circumstances, a suspension of operations and/or production pursuant to 43 CFR 3103.4-2 and 43 CFR 3165.1 may also be needed to preserve any committed lease that would otherwise expire.").

15 This suspension was granted under § 17(i) rather than § 39, but the same principles apply to lifting the suspension in this instance.

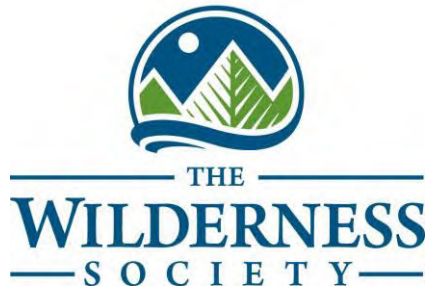
16 **See *Savoy Energy***, 178 IBLA 313, 315, 317, 319-20 (2010).

17 Grand Junction Proposed RMP at F-6.

18 Suspensions issued under Section 39 of the Mineral Leasing Act suspend rental, royalty or minimum royalty payments. Suspensions issued under Section 17(i) of the Mineral Leasing Act do not.

APPENDIX F

Coal PEIS Comments



July 28, 2016

Via electronic mail (BLM_WO_Coal_Program_PEIS_Comments@blm.gov)

Coal Programmatic EIS Scoping
Bureau of Land Management
20 M Street SE
Room 2134LM
Washington, D.C. 20003

Re: Scoping Comments for the Federal Coal Program Programmatic Environmental Impact Statement

To Whom It May Concern:

Please fully consider these scoping comments from The Wilderness Society regarding the Federal coal program Programmatic Environmental Impact Statement (PEIS) being prepared by the Bureau of Land Management (BLM). The Wilderness Society's more than 500,000 members and supporters nationwide care deeply about the management of our public lands. Founded in 1935, our mission is to protect wilderness and inspire Americans to care for our wild places. We appreciate the opportunity to submit these comments and the efforts the BLM is undertaking to review a program that has not been fully assessed for more than twenty years.

I. INTRODUCTION AND OVERVIEW

A. Evaluating and Reforming the Federal Coal Program – a Timely and Urgent Task.

Any and all coal leasing must be conducted "in the public interest." 30 U.S.C. § 201(a)(1). Accordingly, BLM cannot simply continue to lease and permit coal operations on public lands without evaluating the consequences of the program and considering needed changes. Further, public interest includes a wide range of social and environmental concerns, not just the interest or profits of private companies or simply dollars deposited in the federal treasury. As the Federal Land Policy and Management Act (FLPMA) acknowledges in the context of BLM's multiple use mandate, the public lands must be managed "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." 43 U.S.C. § 1702(c). We support the BLM's evaluation of the coal program in a manner that looks at the benefits from needed reforms in a holistic manner.

On March 17, 2015 Secretary of the Interior Sally Jewell asked for an “honest and open conversation” regarding the federal coal program. Her call was followed by a series of listening sessions in several communities, primarily in the west. In the State of the Union address on January 12, 2016 President Barack Obama announced,

Rather than subsidize the past, we should invest in the future—especially in communities that rely on fossil fuels. We do them no favor when we don’t show them where the trends are going. That’s why I’m going to push to change the way we manage our oil and coal resources, so that they better reflect the costs they impose on taxpayers and on our planet.

On January 15, 2016 Secretary Jewell announced plans to implement a “pause” on new federal coal leasing so that the federal coal program could be reviewed in a multi-year environmental review. The Secretary also issued Secretarial Order (S.O.) No. 3338 (Discretionary Programmatic Environmental Impact Statement to Modernize the Federal Coal Program) which formalized plans to implement the pause and to develop the PEIS.

In the S.O. three main concerns were identified that needed to be addressed in the PEIS: (1) concerns about fair return from the federal coal leasing program; (2) concerns about climate change due to federal coal production; and (3) concerns about market conditions affected by the federal coal program. In the notice of intent to prepare the PEIS (81 Fed. Reg. 17,720 (Mar. 30, 2016)), the BLM reiterated the issues that had been identified in the S.O. and also listed a number of approaches that were being considered for reforming the federal coal program, including: raising royalty rates, changing methods for determining fair market value for minimum bids on coal leases, raising rental rates, and changing the methodology for determining how much federal coal or acreage is made available for leasing. As noted above, this type of broad scope of review is needed to ensure that the coal program is meeting the public interest, including the important policy commitments made to balance energy development with conservation, ensure mitigation of impacts to the public lands, and to combat climate change.

As the BLM has noted, there have been prior reviews of the federal coal program where a leasing “pause” was put in place. These occurred in the 1970s into the 1980s. Programmatic environmental reviews were prepared as part of those assessments, and the reviews led to the development of the current BLM coal mining regulations, which have largely been in place since 1979. *See* 43 C.F.R. Part 3400 (presenting the BLM’s coal management regulations). Similar changes may be required to BLM’s regulations as a result of this PEIS, in addition to changes to existing policies and procedures that will not require formal rulemakings.

In recent years about 41 percent of the Nation’s coal was produced on federal public lands and this coal was used to generate about 14 percent of the Nation’s electricity in 2015. This coal is produced from 306 leases covering 482,691 acres of public land in 11 states, with 7.75 billion tons of coal estimated to be recoverable. Nevertheless, coal production has been dropping in recent years and this trend is predicted to continue. Coal production in the U.S. was 10 percent lower in 2015 than in 2014 (the lowest level since 1986) and the Energy Information Administration predicts coal production will drop another 12 percent in 2016. But coal reserves

currently under lease are estimated to be sufficient to continue production at current levels for 20 years. In 2012 as much as 21 percent of the Nation's greenhouse gas (GHG) emissions originated from coal, oil, and natural gas extracted from the public lands, with coal contributing over 57 percent of this. Federally-produced coal is contributing roughly 10 percent to U.S. GHG emissions. While, based on the foregoing predictions, coal production is likely to continue to decrease, its impacts on public lands and contributions to GHG emissions remain significant; therefore, the federal coal program is in need of timely, comprehensive reform.

B. Principal Recommendations.

While we include specific recommendations with each section of these comments, we wanted to highlight some of the key recommendations for the preparation of the PEIS and reform of the federal coal program, which include:

- The coal program must be designed and implemented in the “public interest” and must provide a fair return to taxpayers.
- The process for determining lands “acceptable for further consideration for leasing” must be fully complied with at the land use planning and leasing stage, including applying and updating the unsuitability criteria, considering effects on other multiple uses and developing a reasonably foreseeable development scenario
- The BLM should “take control” of the federal coal leasing program and develop a multi-year leasing program that replaces the current, industry-driven lease by application process, and can incorporate applicable elements from the Solar PEIS and oil and gas Master Leasing Plans.
- BLM must put in place a regional mitigation strategy based on landscape scale analyses to support coal leasing decisions, and coal leasing must proceed only if it is shown there will be a “net benefit” to society resulting from leasing and development.
- BLM must address climate change impacts and commitments by tracking emissions, analyzing impacts, developing a carbon budget and applying compensatory mitigation where impacts cannot be avoided or sufficiently minimized.
- The PEIS should include planning for a future with declining coal production, addressing socio-economic impacts and considering tools to assist coal-dependent communities.

II. SCOPING IS A FUNDAMENTAL REQUIREMENT OF THE NATIONAL ENVIRONMENTAL POLICY ACT AND WILL HELP DEFINE THE PURPOSE AND NEED AND RANGE OF ALTERNATIVES FOR THIS PROGRAMMATIC EIS.

Scoping for preparation of an environmental impact statement (EIS) is required under the Council on Environmental Quality (CEQ) National Environmental Policy Act (NEPA) regulations. 40 C.F.R. § 1501.7. It is to be an “early and open process.” *Id.* Scoping serves to identify the scope of the issues to address in an EIS, and the significant issues that are related to a proposed action. *Id.* §1501.7(a)(2). A number of mandatory and discretionary activities related to scoping are specified in the CEQ regulations, most importantly the need to fully engage with cooperating agencies, tribes, and the general public early in the scoping process.

Specifics of the scope of an EIS are also defined in the CEQ regulations. The scope of a project “consists of the range of actions, alternatives, and impacts to be considered in an [EIS].” 40 C.F.R. § 1508.25. The regulations state that scope consists of three types of actions, three types of alternatives, and three types of impacts. *Id.* Actions include connected actions, cumulative actions, and similar actions. Alternatives include the no action alternative, other reasonable courses of action, and mitigation measures that are not described in the proposed action. Impacts include direct, indirect, and cumulative effects. The three actions--connected, cumulative, and similar--are defined in detail in the regulations, and these will have particular significance for the consideration of climate change impacts of the federal coal program.

The BLM has also established requirements for scoping in its NEPA Handbook. BLM Handbook H-1790-1. Scoping is to help identify incomplete or unavailable information, help identify alternatives to be considered in the EIS, and refine the proposed action. BLM NEPA Handbook at 38. Importantly, scoping also helps initiate consideration of cumulative impacts. *Id.* BLM is to “use scoping to begin identifying actions by others that may have a cumulative effect with the proposed actions, and identifying geographic and temporal boundaries, baselines and thresholds.” *Id.* at 38 and 89. BLM views scoping as having both internal and external (to the agency) components, and external scoping “is to be used to identify past, present, and reasonably foreseeable actions by others that could have a cumulative effect.” *Id.* at 40. Connected and similar actions are recognized as important during scoping in the BLM NEPA Handbook. *Id.* at 39.

The scope of the analysis in the federal coal program PEIS will clearly have a significant role in defining the Purpose and Need for this project and the proposed action. It will also play a significant role in defining the alternatives considered in the PEIS. The Purpose and Need for this PEIS will be discussed later in these comments in section XI. Issues that should be considered in developing alternatives to consider in the PEIS will be addressed in section VII. Additionally, the recognition in the BLM Handbook that scoping is to be used to identify “reasonably foreseeable actions” has significance relative to defining the reasonably foreseeable development level of coal that can be expected from the federal coal program, an important issue that will be discussed in section IV.I. of these comments.

Recommendations: In discussing the scoping report that the BLM will provide, the agency’s factsheet provides that it “will release an interim report by the end of 2016 with conclusions from the scoping process about alternatives that will be evaluated and, as appropriate, any initial analytical results.”¹ The BLM’s scoping process should summarize input received and also provide initial information regarding purpose and need and alternatives so that the public can be informed regarding the direction the agency will take in completing this PEIS and BLM will have a roadmap to follow.

¹ See, FACT SHEET: MODERNIZING THE FEDERAL COAL PROGRAM, available at: http://www.blm.gov/style/medialib/blm/wo/Communications_Directorate/public_affairs/news_release_attachments.Par.47489.File.dat/Coal%20Reform%20Fact%20Sheet%20Final.pdf

III. OVERARCHING ELEMENTS OF THE COAL PROGRAM THAT SHOULD BE REVIEWED AND UPDATED IN THE PEIS

Due especially to the time since the last programmatic review, many of the central, underlying elements of the federal coal program need to be reviewed and updated in the PEIS. These include the definition of “public interest,” fair market value, royalties, rental rates, bonus bids, bonding standards and qualifications to hold a federal coal lease. Ensuring these elements are defined and updated in a manner that fulfills the BLM’s commitments and obligations as steward of our public lands is a vital part of ensuring the federal coal program is operated responsibly.

A. Operating the Coal Program in the “Public Interest” Should Be Explicitly Prioritized and More Clearly Defined.

All coal leasing is to be done “in the public interest.” 30 U.S.C. § 201(a)(1). The BLM should explicitly recognize this guiding purpose of the federal coal program in the PEIS and better define what the public interest means in this context, which is not limited to economic returns on coal leasing and development. FLPMA directs the BLM to consider a range of values in making land use allocation and management decisions and recognizes that looking solely at economic return is not sufficient. Public interest can often be served by managing for other uses, many of which may also provide economic benefits, such as recreation.

In many prior EISs the BLM has said that the public interest was served by coal leasing and development due to economic benefits that were predicted. But what has often been missing is a consideration of when there are *not* public benefits from coal leasing and development and there are benefits from more strictly managing those activities. In assessing how the public interest will be served, the BLM should give as much attention to a lack of benefits resulting from coal leasing and development activities, and/or the benefits from limiting them, as it does to the economic benefits from the activity. The negative externalities of coal development such as increased air pollution and water pollution and the destruction of natural landscapes and habitats should be recognized as *not* being in the public interest, while limiting them and providing more opportunities for protecting other values should be recognized as in the public interest. This analysis should factor in to deciding whether areas are or are not appropriate for leasing, as well as in deciding the terms of leases and other management of activities if areas are identified as appropriate for leasing. As part of the BLM’s “acceptable for further consideration for leasing” determination in its land use planning process, lands that would not further the public interest if they were leased (as opposed to managed for other uses) should be excluded from further consideration for leasing.

Recommendations: Serving the “public interest” is a lynchpin precept of the federal coal program and it must be recognized in all phases and aspects of the federal coal program, including when considering environmental protections. It should therefore be highlighted as a foundational consideration in the PEIS and explicitly defined to include not only the economic benefits from development but also the important context of resulting harms from development and benefits (economic and otherwise) from limiting development.

B. The Coal Program Must Yield a Fair Return.

In addition to the specific economic aspects of the federal coal program discussed in detail below, there is an overall mandate to achieve “fair return” from coal development. The most significant term that is used in the Mineral Leasing Act (MLA) as well as in the BLM coal regulations is “fair market value.”² No bid for a lease “shall be accepted which is less than the fair market value, as determined by the Secretary, of the coal subject to the lease.” 30 U.S.C. § 201(a)(1). *See also* 43 C.F.R. § 3422.1(c)(1) (same). The FLPMA establishes a policy that, “the United States receive fair market value of the use of the public lands and their resources” 43 U.S.C. § 1701(a)(9)

This concept is fundamental to the BLM coal leasing program and to federal coal development. It should therefore be explicitly addressed in the PEIS. The importance of achieving fair market value was recognized in both S.O. 3338 and in the BLM’s Federal Register notice of the development of the PEIS. Further, the White House Council on Economic Advisors released a report documenting the need for royalty reforms if taxpayers are to receive fair market value from the federal coal program. This report is called *The Economics of Coal Leasing on Federal Lands: Ensuring a Fair Return to Taxpayers* (June, 2016). The report notes that, “[a] review of the coal leasing program indicates that the program has been structured in a way that misaligns incentives going back decades, resulting in a distorted coal market with an artificially low price from most Federal coal and unnecessarily low government revenue from the leasing program.”

Concerns about fair market value were raised in 2013 in reports issued by the Government Accountability Office and the Department of the Interior’s Office of the Inspector General. These reports were noted in the S.O. The concern about fair market value stems from the fact that approximately 90 percent of lease sales receive bids from only one bidder, typically the operator of a mine adjacent to the new lease. In addition, the leasing of large amounts of low cost coal may be artificially driving down coal prices in the U.S. markets. Therefore, minimum bids that are not based on a competitive bidding process may not reflect fair market value. The BLM also identified potentially changing the methodology for determining fair market value when establishing the minimum bid or valuing lease modifications in the Notice of Intent, along with other issues related to fair return (some of which are discussed below). 81 Fed. Reg. at 17,726.

The Office of Natural Resources Revenue has recently released new rules that will regulate the valuation for royalty purposes of federally produced oil, gas, and coal. 30 C.F.R. Parts 1202 and 1206. Under the new rule, royalty valuation will be determined by point of sale at or near where the lease is located and will be based on arms-length contracts, which are the best indicators of market value. <http://www.onrr.gov/about/pdffdocs/20160630.pdf>. These new regulations also address aspects of fair market value for the federal coal program and can complement the additional actions BLM takes in the PEIS.

Recommendations: The BLM should highlight the need for the coal program to provide a fair return to taxpayers and use it as an overarching consideration in the PEIS. BLM should adopt

² “Diligent development,” “commercial quantities,” and “minimum bids” are also important concepts that arise here. *See generally* 30 U.S.C. § 202a(2); 43 C.F.R. Subpart 3487; 43 C.F.R. §§ 3480.0-6(d) and (d)(5) and Subpart 3483; 30 U.S.C. § 207(a); and 43 C.F.R. §§ 3430.1-1, 3430.1-2 (presenting these terms).

changes that will ensure this goal is met in analyzing each aspect of the program, including as recommended in further detail below. At a minimum, this includes showing fair market value is being achieved for each element of the program. However, since fair market value is a technical standard, we recommend that, overall, the program should ensure there is a fair return to taxpayers.

C. Royalty Rates Must Provide a Fair Return to Taxpayers.

Royalties must be paid on coal that is produced from federal coal leases. 30 U.S.C. § 207(a). Royalty rates are nominally 12.5 percent on coal mined from surface mines and 8 percent from underground mines. Unfortunately, however, the current effective rate of royalty payments is only 4.9 percent of the value of the coal that is mined—just \$ 1.70 per ton.³ It has been estimated that taxpayers have been shortchanged by nearly \$ 30 billion over the last three decades due to limited royalty, bonus bid, and rental payments from the federal coal program. Part of the reason for these low royalty payments is the availability of subsidies and deductions that lower the royalty rate. In total, because of these problems, Americans are not receiving the fair market value of their coal.

Consequently, there is likely a need to increase royalty rates on federally produced coal. One potential approach would be to apply the 18.75 percent rate that applies to oil and natural gas produced from offshore leases, which indicates a reasonable rate. The BLM should also consider an “add” to royalty rates that would reflect the negative externalities that the public is exposed to due to federal coal production, such as climate change problems (addressed in detail in section VI.G. below). The BLM should carefully consider raising the royalty rates on federally produced coal (both from surface mining and from underground mining) to a level that will help ensure the public receives the fair market value from federal coal.

The White House Council on Economic Advisors report on the coal program (discussed above) also states its findings “highlight the potential of royalty reform to provide a fair return to taxpayers while simultaneously reducing the environmental effects of coal extraction and combustion.” Modeling results presented in the report show that increasing royalty rates would increase government revenues while “only modestly reducing Federal coal production.” The report presents two possible royalty reform approaches, one based on the full market value of the coal and the other on setting royalty rates to maximize revenues to the taxpayer.

Recommendations: The BLM should raise royalty rates on federal coal production to ensure the public receives fair market value from its coal. An “add” could be placed on royalties that applies to externalities from coal production, such as emissions of the GHG methane. The PEIS should fully analyze mechanisms for increasing the royalty rate, such that any subsequent rulemakings to change the rates can rely on this analysis.

³ *An Assessment of U.S. Federal Coal Royalties. Current Royalty Structure, Effective Royalty Rates, and Reform Options.* Headwaters Economics. Jan. 2015.

D. Bonus Bids and Rental Rates Must Be Increased.

Two other revenue-producing aspects of federal coal leasing are bonus bids paid when offers are made for federal coal leases and the rental rates paid on federal coal leases. Bonus bids are amounts operators choose to offer when they bid on leases, but which are required to exceed the fair market value of the coal as determined by the BLM. 30 U.S.C. § 201(a)(1), 43 C.F.R. § 3422.1(c)(1). The current rental rate is \$ 3.00 per acre or fraction thereof. 43 CFR § 3473.3-1(a). These amounts are likely not being paid at a sufficient level to ensure the fair market value of federal coal is returned to the government. For instance, the Council on Economic Advisors report mentioned above finds that bonus bids are not providing fair market value for the coal. The BLM should carefully consider in the PEIS whether bonus bids and rental rates are sufficient on federal leases to ensure a fair market value return to the government, and it should initiate any necessary rulemaking that is needed to ensure there is a fair market value returned to the government. Issues related to the bonus bid that is being offered for federal leases will also be addressed in other sections of these comments, but suffice it to say here there is a significant question as to whether these bonus bids are sufficient to ensure fair market value is collected on leases by application (LBA) sales where an existing lessee is the sole bidder on the lease.

Recommendations: The BLM should carefully analyze bonus bids that are being paid for coal leases and rental rates that are paid on leases in the PEIS and determine how those should be increased to ensure that the government receives fair market value from federal coal production. Bonus bids that have been paid by sole bidders in LBA sales should receive special attention.

E. Bonding Levels Should Be Increased; Self-Bonding Should Be Prohibited.

Operators who acquire federal coal leases are also required to provide bonds to ensure their performance meets the terms and conditions of the lease and to ensure environmental protection, namely effective reclamation of disturbed lands. The first type of bond, the performance bond, is required by the BLM. The second type of bond, the reclamation bond, is required by the Office of Surface Mining Reclamation and Enforcement (OSMRE) and is intended to ensure the reclamation requirements of the Surface Mining Control and Reclamation Act (SMCRA) are met. The BLM bonds “shall be furnished in the amount determined by the authorized officer.” 43 C.F.R. § 3474.29(a). The BLM should determine in the PEIS whether current bonding amounts are sufficient to provide assurance that lease terms and conditions are being met. If needed these bonding levels should be increased.

The BLM should have assurance that lease terms and conditions will be met regardless of the future financial status of the operator, including evaluating previous reclamation performance and bond adequacy as part of bidder qualifications (as discussed in more detail below). This is especially important given the large number of bankruptcy petitions being filed by coal companies. If a rulemaking is needed to increase bond amounts, it should be initiated. If direction to state offices is needed, that should occur. The BLM should also consider the conditions of OSMRE reclamation bonds in the PEIS and receive assurance that there will be sufficient reclamation under these bonds, particularly where the BLM is the surface owner of the lands being mined. The BLM should help ensure that reclamation bonds are not released before reclamation is complete.

One issue that has become increasingly significant relative to bonding is the question of “self-bonding.” While this issue apparently applies to the OSMRE reclamation bonds, particularly as administered by the states, the BLM should consider this bonding issue in the PEIS. Self-bonding allows companies to avoid posting sureties as bonds and to instead rely on their company’s paper net worth to provide assurance of reclamation capabilities. But this has become increasingly problematic as the average share value for publicly traded coal companies has plummeted more than 80 percent in the past two years⁴ and as more than half the nation’s production capacity is now in bankruptcy proceedings⁵, leaving significant question as to whether self-bonded companies will have the capability to meet their reclamation obligations leaving taxpayers exposed to significant financial liability. This must not be allowed to happen. A promise to pay should not be allowed to substitute for a bond. Self-bonds are reported to now cover about \$3.75 billion in reclamation obligations in nine states.

This is a highly risky approach to ensuring reclamation obligations are met and it should not be allowed to continue. Under BLM’s bonding regulations the BLM is allowed to set bonding levels sufficient to “assure that the lease bond covers reclamation within a permit area” where the OSMRE tells the BLM that reclamation costs need to be covered because of the lack of a state program. 43 C.F.R. § 3474.3(b)(1). Given the failure of self-bonding, the BLM should strongly consider modifying this regulation to allow it to put in place reclamation bonds where self-bonding has previously been used to guarantee reclamation. The BLM should fully consider in the PEIS whether self-bonding should be permitted on federal lands, and in our view it should not be permitted. The PEIS should provide that the BLM will not lease to self-bonded companies, and if rulemaking is needed to implement this decision it should be initiated. This is the best way to ensure federal lands are reclaimed, as required by SMCRA.

Recommendations: The BLM should carefully consider needed bonding levels in the PEIS, both bonds to ensure compliance with lease terms and conditions, and bonding to ensure reclamation. If needed, bonding amounts should be increased. Assuring environmental protection objectives are achieved and that the companies faithfully meet their lease obligations should be guiding themes. The BLM should put in place a prohibition on the use of self-bonding to meet reclamation bonding requirements on the federal mineral estate.

F. Bidder/Applicant Qualifications Should Be More Detailed and Robust.

Another issue of concern that should be addressed in the PEIS are the requirements to hold a federal coal lease. Many of these are relatively common sense, like being a citizen of the United States or a corporation organized under the laws of the United States. 43 C.F.R. Subpart 3472. Other current requirements relate to limitations on acreage held, ensuring bidders or applications (collectively referred to as bidders) do not already have a coal lease that has not produced, and certifying compliance with applicable laws and regulations. While these are helpful

⁴ Based on performance of Dow Jones U.S. Coal Index as of July 28, 2016, available at <https://www.google.com/finance?cid=4931635>.

⁵ Kuykendall, Taylor and Ashleigh Cotting. “Companies recently filing bankruptcy produce more than 2/3 of PRB Coal.” SNL <https://www.snl.com/InteractiveX/Article.aspx?cdid=A-36118340-12086>.

qualifications and limitations, additional criteria should be applied to bidders to hold a federal coal lease, including new leases related to existing mines.

In the Solar Energy Program, the BLM has expanded on its approach to ensuring the financial and technical capability of applicants. Instruction Memorandum No. 2011-060 (Solar and Wind Energy Applications – Due Diligence) elaborates on the BLM’s requirements, which are used to ensure that the agency thoroughly evaluates both financial and technical capabilities before proceeding with an application. A similar approach should be used to screen bidders for coal leases, ensuring that applicants have the financial means to develop and reclaim leases and the technical capability to do so without causing harm to the public lands.

In addition, bidders for coal leases should be further evaluated to ensure they have not been cited for violations of environmental regulations in connection with other operations and have been timely and completely fulfilling reclamation requirements. Finally, the BLM should not issue new leases to companies that already have ten or more years of reserves – those companies do not have an immediate need for access to additional coal and their holdings can further skew markets.

Recommendations: The BLM should strengthen requirements for companies bidding on leases to ensure that they have sufficient financial resources and technical expertise, have not been cited for violations of environmental regulations in connection with other operations, and have been fulfilling reclamation obligations in connection with other operations. Further, BLM should not issue leases to companies that already have ten or more years of reserves.

G. Reclamation Requirements Should Be Strengthened.

A central question related to the environmental protection needs in the federal coal program are reclamation requirements for lands disturbed by mining. While the OSMRE, and states that have been delegated authority, have primary responsible to put in place reclamation plans pursuant to the SMCRA, the BLM, as a landowner, obviously also has important responsibilities in this regard. The PEIS should address reclamation needs and the degree to which those needs have been met on the federal mineral estate, especially on lands where the BLM holds surface ownership. It should seek to ensure that any unmet needs are met in the future.

No new mining should be permitted if there is not a reasonable likelihood reclamation needs and requirements will be met in a reasonable amount of time. The public should not have to wait for generations for its lands to be reclaimed. As provided for by SMCRA, reclamation should occur contemporaneously with mining, and this should be required by BLM-issued documents, as well.

While the OSMRE and the states may have primary authority to enforce reclamation requirements, the BLM does have obligations when it comes to reclamation. Under the MLA, operators must submit operation and reclamation plans to the BLM “[p]rior to taking any action on a leasehold which might cause a significant disturbance of the environment.” 30 U.S.C. § 207(c). This must be done within three years of a lease being issued. *Id.* BLM’s regulations governing surface management and protection provide that operators can only use surface areas that have been included in “an approved resource recovery and protection plan.” 43 C.F.R. §

3465.1(a). The BLM is given responsibility to enforce these resource recovery and protection plans. *Id.* § 3480.0-6(d)(5). The BLM should consider reclamation obligations in the PEIS and ensure they are being fully implemented.

A fundamental goal of the BLM’s reclamation enforcement actions should be to meet the environmental protection performance standards specified in SMCRA. 30 U.S.C. §1265. In particular, there is a need to ensure that reclamation activities on coal mines on BLM lands “restore the land . . . to a condition capable of supporting the uses which it was capable of supporting prior to any mining, or higher or better uses of which there is a reasonable likelihood . . .” *Id.* § 1265(b)(2). The BLM’s coal mining regulations also establish many environmental protection standards that should be fully met. *See, e.g.*, 43 C.F.R. § 3420.1-4(e)(3) (requiring areas considered acceptable for further consideration of leasing to be screened for compliance with multiple-use needs with “particular emphasis” given to protecting a number of specified resources). The PEIS should ensure there is protection for these environmental features and values by ensuring adequate reclamation standards and requirements are in place prior to leasing.

Finally, as discussed above, the BLM should not allow reclamation obligations to be met through self-bonding on federal lands and mineral estate.

Recommendations: Achieving successful, contemporaneous reclamation of lands disturbed by coal mining is a central feature of SMCRA and it should therefore be central to the analysis in the PEIS. The MLA and the BLM’s coal mining regulations also call for ensuring successful reclamation. The PEIS should therefore ensure that strong reclamation requirements are in place for the federal coal mining program, by rulemaking if necessary. The BLM should seek to meet a goal of restoring the land to the condition it was in prior to mining. As mentioned in the recommendation above, the BLM should prohibit self-bonding as a means to meet coal mining reclamation obligations on the federal mineral estate.

IV. HOW, WHEN, AND WHERE TO LEASE

A. Introduction.

S.O. 3338 committed to addressing the question of “how, when, and where to lease” in the PEIS and identified issues to consider such as the current approach to leasing in response to industry applications, whether lease sales should be scheduled, and whether zoning, as BLM incorporated into the Solar Energy PEIS, should direct where to lease. BLM’s Notice of Intent reiterated this commitment and also referenced the need to focus on the “unsuitability” criteria when determining where to lease. 81 Fed. Reg. at 17,725.

In deciding how, when and where to lease, BLM decision-making should:

- Ensure that the screening criteria outlined in its regulations are fully applied when the BLM evaluates whether areas might be “acceptable for further consideration for leasing” as part of its development of resource management plans (RMP); these criteria can also be applied at the leasing stage to address current conditions and new information.
- Ensure the BLM’s unsuitability criteria are fully applied at the leasing stage.
- Provide protections for lands with wilderness characteristics and Greater sage-grouse.

- Prepare a reasonably foreseeable development analysis of coal resources.
- Establish a regional leasing program that incorporates landscape level planning and more active BLM management, looking at examples such as the Solar PEIS and master leasing plans.
- Comply with NEPA and mitigation obligations to protect other resources and address other impacts, such as contributions to and effects of climate change.
- Address new and existing leases.
- Ensure that, in fulfilling these recommendations, the statutory and regulatory requirements that there will be “maximum economic recovery” from coal leasing and development need to be understood properly in the multiple-use context.

B. Screening to Determine Tracts “Acceptable for Further Consideration for Leasing”: Using a Landscape-Scale Approach to Avoiding Impacts.

Under BLM’s coal mining regulations, coal cannot be leased competitively until it has been evaluated in a comprehensive land use plan or land use analysis. 43 C.F.R. § 3420.1-4(a). This analysis must be conducted pursuant to BLM’s planning regulations at 43 C.F.R. Part 1600, which requires development of an EIS to support the RMP. *Id.* § 3420.1-4(b)(1). In making the “major land use planning decision” concerning the coal resource resulting from this planning, which is “the identification of areas acceptable for further consideration for leasing,” four screening procedures that must be complied with are specified. *Id.* § 3420.1-4(e). The four screening criteria are:

1. Only areas that have “development potential” can be deemed acceptable for further consideration for leasing.
2. The BLM must assess whether the areas being considered for possible leasing are unsuitable for all or certain stipulated methods of mining, as provided for in the BLM’s unsuitability regulations. 43 C.F.R. Part 3460.
3. After application of the unsuitability criteria the BLM is to make further multiple-use decisions which “may eliminate additional coal deposits from further consideration for leasing” so as to protect other resource values and uses that are important or unique but not included in the unsuitability criteria. These multiple use considerations include those specified in section 522(a)(3) of SMCRA and the OSMRE regulations at 30 C.F.R. § 762.5. “[P]articular emphasis” is to be placed on protecting air and water quality, wetlands, riparian areas, and sole source aquifers, as well as Federal lands in the following systems: National Park System, National Wildlife Refuge System, National System of Trails, and the National Wild and Scenic River System.
4. In preparing the land use plan analysis, the BLM is to consult with surface owners who meet certain criteria “to determine preference for or against mining by other than underground mining techniques.”

43 C.F.R. §§ 3420.1-4(e)(1) to (e)(4).

Unfortunately, in the past the BLM often has not fully applied these screens in its land use planning process. The unsuitability criteria are often not applied—or final decisions on unsuitability is deferred—until later in the coal development process when leasing is actually

occurring or mine plans are being developed. Because of this approach, the further multiple-use considerations are also not fully applied during land use planning, even though this is the stage where land use allocations on the basis of the BLM's multiple use and sustained yield mandate are made. Clearly these additional considerations are an important means to ensure the environment is protected from coal development.

Further, making decisions at the land use plan level permits the BLM to make decisions in the context of a larger landscape, where the unsuitability criteria and multiple use considerations will more clearly apply to identify areas that should be protected from coal leasing. As prescribed in FLPMA, when creating land use plans BLM should:

- “consider present and potential uses of the public lands”;
- “consider the relative scarcity of the values involved and the availability of alternative means (including recycling) and sites for realization of those values”;
- “weigh long-term benefits to the public against short-term benefits.”

43 U.S.C. § 1712(c). These provisions supplement and bolster the provisions in the four screening criteria.

Waiting until the leasing stage to determine whether lands are actually better managed as unavailable for coal mining prevents the BLM from seeing the broader context of its decisions and the needs of the other resources in the planning area.

These oversight and analysis problems should be corrected at the RMP level. The BLM should update its land use planning practices to ensure that “acceptable for further consideration for leasing” decisions are fully informed by all of the relevant considerations, as envisioned by FLPMA and the coal regulations.

The BLM should adopt a new policy that would require the BLM to complete and document all 4 steps of the screening process as part of the land use planning process. Emphasis should be placed on ensuring there is full consideration of the specified multiple-use values rather than defaulting to leaving the vast majority of areas available for coal leasing. There is also a need for full compliance with and application of the unsuitability criteria at the land use planning stage. The new policy could also note the types of “land uses” to be protected by application of the multiple-use principles, including preference for renewable energy development and other uses that would have the effect of reducing the climate change contribution of coal from the federal lands.

For plans that were completed without making these determinations, the BLM would ensure that a more rigorous application of the criteria would be made prior to new leasing and commit to a schedule for updating those determinations and plans. For areas that currently have ongoing coal leasing and development, BLM should complete these updated analyses and amendments as part of the PEIS. We recommend the BLM address needed updates to the following RMPs in the PEIS:

- Miles City RMP, Montana,
- Buffalo RMP, Wyoming,

- Bighorn Basin RMP, Wyoming
- Kanab RMP, Utah,
- Uncompahgre RMP, Colorado (a Draft RMP was recently issued without a sufficient analysis; a supplement could efficiently incorporate appropriate analyses and updated decisions into the range of alternatives).

Recommendations: The PEIS should reiterate and require that when the BLM makes the “acceptable for further consideration for leasing” determination in its land use plans that it fully applies the four specified screening factors specified in its regulations *at the planning stage*, although additional information can certainly be considered at the time of leasing. In particular, the unsuitability criteria and consideration of additional multiple use values which “may eliminate additional coal deposits from further consideration for leasing” and which should be given “particular emphasis” should be fully applied at the planning stage such that the agency does not continue to default to keeping all lands available for coal leasing. As part of this planning, the BLM should also emphasize the potential impacts from precluding development of renewable sources of energy on the federal estate, which could assist in our transition away from fossil fuels. The PEIS should ensure that new leasing does not occur without further evaluation of the unsuitability criteria and multiple use considerations. Further, the PEIS should update the decisions in priority RMPs where ongoing leasing and development are most likely to address potential conflicts, as set out above.

C. Application of the Unsuitability Criteria Should Be Emphasized; Unsuitability Criteria Should Be Expanded.

One of the most significant environmental protections that applies to the federal coal program are the provisions for designating areas unsuitable for surface coal mining. These provisions are found in SMCRA. 30 U.S.C. § 1272. The BLM regulations also provide for designating federal lands as unsuitable for surface coal mining. 43 C.F.R. Subpart 3461.

Currently there are 20 criteria listed in the regulations that define areas as unsuitable for surface mining. 43 C.F.R. §§ 3461.5(a)(1) to (t)(1). In the PEIS the BLM should carefully review these criteria and determine whether new criteria should be added to the regulations. It seems apparent the current regulations are not comprehensive enough—there are many conditions that should make an area unsuitable for surface mining that are not recognized in the current regulations. For example, areas with important bat roosts and colonies should probably be made unsuitable. Important Greater sage-grouse habitats—priority habitat management areas (PHMA) and sagebrush focal areas (SFA)—should clearly be made unsuitable for coal mining. This change will likely also require amendments to the recent land use plan revisions the BLM put in to place for sage-grouse conservation, and this issue will be discussed further below.⁶ And perhaps most importantly, the BLM should consider designating areas unsuitable for surface mining where the coal mining would have significant climate change impacts. In particular, if an area can serve as important carbon sink it should not be available for coal mining. There are likely many other additions to the unsuitability criteria that should be made in the PEIS and related rulemaking.

⁶ See <http://www.blm.gov/wo/st/en/prog/more/sagegrouse.html> (presenting the BLM sage-grouse RMP revisions and amendments).

Under the BLM's regulations, application of the unsuitability criteria and designation of areas that are unsuitable for surface coal mining is to take place at the land use planning stage. 43 C.F.R. §§ 3420.1-4(e)(2), 3461.0-6, 3461.3-1(b)(1) to (b)(2). Unfortunately, however, the BLM has not made decisions based on the unsuitability criteria at the planning stage. All too often the BLM defers application of these criteria when it develops an RMP. In the sage-grouse RMP revisions, for example, the BLM confirmed that priority habitat was "essential habitat for maintaining GRSG for purposes of the suitability criteria set forth at 43 CFR, Part 3461.5(o)(1)" but did not close any lands to future leasing. Rather, the plans state that "[a]t the time an application for a new coal lease or lease modification is submitted to the BLM, the BLM will determine whether the lease application area is "unsuitable" for all or certain coal mining methods pursuant to 43 CFR, Part 3461.5." *See, e.g., Northwest Colorado Greater Sage-Grouse Approved RMP Amendment*, p. 2-18.

BLM has claimed that it delays unsuitability decisions because there is inadequate data allowing application of a criterion or an exception to it, and, as a result, will instead use "deferred criteria" that will not be applied until later in the coal development process. *See* 43 C.F.R. § 3461.2-1(b)(1). The BLM should carefully review how the unsuitability criteria have been applied to date and make improvements in this process so that the unsuitability criteria are fully and faithfully applied at the land use planning stage. Designating areas as unsuitable for coal mining is an important provision in section 522 of SMCRA as well as in the BLM's coal regulations. These provisions should not be given short-shrift.

In addition to carefully considering how the 20 unsuitability criteria have been—or have not been—applied, and whether new unsuitability criteria are needed, the PEIS should also carefully review the exceptions and exemptions that are specified in the regulations for each of the criteria. The BLM should ensure that these "escapes" from the unsuitability criteria are fully justified and warranted, and applied in a fair and rigorous manner, which likely requires narrowing the type and application of exceptions.

Recommendations: Meeting the existing unsuitability criteria specified in the BLM's regulations so as to determine areas that should not be available for coal mining is one of the most important environmental protection mechanisms that is available to the BLM. BLM's regulations call for the application of these criteria when RMPs are developed. Unfortunately, however, the BLM has all too often deferred application of the unsuitability criteria at the planning stage. The PEIS should direct that the unsuitability criteria must be faithfully, and fully, applied when the BLM develops an RMP. Loopholes in the unsuitability criteria should also be scrutinized and narrowed as appropriate. In addition, the BLM should also consider whether the existing criteria are sufficient and develop new criteria as needed, such as to deal with climate change issues.

D. Lands with Wilderness Characteristics Should Be Addressed in the PEIS.

Lands with wilderness characteristics (LWC) have become increasingly prominent in BLM planning and decision-making, and are also likely to be destroyed where coal leasing is permitted. By definition, these lands have wilderness values of size, naturalness, and outstanding opportunities for solitude or primitive and unconfined recreation. In addition, they may also possess supplemental environmental values such as important historic sites or important wildlife

habitats. BLM's guidance requires the agency to maintain a current inventory of LWC and consider opportunities to protect and/or avoid harm to LWC in both land use planning and implementation decisions. See Instruction Memorandum No. 2011-154 and BLM Manual Sections 6310 and 6320.

Recommendations: The PEIS should fully consider LWCs and the potential impact of the federal coal program on these lands, including requiring updated inventory and evaluation of opportunities for protection of LWC prior to leasing. The important values of lands with wilderness characteristics are generally not present on other lands. The BLM should ensure the federal coal mining program seeks to protect these values.

E. Greater Sage-Grouse Should Be Addressed in the PEIS.

Ensuring sufficient protections for the Greater sage-grouse is a national priority of the BLM that culminated in revisions and amendments to land use plans in 10 states that are intended to conserve habitat and avoid the need to list the species. Many of the affected states, such as Montana, Wyoming, Colorado and Utah, also have significant federal coal deposits. Clearly sage-grouse protection should be an important consideration in the PEIS.

Under the current sage-grouse RMP provisions, the BLM is seeking to minimize new or additional surface disturbance by putting in place caps on development, minimizing surface occupancy from energy development, and identifying buffer distances around leks in important sage-grouse habitats. Unfortunately, however, these planning decisions did not actually close areas to coal leasing. This is a shortcoming that the PEIS should address and seek to correct.

Under the new sage-grouse RMPs, the most stringent protections are provided in PHMA and SFA. The PEIS should seek to ensure there are strong protections when a coal lease is located in a PHMA or SFA. If current protections relative to coal are not at least equivalent to what would be required if oil and natural gas development were proposed, that should be corrected. And finally, as mentioned above, new unsuitability criteria should be developed that would designate PHMA and SFA as unsuitable for surface coal mining.

Recommendations: The BLM through the PEIS, and any needed RMP amendments or revisions, should ensure sage-grouse are sufficiently protected through protections for PHMA and SFA, including making appropriate unsuitability determinations to close areas to leasing.

F. Environmental Protections Can and Must Be Applied to Existing Leases.

In addition to assuring that there are strong environmental protections for lands that might be deemed acceptable for further consideration of leasing, the BLM must also ensure that there are strong environmental protections applied to existing leases. There is a need to ensure that protections are in place for renewals of existing leases, for expansions of existing mines, lease exchanges, lease transfers, and for lease modifications. Both mitigation measures and other environmental protections must be applied to existing leases.

There are number of sources of authority that allow the BLM to ensure existing leases are managed to protect the environment. Prior to conducting operations that could disturb the environment, a lease holder must submit an operation plan and a reclamation plan. 30 USC 207(c). There is no reason these plans should not be subject to periodic review. The BLM is charged to “oversee exploration, development, production, resource recovery and protection, diligent development, continued operation, preparation, handling, product verification, and abandonment operations” 43 CFR 3480.0-6(d). This is a continuing obligation. This applies to exploration plans, resource recovery and protection plans, and other activities. *Id.* at 3480.0-6(d)(1)-(2). Compliance is to be assured by ensuring compliance with all applicable laws, regulations, and lease terms, and “approved exploration or resource recovery and protection plans” *Id.* 3480.0-6(d)(5).

In addition, the BLM’s standard coal mining lease provides that lessees must have “due regard” for the prevention of “waste, damage or degradation to any land, air, water, cultural, biological, visual, and other resources,” among other things. BLM Form 3400-12 § 7. “Lessees must take measures deemed necessary by lessor to accomplish the intent of this lease term.” *Id.* Prior to the termination of bond liability, and at other times, lessees must “reclaim all lands the surface of which has been disturbed” *Id.* §10. Leases are made subject to the terms of the Clean Water Act and the Clean Air Act, as well as SMCRA. *Id.* §14. A number of additional special environmental protection stipulations are attached to many coal leases. Lease terms are subject to readjustment on specified terms. 43 C.F.R. 3451.1(a)(1).

Recommendations: BLM has ample authority to apply needed mitigation measures and other environmental protections on existing leases, not only at the time of renewal, modification or transfer, but also for ongoing approvals of development. BLM can also provide for shorter readjustment periods than those in the current regulations, and should initiate any required rulemaking.

G. The BLM should look to its Solar PEIS and Oil and Gas Master Leasing Plan policy as Models for Landscape-scale Guided Development and Avoidance that could be Incorporated into the Coal PEIS.

In updating its approach to managing leasing of federal coal resources, BLM can look to recent programmatic and policy decisions for managing development of federal solar and oil and gas resources. Both the Solar PEIS and the agency’s Master Leasing Plan (MLP) policy provide methods for proactively managing leasing to reduce conflicts, protect other values, and guide development to the right places.

1. The Solar PEIS.

The Solar PEIS provided a framework for solar energy development that updated the BLM’s existing approach, which simply responded to applications submitted by developers for rights-of-way. The Solar PEIS ultimately made a number of decisions that can and should be considered for updating the agency’s approach to leasing in the Coal PEIS, including:

- Identifying Solar Energy **Zones** (SEZ) that are “relatively large areas that provide highly suitable locations for utility-scale solar development: locations where solar development is economically and technically feasible, where there is good potential for connecting new electricity-generating plants to the transmission distribution system, and where there is generally low resource conflict.” Solar Final PEIS, pp. ES-7 – ES-11. Similarly, the Coal PEIS could identify areas that are “highly suitable” for coal in terms of having high resource potential and low resource conflicts, while also being economically and technically feasible.
- Identifying **exclusion areas** from solar development, which “allows the BLM to support the highest and best use of public lands by avoiding potential resource conflicts and reserving for other uses public lands that are not well suited for utility-scale solar energy development.” Solar Final PEIS, p. ES-7. These areas are significant because of “the size and scale of utility-scale solar energy development (typically involving a single use of public lands).” *Id.* Instead of leaving the vast majority of lands open to coal leasing, the BLM can and should identify categories of lands that should be excluded, especially since coal mining also limits the use of land to a single use.
- Identifying **variance lands** that could be made available subject to a stringent process and showing of need in case the SEZs are “insufficient to accommodate demand.” Solar Final PEIS, p. ES-14.
- Incorporating **programmatic design features** that would be incorporated into all future development in order “to avoid or reduce adverse impacts.” Solar Final PEIS, p. ES-6. Similarly, incorporating mandatory best practices for coal development could reduce environmental impacts.
- Setting out a **mitigation framework** and incorporating the mitigation hierarchy of avoidance, minimization and offset/compensation and preparation of regional mitigation strategies through the following actions:
 - “Avoidance will be achieved through siting decisions and the identification of priority SEZs.”
 - “Minimization will be achieved through the application of design features and adherence to applicable federal, state, and local laws and regulations such as the Endangered Species Act (ESA).”
 - “For those impacts that cannot be avoided or minimized, the BLM will determine, in consultation with affected stakeholders, if measures to offset or mitigate adverse impacts would be appropriate.”
 - “BLM proposes to establish regional mitigation plans that will facilitate development in SEZs. As envisioned, these regional mitigation plans will simplify and improve the mitigation process for future projects in SEZs.”
 Solar Final PEIS, p. ES-6. Mitigation should similarly be incorporated into the Coal PEIS, including a regional mitigation strategy to evaluate and design needed mitigation at the programmatic level.

2. Master Leasing Plans.

Master Leasing Plans are created at a smaller landscape level to manage oil and gas development, focusing on areas where there are likely impacts to and potential conflicts with

other resources. *See*, Handbook H-1624-1 (Planning for Fluid Mineral Resources), Chapter V. MLPs incorporate a number of tools to reduce conflicts and guide development to appropriate areas that could be incorporated into the Coal PEIS, including:

- Identifies **resource condition objectives** to provide standards for subsequent development and reclamation; these may apply to management for air quality, wildlife habitat, riparian areas. H-1624-1.V.C.1. Setting standards prior to approving coal leasing and development will enable BLM to identify and address potential impacts.
- Incorporates **resource protection measures** to reduce environmental impacts and help achieve resource condition objectives. These measures may include closing areas to leasing, phased leasing, or other lease stipulations or conditions of approval restricting the timing, location, or method of operations; or conditions of approval. H-1624-1.V.C.2. In practice, these measures have included prioritizing mineral leasing in areas with high development potential and minimal resource conflicts, and using phased leasing and development, which can be accomplished through identifying areas to be leased in order and by using limitations on the amount of cumulative surface disturbance that can occur and requiring reclamation prior to additional development. These types of approaches could be used as part of managing both leasing and development in the Coal PEIS.
- Extends to **BLM surface and split estate** lands. *See*, Instruction Memorandum 2010-117. The Coal PEIS can and should address leasing and development of federal coal resources including where BLM may not manage the surface.
- Extends to both **new and existing leases**. H-1624-1.V.C.2. The Coal PEIS can and should incorporate protective measures, including mitigation, which will apply to new leases and approvals of development on existing leases.

Most of these key concepts are embedded in coal regulations and policy already, including the unsuitability criteria, multiple use considerations, special stipulations for leases, and “due regard” language in standard lease terms and the regional leasing framework.

Recommendations: The BLM should evaluate the key elements discussed above from the Solar PEIS and MLP policy and incorporate them into a proactive approach to managing where, when and how leases are issued and developed. Protective management conditions can be incorporated into new leases via special stipulations and into existing leases through the mechanisms discussed above. BLM has the overarching authority to put similar measures into place to identify the best places for development; protect places that are not suitable for development; and manage development by controlling when, where and how leasing and development occur through tool like phased leasing, phased development, and required best practices.

H. The BLM Must Take Control of the Federal Coal Leasing Program to Obtain a Fair Return.

BLM needs to take a more proactive role in managing leasing and development of coal resources on public lands to ensure that the coal program achieves the goals laid out in S.O. 3338 and underlying statutory authority, including ensuring a fair return to taxpayers, best meeting

national energy needs, achieving U.S. carbon emission reduction goals, and improving protection and management of the many values of our public lands.

The agency should use its broad authority to take control of the Federal Coal Leasing Program through an updated regional coal leasing process to better plan for and manage the leasing and development of publicly-owned coal resources.

1. The current leasing approach has widely-known deficiencies.

The Department of the Interior has broad discretionary authority to decide where, when, and under what terms and conditions, coal development should occur. Under existing regulations, the Secretary can set leasing levels and determine potential coal leasing tracts based upon regional land use planning, expected demand for coal resources, and potential environmental and economic impacts that could result from leasing. 43 C.F.R. § 3420.2.

Yet since 1990, all federal coal leasing has been conducted through a lease-by-application process where coal companies propose tracts of land they are interested in developing to be leased by BLM. In most cases, the lease tracts applications are adjacent to companies' existing coal mines. These take the form of either a lease modification which are non-competitive modifications of existing leases to add contiguous lands of as much as 160 acres or Lease by Application (LBA) for specific tracts delineated by the applicant. More than 90 percent of the lease applications the BLM has received have been for these "maintenance tracts" used to extend the life of an existing mine or to expand that mine's annual production. And in all but one case over the last 25 years, the company that applied for a lease was the only—and the successful—bidder for the tract. This approach makes setting a fair price for the leases very difficult and allows coal companies to set the timing, location, and size of leases.

The consequences of letting industry set the pace, scale and location of lease sales have been well documented. Numerous independent audits and third party reviews from 1980 to 2014 have found that the program does not provide a fair return to taxpayers, concluding that "There is no evidence that the BLM receives a market price for the coal,"⁷ "weaknesses in the current sale process . . . could put the Government at risk of not receiving the full value for the leases,"⁸ and the BLM "does not obtain fair market value for taxpayers. It seldom generates competitive bids, and studies indicate that the resulting losses are substantial."⁹

BLM does not adequately limit lands open to development to appropriate lands. As we outlined in Section IV. B., BLM does not fully consider the full range of multiple-use values during land use planning. An example of this problem in practice is the Buffalo RMP under which "All coal lands are open to exploration, subject to multiple use constraints, resulting in zero acres closed to coal exploration and 4,775,136 acres open to coal leasing. . . ."¹⁰

⁷ Institute for Energy Economics and Financial Analysis, "The Great Giveaway: An analysis of the costly failure of federal coal leasing in the Powder River Basin," June 2012.

⁸ U.S. Department of the Interior Inspector General's Report, "Coal Management Program, U.S. Department of the Interior," June 2013.

⁹ Taxpayers for Common Sense, "Federal Coal Leasing: Fair Market Value and a Fair Return for the American Taxpayer," September 2013.

¹⁰ Buffalo Resource Management Plan Final Environmental Impact Statement, 2015, p. 123.

To address these problems, BLM should consider replacing the existing LBA leasing system with a modern approach that creates mechanisms to ensure a fair return, ensures any new leasing is based on a full consideration of other resources, and provides BLM with tools to achieve national policy priorities such as combating climate change.

2. BLM has authority to manage leasing differently.

As we have emphasized repeatedly in these comments, the BLM has wide latitude to craft the requirements that apply to the federal coal leasing and development program. The Secretary of the Interior has complete discretion to issue leases, which must meet the “public interests.” 30 U.S.C. § 201(a)(1). Besides provision for rentals, royalties, and a limitation on the lease term to 20 years, subject to production requirements, “[t]he lease shall include such other terms and conditions as the Secretary shall determine.” *Id.* § 207(a). Using this broad authority, the BLM has put in place the federal coal mining regulations at 43 C.F.R. Part 3400 which govern all facets of federal coal mining, including: exploration; competitive lease sales; LBAs; split estate leasing; non-competitive lease sales; lease modifications; mining licenses; coal lease management; environmental protection; lease qualification requirements; provisions for fees, rentals, and royalties; lease terms, etc. These regulations were generally put in place in 1979 with some later revisions under the authority provided by the MLA, Mineral Leasing Act for Acquired Lands of 1947, FLPMA, SMCRA, and other statutes. *See* 44 Fed. Reg. 42584 (July 19, 1979) (stating these statutes formed the basis for the BLM’s coal regulations, which were finalized in this rulemaking). *See also* 43 C.F.R. § 3400.0-3. Given the sweeping scope of the agency’s statutory authority and current regulations, BLM can make needed revisions and put in place new regulations to improve fair return, reduce climate emissions, and better protect affected lands and resources.

3. BLM should develop a new, multi-year approach for coal leasing and development.

BLM should use the PEIS to develop a new, multi-year approach for the leasing and development of federal coal in the West. This will likely require some new regulations but can be developed and subjected to NEPA analysis in the PEIS. Under a new approach, BLM would initiate new leasing activity based on market circumstances, progress on climate objectives and other considerations; determine where coal leases will be considered and screen for potential conflicts; develop new methods for selling coal resources in collaboration with the industry and leading economic experts; enhance the assurances that potential lessees have the financial and technical capabilities to viably operate the lease in question for its anticipated duration; and issue leases for specific tracts.

a. *Establish a Western Coal Production Region.*

In order to create a unified approach to coal leasing and to allow the BLM to manage the amount and timing of coal lease sales, the BLM should create a Western Coal Production Region based on the region as defined by the Energy Information Administration (EIA). EIA defines the Western coal region to include Alaska, Arizona, Colorado, Montana, New Mexico, North Dakota, Utah, Washington, and Wyoming.¹¹ According to the latest state-specific data from

¹¹ *See* U.S. Energy Information Administration, <http://www.eia.gov/tools/glossary/?id=coal>.

EIA's *Annual Coal Report*, of the coal produced in the United States in 2014, 54 percent was produced in the Western coal region, with Wyoming producing the lion's share: 73% of the coal mined in the Western coal region.¹² This region also encompasses 94 percent of the leases BLM had on record in 2015.¹³

Given significant differences in the geology, coal rank and quality, and mining conditions within the Western Coal Production Region, the BLM could consider special circumstances faced by mine-mouth power plant situations, where coal rank and value may be low, but the lack of transportation costs creates unique captive markets. Any exception process for mine-mouth plant situations would have to consider the climate change implications of extending leasing and operations of the plant and the socio-economic dislocations associated with continuing or restricting coal availability for the local community (as discussed in Section VIII).

For coal resources outside the western region, BLM should consider whether to create an eastern coal leasing region and apply new leasing approaches to those areas as well.

b. Prioritize where coal leases will be considered.

As described in Section IV.B., BLM should determine where additional leasing should be given "particular emphasis" and "eliminate additional coal deposits from further consideration for leasing" within RMPs, or for areas where such determinations have not been made, as part of the 5-year plans. Within the Western Coal Production Region, BLM should prioritize revising land use plans in areas where there are active coal mines.

c. Specify the size and timing of potential leasing activity.

The BLM should significantly modify the orientation of the agency to the industry in reforming the federal coal program. As the dramatic, rapid changes in the coal industry over the past two years have shown, federal lands deserve a more objective arbiter of whether, where and when additional coal resources should be put on the block for development. To accomplish this, the BLM should assume a greater role in specifying the size and timing of potential leasing activity that the Secretary of the Interior determines will best meet national energy needs, achieve U.S. carbon emission reduction goals, and ensure a fair return to taxpayers.

Under this approach, BLM would set the total amount of coal resource available for sale by auction each year consistent with a 5-year plan. There is precedent within BLM and elsewhere with the Interior Department for such a program: the Bureau of Ocean Energy Management (BOEM) has a Five-Year Program for oil and gas development. It establishes a schedule of oil and gas lease sales proposed for planning areas of the U.S. Outer Continental Shelf (OCS). The Program specifies the size, timing, and location of potential leasing activity that the Secretary of the Interior determines will best meet national energy needs. BOEM also has a leasing program

¹² See Table 1 in U.S. Energy Information Administration, *Annual Coal Report 2014*, March 2016. Available at <http://www.eia.gov/coal/annual/pdf/acr.pdf>. (Accessed July 26, 2016.)

¹³ Cross Reference of BLM Coal Lease Serial Numbers and MSHA Identification Numbers, Feb. 3, 2015. BLM FOIA# 2015-00462. Mark Haggerty, Headwaters Economics, pers. comm.

for its off-shore renewable energy that incorporates a multi-phase leasing process. We recommend the BLM seriously consider the five-year planning process for use in determining how much and which coal resources should be made available on a shorter time horizon than afforded by the PEIS.

In these five year plans, the BLM could set production targets for the total amount of coal resource sales that would be needed to meet declining coal production demand from public lands. The BLM should also consider carbon performance for coal's allocated share of all federal lands energy under a "carbon budget" calibrated to leading domestic and international climate goals. Our views on the need for a carbon budget are discussed in section VI.E. of these comments.

d. An Immodest Proposal: Auction coal resource allocations (credits) within the Western Coal Production Region.

To overcome the problems related to assuring a fair return for coal in a declining market dominated by incumbent mines leasing coal adjacent to their existing mines, BLM should develop an alternative bidding program for allocating federal coal in the Western Coal Production Region. BOEM has studied different auction systems for issuing renewable energy leases, easements, and rights-of-way on the OCS that may provide models for BLM to look at as it modernizes its coal leasing program.¹⁴

One approach to selling coal rights would have BLM auction coal resource allocations (or lease credits) rather than specific tracts for lease. BLM could specify the amount of coal made available for lease in terms of a total British thermal units (Btu) value, to establish basic parity among different areas within the leasing region. Because the quality of coal resource varies tremendously from one location to another, using a more static unit of measurement such as acres of land or tons of coal as the limit on the amount available for lease would disproportionately affect and disadvantage mines or companies producing lower quality coal. Btu content measures the heating value of the resource and therefore reflects the need for a larger amount of acreage or tons of coal to be developed to reach that limit in poorer quality areas. Additionally, leasing based on total Btu allows the BLM to easily track and measure potential GHG emissions from approved leases and compare that to the agency's climate targets or goals under the carbon budget discussed in section VI.E.

During this phase of the program, the sale of coal resource allocations (or lease credits) gives the successful bidder the right to subsequently seek BLM approval for the development of a leasehold. The lease credit does not grant the holder the right to construct any facilities; rather, the lease credit grants the right to develop a lease application and plan of development, which must be approved by BLM before the project can move on to the next stage of the process.

¹⁴ BOEM issued a contract to Power Auctions, LLC to study different types of auctions for wind rights. The study has been published in three parts, and is available at the links below:

- [Auction Design for Wind Rights](#)
- [Multiple Factor Auction Design for Wind Rights](#)
- [Comparison of Auction Formats for Auctioning Wind Rights](#)

A coal resource allocation auction system would help to convey coal resource allocations (credits) to entities most likely to successfully develop the resources and to meet the statutory requirement to obtain a fair return on coal sales. It could also provide a mechanism for reducing the carbon consequences of the federal coal program by putting BLM in charge of the pace and scale of coal allocation sales.

BLM should develop new auction formats to implement the new program and address important program performance goals. Performance measures developed by BOEM for its auction process for Wind Energy Areas¹⁵ could be applied to BLM's approach:

- Economic Efficiency: The auction process should try to ensure that future federal coal sales are awarded to those who value the coal resource the most because these entities would likely be the most efficient at using the resource;
- Fair Return: BLM is statutorily required to obtain a "fair return" for coal resources.
- Program Efficiency: The coal auction process must be manageable for BLM to administer;
- Lease Boundary Flexibility: Within constraints fixed by BLM, the auction should allow bidders to apply coal allocations to the optimal lease areas;
- Competition: The auction process must be fair, and encourage participation from all interested bidders while minimizing the opportunity for collusion among bidders;
- Transparency: The auction process must be an open one in which bids are comparable and the reason why the winners won is clear;
- Neutrality: The auction process must ensure that all bidders are treated equally;
- Simplicity: The auction process must be easily understood and implemented, for both the bidders and BLM; and
- Consistency: The auction process should be applicable to the issuance of leases in a variety of contexts.

e. Issuing specific leases to exercise coal credits.

Once sold, the credits could then be applied to specific lease tracts in the Western Coal Production Area identified by the successful bidders from within lands made available to leasing by the BLM. Though the selection of tracts would look similar to what those companies would propose under the lease by application system, allocations would have to be within areas pre-screened by BLM and BLM would not have to determine the fair market value at this stage—it will have been determined at the auction stage. BLM would still have to determine the Btus contained within a specific tract, but the agency could do that in a public and transparent way since there would not be bidding on the specific lease tract.

Under this, or any leasing system, BLM must continue to ensure full NEPA compliance by preparing an EIS for coal leases, which is also envisioned by the current regulations. *See* 43 C.F.R. § 3420.3-4(c) (stating that "[a]fter tract ranking and selection, a regional lease sale environmental impact statement . . . shall be prepared" by the BLM in accordance with NEPA). These EISs would consider the site-specific impacts at each tract and the regional cumulative

¹⁵ <http://www.boem.gov/Renewable-Energy-Program/Regulatory-Information/RenewableEnergy-Auction-Formats.aspx>

environmental impacts of the proposed lease, including other coal and non-coal development activities. 43 C.F.R. § 3420.3-4(c)(1) to (c)(2). It would be important to maintain this NEPA compliance both so that environmental issues can be dealt with and so that the public can be fully engaged.

Finally, the BLM should abandon the use of Regional Coal Teams and instead determine regional leasing needs based on expert analysis.

Recommendations: The BLM should carefully analyze the current coal leasing system in the PEIS and develop new regulations to modernize the process, incorporating elements from the Solar PEIS and oil and gas Master Leasing Plans discussed above. The agency should terminate the LBA leasing system and replace it with a Western Regional Coal Leasing Program that incorporates some of the principles from the current regulations but is updated to reflect current knowledge and policy. This regional system should evaluate bidding on individual tracts with bidding on an amount of coal that the BLM has determined should be available for development. This leasing system should be consistent with the carbon budget recommendations we make elsewhere in these comments. This new system could be put in place based on five-year plans of development similar to the system used in Outer Continental Shelf oil and gas leasing. These plans of development should be designed to meet national program objectives and done from a Western Regional perspective, not a local one. The BLM should also abandon the use of Regional Coal Teams and instead determine regional leasing needs based on the BLM's expert analysis. The provisions for NEPA compliance should be maintained in the regional coal leasing program. In all cases this leasing system must ensure the federal government achieves a fair market value for the federal coal it leases.

I. BLM Should Prepare a Reasonably Foreseeable Development Scenario.

An important issue that BLM must address in the PEIS is the Reasonably Foreseeable Development (RFD) level for federal coal that is likely in the next several decades. RFD is a term that is routinely used when the BLM considers oil and gas development activities, but is also used in other contexts, including for coal and as part of the Solar PEIS. As mentioned in section I above, where we discussed scoping issues, the BLM's NEPA Handbook says that in scoping the BLM should identify "reasonably foreseeable actions." This is essentially direction that the BLM consider coal RFD in the PEIS.

An RFD is essentially a long-term projection of exploration, development, production, and reclamation. Activity that can inform the development of alternatives, analysis of environmental consequences, and selection of a management approach are all affected by the RFD analysis. The summary of an RFD in BLM's guidance related to planning for oil and gas development highlights the need for an RFD as part of the Coal PEIS:

A Reasonably Foreseeable Development Scenario:

1. Is based on a reasonable, technical, and scientific estimate of anticipated oil and gas activity based on the best available information and data at the time of the study.
2. Provides the RMP/NEPA process with information needed in the review and

- evaluation of existing management direction and alternatives for a land use plan or plan amendment.
3. Facilitates informed decisions on the management of oil and gas resources balanced with management of other resources.
 4. Provides an effective tool to determine the need to update or revise the NEPA document upon which a management plan is based.
 5. Includes an evaluation of interrelated activity resulting from oil and gas exploration and development efforts regardless of land ownership or jurisdiction.
 6. Provides information necessary for the identification and assessment of alternatives in a NEPA document.
 7. Provides technical information for analyzing cumulative effects from oil and gas activity that could be reasonably expected as a result of a BLM decision.
 8. Is prepared by specialists with technical and scientific oil and gas experience and qualifications (Petroleum Geologists and/or Petroleum Engineers with assistance from experienced Minerals Resource/Natural Resource Specialists as needed).
 9. Is documented in a report subject to peer review.
 10. Will be included in the administrative record of any analysis for which it is used.
 11. Is a technical report that supports NEPA and planning documents that can be challenged through the administrative review process.

Instruction Memorandum No. 2004-89, Attachment 1-3.

NEPA dictates that BLM take a “hard look” at the environmental consequences of a proposed action and the requisite environmental analysis “must be appropriate to the action in question.” *Metcalfe v. Daley*, 214 F.3d 1135, 1151 (9th Cir. 2000); *Robertson v. Methow Valley Citizens Council*, 490 U.S. 332, 348 (1989). In order to take the “hard look” required by NEPA, BLM is required to assess impacts and effects that include: “ecological (such as the effects on natural resources and on the components, structures, and functioning of affected ecosystems), aesthetic, historic, cultural, economic, social, or health, *whether direct, indirect, or cumulative.*” 40 C.F.R. § 1508.8. (emphasis added). NEPA regulations define “cumulative impact” as:

the impact on the environment which results from the *incremental impact of the action when added to other past, present, and reasonably foreseeable future actions* regardless of what agency (Federal or non-Federal) or person undertakes such other actions. *Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time.*

40 C.F.R. § 1508.7 (emphasis added).

To satisfy NEPA’s hard look requirement, the cumulative impacts assessment must do two things. First, BLM must catalogue the past, present, and reasonably foreseeable projects in the area that might impact the environment. *Muckleshoot Indian Tribe v. U.S. Forest Service*, 177 F.3d 800, 809–10 (9th Cir. 1999). Second, BLM must analyze these impacts in light of the proposed action. *Id.* Therefore, there is no doubt the BLM must consider the likely level of

federal coal development that can be anticipated in the future. Tools and data are available that allow assessments of likely demand levels under different scenarios, so the amount of coal that will be demanded and potentially mined can also be estimated. Knowing how much coal will potentially be demanded and produced from federal coal leases under different scenarios is clearly a fundamental area of information that both the agency and the public should have available if informed decision-making is to occur.

The BLM has developed a forecast of reasonably foreseeable coal, coal-related, and other industrial development (RFD) in the Powder River Basin. As recently as 2011, BLM put out an RFD for the Powder River Basin for use in evaluating cumulative impacts in future NEPA documents as part of the Powder River Basin Coal Review.¹⁶ The RFD summarizes “the past and present energy-related development activities that have occurred in the PRB through the end of 2008 and the projected RFD activities for future years 2020 and 2030.”¹⁷ The BLM should develop an RFD for the entire federal coal program, encompassing all mines and leases for federal coal as part of the PEIS, but it must improve upon the methods used in the Powder River Basin Coal Review.

The Powder River Basin Coal Review RFD inaccurately predicted production levels. The 2011 RFD generated two scenarios—the lower and upper production scenarios, both of which assumed an increase of coal production in both Montana and Wyoming by 2030. Yet since 2011 (and the base year of the study 2008), coal production from the Powder River Basin has declined. The two production scenarios were based on information from 2010 projections of U.S. electricity consumption (IHS Global Insight (2010)), total Powder River Basin annual production projections (Wood McKenzie (2010)), global electricity consumption (International Energy Agency (2010)), U.S. Energy Information Administration (2010) and information provided by Powder River Basin coal mine operators and regulatory agencies. But most importantly the RFD is based on the history of production levels from 1990 to 2009, which “increased at an average rate of approximately 4.5 percent per year.” (Task 2, p. 3-2). And it assumes a robust international export market. (Task 2, p. 2-4). The RFD also assumes that certain speculative projects, including a mine-mouth coal to liquids plant (for example, the Many Stars Project in Montana), coal gasification projects (for example, the School Creek Mine proposal in Wyoming), lease development at the Otter Creek mine in Montana for export, and continued constant production at the Rosebud in Montana will occur. Most of these projects have now been withdrawn or are in the process of being shut down.

The coal industry is changing rapidly and historic production is no longer a good predictor of future production. Business as usual is anything but for the coal industry, and the BLM must analyze the new-normal for the federal coal program and then analyze reasonable future development using more robust data and models.

¹⁶ Powder River Basin Coal Review, Q&A, http://www.blm.gov/wy/st/en/programs/energy/Coal_Resources/PRB_Coal/prbdocs/coalreview/QAs.html, last accessed, 7/15/2016.

¹⁷ AECOM, Task 2 Report for the Powder River Basin Coal Review—Past and Present and Reasonably Foreseeable Development Activities, December, 2011, http://www.blm.gov/wy/st/en/programs/energy/Coal_Resources/PRB_Coal/prbdocs/coalreview/task_2_update_12.0.html, last accessed 7/15/2016.

In developing national level RFD projections as part of the PEIS, the BLM must carefully consider assumptions that have been made in RFD analyses and whether they are valid. Given the economic conditions of the coal industry, existing mines may not remain in operation and new mines may not be built. Given the growth in natural gas generated electrical power and regulations such as the Clean Power Plan it might not be wise to assume that new coal-fired power plants will be built, or that existing coal-fired power plants will necessarily continue in operation. The RFD projections in the PEIS should be based on current conditions and those projected to be in place out to about 2050, which is the period of time that must be considered relative to this country's climate change GHG commitments. It is clear the level of federal coal development may well decrease, and the RFD in the PEIS should recognize this possibility and be based on it.

The Powder River Basin RFD Report, like other BLM RFDs, was considered part of a cumulative impacts analysis. Given the significance of the cumulative impacts analysis in the Coal PEIS, the BLM should similarly use an RFD analysis and projections to inform the needed cumulative impacts analysis in the PEIS.

We have also considered two other BLM RMP analyses where RFD for coal was implicated. First, in the Kemmerer RMP in Wyoming, the analysis was largely a technical, geological consideration of coal resources in the area with the coal development potential being considered. Additionally, the BLM applied the four RMP coal leasing screens that have been discussed elsewhere in these comments to identify areas that could be available for leasing. Six small areas were found to be acceptable for further consideration for leasing and one LBA area (the Haystack area) was of primary likelihood for development. In assessing the potential for future development the BLM considered coal sale prices that were evident in the area and EIA development forecasts, and generally concluded that the mine in the Kemmerer area would serve a local market (a local power plant) and that overall growth in the coal market in southwest Wyoming would be slow (0.8-0.9 percent per year).

In southwest Colorado, federal coal in the Paonia/Somerset area were the primary focus in the Uncompahgre Draft RMP. The RMP concluded mineable coal would be available in the area through at least 2022. In the planning area the Somerset coal field had the greatest potential for continuing production and demand for Somerset coal "will remain high and will likely continue to provide around 40 percent of Colorado's coal." The Elk Creek mine in Somerset has gone idle and is essentially closed. Reference is made in the Uncompahgre RMP to the "Coal Resource and Development Potential Report" but this document does not seem to be available on line.

To the extent existing RMPs have not provided RFD analyses for coal, the BLM will need to update those RMPs. It is apparent that the level of coal mining and the demand for coal may well decrease. The RFD in the Coal PEIS should be developed in light of this likelihood, using updated models and with related information provided by the EIA and the U.S. Geological Survey. BLM should develop a revised analysis of past and present coal development activities using updated data, assumptions, and analytical tools to reflect the "new normal" or baseline case

for the coal program. The agency should also develop an RFD for the program, incorporating into its analysis the use of energy models.¹⁸

Recommendations: The BLM should prepare an RFD as part of the Coal PEIS that incorporates sufficient analysis to inform cumulative impact analysis and management decisions. The RFD should follow the elements identified in BLM’s guidance for preparing an RFD for oil and gas development. Further, the RFD analysis in the Coal PEIS must not only provide information on the future coal development potential and the amount of coal that will be mined out to at least 2050, but should also look at estimates of the amount of land that will be disturbed by coal mining and the reclamation needs that will be presented by this level of disturbance. There is a need to know disturbance levels and reclamation needs as part of the RFD assessment. The BLM should also update RFDs in existing RMPs to the extent needed.

J. Maximum Economic Recovery Must Be Assessed in the Context of Multiple-Use Obligations.

There are requirements in the MLA and in BLM’s coal regulations for coal leasing and development to provide for the “maximum economic recovery” (MER) of the coal. However, MER does not dictate all decisions related to the federal coal leasing program. BLM retains significant discretion to decide if, when and where to issue leases, as well as how to regulate development of those leases and royalties or other associated fees.

There are only two points where applicable laws require DOI/BLM to apply the MER standard:

1. Before leasing, when deciding if a lease should be developed by surface or underground mining – using MER to determine the right technical approach. 30 U.S.C. § 201(a)(3)(C).
2. After leasing, when evaluating an operating plan, which must achieve MER in order to be approved. 30 U.S.C. § 201(a)(3)(C).

Further, operators have the responsibility to conduct operations to achieve MER, with the BLM confirming whether MER will be achieved. 43 C.F.R. § 3484.1(b). MER is defined in the BLM coal regulations but it “does not restrict the authority” of the BLM to make decisions providing for the conservation of other resources. *Id.* § 3480.0-5(21). In the definition of MER it is also stated that MER will also provide for “compliance with applicable laws and regulations.” *Id.* Prior to holding a lease sale, the Secretary must solicit public comments on the fair market value of the coal and its MER, and she must consider “factors that may affect these 2 determinations.” *Id.* § 3422.1(a).

While there are requirements to consider achieving MER when coal is leased, this should not be viewed as the sole goal of the federal coal program. Fundamentally coal leasing is a discretionary action on the part of the Secretary that is taken in the “public interests.” 30 U.S.C. § 201(a)(1). The Secretary can also attach terms and conditions of her choosing to a lease. *Id.* § 207(a). Before any actions can be taken on a leasehold that may cause significant disturbance to the

¹⁸ See Howard, Peter, “*The Bureau of Land Management’s Modeling Choice for the Federal Coal Programmatic Review*,” review copy, July 2016.

environment, lessees must submit for Secretarial approval an operations plan and a reclamation plan, and no bid for a lease can be accepted that is less than fair market value. *Id.* § 207(c). 43 C.F.R. § 3422.1(c). And most significantly, the FLPMA puts in place requirements for the BLM to ensure multiple-use management on the public lands, and one part of the definition of multiple-use provides for “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.” 43 U.S.C. § 1702(c). Moreover, numerous environmental protection provisions apply to federal coal leases such as the prohibition in FLPMA on taking any action that causes “unnecessary or undue degradation” of the land, and the numerous reclamation provisions of SMCRA and the provisions of the Clean Water Act and Clean Air Act.

Given these other multiple-use requirements, the BLM should not allow MER determinations to trump other important issues in deciding where, when, and how to lease. The MER requirements amended into the Mineral Leasing Act by the Federal Coal Leasing Act Amendments must be viewed as complimentary to the multiple-use requirements specified in FLPMA. The multiple-use definition in FLPMA clearly does not envision assuring MER unilaterally, rather, it envisions consideration of the relative values of the resources.

Recommendation: While the BLM is required to consider MER in the federal coal program, achieving MER should not be treated as a unilateral, unvarying command. It should be achieved in recognition and in compliance with the BLM’s broad multiple-use mission, which is also mandatory.

V. BLM MUST ENSURE THAT THE MITIGATION COMPONENTS OF THE PEIS ARE CONSISTENT WITH FLPMA, NEPA AND CURRENT MITIGATION GUIDANCE

As detailed more fully in Attachment 2, the agency has a broad range of authorities supporting analysis of the full range of impacts and actions to offset unavoidable impacts. FLPMA requires the BLM to manage for multiple use and sustained yield, and to avoid unnecessary or undue degradation of resources and values. *See*, 43 U.S.C. §§ 1701, 1732(b). NEPA and associated CEQ guidelines require the BLM to analyze potential impacts and consider ways to avoid, minimize and mitigate impacts. *See*, 40 C.F.R. §§ 1508.8, 1502.14, 1502.16. More recent guidance requires the BLM to take a landscape-scale approach to planning for conservation and energy development as well as analysis of proposed development and consideration of mitigation. This PEIS is the right vehicle for establishing a landscape-scale approach to coal leasing, exploration and development.

Applicable laws and policies require that the mitigation hierarchy be applied step-wise, starting with avoidance and then minimization, and only after opportunities for avoidance and minimization are exhausted considering compensatory mitigation to offset unavoidable impacts. The landscape-scale approach should also be used at all steps in the hierarchy; at the avoidance stage by focusing development in low-conflict areas and prioritizing conservation in areas with important and sensitive resources and values, at the minimization stage by developing protective measures that address resources on a landscape scale, and at the compensatory mitigation stage through development of Regional Mitigation Strategies or Plans.

Through its approach to mitigation in the Coal PEIS, BLM must ensure that impacts to *all* resources and values from coal leasing, exploration and development are addressed. Though there is a long history of requirements for compensatory mitigation for impacts to wetlands and endangered species, other resources and values have historically been neglected or ignored. Current mitigation guidance underscores the need to address all impacted resources and values, consistent with underlying statutes.

It is important to note that the improved approach to mitigation in recent guidance is not only required under current law and policy, it is also showing benefits in the form of improved outcomes for both energy developers and stakeholders and the public who care deeply about impacts on our public lands. The Dry Lake Solar Energy Zone outside of Las Vegas, Nevada shows the promise of this approach. Because of the landscape-scale approach and upfront analysis the BLM completed through the Solar PEIS and the Solar Regional Mitigation Strategy for the zone, the BLM was able to provide predictability to developers on their mitigation costs and an expectation for an efficient permitting process, drawing \$5.8 million in bids from three winning bidders. The BLM then completed NEPA analysis and permitting for the projects in less than a year, less than half the time for projects outside of zones. Mitigation funds will be spent on strategic restoration and preservation efforts in the region that have garnered the support of local and regional stakeholders. And First Solar will be delivering power from its projects in the zone for \$3.8 cents/kWh, one of the cheapest rates in the nation. Similar efficiencies and beneficial outcomes across interests could be achieved by using this smart approach in the coal program and PEIS as well.

The BLM must ensure that the mitigation components of the PEIS are consistent with all relevant laws and policies, including current mitigation guidance. Section IV includes the bulk of our recommendations on avoidance, the first and most important step in the mitigation hierarchy, and minimization, in recommending where, how and when to lease. This section is focused on compensatory mitigation for impacts to land, wildlife habitat, and other resources and values that are unavoidably impacted by coal leasing, exploration and development. Avoidance, minimization and compensatory mitigation for climate impacts from coal leasing, exploration and development are addressed in section VI.F.

A. BLM Must Ensure that the Mitigation Components of the PEIS Are Consistent with Current Mitigation Guidance, Including the Requirement for a Net Benefit or a Minimum of a No Net Loss Outcome.

Secretarial Order 3330, the report to the Secretary of Interior from the Energy and Climate Change Task Force, and the BLM's current mitigation guidance (IM No. 2013-142 and Draft Manual Section 1794), all direct the BLM to incorporate mitigation strategies into land use planning and programmatic evaluations such as this PEIS. BLM's final mitigation manual and handbook are forthcoming and will likely provide additional details and guidance, although we expect they will build on current requirements and our recommendations below will be consistent with the updated guidance.

More recent guidance in the form of the Presidential Memorandum: Mitigating Impacts on Natural Resources from Development and Encouraging Related Private Investment (2015) and the Department of the Interior's Landscape-Scape Mitigation Manual (2015) also emphasize the importance of mitigation in BLM planning and decision-making. Key elements of these policies are summarized below and should be incorporated into BLM's approach to mitigation in the PEIS:

- Landscape-scale approach: land use planning for conservation and energy development as well as analysis of proposed development and consideration of mitigation must use a landscape-scale approach to focus development in low-conflict areas and prioritize conservation in areas with important and sensitive resources and values.
- "Irreplaceable resources": avoidance is the most appropriate tool for addressing "irreplaceable resources," "resources recognized through existing legal authorities as requiring particular protection from impacts and that because of their high value or function and unique character, cannot be restored or replaced."
- No net loss of important resources and values: mitigation must achieve a goal of no net loss of important resources and values, with a net benefit goal as required or appropriate.
- Climate change impacts and resilience: agencies must identify and promote mitigation measures that help address climate change impacts and resilience.
- Compensatory mitigation standards: compensatory mitigation (generally comprised of acquisition, restoration or preservation of resources and values) must be:
 - Durable: protected against non-conforming uses like development and lasting as long as the impacts;
 - Additional: demonstrably new conservation benefits that would not occur without mitigation;
 - Be developed based on the best available science: including for determining equivalency of impacts and mitigation benefits;
 - Provide for public transparency: including tracking locations of impacts and mitigation actions; and
 - Include monitoring and adaptive management.

Additional emphasis is appropriate for the no net loss/net benefit goal – the overarching goal of the mitigation approach in the PEIS should be to provide a net benefit for society as called for by the Presidential Memorandum. This would also be in accord with the MLA. *See* 30 U.S.C. § 201(a)(1) (providing that at the discretion of the Secretary of the Interior coal leasing tracts will be identified that provide for the "public interests"). If the net benefit goal or no net loss goal cannot be achieved for an area under consideration for leasing and development, it should not be considered for leasing and development.

We also recommend that the BLM emphasize the value of using preservation through special designations and conservation management as mitigation actions. Though compensatory mitigation has often focused on restoration, preservation is an incredibly important and valuable tool that can be used on its own or in concert with restoration. This is especially true for certain resources and values such as lands with wilderness characteristics that by definition are primarily intact and thus lend themselves to compensatory mitigation through preservation of other lands with equivalent values. The Solar PEIS explicitly provides for managing additional lands to

protect their wilderness characteristics as a form of compensating for unavoidable loss of lands with wilderness characteristics. *See*, Solar PEIS ROD, pp. 54-56. Further, recent Solar Regional Mitigation Strategies (SRMS) identify protective management as a form of compensatory mitigation and identify potential mitigation sites. *See, e.g.*, Colorado SRMS, Table 2-10, Figure 2-29; Arizona SRMS Table 2-5, Figure 2-12

Finally, we emphasize that the reclamation obligations imposed by the BLM and also fulfilled through the bonds held by the OSMRE or authorized states do not relieve the agency of its mitigation obligations. The bonds can assist in ensuring impacts are addressed, but this is not a substitute for avoiding impacts altogether or minimizing impacts through measures such as limiting surface disturbance and designing facilities to minimize destruction or interference with wildlife habitat and wildlife. The BLM has authority to incorporate mitigation requirements into special stipulations and mine plans, guided by standards set at the planning level, which will also set standards that the OSMRE or authorized states will follow in requiring and managing reclamation.

B. BLM should develop Regional Mitigation Strategies or Plans to Support the PEIS.

BLM's current mitigation policy under IM No. 2013-142 and Draft Manual Section 1794 (DM 1794) provides guidance on establishing both Regional Mitigation Strategies and Plans. For Regional Mitigation Strategies, it provides policies, procedures and instructions for "Developing strategies that identify and facilitate mitigation opportunities at the regional scale, including mitigation opportunities on both BLM-managed public lands and non-BLM-managed lands (other Federal lands, as well as Tribal, State, and private lands);" DM 1794 p. 1-1. For Regional Mitigation Plans, it provides policies, procedures and instructions for "Using the land use planning process to identify potential mitigation sites and measures (e.g., land treatments, infrastructure modification or removal) on BLM-managed lands at a regional level (including by considering and potentially incorporating any Regional Mitigation Strategies)." *Id.*

The policy goes on to provide additional details on what components these strategies and plans should include and how they should be developed. The BLM has already completed several Solar Regional Mitigation Strategies, including for the Dry Lake Solar Energy Zone described above. BLM is also developing a Regional Mitigation Strategy for oil and gas development in the National Petroleum Reserve-Alaska, and will be developing regional mitigation strategies for greater sage-grouse as well. These mitigation strategies also incorporate elements identified as part of regional mitigation plans, although they are not being prepared with NEPA analysis.

The BLM can and should develop an overarching mitigation strategy for the Coal PEIS. Further, to the extent that the BLM identifies priority areas or zones for coal leasing as part of this PEIS and amends underlying RMPs, BLM should include in the PEIS Regional Mitigation Plans for those priority areas or zones and incorporate the Plans into the underlying RMPs through the PEIS. The PEIS should also commit to development of Regional Mitigation Plans or Strategies to support future priority areas or zones that may be designated through future land use planning.

Further, as noted above, BLM has identified mitigation sites and potential actions in the SRMS it has prepared. In addition to identifying these sites, the BLM can ensure that the potential for

mitigation actions to be conducted in these sites, including preservation, is safeguarded through interim management direction. The BLM can identify these “pools” for mitigation actions in Regional Mitigation Strategies or Regional Mitigation Plans and also direct that they be protected from actions that could harm their potential function.

Though both Regional Mitigation Strategies and Plans are very valuable, BLM should pursue opportunities to complete the NEPA analysis necessary to select mitigation sites and approve mitigation actions through development of Regional Mitigation Plans whenever possible. Doing so also provides the opportunity to add durability and additionality to mitigation sites through special designations or management decisions (e.g. managing lands with wilderness characteristics for protection). Such special designations or management decisions will also help ensure that the viability of the mitigation sites is maintained between the finalization of the Regional Mitigation Plan and leasing, exploration, and development of priority areas or zones. Incorporating Regional Mitigation Plans into the underlying RMP will greatly increase the value of the Plans in providing a predictable and efficient process and maximally beneficial outcomes for compensatory mitigation. It is also consistent with BLM’s emphasis on landscape-level planning found in Planning 2.0. We note that even if a Regional Mitigation Strategy is developed instead of a Plan, the additional benefits described above can be achieved by incorporating the Strategy into the underlying RMP. However, the BLM should use the opportunity that this PEIS provides to start out with Regional Mitigation Plans that are incorporated into the underlying RMPs through the PEIS as much as possible.

Recommendations: The BLM must ensure that the mitigation components of the PEIS are consistent with all relevant laws and policies, including current mitigation guidance. This includes the use of a landscape-scale approach, an emphasis on a net benefit outcome, the importance of preservation as a mitigation action, and the use of Regional Mitigation Strategies and Plans to support the PEIS. A Regional Mitigation Strategy for the Coal PEIS would set an important framework to guide additional Regional Mitigation Strategies and Regional Mitigation Plans. Mitigation should be analyzed at both the land use planning stage and at the regional coal leasing stage via NEPA-based EISs that adopt the required mitigation policies. The mitigation policy should be made applicable to existing mines and areas in the vicinity of existing mines that are proposed for mining, as well as to new areas that might be open for mining consideration.

VI. THE PEIS MUST ADDRESS CLIMATE CHANGE IMPACTS RELATED TO THE FEDERAL COAL PROGRAM, INCLUDING RELATED MITIGATION.

A. Introduction

The need to address climate change impacts in the Coal PEIS has been raised above; in this Section we will address this issue in more detail. We also note that while the PEIS is fundamentally directed at the coal leasing and development program, our concerns about climate change relate to all fossil fuels that are produced from the federal mineral estate—oil, natural gas, and coal, as well as oil shale and tar sands. Thus, this Section of our comments applies to climate change issues that are created from fossil fuel extraction on the federal mineral estate, not just coal production. While the immediate opportunity—and indeed the carbon necessity—

starts with the climate change impacts of coal, the analysis should not end there and oil, natural gas, oil shale and tar sands should also be included in a Department-wide analysis as soon as possible. Both the emissions causing climate change and the unavoidable impact of climate change, including social costs and changes to landscapes, need to be addressed.

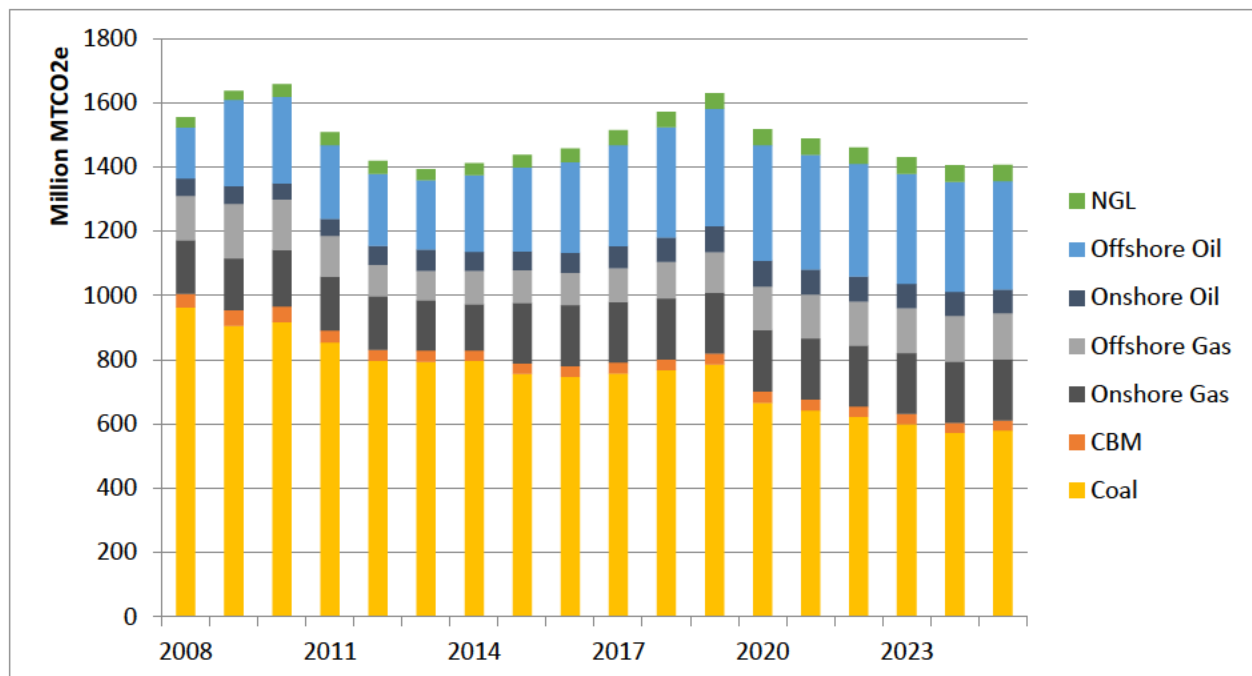
Fossil fuels production on federal public lands and mineral estate is extensive and the production of greenhouse gasses (GHG) resulting from the exploration, extraction, transportation and combustion of these fuels is significant. The climate change impacts we are seeing from GHG emissions are already evident and will worsen unless emissions of GHG are greatly reduced. The wide range of impacts from climate change, including melting glaciers and earlier snow melts in our mountains that disrupt water supplies in the west, forest fires, widespread drought, rising sea levels, and the spread of invasive species, have been rigorously and scientifically documented by the Intergovernmental Panel on Climate Change, as well as American researchers and agencies. These have led to substantial commitments made by this Administration to reduce our national contribution to climate change. As part of these commitments, federal agencies are required to take climate change impacts into account in decision-making.

Our public lands and minerals are held in trust for the public. We must ensure this trust is not broken when fossil fuels are leased and developed on these lands. The federal fossil fuels program, including the coal program, must provide assurance the public trust will not be violated by carefully considering climate change issues and taking steps to avoid, minimize and offset impacts through compensatory mitigation.

In 2012 as much as 21 percent of the Nation's GHG emissions originated from coal, oil and natural gas extracted from the public lands, with coal contributing over 57 percent of this. Federally produced coal is contributing roughly 10 percent to U.S. GHG emissions.¹⁹

Table 5. TWS Analysis of Lifecycle Emission from Federal Lands by Fuel Type

¹⁹ Claire Moser, Joshua Mantell, Nidhi Thakar, Chase Huntley and Matt Lee-Ashley. *Cutting Greenhouse Gas from Fossil-Fuel Extraction on Federal Lands and Waters*. March 19, 2015. Policy brief and underlying analysis is available at <http://wilderness.org/blog/blind-spot-plan-reduce-emissions-slowing-progress-fight-against-climate-change> (accessed July 28, 2016).



There are three critical needs relative to BLM decision-making and climate change, including for the federal coal program. First, the agency must provide an accurate and comprehensive assessment of the *amount* of GHG produced by its fossil fuel program activities. Second, it must ensure a fair and comprehensive assessment of the *impacts* of these GHG emissions. It is critical that two GHG in particular receive treatment in these analyses: carbon dioxide (CO₂) and methane (CH₄), both of which are emitted at significant levels as a result of the federal coal leasing and development program. Third, it must commit to avoiding, minimizing and offsetting impacts through compensatory mitigation.

B. The BLM is Obligated to Measure and Disclose to the Public Reasonably Foreseeable Climate Change Emissions and Associated Impacts from the Federal Coal Program.

1. Guidance from the President, Department of the Interior and CEO.

S.O. 3289 unequivocally mandates all agencies within the Department of the Interior “analyze potential climate change impacts when undertaking long-range planning exercises, setting priorities for scientific research and investigations, developing multi-year management plans, and making major decisions regarding potential use of resources under the Department’s purview.” S.O. 3289 (Addressing the Impacts of Climate Change on America’s Water, Land, and Other Natural and Cultural Resources), *incorporating* S.O. 3226 (Evaluating Climate Change Impacts in Management Planning). Activities such as the PEIS must meet these requirements. Notably, S.O. 3338, in directing preparation of the PEIS, cites the need to address climate change as one of the main purposes for this evaluation of the coal program.

Making the case for the need to consider climate change in NEPA documents, the Council on Environmental Quality (CEQ) issued its revised draft Climate Change NEPA Guidance in December, 2014.²⁰ It provides direction to all agencies on when and how to consider the effects of GHG emissions and climate change in the evaluation of federal actions. The guidance states that, “[i]t is essential . . . that federal agencies not rely on boilerplate text to avoid meaningful analysis, including consideration of alternatives or mitigation.” The CEQ draft guidance provides detailed reasons and instruction on how climate change and GHG NEPA analyses can be effectively accomplished. Any “boilerplate” claims that GHG and climate change analyses are impossible are rejected.

The Department of the Interior’s Departmental Manual on Mitigation clearly states in its principles for implementing mitigation that it will “Identify and promote mitigation measures that help address the effects of climate change and improve the resilience of our Nation’s resources and their values, services, and functions.” Manual Section 6.6.F on p. 6. It goes on to say that this includes “Considering greenhouse gas emission in project design, analysis, and development of alternatives.” Manual Section 6.6.F.(6) on p. 7. Though our recommendations on avoiding, minimizing and mitigating impacts from GHG emissions from the federal coal program are discussed in further detail in Section VI.F, we include these citations here because they underscore the fact that the BLM must have an accounting for the amount of GHG emissions and climate change impacts from its coal program in order to mitigate for those impacts.

S.O. 3330 (Improving Mitigation Policies and Practices of the Department of the Interior) as well as the report to the Secretary of the Interior from the Energy and Climate Change Task Force,²¹ and the BLM’s current mitigation guidance (IM No. 2013-142 and Draft Manual Section 1794), all also direct the BLM to incorporate mitigation strategies into planning and to address climate change. S.O. 3330 notes that a key reason for issuing the new policy is to “focus on mitigation efforts that improve the resilience of our Nation’s resources in the face of climate change.” More recent guidance in the form of the Presidential Memorandum: Mitigating Impacts on Natural Resources from Development and Encouraging Related Private Investment (2015) and the Department of the Interior’s Landscape-Scape Mitigation Manual (2015) also emphasize the importance of mitigation in BLM planning and decision-making and how it can and should apply in the context of addressing impacts from climate change. Again, the BLM must have an accounting for the amount of GHG emissions and climate change impacts from its coal program in order to mitigate for those impacts.

²⁰ Available at <https://www.whitehouse.gov/administration/eop/ceq/initiatives/nepa/ghg-guidance>.

²¹ Clement, J.P. et al. 2014. *A strategy for improving the mitigation policies and practices of the Department of the Interior*. A report to the Secretary of the Interior from the Energy and Climate Change Task Force, Washington, D.C.

2. Applicable requirements of NEPA.

NEPA requires all significant environmental impacts to be considered in an EIS. The “twin aims” of NEPA are to “consider every significant aspect of the environmental impact of a proposed action” and to “ensure that the agency will inform the public that it has indeed considered environmental concerns in its decisionmaking process.” *Baltimore Gas & Elec. Co. v. Natural Res. Def. Council*, 462 U.S. 87, 97 (1983). BLM must fully analyze the cumulative and incremental impacts of proposed decisions, including climate change impacts. *Center for Biological Diversity v. Nat’l Highway Traffic Safety Admin.*, 538 F.3d 1172, 1217 (9th Cir. 2008). In that case, the NHTSA failed to provide analysis for the impact of greenhouse gas emissions on climate change and was rebuked by the U.S. Court of Appeals for the Ninth Circuit, which observed that, “[t]he impact of greenhouse gas emissions on climate change is precisely the kind of cumulative impacts analysis that NEPA requires agencies to conduct.” 538 F.3d at 1217.

Further, NEPA regulations require that NEPA documents address not only the direct effects of federal proposals, but also “reasonably foreseeable” indirect effects. These are defined as:

Indirect effects, which are caused by the action and are later in time or farther removed in distance, *but are still reasonably foreseeable*. Indirect effects may include growth inducing effects and other effects related to induced changes in the pattern of land use, population density or growth rate, and related effects on air and water and other natural systems, including ecosystems.” 40 C.F.R. § 1508.8(b) (emphasis added).

That said, the law is well settled that NEPA only establishes procedural requirements for agencies to follow, it does not establish substantive environmental protection mandates. *Robertson v. Methow Valley Citizens Council*, 490 U.S. 332, 350 (1989). Nevertheless, NEPA is intended to be “action-forcing” so as to achieve its environmental protection policies, and consideration of mitigation is an important element of that. *Id.* at 350, 351; *see also* 40 C.F.R. § 1502.1 (stating the primary purpose of an EIS is to be “action-forcing” so as to ensure the policies and goals of NEPA are infused into agency decision-making). Therefore, as detailed in Section V.F., an important element of the coal program PEIS will be consideration of climate change mitigation options, and under the climate change commitments this country has made (discussed below), development of mitigation measures will be required.

3. National commitments to reduce greenhouse gas emissions.

The context for these requirements, as noted above, is the important commitments made by this Administration regarding climate change. One of these commitments is a GHG reduction strategy. The United States has submitted its target to cut net GHG emissions to the United Nations Framework Convention on Climate Change. This Intended Nationally Determined Contribution (INDC), as provided for in the Paris Agreement, is a formal statement of the U.S. target to reduce emissions by 26 to 28 percent below 2005 levels by 2025. In addition, to achieve a no more than 2 degrees C temperature increase, heat trapping gasses in the atmosphere must be kept at or below 450 parts per million CO_{2-eq.}, which means that industrialized nations like the U.S. will have to reduce their emissions an average of 70 to 80 percent below 2000 levels by

2050. This will require that a carbon budget be developed that limits carbon emissions from federal energy development in order to keep emissions below 500m metric tons CO₂-eq by 2050. The need for a coal program budget will be discussed in detail in Section VI.E.

In addition, on June 29, 2016, the leaders of Canada, Mexico, and the United States committed to the North American Climate, Clean Energy, and Environment Partnership. Under this agreement the countries will pursue an historic goal for North America to strive to achieve 50 percent clean power generation by 2025. “Canada, the U.S., and Mexico will work together to implement the historic Paris Agreement, supporting our goal to limit temperature rise this century to well below 2 degrees C, and pursuing efforts to limit the temperature increase to 1.5 degrees C.”²²

These commitments are consistent with and required by The President’s Climate Action Plan (June 2013) which calls for many steps to combat climate change such as reductions in CO₂ emissions from power plants, increased use of renewable energy, improved automobile efficiency standards, and reducing methane emissions, among many other things.²³ But to achieve the goals of the Climate Action Plan, which include “steady, responsible action to cut carbon pollution, [so] we can protect our children’s health and begin to slow the effects of climate change so that we leave behind a cleaner, more stable environment,” it will also be necessary to address issues related to fossil fuel extraction from our public lands. The Coal PEIS and other BLM regulatory actions should look to these commitments as part of decision-making, in order to ensure that steps are taken to meet these commitments.

4. Court cases requiring analysis of GHG emissions.

In the context of the federal coal program, there have been an increasing number of court decisions requiring federal agencies to present an analysis of GHG emissions in their coal program NEPA analyses, including downstream emissions. The indirect effects—such as burning the coal to generate electricity and thereby producing GHG—must be considered. Four cases where the agency did not take the required NEPA “hard look” at downstream emissions of the combustion of coal included:

- *High Country Conservation Advocates v. U.S. Forest Serv.*, 52 F. Supp. 3d 1174 (D. Colo. 2014).
- *Dine Citizens Against Ruining our Env’t v. Office of Surface Mining Reclamation and Enforcement [OSMRE]*, 82 F. Supp. 3d 1201 (D. Colo. 2015).
- *Wild Earth Guardians v. OSMRE*, 104 F. Supp. 3d 1208 (D. Colo. 2015).
- *Wild Earth Guardians v. OSMRE*, No. CV 14-103-BLG-SPW (D. Mt., Oct. 32, 2015, Jan 21, 2016).

²² See <https://www.whitehouse.gov/the-press-office/2016/06/29/leaders-statement-north-american-climate-clean-energy-and-environment> (presenting Leaders’ Statement on a North American Climate, Clean Energy, and Environment Partnership).

²³ See also Climate Action Plan Strategy to Reduce Methane Emissions (March 2014) (presenting the President’s methane reduction strategy).

As a result, the agencies' NEPA analyses were invalidated and the agencies have been forced to conduct additional analyses. In another case the court held that the analysis of downstream emissions was adequate party because emissions from coal combustion had already been disclosed. *Wild Earth Guardians v. OSMRE*, 120 F.Supp.3d 1237 (D. Wyo. 2015).

The BLM should clearly present information on the amount of GHG that are produced by the federal coal program, both upstream and downstream, in the PEIS. This would be consistent with the requirements of S.O. 3338 and the BLM's statements in the Federal Register notice announcing the PEIS.

5. Reliable methods and tools exist to measure and disclose the amount of greenhouse gas emissions from federal coal.

On the same day Secretary Jewell issued S.O. 3338, she also issued several good governance policies designed to improve the effectiveness of permitting, including directing the Interior Department's U.S. Geological Survey to establish and maintain a public database to account for the annual carbon emissions from fossil fuels developed on federal lands and waters. The agency has estimated a delivery date of 2018 for that tool.²⁴ In the interim, there are a number of well-recognized methods available for assessing the amount of CO₂-eq and methane emissions that result from federal fossil fuels leasing and development. These include downstream amounts, such as those resulting from the combustion of coal primarily for electricity generation. These methods can be used in the PEIS to estimate GHG emissions resulting from the federal coal program. Methods such as the Greenhouse Gas Protocol and the EPA's GHG Reporting Rule can provide estimates of the GHG emissions levels from federal fossil fuel programs, including the coal program. The PEIS should employ these methods.

Recommendations: The BLM is clearly required to measure, evaluate and fully consider the GHG emissions and climate change impacts of the federal coal program in the PEIS based on a number of policies of the BLM and other agencies, and even the President. NEPA also requires the BLM to fully consider climate change issues in the PEIS. This must include both upstream and downstream emissions, including those from coal combustion at power plants. This analysis must inform BLM's requirements to avoid, minimize and compensate for these impacts consistent with this country's climate change commitments, specifically the requirement to reduce emissions by 26 to 28 percent below 2005 levels by 2025. This analysis and decision-making should seek to achieve a no more than 2 degrees C temperature increase, which will require the U.S. to reduce emissions an average of 70 to 80 percent below 2000 levels by 2050. The PEIS should put in place requirements to achieve these commitments.

C. The BLM Must Disclose Climate Change Impacts in its NEPA Analyses.

In addition to disclosing the *amounts* of GHG emitted as a result of its coal program, and other programs, the BLM must also disclose the *impacts* of those emissions in its NEPA analyses. NEPA specifically requires federal agencies to analyze and disclose the environmental effects of

²⁴ See Q&A Department of the Interior Federal Coal Reforms, available at http://www.blm.gov/style/medialib/blm/wo/Communications_Directorate/public_affairs/news_release_attachments.Par.98291.File.dat/Questions%20and%20Answers%20Coal.pdf.

their actions. 40 C.F.R. § 1508.8. Where “information relevant to reasonably foreseeable significant adverse impacts cannot be obtained because the overall costs of obtaining it are exorbitant or the means to obtain it are not known,” NEPA regulations direct agencies to evaluate a project’s impacts “based upon theoretical approaches or research methods generally accepted in the scientific community.” 40 C.F.R. § 1502.22(b)(4).

A number of tools exist that BLM could use to conduct an evaluation of climate change impacts. Some of these tools are more developed than others and some may be finalized while the PEIS is proceeding. BLM should ensure that any and all tools used can meaningfully quantify impacts of GHG emissions.

1. BLM should use one or more generally-accepted approaches to assess climate impacts.

The BLM must employ one or more accepted approaches to assess climate impacts associated with potential future leasing, and require those approaches be used in future significant leasing decisions. Any such method should be based on the best available science and be generally accepted as rigorous and transparent.

The Social Cost of Carbon (SCC) is a leading tool for quantifying the climate impacts of proposed federal actions. The SCC is an estimate, in dollars, of the long term damage caused by a one ton increase in carbon dioxide (CO₂) emissions in a given year; or viewed another way, the benefits of reducing CO₂ emissions by that amount in a given year. The SCC is intended to be a comprehensive estimate of climate change damages that includes, among other costs, the changes in net agricultural productivity, risks to human health, and property damages from increased flood risks. The method was initially designed for application in rulemakings, but the courts have recognized its applicability to NEPA analyses.²⁵

The SCC was developed through a rigorous multi-agency process based on generally accepted research methods and years of peer-reviewed scientific and economic studies. In 2010, an interagency working group was convened by the Council of Economic Advisers and the Office of Management and Budget to design an SCC modeling exercise and develop estimates for use in rulemakings. The interagency group was comprised of scientific and economic experts from the White House and federal agencies, including: Council on Environmental Quality, National Economic Council, Office of Energy and Climate Change, and Office of Science and Technology Policy, EPA, and the Departments of Agriculture, Commerce, Energy, Transportation, and Treasury. The interagency group identified a variety of assumptions, which EPA then used to estimate the SCC using three integrated assessment models, which each combine climate processes, economic growth, and interactions between the two in a single modeling framework.

This method has undergone careful peer review from a number of agencies and has been subject to updates and revisions, and considerable public comment. For example, see the Office of Management and Budget's (OMB) SCC site, which presents the OMB response to the public comments received through its solicitation for comments on use of SCC estimates in Federal

²⁵ See *High Country Conservation Advocates v. U.S. Forest Serv.*, 52 F. Supp. 3d 1174 (D. Colo. 2014).

regulatory analyses.²⁶ In this response, OMB announced plans to obtain expert, independent advice from the National Academies of Sciences, Engineering, and Medicine on how to approach future updates to the estimates. This panel is concluding its review but published an interim review generally reaffirming the methods used to develop the SCC for use in evaluating proposed federal actions.²⁷

In addition, the Environmental Protection Agency (EPA) has developed a companion protocol called the Social Cost of Methane method, focusing on methane emissions. These methods provide a way to quantify the costs of GHG emissions and present them to the public. Since the benefits of the production of fossil fuel production are regularly monetized in BLM's NEPA documents, it is critical that the *impacts* also be monetized.

The SCC protocol is relatively simple, involving the following steps: (1) identify the amount of coal produced, (2) estimate the tons of CO₂ generated from the exploration, extraction, processing, transport and combustion of this coal, (3) multiply the amount of CO₂ produced times a factor provided from the appropriate discount rate from the SCC tables, and (4) get a total SCC by adding the amounts for each year that coal mining would occur. To achieve an accurate assessment of the impacts of GHG emissions, some experts have said lower discount rates (3 percent or lower) should be applied in the SCC model.

There is at least one court case supporting the use of the SCC protocol. In *High Country Conservation Advocates v. U.S. Forest Serv.*, 52 F. Supp. 3d 1174 (D. Colo. 2014), a case involving coal mining EISs, the court rejected claims that it was too speculative to estimate coal combustion emissions when the SCC method was available to the agency and had been recognized earlier by the agency. This was particularly true because the agency presented the *benefits* of the project in a monetary form. By refusing to quantify the climate change costs of the project, the agency effectively zeroed out the costs of greenhouse gasses. Presenting only a project's economic upsides while omitting a projection of the project's costs was arbitrary and capricious and violated NEPA.

However, the SCC has some limitations. The method is recognized as an underestimate of the total likely damages associated with a proposed action.²⁸

Nevertheless, CEQ recognized in its Draft Guidance that the SCC “offers a harmonized interagency metric” that can provide context for a meaningful NEPA review. Thus, as the leading tool to quantify economic damage likely from a proposed action, the SCC and the EPA

²⁶ See <https://www.whitehouse.gov/omb/oira/social-cost-of-carbon>. (Accessed July 25, 2016.)

²⁷ National Academies of Sciences, Engineering, and Medicine. (2016). *Assessment of Approaches to Updating the Social Cost of Carbon: Phase 1 Report on a Near-Term Update*. Committee on Assessing Approaches to Updating the Social Cost of Carbon, Board on Environmental Change and Society. Washington, DC: The National Academies Press.

²⁸ EPA concluded, “The models used to develop SC-CO₂ estimates, known as integrated assessment models, do not currently include all of the important physical, ecological, and economic impacts of climate change recognized in the climate change literature because of a lack of precise information on the nature of damages and because the science incorporated into these models naturally lags behind the most recent research. **Nonetheless, the SC-CO₂ is a useful measure to assess the benefits of CO₂ reductions.**”

<https://www3.epa.gov/climatechange/EPAactivities/economics/scc.html> (emphasis added). Accessed July 25, 2016.

SCM clearly can assist in quantifying the costs associated with GHG emissions, that is, the impacts of climate change. At a minimum, we therefore believe these tools should be applied in the Coal PEIS.

Additional means to assess the impacts of carbon dioxide and methane emissions should also be pursued. These additional approaches should, at a minimum, be consistent with existing guidance including the BLM's guidance on estimating non-market environmental values (Instruction Memorandum No. 2013-131 Change 1) and the CEQ Draft Guidance.

One alternative method identified by the National Academies of Science is an iterative risk management assessment. In a risk management assessment the BLM would consider means to reduce or respond to GHG emissions such as through mitigation, adaptation, geo-engineering, or an improved knowledge base. Many responses are possible for estimating risk reduction potential. Such a method should seek to pursue the most feasible options, pursue options with the lowest costs and good cost effectiveness, put in place options with proven effectiveness, ensure equity and fairness, and be robust to the uncertainties surrounding climate change. The approximate costs would then serve as the basis for determining the risk cost of a proposed action.²⁹

2. Climate change impacts should be analyzed from a global perspective.

It is also critical that the BLM assess climate change impacts from a global perspective, not just a local or even national perspective. The PEIS is national in scope—this is a perfect time to look at the overall impacts of GHG emissions and not claim individual impacts are too small.

Addressing impacts globally is part of a strategy to encourage other nations to take steps to address climate change that will directly benefit Americans. Moreover, issues such as climate change and clean air are globally common resources available to all, but any one country's degradation or harm to these resources impacts the whole world. Carbon pollution is not limited to the area where it is released, but rather it mixes and travels freely throughout the world and affects the climate worldwide. The carbon and methane pollution in this country not only impacts the U.S., it also imposes externalities on the rest of the world. And when other countries take steps to reduce their climate change emissions, it also benefits the U.S. If we only set our GHG emission strategies based on domestic costs and benefits while ignoring global consequences there would be a significant reduction in climate protection benefits and significantly increased risks of harms, including to the United States.

As stated in CEQ's Draft Guidance, "the statement that emissions from a government action or approval represent only a small fraction of global emissions is more a statement about the nature of the climate change challenge, and is not an appropriate basis for deciding whether to consider climate impacts under NEPA This approach does not reveal anything beyond the nature of the climate change challenge itself: the fact that diverse individual sources of emissions each make relatively small additions to global atmospheric GHG concentrations that collectively have huge impact." There is little doubt that the consideration of indirect impacts that is required

²⁹ See *America's Climate Choices*, National Academy of Sciences, National Research Council at 46-50 (presenting and discussing these issues).

under the CEQ NEPA regulations includes consideration of different scales of impacts. 40 C.F.R. § 1508.8(b). Therefore, the assessment of climate change impacts in the PEIS should clearly be on a global scale.

3. BLM should not assume perfect substitution in analyzing GHG impacts.

Related to the issue of ensuring there is a global and life-cycle analysis of GHG impacts on climate change is the question of “perfect substitution” by other coal from other sources for federal coal that is not mined. Some claim that “perfect substitution” will occur if there is less federal coal mined, and therefore any climate change and other benefits of the reduction in federal coal supply will be nullified. This argument has no basis. Much (85 percent) of the federal coal is mined in the Powder River Basin in Wyoming and Montana. This coal is notable for being low cost and having low sulfur content relative to other sources of coal in the U.S. What this means is that if Powder River Basin coal is not produced, the costs of other coal will make these sources less economically attractive than the Powder River Basin coal. In addition, it will not have the low sulfur (reduced air pollution) benefits of the Powder River Basin coal. That is, there will not be a basis for “perfect substitution.”

Moreover, given the higher prices and higher sulfur content of alternative sources of coal and the availability of renewable forms of energy with no (or very little) GHG emissions and increased energy efficiency measures, there will likely be “fuel switching” market decisions made by companies. Companies will choose to switch from coal to renewable forms of energy, or natural gas, in many cases, which will reduce climate change impacts.

Perfect substitution of other coal for federal coal that is not mined is an unfounded myth and should not be used to avoid evaluating climate change impacts in the PEIS. This theory is not based on empirical evidence and it is not supported by economic theory. In addition, there have been several recent papers that bring into question the perfect substitution theory by the White House Council of Economic Advisors, Vulcan Philanthropy, Stockholm Environment Institute, and the Carbon Tracker Initiative.³⁰

The substitution question has been addressed relative to the federal offshore oil and natural gas leasing program where one court noted that fuel switching would lead to greater conservation: “forgoing additional leasing on the [outer continental shelf] would cause an increase in the use of substitute fuels . . . and a reduction in overall domestic energy consumption from greater efforts to conserve in the face of higher prices.” *Ctr. for Sustainable Economy v. Jewell*, 779 F.3d 588, 609 (D.C. Cir. 2015).

³⁰ CEA. 2016. “The Economics of Coal Leasing on Federal Lands: Ensuring a Fair Return to Taxpayers”. Council of Economic Advisers. May 2016.

Vulcan/ICF. 2016. “Federal Coal Leasing Reform Options: Effects on CO2 Emissions and Energy Markets. Final Report: Summary of Modeling Results.” A Vulcan Philanthropy | Vulcan, Inc. report with analysis supported by ICF International, Fairfax, VA. February 2016.

Erickson, Peter and Lazarus, Michael. “How would phasing out U.S. federal leases for fossil fuel extraction affect CO2 emissions and 2°C goals?” Stockholm Environment Institute, Working Paper 2016-02. May 2016.

Fulton, Mark; Kaplow, Doug; Capalino, Reid; and Grant, Andrew. “Enough Already: Meeting 2°C PRB Coal Demand Without Lifting the Federal Moratorium.” July 2016.

4. Local impacts must also be considered.

While the BLM must ensure there is a global analysis of climate change impacts in the PEIS, and impacts due to other fossil fuels decisions, it also cannot exclude local climate change and other local environmental impacts. The BLM often expresses the monetary benefits of the coal program on a local level—county employment benefits, county tax benefits, etc. The SCC is well adapted to assessing impacts on a broad, global, level but may not be as well suited to a consideration of local monetary impacts. The BLM should ensure that there is also a local consideration of the costs of the coal program in the PEIS—both relative to climate impacts and of other environmental and social impacts. The local benefits of “fuel switching” to things like greater reliance on development of renewable sources of energy in local areas should be fully considered in the PEIS.

In addition, BLM should take a hard look at the short- and long-term impacts of each alternative on carbon storage. BLM lands can be an important carbon “sink” that functions to store carbon and keep it out of the atmosphere. BLM has a duty under FLPMA to prepare a current and up-to-date inventory of public lands and their new and emerging resource values. 43 USC § 1711. This more local issue should also be considered the PEIS.

Recommendations: The second critical step in analyzing climate change issues in the PEIS after determining the amount of GHG that are emitted is to evaluate the climate change impacts of those emissions. This can be done by utilizing the Social Cost of Carbon (and companion EPA Social Cost of Methane) protocol. The BLM should use this method for climate change impact assessment in the PEIS. But in addition, due to some shortcomings in the SCC method, the BLM must also evaluate qualitative, non-monetary impacts that are caused by climate change, such as from earlier snowmelts in our western mountains that are changing water supplies. This analysis should be done from a global perspective because as recognized in the CEQ Climate Change NEPA Guidance, “diverse individual sources of emissions each make relatively small additions to global atmospheric GHG concentrations that collectively have huge impact.” That said, local impacts also need to be considered especially since the BLM has traditionally published the local monetary benefits of the coal program in its NEPA analyses. BLM should not assume that federal coal that is not produced will simply be replaced by production from other sources (so-called “perfect substitution”) thus eliminating any climate change benefits —this unfounded myth is not based on empirical evidence or sound economic theory, and it has been rejected in several reports.

D. The BLM Should Establish Carbon Emission Targets for Future Coal Leasing Based on U.S. Climate Commitments and Expected Future Leasing and Production Scenarios (a so-called “Carbon Budget”).

1. Introduction.

Secretarial Order 3338 clearly states that concerns regarding whether the federal coal program was in conflict with the nation’s climate policies and climate goals was one of the three most

significant issues that were identified.³¹ Similarly, the Notice of Intent clearly stated that the public concern raised during listening sessions in 2015 led to the agency’s consideration of these questions: “Many stakeholders highlighted the tension between producing very large quantities of Federal coal while pursuing policies to reduce U.S. GHG emissions substantially, including from coal combustion.” NOI, p. 21. As recognized in the S.O. federal coal production represents approximately 41 percent of the total coal produced in the U.S. and when combusted, contributes about 10 percent to total U.S. GHG emissions. Accordingly, the NOI instructed that the PEIS should assess the climate impacts of the federal coal program, including coal combustion, and how those impacts should be addressed in coal program management, including “how best to ensure no undue or unnecessary degradation of public lands from climate change impacts.” NOI, p. 21

In that vein, a critical element of the S.O. is increasing the transparency of energy leasing and production activities on public lands. We believe reforms to the manner and terms of leasing are essential. But without a commitment to ensuring that the Department of the Interior (as the nation’s largest energy asset manager) measures and discloses to the American public the carbon performance of current and expected future energy leasing and production, comprehensive reform will fall short of the Department’s intended goals.

2. Definition of a “carbon budget.”

A “carbon budget” is often defined as the quantity of carbon dioxide that the nations of the world can emit and still limit warming to 2-degree C above pre-industrial levels, although recently it has been applied to determine quantities of fossil energy that could be burned by individual nations consistent with their commitments.

While there appears to be general agreement on the conceptual definition of “carbon budget,” the operational use of the term varies widely. It has been in use in the forestry and agricultural sector for years in the sense of bookkeeping for stocks and flows due to annual variation, including harvest and natural or man-made perturbations like wildfire, whereas the term has been used as short-hand for a fixed cap on emissions across the full carbon cycle in some climate policy circles.

In the context of these comments, **we use the term “carbon budget” to refer to the estimated annual volumes of CO2 advisable from federal lands under international goals set by leading climate science and prevailing national climate emissions reduction commitments.** To us, these volumes function best as performance targets set as a matter of policy rather than as a hard and fast cap. We believe BLM can create a “carbon budget” to establish a CO2 emission reduction target that takes into consideration our domestic and international climate commitments and can be used as a policy and decision-making tool when addressing the questions of when and how much fossil fuel development should be permitted on federal land.

³¹ The Order clearly notes the tension between international emissions reduction pledges and the carbon emissions resulting from federal coal. See SO 3338, p 4.

3. Support for conceptual framework for a “carbon budget.”

The concept of a carbon budget builds upon the well-established scientific understanding that the global increase in temperature due to greenhouse gas emissions must be capped at or below 2-degree C to avoid unmanageable climate change consequences. The 2-degree C threshold was first enshrined in the 2009 Copenhagen Accord³² and reaffirmed in the 2015 Paris Agreement as the limit for “acceptable” warming.³³

During that time, the international scientific community’s understanding of the interaction between fossil fuel development and temperature thresholds has greatly increased, and today it is widely agreed that development of additional reserves should be considered in the context of warming goals—giving rise to the idea of a carbon budget for the planet. In fact, this notion has been assessed and supported by the IPCC in all assessment reports going back to 1990 and has yielded a methodology routinely employed and updated annually by the Global Carbon Project.³⁴

The IPCC’s analytic method was further advanced in January 2015 in a paper published in the scientific journal *Nature* entitled “The geographical distribution of fossil fuels unused when limiting global warming to 2 degrees C.”³⁵ The study evaluates known fossil fuel reserves to determine, based on current emissions factors and global warming potential, how much should be left in-place to maximize the planet’s chances of remaining below 2 degrees C. Importantly, it quantifies the regional distribution of known fossil-fuel reserves and resources and, through modeling a range of scenarios based on least-cost climate policies, identifies geographically-specific resources that should not be burned between 2010 and 2050 to ensure the world stays

³² Copenhagen Accord ¶ 1, *agreed* Dec. 18, 2009, FCCC/CP/2009/11/Add.1, *available at* <http://unfccc.int/resource/docs/2009/cop15/eng/11a01.pdf> (“recognizing the scientific view that the increase in global temperature should be below 2 degrees Celsius” relative to pre-industrial temperatures to “stabilize greenhouse gas concentration in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system”); *id.* at ¶ 2 (agreeing that “deep cuts in global emissions are required according to science” to meet this goal).

³³ The United States and other signatory nations committed to reducing greenhouse gas emissions “well below 2 °C above pre-industrial levels and to pursue efforts to limit the temperature increase to 1.5 °C above pre-industrial levels.” Paris Agreement art. 2, ¶ 1(a), *adopted* Dec. 12, 2015, FCCC/CP/2015/L.9, *available at* <http://unfccc.int/resource/docs/2015/cop21/eng/109r01.pdf>. The authority cited in the letter is being provided via regulations.gov and it should be included in the administrative record for this decision.

³⁴ The IPCC has produced and reviewed a carbon budget for the planet in all assessment reports (Ciais et al., 2013; Denman et al., 2007; Prentice et al., 2001; Schimel et al., 1995; Watson et al., 1990), as well as by others (e.g. Ballantyne et al., 2012). These assessments included carbon budget estimates for the decades of the 1980s, 1990s (Denman et al., 2007) and, most recently, the period 2002–2011 (Ciais et al., 2013). The IPCC methodology has been adapted and used by the Global Carbon Project (GCP, www.globalcarbonproject.org), which has coordinated a cooperative community effort for the annual publication of global carbon budgets up to the year 2005 (Raupach et al., 2007), 2006 (Canadell et al., 2007), 2007 (published online; GCP, 2007), 2008 (Le Quéré et al., 2009), 2009 (Friedlingstein et al., 2010), 2010 (Peters et al., 2012b), 2012 (Le Quéré et al., 2013; Peters et al., 2013), 2013 (Le Quéré et al., 2014), and most recently 2014 (Friedlingstein et al., 2014; Le Quéré et al., 2015). Each of these papers updated previous estimates with the latest available information for the entire time series. From 2008, these publications projected fossil fuel emissions for one additional year using the projected world gross domestic product (GDP) and estimated trends in the carbon intensity of the global economy (Rogelj, 2016).

³⁵ McGlade, Christophe and Paul Ekins, *The Geographical Distribution of Fossil Fuels Unused When Limiting Global Warming to 2 °C*, 517 *Nature* (187) (2015).

within a 2-degree C limit in the most cost-efficient manner.³⁶ This study demonstrates two important facts: first, one way in which geographically-specific analysis can be undertaken to make comparative judgments about the appropriateness of tapping into different resources and plays, and, second, that policy priorities can be brought into such an analysis—in McGlade et al it was cost-efficiency, but priorities like land use intensity, water demand, or impact on sensitive resources could as well. In addition to being the analytic source of ignition for the self-proclaimed “Keep it in the Ground” movement, the paper spawned a number of related inquiries looking at modified scenarios and derivative analysis examining U.S. demand scenarios in the specific context of already-leased federal fossil energy resources.³⁷ Attachment 1 provides a fuller discussion of the literature.

Reaching international climate commitments, including the Paris Agreement goals, will require the U.S. to adopt measures that reduce the GHG associated with production of fossil fuels on public lands in addition to efforts to reduce GHG from power plants and fuel efficiency for vehicles.³⁸ Nearly all other significant federal activities have had GHG reduction targets set for them (see Appendix 1)—it is time to put a similar set of performance targets in place for federal fossil energy leasing and production. As described below, it also will require measures that phase down the supply of fossil fuels from federal lands starting with the coal PEIS.

4. Methodologies exist for developing a “carbon budget” for fossil energy from federal lands.

We propose that the BLM develop a carbon budget for all fossil fuels produced from public lands, and derive from that analysis a coal-specific target.

As contemplated in the Federal Register notice announcing the preparation of the PEIS for the coal program, the BLM can better align leasing and production decisions with national climate change commitments by establishing (as a matter of policy) targets – a so-called “budget” – for the amount of federal coal production and desired additional leasing over a specified time period that would be consistent with current reduction targets. 81 Fed. Reg. at 17,727. This “budget” would effectively determine a production curve and leasing schedule that is consistent with U.S. climate goals and commitments, honors valid existing rights, and better anticipates the future market demand for coal in an increasingly carbon-constrained economy.

As discussed elsewhere in these comments, the BLM is clearly required to measure, evaluate and fully consider the GHG emissions and climate change impacts of the federal coal program in the PEIS based on a number of policies of the BLM and other agencies, and even the President. NEPA also requires the BLM to fully consider climate change issues in the PEIS. This analysis must inform BLM’s requirements to avoid, minimize and compensate for these impacts consistent with this country’s climate change commitments, specifically the requirement to reduce emissions by 26 to 28 percent below 2005 levels by 2025. This analysis and decision-

³⁶ See *id.* at 187-90.

³⁷ CEA 2016, Vulcan/ICF 2016, Erickson and Lazarus 2016, and Fulton, Kaplow, Capalino, and Grant 2016.

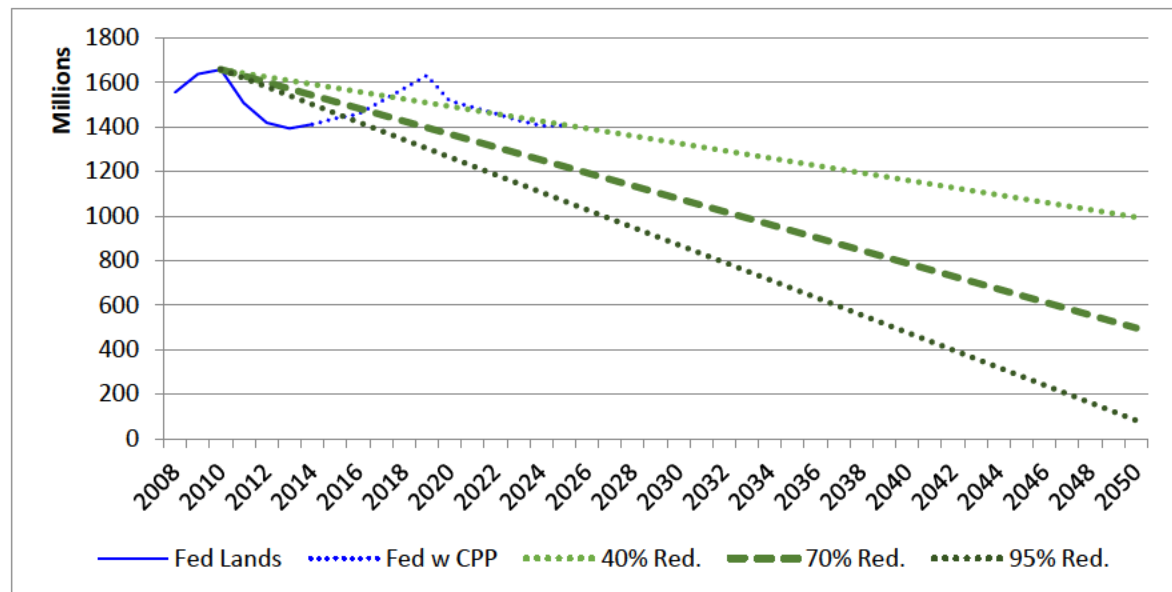
³⁸ 80 Fed. Reg. 64,662 (Oct. 23, 2015) (existing power plants); 80 Fed. Reg. 64,510 (Oct. 23, 2015) (new power plants); 77 Fed. Reg. 62,624 (Oct. 15, 2012) (light-duty vehicles); 76 Fed. Reg. 57,106 (Sept. 15, 2011) (medium- and heavy-duty vehicles).

making should seek to achieve a no more than 2 degrees C temperature increase, which will require the U.S. to reduce emissions an average of 70 to 80 percent below 2000 levels by 2050. This will require that a carbon budget be developed that limits carbon emissions from federal energy development to below 500m metric tons CO₂e by 2050.

Determining a “carbon budget” involves addressing a number of complicated factors including time horizon, target temperature, role of land use change, units, short-term climate pollutant emissions (like methane), aerosol emissions, climate sensitivity, and probability of success. Nevertheless, the approach is increasingly in use and a growing community of practice has demonstrated that such an approach is possible to calculate for federal lands.

For example, we at The Wilderness Society followed a common approach using publicly-available data.³⁹ We determined that that lifecycle federal emissions should be less than 500 million metric tons carbon dioxide equivalent (MTCO₂e) by 2050—which will require at least a 70 percent reduction in emissions from all fossil energy resources. Direct (sometimes called “upstream”) emissions must fall at least to 25 million MTCO₂e to stay within the “carbon budget” for public lands as a share of total U.S. national emissions.

Table 1: TWS Analysis of Federal Lifecycle CO₂e Compared to IPCC 2°C and 1.5°C Reduction Goals



We provide the results from our assessment of a “carbon budget” for federal lands to illustrate that such an exercise can be conducted with available data provided key assumptions are disclosed, and encourage BLM to prepare its own analysis utilizing a similar approach. From there, BLM can create a coal target based on coal’s projected future share of federal fossil energy

³⁹ This analysis will be detailed in a forthcoming whitepaper that presents our results, calculations, and highlights key assumptions and provides links to data elements. We will provide that information as supplemental comment and, as appropriate, incorporate it herein by reference.

production and/or CO₂e emissions.⁴⁰ We recommend the agency focus on simply scenarios, rather than complex models, to establish leasing targets based on a “carbon budget” analysis. A scenario-based approach was used by the Carbon Tracker Initiative in determining a critical input (future demand for Powder River Basin coal under a 2-degree scenario) used in their recent report reviewing the necessity of future federal coal leasing.⁴¹ This approach should be closely examined by the agency for potential use in establishing a coal production target under a fossil energy “carbon budget” for the Department. We will explore this and alternative methods more fully in our forthcoming whitepaper.

5. Incorporating budgets into a carbon management system.

We further recommend integrating the results of these analyses into a “carbon management system” at the Department-level for all fossil fuel energy including oil, gas and coal. A key element of this approach is tracking and disclosing emissions to measure progress and ensure accountability. And this system would also develop emissions reduction targets in accordance with national and international climate commitments as a basis for ensuring alignment, identifying new reduction opportunities and making future leasing determinations.

The carbon budget analysis serves as the basis for setting these targets, and would be used to inform decision making by the agency as part of a carbon management system. It could also be used when evaluating new policies, in NEPA processes or to dictate actual leasing decisions. While a carbon budget should be developed for all energy resources on federal lands, we believe that applying this concept to the coal leasing program is a logical starting point presented by the PEIS. The coal budget (measured in terms of CO₂e) will provide a target for the agency to stay below when making leasing decisions. The agency could consider how each new lease impacts the budget and, while a more robust system could be used to construct a firm limit or “hard cap” in the future, we recommend the budget be used to develop “soft targets” to guide decisions in the near term. Thus, we envision the coal budget playing an integral role in the agency’s determination of what, where and how much coal will be made available for lease. It should be incorporated into the proposed leasing process described in Section IV.H above.

6. Benefits of using a carbon management system.

This framework could provide great benefit for managers and stakeholders alike. A well-designed carbon management system based on a carbon budget for public lands would:

- Raise the profile of GHG emissions reductions within federal land management agencies responsible for overseeing development of public-owned energy assets by setting targets and creating accountability for making progress toward those targets;
- Enable development of a clear, sensibly devised emissions reduction profile for the long term which would provide direction and predictability to business and policy makers;
- Provide a structure for regular monitoring and review of targets;
- Underscore the necessity of accurate data and metrics based on strong science;

⁴⁰ This determination is based on scenario modeling and therefore will require the agency to be transparent with its methods.

⁴¹ Fulton 2016.

- Provide flexibility for achieving reductions in different aspects of federal land management over time.
- When used in conjunction with coal leasing, this could increase competition in the bidding process and incentive development of high potential/economically viable areas. It could also reduce the amount of speculative leasing and possibly lead to operators giving up leases they currently hold in low potential or economically unfavorable areas for alternative parcels.

7. Legal authority.

As discussed repeatedly in these comments, there is no doubt the BLM has the legal authority to pursue development of a coal budget and a carbon budget. This authority is provided under the MLA, FLPMA, and NEPA. These responsibilities are reiterated in the CEQ NEPA regulations as well as the BLM's federal coal regulations, as also discussed in numerous parts of these comments. A review of the most significant sources of this legal authority is set out in Section IX.A. and IX.B. of these comments. The BLM should recognize its authority—and indeed responsibility—and pursue development of a carbon budget and a coal budget.

8. Additional considerations.

We believe the carbon management system and coal budget are an important component of our overall recommendations for reducing the climate impacts from the federal coal program through this reform. That said, we understand that questions may arise regarding implementation of our recommendations - most importantly, the question of how compensatory mitigation might impact the budget.

As described above, the goals of the coal budget are to track and ultimately reduce emissions from the coal program to ensure that it is consistent with national climate goals and policies. The issue some might raise is that under our budget proposal, a new coal lease and the associated CO₂e emissions would count against the overall budget, which again, in and of itself, is intended to reduce climate impacts; at the same time, we propose compensatory mitigation requirements for new leases that may include offsets for greenhouse gas emissions and/or actions to support adaptation for the climate change impacts caused by the increased emissions.

In order to address this, it is important to understand how the budget interacts with the mitigation hierarchy. The hierarchy consists of avoidance, minimization and offsets/compensatory mitigation; the hierarchy must be pursued in that order to address potential impacts from a particular action (*See* Sections V and VI.F for additional discussion of mitigation in the broader context of the PEIS).

The carbon budget should be thought of as an avoidance mechanism or strategy. The goal of the budget is to reduce or “avoid” greenhouse gas emissions. In other words, individual actions or decisions, like the decision to lease additional coal, should always count against the budget because the budget in and of itself is part of the agency's strategy for reducing greenhouse gas emissions from the federal coal program.

This approach will also allow BLM track all emissions under the carbon/coal budget for inventory and recordkeeping purposes. Meaning regardless of compensatory mitigation, the agency can keep an emissions inventory showing total potential CO₂e emissions from producing, existing and new leases.

In addition to tracking and managing towards the overall coal emissions budget when considering new leases, the BLM should also require compensatory mitigation for new leases to address their specific impacts, including greenhouse gas emissions and associated climate change impacts. This approach is analogous to BLM's approach to mitigation under the sage grouse plans. There, the agency established regional surface disturbance caps and requirements that developers demonstrate a net benefit to grouse populations through implementation of compensatory mitigation. Under the grouse plans, while BLM may authorize impacts in areas that have not exceeded the disturbance cap, those impacts count against the cap *and* mitigation for the impacts is still required to demonstrate a net benefit to grouse. A similar approach is appropriate here.

Recommendations: BLM should develop a carbon budget and carbon management system for fossil fuels on public lands modeled after the analysis done by The Wilderness Society. Using the carbon budget, BLM should create a coal budget that will be used as a soft target and decision making tool. The budgets and carbon management system should play an integral role in the leasing process as proposed in Section IV.H. When considering new leases BLM should measure and manage toward the budget as well as requiring compensatory mitigation for the GHG emissions and climate change impacts new leases would cause.

E. BLM Must Ensure that the PEIS Addresses Mitigation for Climate Impacts Consistent with all Relevant Laws and Policies, including Current Mitigation Guidance

1. Consistent with the mitigation hierarchy, BLM must avoid, minimize and mitigate impacts from the federal coal program, including climate change impacts.

As discussed above, BLM has significant obligations and authority related to mitigation. Mitigating climate-related impacts includes avoiding and minimizing generation of GHG emissions, including protecting intact lands and applying management prescriptions to reduce emissions and harm to carbon sinks. However, there are acknowledged, serious and unavoidable climate impacts for the United States and the entire planet from the federal coal program, including upstream impacts from coal exploration and development and downstream impacts from coal transportation and combustion. The full lifecycle GHG emissions from federal coal accounted for 10 percent of the total U.S. GHG emissions in 2012.

In addition to the legal and policy direction that requires mitigation for climate impacts from the federal coal program and provide the agency with ample discretion to require mitigation, it is important to underscore that as a land manager, the federal government is facing huge and rapidly escalating costs to address the impacts caused by fossil-fuel driven climate change. Forest fires, widespread drought, rising sea levels, spread of invasive species and spread of disease already result in significant costs to the federal government, and each new coal lease the BLM authorizes increases these problems and the associated costs. Research from the University

of Vermont's Gund Institute for Ecological Economics and The Wilderness Society suggests that total costs in degraded ecosystem services could exceed \$14.5 billion annually under a 2-degree C warming scenario.⁴² These costs are ultimately borne by all American taxpayers, and BLM has a responsibility to recoup these costs when it makes decisions authorizing activities that directly cause these impacts and associated costs.

2. The programmatic nature of the Coal PEIS makes it the appropriate place to analyze and set up a framework to address climate impacts through mitigation.

Despite the clear requirements (discussed in detail above) that BLM analyze climate impacts from its decisions, BLM has to-date mostly failed to complete such analyses, arguing that, "... because the current state of climate science prevents the association of specific actions with specific climate-related effects, the BLM can neither: (a) Analyze the climate-related effects of BLM actions nor (b) Ascribe any significance to these potential effects." See, e.g., BLM Presentation *Incorporating Climate Change into BLM Planning and NEPA Processes*.⁴³ The agency has pointed to⁴⁴ CEQ's Draft Guidance emphasizes the "rule of reason" which, "... ensures that agencies are afforded the discretion, based on their expertise and experience, to determine whether and to what extent to prepare an analysis based on the availability of information, the usefulness of that information to the decision-making process and the public, **and the extent of the anticipated environmental consequences.**" CEQ Draft Guidance, page 5 (emphasis added). In particular, BLM has pointed to instruction in the Draft Guidance with regard to the extent of the anticipated environmental consequences directing agencies to "... consider both the context and the intensity." CEQ Draft Guidance, page 10.

This argument is specious at best and, as discussed above, has been rejected by the CEQ in its Climate Change NEPA Guidance report and increasingly by the courts. As detailed above, BLM is required to analyze these effects. There are existing, widely available science-based tools for doing so. And the GHG emissions and climate impacts from individual coal can and must be measured, and then commensurate mitigation actions taken. Moreover, the Draft Guidance clearly states that, "[i]t is essential . . . that federal agencies not rely on boilerplate text to avoid meaningful analysis, including consideration of alternatives or mitigation."

Regardless, because of the anticipated environmental consequences resulting from the entirety of the federal coal leasing program for the duration of the study period, the Coal PEIS is both an appropriate vehicle and a necessary context in which to analyze these emissions, and design a

⁴² See Esposito, Valerie; Phillips, Spencer; Boumans, Roelof; Moulaert, Azur; Boggs, Jennifer. 2011. "Climate change and ecosystem services: The contribution of and impacts on federal public lands in the United States." In: Watson, Alan; Murrieta-Saldivar, Joaquin; McBride, Brooke, comps. *Science and stewardship to protect and sustain wilderness values: Ninth World Wilderness Congress symposium*; November 6-13, 2009; Merida, Yucatan, Mexico. Proceedings RMRS-P-64. Fort Collins, CO: U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station. p. 155-164. Available at http://www.fs.fed.us/rm/pubs/rmrs_p064.pdf? (accessed July 23, 2016).

⁴³ Available at:

http://www.blm.gov/style/medialib/blm/wo/Planning_and_Renewable_Resources/presentations.Par.2279.File.pdf/Incorporating_Climate_Change_into_Planning_and_NEPA_Documents.pdf

⁴⁴ E.g., see BLM Protest Resolution notification 3100 (MT9221.AG), April 18, 2016. Available at http://www.blm.gov/style/medialib/blm/mt/blm_programs/energy/oil_and_gas/leasing/lease_sales/2016/may4_2016.Par.26452.File.dat/May%204%202016%20protest%20response%20%204-18-2016.pdf (accessed July 24, 2016).

framework for addressing mitigation. As discussed above, the programmatic nature of this PEIS makes it even more appropriate and important for BLM to measure and address these impacts as part of the PEIS. Though GHG emissions and climate impacts from individual coal leases may be small, their cumulative impacts are enormous, with full lifecycle emissions accounting for ten percent of all US GHG emissions. While downstream emissions, from use of coal, may be more attenuated than upstream emissions from exploration and production, BLM can and should evaluate and estimate these impacts, then develop commensurate mitigation requirements.

3. BLM should develop a compensatory mitigation framework for addressing unavoidable climate impacts in its draft alternatives.

For unavoidable climate change impacts associated with leasing and development of coal resources, BLM should develop a framework in the PEIS that can be used for the entire program. We will be releasing a longer whitepaper going into greater detail on key design considerations and operational elements in August 2016 and will provide as supplemental comment. In the meantime, this letter spells out the basic framework.

To establish this framework, BLM must quantify through the PEIS the GHG emissions using the tools described in Section VI.C, and analyze the climate impacts associated with these GHG emissions using the tools described in Section VI.D.

The BLM should establish in the Record of Decision as a matter of policy that the agency will require compensatory mitigation to offset the climate impacts of federal coal leasing and production. The same tools should be required to be used for future lease-level analysis with guidance for field staff on how to apply them. The estimated impacts resulting from the analysis represent unavoidable climate impacts that should be addressed through compensatory mitigation.

As part of the compensatory mitigation policy, the BLM should initiate a regional mitigation strategy/plan for key coal leasing areas that addresses all impacts include climate. BLM should consider several key design features that should be spelled out in the ROD:

- *BLM should consider compensatory mitigation actions that offset the climate impacts associated with the emissions attributable to the leased coal in question, and that offset the carbon emissions themselves.*

Quantifying impacts is becoming increasingly more practical, and the science connecting impacts to temperature changes increasingly more precise. The practice of arriving at a mitigation fee at a lease level can be challenging, but real harm will be felt by human and natural communities. Compensatory mitigation funds can be directed at enhancing the adaptive capacity of human and natural communities in the affected landscape to improve their health and resilience in the face of expected change. Offsetting actions can include investments in land protection, restoration or rehabilitation. They can also include payments to communities to assist with a transition away from coal-dependent regional economy.

Significant opportunity also exists to offset the GHG emissions themselves. EPA has repeatedly urged land management agencies to assess carbon offsets in EAs and EISs as a way to reduce

climate change impacts of agency actions. EPA has specifically noted that offsets are a reasonable alternative to lessen the impacts of coal mine methane emissions. In a 2007 letter concerning a proposal to permit MDWs at the West Elk Mine, EPA specifically rejected the Forest Service's assertion that a carbon offset alternative was not reasonable: "[I]t is reasonable to consider offset mitigation for the release of methane, as appropriate. Acquiring offsets to counter the greenhouse gas impacts of a particular project is something that *thousands of organizations, including private corporations, are doing today*."⁴⁵ EPA specifically recommended that the Forest Service's Lease Modifications EIS "acknowledge that revenues for carbon credits are available via several existing markets."⁴⁶ Similarly, EPA has recommended that a Forest Service NEPA analysis of a forest health project "discuss reasonable alternatives and/or potential means to mitigate *or offset* the GHG emissions from the action."⁴⁷ Numerous state agencies already use offsets to control GHG emissions.⁴⁸ Offsets can include participation in third-party offset markets or renewable energy credits.

The potential for federal participation in an offsets program is well demonstrated by actions that have been taken relative to emissions from the Navajo Generating Station in Arizona to comply with Clean Air Act requirements pursuant to EPA's regional haze rules. There, in agreement with state, federal, tribal and NGO participants, the DOI has committed to reduce or offset federal carbon dioxide emissions by three percent annually for a total of 11.3 million metric tons of emissions reductions by the end of 2031.⁴⁹ This is intended to reduce carbon dioxide emissions and demonstrate the workability of a credit-based system to achieve carbon dioxide emission reductions. In addition, the DOI has committed to facilitating development of Clean Energy Projects intended to achieve eighty percent generation of clean energy for the federal share at the Navajo Generating Station by 2035 by securing over twenty-six million megawatt hours in Clean Energy Development Credits.⁵⁰

Knowing that not every option may be available in all instances, the BLM should specify the priority order for investment amongst the several options. We recommend every effort be taken to offset the carbon emissions from the coal program.

- *BLM should attempt to address the full scope of lifecycle emissions through compensatory mitigation – that is, production, transport and combustion.*

The premise of compensatory mitigation is to address unavoidable harm. In the case of federal coal, the harm is significant and primarily attributable to end-use combustion. The BLM should

⁴⁵ Letter of L. Svoboda, EPA to C. Richmond, Forest Service (Aug. 7, 2007) at 7 (emphasis added).

⁴⁶ EPA July 2012 Comment Letter (Ex. 29) at 5 (identifying four U.S. carbon exchanges creating a market for carbon credits).

⁴⁷ Letter of L. Svoboda, EPA, to T. Malecek, USFS, at 8 (Oct. 27, 2010).

⁴⁸ See, e.g., Settlement Agreement, ConocoPhillips and California (Sept. 10, 2007) (California agency requiring offsets as a condition of approving a project), attached as Ex. 46; Minn. Stat. § 216H.03 subd. 4(b) (Minnesota law requiring offsets for certain new coal-fired power plants); Me. Rev. Stat. Ann. tit. 38, § 580-B(4)(c) (Maine law establishing greenhouse gas initiative that includes the use of carbon offsets).

⁴⁹ See https://www.doi.gov/sites/doi.gov/files/migrated/upload/7-25-2013-NGS-TWG-Agreement-FINAL_Executed.pdf (presenting the Technical Work Group Agreement Related to Navajo Generating Station (NGS)).

⁵⁰ *Id.*

make every effort to address this but at least establish a regime capable of addressing the direct emissions that could be avoided or minimized by regulatory action.

- *BLM should specify whether compensatory mitigation should be paid on an annual basis or paid up front.*

In lieu fees collected for compensatory mitigation are often paid in lump sum at the beginning of a project's operational life. In the case of climate impacts, it may make more sense to consider an annual payment on the basis of production, or an annualized payment schedule based on expected production with corrections on a semi-annual basis. By spreading payments over the life of the project (and tying them to when the impacts actually occur), the system should be both fairer to producers and truer to the spirit of mitigation.

- *BLM must ensure mitigation actions are additional—that is, result in actions that add real, verifiable carbon savings or other benefit—and durable—that is, the conservation benefit lasts for at least a period of time commensurate with the duration of the impact itself.*

This is an established principle for the Department's approach to mitigation but is particularly important with regard to climate impacts. For example, the Australian Government's Climate Change Authority found that, "Assessing additionality is a key feature of all baseline and credit schemes. An additionality test assesses whether a project or activity creates 'additional' emissions reduction that would not have occurred in the absence of the incentive. The baseline for the project assesses how much emissions have been reduced. Additionality is important to ensure that a baseline and credit scheme does not pay for emissions reductions that would have occurred anyway."⁵¹

- *BLM should specify when mitigation terms apply to existing leases.*

Mitigation terms should be applied as broadly and comprehensively as possible. With regard to climate impacts, so much coal is under lease that simply limiting a compensatory mitigation approach to future new leasing will do little to address the climate harms known to result from leasing and production of federal coal. The BLM should look at a transparent and fair method to incorporate these requirements when significant modifications are sought for existing leases, as well as ensuring new leases include these provisions.

F. BLM Should Evaluate Addressing Externalities Associated with Carbon Emissions Resulting from Leasing and Production of Federal Coal Through Royalty Rates or Additional Fees.

Another approach to managing the carbon emissions associated with the Federal Coal Program is by addressing the costs borne by society due to federal coal leasing and production through economic tools designed to ensure that taxpayers receive a fair return. Referred to by some as a

⁵¹ See <http://www.climatechangeauthority.gov.au/reviews/carbon-farming-initiative-study/additionality>

carbon adder, such an approach increases the price paid to the federal government for the use of federal coal to reflect some or all of its climate costs (*i.e.*, climate externality).⁵² Some have argued that such an adder could be incorporated into the existing bonus bid, rents, or royalty paid on federal coal sales because it offers the administratively simplest and most efficient strategy, and because of the potential for states and communities impacted by reductions in coal mining to receive a portion revenue generated by the adder even as coal production declines.⁵³ An adder could be set at a price to address emissions associated with lifecycle emissions of federal coal or just the direct (upstream) emissions of from coal mining.⁵⁴ Fully incorporating the lifecycle costs would potentially result in a very large price increase, but could be phased in.⁵⁵ Another approach would be for DOI to initially apply an upstream (direct) carbon adder for all fossil production, including coal, as part of the royalty rate. In a forthcoming paper, we will demonstrate in more detail how this approach has myriad benefits, including market flexibility so that least cost options will be made, clearly under the purview of DOI and BLM, more straightforward and transparent than a lifecycle cost, increases taxpayer fairness by beginning to internalize externalities and increasing state and federal revenue, is complimentary to leasing reform. Lastly, “The statutory case for a BLM coal pricing initiative appears to be stronger than the case against it since BLM is required to consider the environment when making multiple use decisions for public land. BLM’s leasing statutes also appear to afford the agency a significant amount of discretion to set the financial terms of coal leases.”⁵⁶

Recommendations: BLM should consider adjusting bonus bids, rents, and royalties to address the associated externalities (a so-called “carbon adder”) as a pathway to meeting its goals to reduce climate emissions from the federal coal program consistent with national climate commitments.

G. BLM Can Also Directly Regulate Climate Emissions.

BLM also has the authority—and we believe the obligation—to reduce climate emissions from the federal coal program through regulation. The PEIS should examine and advance regulations to reduce the emissions of methane and other greenhouse gases from coal mining operations. BLM has already taken steps in this direction with an advance notice of proposed rulemaking to regulate methane that is released as a direct results of mining operations, known as waste mine

⁵² A.J. Krupnick et al., “Putting a Carbon Charge on Federal Coal: Legal and Economic Issues”, Resources for the Future Discussion Paper 15---13, 2015, Washington, DC: RFF. Available at <http://www.rff.org/files/sharepoint/WorkImages/Download/RFF-DP-15-13.pdf>. Last accessed, July 22, 2016.

⁵³ Krupnick et al.; T. Gerarden, W. Spencer Reeder, and J. Stock, “Federal Coal Program Reform, the Clean Power Plan, and the Interaction of Upstream and Downstream Climate Policies,” April 2016. Available at http://scholar.harvard.edu/files/stock/files/fedcoal_cpp_v9.pdf. Last accessed July 22, 2016. Note that under existing law, the government’s authority to share revenue collected from federal coal leasing and production is limited. See Baldwin, Pamela. 2010. “Fair Market Value for Wind and Solar Development on Public Land.” Whitepaper commissioned by The Wilderness Society and Taxpayers for Common Sense. Pages 21-24. Available at <https://wilderness.org/sites/default/files/Fair-Market-Value-Whitepaper.pdf> (accessed July 26, 2016).

⁵⁴ For an in-depth look at the distinction between lifecycle and direct (upstream) emissions, see Burger, Michael and Wentz, Jessica. 2016. “Downstream and Upstream Greenhouse Gas Emissions: The Proper Scope of NEPA Review.” Forthcoming working paper.

⁵⁵ Krupnick et al.

⁵⁶ Krupnick, et al. p. 3.

methane. BLM should move forward with the Coal Mine Waste rule and, through the PEIS, examine other rules to reduce greenhouse gas emissions from coal mining operations.

1. Reducing methane emissions from public lands is important.

According to BLM, emissions of methane make up nearly nine percent of all the greenhouse gas emitted as a result of human activities in the United States. Since 1990, methane pollution in the United States has decreased by eleven percent, even as activities that can produce methane have increased. However, methane pollution is projected to increase to a level equivalent to over 620 million tons of carbon dioxide pollution in 2030 absent additional action to reduce emissions. BLM recognized that “[r]educing methane emissions is a powerful way to take action on climate change.”⁵⁷ Although methane emissions from coal mines account for only about 6.3 percent of the total lifecycle emissions for coal used to produce electricity,⁵⁸ an analysis by The Wilderness Society suggests that implementation of the Mine Methane Waste Rule could reduce direct emissions from the federal coal program by an estimated 2.4 million MT_{CO2e}.⁵⁹

2. BLM has the authority to regulate methane emissions from coal mining.

In 2014, the BLM issued an Advance Notice of Proposed Rulemaking to reduce methane from mining operations on public lands.⁶⁰ BLM cited its authority for regulation methane waste: “The authority for the BLM to address the capture, use, or destruction of waste mine methane across 700 million acres of Federal mineral estate comes from the Mineral Leasing Act.”

The ANPR also recognizes that methane is emitted “not only from underground coal mines, but also from active surface coal mines and post-mining operations, as well as abandoned or closed underground coal mines.”⁶¹ BLM should consider regulations to reduce emissions from these sources as well.

Recommendations: The BLM should examine and advance regulations to reduce the emissions of methane and other greenhouse gases from coal mining operations, both underground and surface operations. Unless and until those regulations are complete, the BLM should immediately consider other options to offset these emissions or otherwise address the associated climate impacts.

⁵⁷ From BLM to Examine Steps to Reduce Methane from Mining Operations on Public Lands, at http://www.blm.gov/ut/st/en/info/newsroom/2014/april/blm_to_examine_steps.html.

⁵⁸ Whitaker et al., Harmonization of Coal Life Cycle GHG Emissions, Yale University, 2012. <http://onlinelibrary.wiley.com/doi/10.1111/j.1530-9290.2012.00465.x/pdf>

⁵⁹ Ratledge, Nathan. Unpublished analysis of carbon emissions reduction potential of current and proposed rules at the Department of the Interior and related agencies. October 2015. Available upon request.

⁶⁰ Waste Mine Methane Capture, Use, Sale, or Destruction, A Proposed Rule by the Bureau of Land Management on April 29, 2014, 79 FR 23923, RIN 1004-AE23. <https://www.federalregister.gov/articles/2014/04/29/2014-09688/waste-mine-methane-capture-use-sale-or-destruction>.

⁶¹ *Id.*

VII. BLM SHOULD CONSIDER A ROBUST RANGE OF ALTERNATIVES TO ADDRESS THE COMPLEX CONSIDERATIONS IN THE PEIS.

A. BLM Should Develop a Broad Range of Alternatives That Considers Avoiding Environmental Harm and Supporting Conservation.

The range of alternatives is “the heart of the environmental impact statement.” 40 C.F.R. § 1502.14. NEPA requires BLM to “rigorously explore and objectively evaluate” a range of alternatives to proposed federal actions. *See* 40 C.F.R. §§ 1502.14(a) and 1508.25(c).

NEPA’s requirement that alternatives be studied, developed, and described both guides the substance of environmental decision-making and provides evidence that the mandated decision-making process has actually taken place. Informed and meaningful consideration of alternatives -- including the no action alternative -- is thus an integral part of the statutory scheme.

Bob Marshall Alliance v. Hodel, 852 F.2d 1223, 1228 (9th Cir. 1988), *cert. denied*, 489 U.S. 1066 (1989) (citations and emphasis omitted).

An agency violates NEPA by failing to “rigorously explore and objectively evaluate all reasonable alternatives” to the proposed action. *City of Tenakee Springs v. Clough*, 915 F.2d 1308, 1310 (9th Cir. 1990) (quoting 40 C.F.R. § 1502.14). This evaluation extends to considering more environmentally protective alternatives and mitigation measures. *See, e.g., Kootenai Tribe of Idaho v. Veneman*, 313 F.3d 1094, 1122-1123 (9th Cir. 2002) (and cases cited therein); *see also Env’tl Defense Fund., Inc. v. U.S. Army Corps. of Eng’rs*, 492 F.2d 1123, 1135 (5th Cir. 1974); *City of New York v. Dept. of Transp.*, 715 F.2d 732, 743 (2nd Cir. 1983) (NEPA’s requirement for consideration of a range of alternatives is intended to prevent the EIS from becoming “a foreordained formality.”); *Utahns for Better Transportation v. U.S. Dept. of Transp.*, 305 F.3d 1152 (10th Cir. 2002), *modified in part on other grounds*, 319 F.3d 1207 (2003); *Or. Env’tl. Council v. Kunzman*, 614 F.Supp. 657, 659-660 (D. Or. 1985) (stating that the alternatives that must be considered under NEPA are those that would “avoid or minimize” adverse environmental effects).

In recent cases, courts have found NEPA violations based on an agency’s failure to evaluate a conservation-oriented alternative. *See, e.g., New Mexico v. BLM*, 565 F.3d 683, 710-711 (10th Cir. 2009) (Alternative considering closing Otero Mesa to oil and gas leasing must be considered as part of oil and gas amendment to governing land use plan); *Colorado Environmental Coalition v. Salazar*, 875 F.Supp.2d 1233, 1249-1250 (D.Colo. 2012) (BLM required to consider community alternative protecting Roan Plateau from surface disturbance). Accordingly, the BLM should consider a range of alternatives that includes protecting other resources and values in developing alternatives in the Coal PEIS.

Further, the BLM should fully evaluate a true range of alternatives, rather than setting up alternatives that are at far ends of a spectrum with one “compromise.” An agency violates its obligation to consider a reasonable range of alternatives and to take NEPA’s hard look at environmental impacts when it only looks at “straw men” for comparison, which the agency has

no intention of accepting and are put forth only to lead to the agency's already foregone conclusion. *See, e.g., California v. Block*, 690 F.2d 753 (9th Cir. 1982); *Blue Mountains Diversity Project v. U.S. Forest Service*, 229 F.Supp.2d 1140 (D.Or. 2002); *Oregon Natural Desert Association v. Singleton*, 47 F.Supp.2d 1182 (D.Or. 1998). In the context of the Coal PEIS, there are a variety of issues to be addressed and tools to be considered that merit a range of alternatives that is both broad in terms of options and deep in terms of the level of analysis completed. This will provide the agency with a thorough range of options from which to develop its final PEIS.

B. BLM Should Evaluate a Range of Tools to Achieve Climate Goals.

A goal of the PEIS is to reduce climate emissions from the federal coal program consistent with national climate commitments. To achieve that goal, the BLM should establish a reduction target for public lands of at least 70% by 2050 and create a measurement protocol for federal lands emissions, regularly disclosing progress towards meeting that target and developing new policies that yield reductions. There are several policy pathways that lead towards meeting this goal, which can be applied in a manner that is fair, efficient and consistent with existing laws, as discussed in detail above. A range of alternatives will give the agency the opportunity to evaluate a variety of approaches and ultimately incorporate the best elements into this final PEIS.

Consequently, we recommend that BLM develop alternatives that evaluate the suite of policies that could be used to meet climate goals, including:

- Incorporating a carbon adder into the royalty rate for coal. While measurement and assessment of impacts from upstream emissions (from exploration and production) may be easier to quantify and downstream emissions (from transportation and combustion) may be more challenging because they are more attenuated, a carbon adder may be useful in one or both contexts by offering a straightforward approach and a mechanism to direct funding directly to states and local communities.
- Developing and applying mitigation measures consistent with the mitigation hierarchy, including compensatory mitigation requirements to offset climate impacts.
- Developing a carbon budget and management framework for all fossil fuels developed on federal lands that includes a targeted budget for coal. The budget should inform decisions made by the agency and could be used as a cap to limit future coal sales.
- Incorporating a range of tools to measure carbon emissions and impacts from those emissions, including those discussed above and others that may be under development.

C. BLM Should Evaluate a Range of Approaches to Meet Other Goals of Reforming the Coal Program.

In addition to a range of alternatives that includes a focus on reducing environmental impacts and methods to meet climate goals, BLM should evaluate a range of alternatives to meet the other goals of the PEIS, including:

- Developing a regional mitigation strategy for the Coal PEIS and/or developing regional mitigation strategies that are focused on high priority areas.

- Amending all affected plans or amending a set of priority plans where ongoing development and risks to communities are highest and setting up an approach for remaining plans.
- Incorporating transition approaches for affected communities that can be a set of common elements or tailored to specific regions or communities, or simply setting out priority areas where transition will be addressed.
- Evaluating use of royalty rates or mitigation or a combination thereof to address impacts to resources and communities.
- Eliminating LBA or incorporating LBA into a more proactively managed regional leasing program.
- Identifying opportunities to incentivize competition, which could include bidding on a set Btu of coal, or determining what role competition can play in other ways.
- Including a range of tools to ensure a fair return to taxpayers from the federal coal program. At a minimum this means identifying and ensuring fair market value for coal produced. It also includes evaluating the other public benefits that would be gained from contracting the coal program and considering whether and how royalty rates, bonding amounts and reclamation standards should be adjusted.

D. A Preliminary Range of Alternatives Should Be Set out in BLM’s Scoping Report, along with an Initial Purpose and Need.

An initial version of the broad range of alternatives should be defined in the report BLM will be producing regarding the scoping process and information gained to date. The scoping process will help to define the range of alternatives under consideration and these initial conclusions should be presented to the public. Similarly, the report can set out the agency’s initial approach to the purpose and need for the PEIS, which is a vital part of defining the range of alternatives.

Recommendations: Through this PEIS, the BLM can and should protect natural and cultural values through various management decisions, including by excluding or limiting certain uses of the public lands. *See*, 43 U.S.C. § 1712(e). Incorporating a robust range of alternatives to address the significant set of issues impacted by the Coal PEIS will require evaluating opportunities and tools to protect other resources, meet climate goals, and improve the fair return of the program as a whole. Setting out an initial purpose and need and range of alternatives in the scoping report will ensure that both the agency and stakeholders get the most benefit from the information provided through the scoping process. Developing a range of alternatives with sufficient breadth and depth will provide the best opportunities to arrive at the most effective set of reforms for the federal coal program.

VIII. PLANNING FOR A FUTURE WITH DECLINING COAL PRODUCTION.

Communities that are largely dependent on mining publicly-owned coal are already feeling the impacts of structural changes in the coal industry. Compared to 2008, coal production in the Powder River Basin was down by 19 percent in 2015, a decrease of nearly one-fifth in just eight years. Across EIA’s Western Region, where most federally-owned coal is located, over the same period coal mining jobs went from 15,177 down to 14,100, a seven percent decrease. Colorado

has lost roughly 320 coal mining jobs since January 2015, or 20 percent of jobs at mines.⁶² Workers and their families have borne the brunt of these changes, losing jobs, facing unmet healthcare needs and dealing with the emotional impacts of suffering dramatic changes to their lives and those of their neighbors.

Going forward, coal-dependent communities in the West will continue to experience declines in employment and revenue. EIA's *Annual Energy Outlook 2016* (AEO2016) reference case projects that coal production in the Western Region will fall by 155 million tons between 2015 and 2040.⁶³ These changes have occurred without any significant new policies or regulations specific to the federal coal program, driven by gains in productivity and loss of market share to natural gas and renewable energy.

The federal coal program should help communities become more resilient to the accelerating changes in the coal sector. A significant part of federal coal program reform and the PEIS should include taking action to address current job losses and mine closures and create more resilient economies in future.

A. Coal-dependent Communities.

In the West, some 45 mines with federal coal leases are spread across 27 counties in seven states.⁶⁴ The degree to which different counties and communities depend on coal varies, but all are reliant on coal mining for jobs, taxes, and federal royalties to a significant extent. Counties where coal-fired power plants are located at the mouth of the coal mine or where coal mines supply coal to only one nearby power plant are more economically dependent on the coal industry. Prime examples include Moffat and Routt Counties in Colorado, Emery County in Utah, and Campbell, Lincoln, and Sweetwater Counties in Wyoming.⁶⁵

B. Socio-economic Analysis Is Needed.

As part of the PEIS, the BLM should look carefully at each county where federal coal plays a significant role in the local economy to understand the past, current and future economic and social impacts of the coal mining and associated power plants. This analysis should serve as the basis for designing measures to help communities plan for a future with declining coal extraction and energy generation.

As BLM reviews socio-economic impacts of federal coal leasing and development, it should consider the positive *and* negative impacts of continued economic reliance of local communities

⁶² Colorado Division of Reclamation, Mining and Safety Monthly Coal Summary Reports, <http://mining.state.co.us/Reports/Reports/Pages/Coal.aspx>. Last accessed July 26, 2016. See also, <http://www.denverpost.com/2016/05/14/collapse-of-colorado-coal-industry-leaves-mining-towns-unsure-whats-next/>.

⁶³ <http://www.eia.gov/todayinenergy/detail.cfm?id=26992>

⁶⁴ Colorado, 7 counties; Montana, 5 counties; North Dakota, 4 counties; New Mexico, 2 counties; Utah, 3 counties; Washington, 1 county; Wyoming, 5 counties. Based on data from MSHA BLM Coal Mine Crosswalk Feb. 3, 2015. Pers. Comm. From Mark Haggerty, Headwaters Economics, July 15, 2016.

⁶⁵ Form EIA-923 detailed data, <https://www.eia.gov/electricity/data/eia923/>. Last accessed, July 22, 2016.

on coal extraction. Some research has shown that dependence on coal adversely affects non-coal employment in places like Appalachia.⁶⁶ They found that high levels of coal employment are associated with lower levels of entrepreneurship and higher levels of migration out of Appalachian regions as coal crowds out other types of businesses. Prolonging coal employment may actually slow the transition to other economic activities and reduce long-term economic growth.

C. Transition Planning and Programs Should Be Assessed in the PEIS.

BLM can and should help communities plan for the future through the PEIS. BLM should both provide analysis of current and projected economic conditions *and* put in place programs that can help with coal-dependent economies become more resilient to changing conditions. BLM's efforts should include the following:

Support communities' creation of impact mitigation plans. Given the relatively small number of counties and communities engaged in mining of federal coal, BLM should work with communities to conduct analyses of the socio-economic characteristics of each county in which federal coal is mined. BLM should, among other things, use the Economical Profile System (EPS) and produce detailed socioeconomic profiles.⁶⁷ BLM should incorporate best practices for social impact assessment, including involving potentially affected publics and developing mitigation plans.⁶⁸ BLM could incorporate transition approaches for affected communities both in the PEIS and through targeted RMP amendments or revisions for areas with current mining operations.

Identify mechanisms through which the Department of the Interior can assist communities become stronger and more resilient in the face of rapidly changing economic conditions.

Use mitigation planning and funding. In section VI. G., we recommend that BLM implement a comprehensive mitigation program that could provide both financial resources and job opportunities to local communities to address the impacts of coal mining and climate change. In that section, we argue that BLM should evaluate mechanisms that would allow communities to share in revenue generated by efforts to capture environmental externalities in the cost of federal coal, whether through efforts to address compensatory mitigation or a carbon adder. The BLM should explore every opportunity to ensure financial and other resources are made available to assist in repositioning resource-dependent communities to succeed in the next energy economy.

Develop a program to hire mine workers for restoration and rehabilitation beyond the mine site. BLM should also propose a program to employ the skills of mine workers in restoration and rehabilitation of public lands, aimed at both improving resilience of public lands in the face of climate change and their ability to mitigate climate change through biological sequestration.

⁶⁶ Michael R. Betz, Mark D. Partridge, Michael Farren, Linda Lobao, Coal mining, economic development, and the natural resources curse, *Energy Economics*, Volume 50, July 2015, Pages 105–116.

⁶⁷ <http://headwaterseconomics.org/tools/economic-profile-system/about/>. Last accessed, July 24, 2016

⁶⁸ Jeffrey B. Jacquet, Ph.D., A Short History of Social Impact Assessment, November, 2014.

http://headwaterseconomics.org/wphw/wp-content/uploads/Energy_Monitoring_SocialImpacts_History.pdf

Over the last several decades, the federal government has invested in programs to address job losses and improve environmental conditions in local areas. BLM should look to, learn from, and improve upon past examples like the watershed restoration and the “Jobs-in-the-Woods Program” from the 1990s and its contemporary incarnations.⁶⁹

Explore changes to revenue sharing statutes to improve community access to funding for local schools and other community priorities. Headwaters Economics and others have proposed changing the formula through which the federal Payments in Lieu of Taxes (PILT) program functions so that the size and relative distribution of federal payments to counties is less directly tied to the specific source of revenue. This would create a framework that can accommodate new dedicated funding streams from public lands from various sources, such as increased fossil fuel royalties, new leasing fees or a carbon tax.⁷⁰ It could also provide more stable funding for local schools in vulnerable communities. Though such an approach would require federal legislation, the PEIS could propose and analyze such an option.

Help communities understand the likely future. As outlined in section IV.I. above, BLM needs to provide an updated “base case” and reasonably foreseeable development scenario for the federal coal program. Such an analysis should include information about expected retirement for coal fired power plants, status of proposed/announced coal mining projects, availability (or lack thereof) of capital for coal mining projects, employment trends, local government revenue sources, and other key factors. It is important for communities to have a realistic understanding of the likely future of the coal industry generally and the market their mines supply specifically.

Provide communities a comprehensive review of tools to help diversify their economies.

This has been helpful for coal-dependent communities—across the country and specifically in the West—to support worker transition and to help communities retooling their economies to become more resilient to changing conditions. These tools include programs targeted at workers and their families to address economic security (such as job retraining programs⁷¹, ensuring health and retirement security), local government (such as providing local infrastructure⁷²), rural

⁶⁹ Christopher E. DeForest, 1999. Watershed restoration, jobs-in-the woods, and community assistance: Redwood National Park and the Northwest Forest Plan. Gen. Tech. Rep. PNW-GTR-449. Portland, OR: U.S. Department of Agriculture, Forest Service, Pacific Northwest Research Station. 31 p.

http://www.fs.fed.us/pnw/pubs/pnw_gtr449.pdf. Last accessed, July 26, 2016. See also, Ecotrust, “Investing in natural assets for the benefit of communities and salmon” brochure, <http://www.ecotrust.org/media/WWRI-Restoration-Economy-Brochure.pdf> describing current economic benefits of restoration for Oregon communities.

⁷⁰ Testimony of Mark Haggerty, Headwaters Economics March 19, 2013, Senate Energy and Natural Resources Committee Hearing on PILT and SRS Reauthorization and Reform. http://www.energy.senate.gov/public/index.cfm/files/serve?File_id=4cf8ec04-5477-4c03-87f5-b0eb29ea6e26. Last accessed July 24, 2016.

⁷¹ Such as retaining programs in Kentucky (<http://www.jobssight.org/jobseeker/coalminers>) and West Virginia (<http://workforcewv.org/job-seekers/training/laid-off-coal-miners.html>). Last accessed, July 24, 2016.

⁷² For example, see efforts to expand broad band internet access in Colorado’s Delta County. <http://www.region10.net/regional-development/broadband/>. Last accessed, July 24, 2016. See also National Association of Counties’ Coal-Reliant Communities Innovation Challenge. <http://www.naco.org/resources/programs-and-initiatives/coal-reliant-communities-innovation-challenge> and <http://diversifyeconomies.org/>. Last accessed July 24, 2016.

school improvement⁷³, small business support, repurposing mine lands, and infrastructure programs.⁷⁴

Recommendations: BLM should conduct thorough and robust analyses of the current and future economic conditions facing the coal industry in the Western Region, including county-specific analyses for counties with active leases. BLM should also develop a comprehensive review of tools communities can use *now* to help diversify their economies and help workers. Lastly, BLM should identify, propose, and conduct appropriate NEPA analysis of mechanisms through which the Department of the Interior can help communities become stronger and more resilient in the face of rapidly changing economic conditions.

IX. BLM LEGAL AUTHORITIES AND RULEMAKING POWERS

Implicit in much of what has been discussed in these comments is the BLM's strong legal authority to make needed changes to the federal coal program. We provide an overview of that authority below. Specifics of many of the needed changes have been discussed above.

A. BLM Has Broad Authority Under the Mineral Leasing Act and the Federal Land Policy and Management Act.

The BLM has broad authority to modify the federal coal program as needed pursuant to its authority under the MLA and FLPMA. Under the MLA, the Secretary of the Interior has wide discretionary authority to issue coal leases on the federal mineral estate. 30 U.S.C. § 201(a)(1). Prior to issuing coal leases the Secretary is to consider the effects of mining, including, but not limited to, environmental impacts, impacts on agriculture and economic activities, and impacts on public services. *Id.* § 201(a)(3)(C). Leases are to have limited lengths (20 years) and require production of commercial quantities of coal as well as have annual rentals and royalties on coal production, and “such other terms and conditions as the Secretary shall determine.” *Id.* § 207(a). “Prior to taking any action on a leasehold which might cause a significant disturbance of the environment . . . the lessee shall submit for the Secretary’s approval an operation and reclamation plan.” *Id.* § 207(c).

FLPMA sets out a policy that the Secretary is required to “establish comprehensive rules and regulations” for the administration of the public land statutes such as the MLA. 43 U.S.C. § 1701(a)(5). The public lands are to be “managed in a manner that will protect the quality of the scientific, scenic, historical, ecological, environmental, air and atmospheric, water resource, and archeological values; that where appropriate will preserve and protect certain public lands in their natural condition; that will provide for food and habitat for fish and wildlife . . .” *Id.* § 1701(a)(8). In managing the public lands the Secretary of the Interior “shall, by regulation or otherwise, take any action necessary to prevent unnecessary or undue degradation of the lands.” *Id.* § 1732(b). As already mentioned, it is the policy of the United States under FLPMA that “the

⁷³ See <http://ieefa.org/invest-struggling-coal-industry-communities-let-us-count-ways/>. Last accessed July 24, 2016.

⁷⁴ See also Adele C. Morris, “Build a Better Future for Coal Workers and their Communities,” The Brookings Institution, Washington, D.C., APRIL 25, 2016, <http://www.brookings.edu/~media/research/files/reports/2016/04/25-coal-workers-morris/build-a-better-future-for-coal-workers-and-their-communities-morris-updated-071216.pdf>. Last accessed, July 24, 2016.

United States receive fair market value of the use of the public lands and their resources” *Id.* § 1701(a)(9). And, as well, there is a recognition of the need to manage the public lands “in a manner which recognizes the Nation’s need for domestic sources of minerals” *Id.* § 1701(a)(12).

The most fundamental requirement of FLPMA is to manage the public lands for multiple-use and sustained yield. The definition of multiple-use is broad but among other things it requires: (1) management so that the lands “are utilized in the combination that will best meet the present and future needs of the American people;” (2) “the use of some land for less than all of the resources;” and (3) “harmonious and coordinated management of the various resources without permanent impairment of the productivity of the land 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.” 43 U.S.C. § 1702(c). Sustained yield is management that achieves a high level annual or regular periodic output of renewable resources in perpetuity. *Id.* § 1702(h). The Secretary of the Interior “shall manage the public lands under principles of multiple use and sustained yield” *Id.* § 1732(a).

In addition to managing the public lands to achieve multiple-use and sustained yield, FLPMA includes wide-ranging provisions requiring the development of RMPs to achieve this. 43 U.S.C. §§ 1712, 1732(a). FLPMA also provides that the Secretary “shall issue regulations necessary to implement the provisions of this Act with respect to the management, use, and protection of the public lands” *Id.* § 1733(a). And moreover, the Secretary “with respect to the public lands shall promulgate rules and regulations to carry out the purposes of this Act and of other laws applicable to the public lands” *Id.* § 1740.

Moreover, under both FLPMA and the MLA, the BLM has discretion to issue leases or permit other activities on the federal lands. The MLA explicitly provides that coal leasing will be decided upon by the Secretary of the Interior “in his discretion.” 30 U.S.C. § 201(a)(1). Similarly, FLPMA provides for the agency to decide how public lands are managed “making the most judicious use of the land for some or all of these resources or related services.” 43 U.S.C. § 1702(c). This discretion has been upheld in the face of numerous challenges and is highlighted by the agency in the context of managing mineral leasing. *See, e.g., Wyoming ex rel. Sullivan v. Lujan*, 969 F.2d at 877, 882 (10th Cir. 1992) (“By law that discretion is vested absolutely in the federal government’s executive branch”); *see also Marathon Oil Co. v. Babbitt*, 966 F. Supp. 1024 (D. Colo. 1997); *affirmed* 166 F.3d 1221 (10th Cir. 1999); *cert. denied* 528 U.S. 819 (1999).

The BLM has also highlighted its discretion to authorize uses of the public land in discussing its authority to condition such uses on other actions, including mitigation. BLM’s current mitigation policy provides: “The BLM may expressly condition its approval of the land-use authorization on an applicant’s commitment to perform or cover the costs of mitigation, both onsite and outside the area of impact.” Draft MS-1794 – Regional Mitigation Manual Section, p. 1-6.

Clearly the BLM has wide ranging authority under the MLA and FLPMA to manage the coal program and incorporate needed policy changes through administrative measures, including issuing interim guidance during the pendency of the PEIS process. This authority further

supports BLM's ability to engage in needed rulemaking to implement changes that are found to be needed in the federal coal program as a result of the analysis in the PEIS.

B. BLM Has Additional Authorities as a Landowner.

Another factor that gives the BLM broad authority to protect public lands that are affected by the federal coal program is its status as a landowner—the proprietary owner of the public lands.⁷⁵ It is widely recognized that federal land management agencies derive power to manage the public lands from two sources: Their powers as a sovereign representative of the people, and the powers that all landowners have to control the management of their property.

The BLM acts “in a proprietary capacity” under the MLA. *United States v. Ohio Oil*, 163 F.2d 633, 639-40 (10th Cir. 1947). The Congress has “reserved to the Government the right to supervise, control, and regulate” the development of federal leasable minerals. *Boesche v. Udall*, 373 U.S. 472, 481 (1963). And under the MLA, leased land is subject to “exacting restrictions and continuing supervision by the Secretary.” *Id.* at 477-78. Thus, the BLM is clearly both the manager and the steward of the public lands. And while leasing conveys a right to develop hydrocarbon resources, title to the land remains with the U.S.—the BLM remains the landowner.

Thus, the BLM should recognize its powers as a landowner as it develops plans pursuant to the PEIS, and implements them through any needed rulemaking or through other administrative actions. These proprietary powers as a landowner supplement the powers under the MLA and the FLPMA that have been discussed. These powers are reemphasized in the MLA where it is stated, “[e]ach lease shall contain provisions for the purpose of insuring the exercise of reasonable diligence, skill, and care in operation of said property” and the lease is to be “for the protection of the interests of the United States” and is to be “for the safeguarding of the public welfare.” 30 U.S.C. § 187.

C. Planning 2.0 Will Set Out Additional Direction for Applying BLM's Land Use Planning and Management Authorities.

In addition, the BLM is currently developing new regulations that will govern land use planning. These rules will govern the development, revision, and amendment of RMPs. This process is referred to as “Planning 2.0.” When these new regulations are put in place—likely long before the PEIS is completed—they will provide another source of authority the BLM should consider in developing coal program regulations as well as any needed RMP amendments and revisions. The new planning rules could also affect any needed interim guidance.

The final planning rules will likely require landscape scale planning, not simply planning based at the field office level. Consistent with this direction, the BLM's coal leasing program should be conducted from a national perspective, not a local or even state level perspective, and regional mitigation strategies will be developed at a landscape level, as well. Further, the regulations will likely emphasize the importance of identifying places and values that should be protected and where different types of energy development might be appropriate. The new Planning 2.0

⁷⁵ We recognize of course that the United States is the owner of these lands, but we will refer to the ownership being held by the BLM, the federal agency charged with managing these lands.

regulations will also likely establish procedures for efficiently updating RMPs, including amendments, that will support the actions we recommended to apply suitability and multiple use considerations to leasing availability at the RMP level, as well as to incorporate mitigation plans. The BLM will need to consider the updated planning regulations and follow-on revisions to the agency's Land Use Planning Handbook in terms of overall management approaches and applying protective land designations in the federal coal program.

Recommendations: Given its broad legal power, the BLM clearly has sufficient authority to implement the protective measures and reforms we are recommending for the federal coal program, including those related to updating key elements of the federal coal program, mitigating impacts, and evaluating and addressing climate change impacts. These reforms will ensure that the coal program is conducted in the public interest and achieves a fair market return to the American people.

X. ADDITIONAL DECISIONS TO BE TAKEN.

Based on the recommendations in these comments, the BLM will need to make specific decisions and take specific actions, which will be supported by the analysis in the PEIS and are within the scope of BLM's authority, but may require action outside the PEIS.

A. RMP Amendments.

In order to implement updates to leasing availability decisions and incorporate phased or prioritized leasing, the BLM will have to amend existing RMPs in coal country. As proposed above, the recently approved Buffalo Field Office RMP in the coal-rich Powder River Basin in Wyoming should be a priority for updating through a targeted amendment. The PEIS can amend priority RMPs and also make provision for initiating additional amendments.

In initiating these RMP amendments it will be necessary to consider specific coal mines and the communities adjacent to them. It will also probably be necessary to consider power plants that utilize federal coal to generate electricity. While much of the coal mined in the Powder River Basin is shipped far away, many federal coal mines are near to local power plants. Power plants in the Powder River Basin, the Jim Bridger Power Plant near Rock Springs, Wyoming, and the Craig and Hayden power plants in Colorado are in this category. The PEIS should consider these issues as part of amending these priority plans.

In considering local RMPs and the need for amending them, the BLM should also consider the issue of local community "transition" from the coal industry. This issue has of course been important as the BLM has developed this review and reform of the federal coal program, as discussed in more detail in Section VIII above.

A number of communities, such as Gillette in Wyoming and Paonia and Somerset in Colorado have already been significantly affected by the decline in the coal industry, and there is every likelihood these trends will continue. This may well be true whatever the BLM decides relative to the federal coal program due to the severe economic problems many coal companies are facing. But regardless, the BLM should be sensitive to this issue and seek to assist in rectifying

these problems. In many cases the BLM may not be able to directly address economic and social issues that are impacting a local community—such as reduced employment or the loss of school teachers, for example—but it can, at a minimum, address this issue in the PEIS and seek to enlist the aid of other local, state, and federal agencies that do have the capability, and legal obligation, to address these issues, as discussed in more detail in Section VIII above.

The fundamental decision that will need to be evaluated in all existing RMPs that authorize coal leasing is whether areas are “acceptable for further consideration for leasing.” And if an area subject to updated analysis is found to not be acceptable for leasing, it should be removed from the leasing pool. In particular, areas with high levels of environmental conflict need to be removed from the leasing pool. Accordingly, we recommend BLM set a schedule for completing amendments to update leasing availability for RMPs outside the priority plans for amendment.

B. Interim Guidance Should Be Issued.

In addition to amending RMPs, there is also a need for interim guidance from the BLM to guide coal development during the pendency of the PEIS process.

Under S.O. 3338 provision is made for “exceptions” or “exclusions” from the coal leasing pause. Emergency leasing, lease modifications, lease exchanges, preference right leases, and LBAs where NEPA compliance is complete, including those vacated by judicial decision but undergoing revaluation, are not subject to the pause. These possible continuations of the federal coal development program need to be carefully considered if the PEIS is to be as effective as possible. Therefore, interim guidance—including through Instruction Memoranda—should be issued to carefully define when any of these exclusions might be appropriate. The attempt that has been made to allow for an “emergency lease” at the Alton coal field in Utah is an example of the potential for these exceptions to be controversial.

Interim guidance should also be issued to:

1. Define the “public interest” that governs decisions in the coal program and elaborate on how this can and should be taken into account in evaluating leasing proposals.
2. Require tracking and quarterly reporting of climate emissions;
3. Require development and application of a climate budget, as well as quarterly reporting on actions taken toward achieving the budget;
4. Reiterate the intent and application of the unsuitability criteria and multiple-use considerations and require evaluation of whether proposed leases meet these criteria in the context of the planning area prior to any new leasing;
5. Require that BLM complete and document all 4 steps of the screening process as part of the land use planning process, with an emphasis on ensuring that BLM evaluates the “multiple use considerations” carefully, looking at impacts on land health, species, water, air and protected lands, to determine if conflicts would support making land unavailable and/or specifying required mitigation practices. The policy would also note that the types of “land uses” to be protected by application of the multiple use consideration include the preemption of renewable energy development and other uses that would have the effect of reducing the climate change contribution of the federal lands.

6. Require an enhanced showing of technical and financial capability to qualify for leasing.

C. Rulemakings Should Be Prioritized and Conducted to Implement Reforms.

In addition, the BLM may need to conduct formal rulemakings to incorporate specific reforms. The BLM can conduct needed NEPA analysis to support the rulemakings and make the ultimate processes more efficient. The BLM should commit to completing these rulemakings, set out a schedule, and prioritize the following rulemakings where the agency determines they are needed to fulfill reforms:

1. Update and expand unsuitability criteria;
2. Update royalty, minimum bid, rental rates and reclamation bonding standards;
3. Incorporate a carbon adder into royalty rates;
4. Develop an updated regional coal leasing approach;
5. Shorten lease review terms;
6. Complete Mine Methane Waste Rule.

Recommendations: The BLM has a great deal of legal authority that would allow it to make any changes that are needed to RMPs and to issue any needed interim guidance. It also has full authority to make the various decisions that we have asked for, such as putting in place provisions to reduce the impacts of climate change. The PEIS should recognize the depth of this authority and make decisions from that standpoint.

XI. PURPOSE AND NEED

A fundamental matter that the BLM will have to address during scoping is to define the Purpose and Need for the PEIS. An EIS must contain a statement of the Purpose and Need to which the agency is responding. 40 C.F.R. § 1502.13. As discussed in the first section of these comments, defining the Purpose and Need for an EIS, and thus the alternatives considered in it, is an important aspect of the scoping phase of the NEPA process.

The BLM NEPA Handbook also discusses developing a Purpose and Need statement for an EIS. The BLM feels that the need for a project is often the “underlying problem” that is being addressed. BLM Handbook H-1790-1 at 35. And the purpose of a project is the goal or objective that the BLM is seeking. *Id.* As the BLM recognizes, and as court opinions have emphasized, the Purpose and Need statement cannot be arbitrarily narrow, although the BLM has considerable flexibility in defining the Purpose and Need. *Id.*

The CEQ has determined that “[a]gencies draft a “Purpose and Need” statement to describe what they are trying to achieve by proposing an action.” CEQ *A Citizen’s Guide to NEPA, Having Your Voice Heard* at 16. “The identification and evaluation of alternative ways of meeting the purpose and need of the proposed action is the heart of the NEPA analysis.” *Id.* Thus, it is clear that the BLM should carefully develop the Purpose and Need statement in the PEIS so as to properly identify alternatives for consideration in the PEIS, and ultimately selection of the preferred alternative

Here, it seems clear that a fundamental purpose of the PEIS is to ensure the federal coal program is in alignment with the requirements, goals, and mission of the MLA and FLPMA, and to make changes as needed to meet those objectives. In our view, specific needs could include:

- Ensuring the coal program meets and is conducted in the public interest and provides a net benefit to society.
- Ensuring the public welfare is protected and the public trust responsibility is maintained.
- Ensuring the coal program provides fair market value to taxpayers.
- Ensuring the BLM's multiple-use mission and goals are met, including addressing issues related to climate change so that the nation's climate change objectives can be met.
- Providing for a landscape scale analysis that fully considers and manages the pace, scale, location and timing of leasing so that the BLM can best determine how, where and when to lease.
- Ensuring the PEIS is consistent with all existing laws and policies, including current guidance, for mitigation, including mitigation of climate impacts.

We believe that this range for the Purpose and Need statement would be sufficiently targeted to guide development of an appropriate range of alternatives to consider in the PEIS, which we considered above in section VIII, the alternatives section. This range for the Purpose and Need statement would also help ensure that the BLM's preferred alternative and the proposed action were well based and grounded in the analysis in the PEIS.

Recommendations: The BLM must include a thorough Purpose and Need in the Coal PEIS to guide appropriate development and analysis of alternatives.

XII. CONCLUSION

We would like to thank you for considering these comments. The Wilderness Society looks forward to remaining involved in the BLM's review of the federal coal program as this NEPA process moves forward, including in a review of the scoping report.

Sincerely,

Chase Huntley
Senior Director of Energy & Climate Campaigns
1615 M Street, NW
Washington, DC
202-429-7431
Chase_Huntley@tw.s.org

Nada Culver
Senior Director, Agency Policy and Planning
1660 Wynkoop Street, #850
Denver, CO 80202
303-225-4635
Nada_Culver@tw.s.org

Attachment 1. History of the Origins of the Carbon Budget Concept in the Scientific Literature

In 2012, the International Energy Agency, an international organization established to “provide authoritative research and analysis on ways to ensure reliable, affordable and clean energy” for its members,⁷⁶ concluded there is a limit to the amount of fossil fuels that can be developed if the world is to remain within acceptable warming thresholds. Based on an assessment of global carbon reserves, and given existing pollution controls, the agency concluded that “[n]o more than one-third of proven reserves of fossil fuels can be consumed prior to 2050 if the world is to achieve the 2-degree C goal.”⁷⁷

In the fall of 2014, this analysis was expanded and strengthened by the Intergovernmental Panel on Climate Change (Panel). The Panel published a comprehensive synthesis of the latest worldwide scientific consensus on climate change, called the Climate Change 2014 Synthesis Report.⁷⁸ The synthesis describes the recent scientific consensus that there is an overall limit to the amount of carbon dioxide (CO₂) that can be released into the atmosphere to stay within the 2 degree C warming cap.⁷⁹ It calculated that emissions from the year 1870 on would need to be limited to about 2,900 gigatons of CO₂ (GtCO₂) to have a reasonable chance of staying within the cap.⁸⁰ The Panel noted that as of 2011, about 1,900 GtCO₂ had already been emitted.⁸¹ Therefore, the report concluded, to provide better than a 66 percent chance of limiting warming to less than 2 degree C, additional carbon dioxide emissions must be limited to 1,000 GtCO₂.⁸² The Panel also estimated that there are about 3,670 to 7,100 GtCO₂ in proven fossil fuel “reserves” remaining in place,⁸³ which it describes as quantities of fossil fuels “able to be recovered under existing economic and operating conditions.”⁸⁴ As the report notes, this volume of reserves is four to seven times the amount that can be burned to have better than a 66 percent

⁷⁶ International Energy Agency, World Energy Outlook 2012 at 2 (2012), *available at* https://www.iea.org/publications/freepublications/publication/WEO2012_free.pdf.

⁷⁷ *Id.* at 25.

⁷⁸ Intergovernmental Panel on Climate Change (Panel), Climate Change 2014: Synthesis Report (2014), *available at* <http://www.ipcc.ch/report/ar5/syr/>. In fact, a carbon budget has been assessed by the IPCC in all assessment reports (Ciais et al., 2013; Denman et al., 2007; Prentice et al., 2001; Schimel et al., 1995; Watson et al., 1990), as well as by others (e.g. Ballantyne et al., 2012). These assessments included budget estimates for the decades of the 1980s, 1990s (Denman et al., 2007) and, most recently, the period 2002–2011 (Ciais et al., 2013). The IPCC methodology has been adapted and used by the Global Carbon Project (GCP, www.globalcarbonproject.org), which has coordinated a cooperative community effort for the annual publication of global carbon budgets up to the year 2005 (Raupach et al., 2007), 2006 (Canadell et al., 2007), 2007 (published online; GCP, 2007), 2008 (Le Quéré et al., 2009), 2009 (Friedlingstein et al., 2010), 2010 (Peters et al., 2012b), 2012 (Le Quéré et al., 2013; Peters et al., 2013), 2013 (Le Quéré et al., 2014), and most recently 2014 (Friedlingstein et al., 2014; Le Quéré et al., 2015). Each of these papers updated previous estimates with the latest available information for the entire time series. From 2008, these publications projected fossil fuel emissions for one additional year using the projected world gross domestic product (GDP) and estimated trends in the carbon intensity of the global economy (Rogelj, 2016).

⁷⁹ *Id.* at 63.

⁸⁰ *Id.*

⁸¹ *Id.*

⁸² *Id.*

⁸³ *Id.* at 64 Table 2.2.

⁸⁴ *Id.* at Table 2.2 n.f (defining “reserves” and noting that “resources,” by contrast, are quantities of fossil fuels where economic extraction is potentially feasible).

chance of remaining within the 2 degree C warming goal.⁸⁵ One of the expert reports feeding into the Panel's synthesis explained that to meet "[t]he emissions budget for stabilizing climate change at 2 degree C above pre-industrial levels... only a small fraction of reserves can be exploited."⁸⁶

The Panel's synthesis analysis was refined further in January 2015, when the scientific journal *Nature* published a study entitled "The geographical distribution of fossil fuels unused when limiting global warming to 2 degree C."⁸⁷ The study identifies which fossil fuels must remain undeveloped to improve the chances of remaining below the warming cap. It quantifies the regional distribution of fossil-fuel reserves and resources and, through modeling a range of scenarios based on least-cost climate policies, identifies which reserves and resources could not be burned between 2010 and 2050 if the world efficiently complies with the 2 degree C limit.⁸⁸ It concludes that "a stark transformation in our understanding of fossil-fuel availability is necessary," because "large portions of the reserve base and an even greater proportion of the resource base should not be produced if the temperature rise is to remain below 2 degree C."⁸⁹ Thus, expanding on the prior analyses' conclusion that development of already-existing reserves would far exceed the cap, let alone development of the more speculative category of resources, the study concludes that a commitment to meet the 2 degree C limit would "render unnecessary continued substantial expenditure on fossil-fuel exploration, because any new discoveries could not lead to increased aggregate production."⁹⁰

⁸⁵ *Id.* at 63.

⁸⁶ Blanco, Gabriel *et al.*, Drivers, Trends and Mitigation, in Climate Change 2014: Mitigation of Climate Change, Working Group III Contribution to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change at 251, 380 (2014), available at http://www.ipcc.ch/pdf/assessment-report/ar5/wg3/ipcc_wg3_ar5_chapter5.pdf.

⁸⁷ McGlade, Christophe and Paul Ekins, *The Geographical Distribution of Fossil Fuels Unused When Limiting Global Warming to 2 °C*, 517 *Nature* (187) (2015).

⁸⁸ *See id.* at 187-90.

⁸⁹ *Id.* at 190.

⁹⁰ *Id.* at 187.

Attachment 2. Selected Major Authorities, Regulations, and Guidance Addressing Mitigation

The Interior Department compiled a list of authorities, regulations, and guidance supporting their efforts to advance mitigation policies in *A Strategy for Improving the Mitigation Policies and Practices of The Department of the Interior: A Report to The Secretary of the Interior from the Energy and Climate Change Task Force*⁹¹ that includes, but is not limited to:

National Environmental Policy Act (NEPA) - 42 U.S.C. §4371 et seq.

NEPA aims to integrate environmental values into decision making by requiring agencies to analyze the environmental impacts of proposed actions that may significantly impact the environment. 42 U.S.C. § 4332(2)(C). Council on Environmental Quality and Department of the Interior regulations implementing NEPA recognize the potential for mitigation to ameliorate impacts of a proposal and require agencies to include in their analyses appropriate mitigation measures not already included in the proposed action or alternatives. 40 C.F.R. §§ 1502.14(f), 1502.16(h); 43 C.F.R. § 46.130. Mitigation is defined broadly, to include means by which impacts can be avoided, minimized, rectified, and reduced, as well as means for compensating for impacts through replacement of resources. 40 C.F.R. § 1508.20. The regulations further require that agency decisions must “[s]tate whether all practicable means to avoid or minimize environmental harm from the alternative selected have been adopted, and if not, why they were not.” 40 C.F.R. § 1505.2(c). CEQ guidance recognizes the importance of mitigation, including the use of mitigation to ensure that impacts of a proposed action will not be significant, along with monitoring and other mechanisms for ensuring that mitigation is implemented, thus enabling agencies to reach a Finding of No Significant Impact (i.e., a “mitigated FONSI”). Appropriate Use of Mitigation and Monitoring and Clarifying the Appropriate Use of Mitigated Findings of No Significant Impact (January 14, 2011).

Federal Land Policy and Management Act (FLPMA) – 43 U.S.C. § 1701 et seq.

FLPMA requires that the public lands be managed “on the basis of multiple use and sustained yield,” 43 U.S.C. § 1701(a)(7), and “in a manner that will protect the quality of scientific, scenic, historical, ecological, environmental, air and atmospheric, water resources, and archeological values....” 43 U.S.C. § 1701(a)(8). Under the broad discretion afforded by FLPMA, the BLM can condition uses of the public lands authorized through various instruments (e.g., rights-of-way, permits, licenses, easements, etc.) on the implementation of mitigation measures intended to reduce impacts. The BLM’s recently issued draft mitigation policy provides policy, procedures, and instructions for developing strategies that identify and facilitate regional mitigation strategies, using BLM’s land use planning process to identify potential mitigation sites and measures, and identifying and implementing appropriate mitigation within or outside of the area of impact for particular land-use authorizations. Interim Draft Policy on Regional Mitigation; Manual Section 1794 (June 13, 2013).

⁹¹ Clement, J.P. et al. 2014. A strategy for improving the mitigation policies and practices of the Department of the Interior. A report to the Secretary of the Interior from the Energy and Climate Change Task Force, Washington, D.C.

Mineral Leasing Act (MLA) - 30 U.S.C. § 181 et seq.

The MLA governs leasing of several minerals, most notably oil and gas. The BLM is required, at a minimum, to hold quarterly auctions of oil and gas leases in each state, 30 U.S.C. 226(b)(1). Leases are issued for 10 year terms and may be extended for as long as they produce oil or gas in paying quantities, and include stipulations for reducing impacts of development, Id., 226(e); 43 C.F.R. 3101.1-3. Prior to drilling, operators must file an application for a permit to drill (APD) that, when issued, can require additional measures for mitigating anticipated impacts of development, 30 U.S.C. 226(f), (g).

National Landscape Conservation System (NLCS, Organic Act) - 16 U.S.C. § 7201 et seq.

The NLCS was established “in order to conserve, protect, and restore nationally significant landscapes that have outstanding cultural, ecological, and scientific values for the benefit of current and future generations” and that “The Secretary shall manage the system...in a manner that protects the values for which the components of the system were designated.” Under this direction, the BLM has implemented policy to require mitigation of impacts in order to protect the objects and values for which the units of the NLCS were designated. For example, BLM Manual Section 6100 § 1.6.A.3 describes how “valid existing rights and other non-discretionary uses occurring within NLCS units will be managed to mitigate associated impacts to the values for which these lands were designated”. Similarly, BLM Manual Section 6220 § 1.6.E.5.b describes how “the effects of projects from the grants of the (rights-of-way) must be mitigated” for National Monuments and National Conservation Areas. Additionally, BLM Manual Section 6100 § 1.6.C.5 identifies how NLCS units provide good locations for compensatory mitigation projects.

Endangered Species Act of 1973 (ESA) - 16 U.S.C. § 1531 et seq.

Under Sections 7 and 10 of the ESA, the FWS may recommend means to avoid and minimize the take of listed wildlife species, as well as to establish targeted habitat. Under Section 7, Federal agencies must consult with FWS or National Marine Fisheries Service to ensure that agency actions are not likely to jeopardize the continued existence of a listed species or destroy or adversely modify designated critical habitat. The biological opinion issued by FWS or NMFS includes an incidental take statement, if appropriate, and provides reasonable and prudent measures that must be implemented to minimize the impacts of any anticipated take of listed wildlife species. Where a jeopardy or adverse modification opinion is rendered, reasonable and prudent alternatives will be recommended. Landowners who wish to develop private lands inhabited by listed wildlife species may receive an incidental take permit from FWS under Section 10, provided they have developed an approved habitat conservation plan (HCP), which sets out steps that the permit holder will take to avoid, minimize, and mitigate the impacts on species likely to occur from the proposed action. Off-site mitigation banks often play a key role in meeting conservation requirements under an HCP. Candidate Conservation Agreements, also under Section 10, are voluntary agreements where landowners agree to carry out measures to assist in the conservation of candidate and other at-risk species.

The FWS issued a mitigation policy in 1981 to help the agency make consistent and effective mitigation recommendations to protect and conserve the most important and valuable fish and wildlife resources, while facilitating balanced development of the Nation’s natural resources; U.S. Fish and Wildlife Service Mitigation Policy (46 FR 7644-7663, 1981). FWS has also issued

guidance to help the agency evaluate proposals for establishing conservation banks for the purpose of off-setting adverse impacts to listed species. Guidance for the Establishment, Use, and Operation of Conservation Banks (May 2, 2003). More recently, FWS issued draft guidance that describes a crediting framework for Federal agencies in carrying out recovery of threatened and endangered species. Under the draft guidance, Federal agencies could show how adverse effects of agency activities to a listed species are offset by beneficial actions taken elsewhere for that species, so long as there is a net conservation benefit to the species. Draft Guidance on Recovery Crediting for the Conservation of Threatened and Endangered Species; 72 Federal Register 62258 (November 2, 2007).

Fish and Wildlife Coordination Act (FWCA) – 16 USC § 661-667e.

The FWCA establishes fish and wildlife conservation as a coequal objective of all federally-funded, permitted, or licensed water-related development projects. Under the FWCA, Federal agencies developing such projects must consult with FWS (and NMFS in some instances) and the states regarding fish and wildlife impacts. The statute provides FWS with authority to investigate and prepare reports providing mitigation analyses on all water-related development projects; FWS mitigation recommendations may include measures addressing a broad set of habitats beyond the aquatic impacts triggering the FWCA and species beyond those covered by other resource laws.

National Historic Preservation Act (NHPA) - 16 U.S.C. § 470 et seq.

The NHPA is a procedural statute that requires Federal agencies under Section 106 to take into account the effects of their undertakings on historic properties, and to afford the Advisory Council on Historic Preservation (ACHP) a reasonable opportunity to comment on these undertakings. For the purposes of NHPA, historic properties include properties that are listed in or eligible for listing in the National Register of Historic Places. Through the implementing regulations of Section 106, which are contained in 36 CFR Part 800, “Protection of Historic Properties,” federal agencies are required to consult with State/Tribal Historic Preservation Officers, Indian tribes or Native Hawaiian Organizations, local governments, interested parties such as historic preservation advocacy organizations, the public, and the ACHP. Consultation includes assessing whether or not the undertaking will have adverse effects on such properties and measures to resolve those adverse effects. Section 110(f) specifically addresses mitigation of adverse effects to properties of national significance, requiring that “prior to the approval of any Federal undertaking which may directly and indirectly affect any National Historic Landmark, the head of the responsible Federal agency shall, to the maximum extent possible, undertake such planning and actions as may be necessary to minimize harm to such landmark.” In many instances, the Section 106 consultation process will result in the execution of a memorandum of agreement, see 36 C.F.R. § 800.6(c), which may include federal agency commitments to avoid or mitigate any adverse effects.

Clean Water Act - 33 U.S.C. § 1251 et seq.

Section 404 of the Clean Water Act provides extensive authority to the U.S. Army Corps of Engineers and the Environmental Protection Agency to conduct mitigation where federal actions impact waters of the United States. The FWS has specific authority under Section 404(m) to secure mitigation for impacts to aquatic resources nationwide. Section 404 (m) requires the Secretary of the Army to notify the Secretary of the Interior, through the FWS Director, when a

permit application has been received or when the Secretary proposes to issue a general permit, and FWS can submit written comments within 90 days. Through its comments, FWS can assist the Corps of Engineers in developing permit terms that avoid, minimize or compensate for permitted impacts. Through its policy on compensatory mitigation related to the National Wildlife Refuge System, FWS has established guidelines for using Refuge lands for siting compensatory mitigation for impacts permitted through Section 404 or Section 10 of the Rivers and Harbors Act. Final Policy on the National Wildlife Refuge System and Compensatory Mitigation under the Section 10/404 Program (64 FR 49229-49234, 1999).

Clean Air Act - §7401, et seq.

The Clean Air Act calls for the prevention and control of air pollution across the country and includes a national goal to “to preserve, protect and enhance the air quality in national parks, national wilderness areas, national monuments, national seashores, and other areas of special national or regional natural, recreational, scenic or historic value” (42 U.S.C. §7470(2)). It sets forth an affirmative duty to protect air quality and air quality related values (e.g., visibility and ecosystem resources) of national parks and wilderness areas designated as Class I areas under the statute by avoiding and minimizing impacts to such areas. The Clean Air Act also provides for the banking and trading of emissions reductions and use of emission offsets to capture cost efficiencies. The NPS, BLM, FWS, US Forest Service and the EPA have entered into a memorandum of understanding that adopts a standardized approach that facilitates the completion of NEPA environmental analyses for federal land use planning and oil and gas development decisions and leads to improved design and implementation of mitigation measures that will both protect air quality and air quality related values and provide opportunities for future oil and gas development.

NPS Organic Act of 1916 and General Authorities Act of 1970, as amended - 16 U.S.C. §1, et seq. Under the Organic Act, the National Park Service (NPS) in the Department of the Interior is charged with managing the units of the National Park System so as to “conserve the scenery and the national and historic objects and the wild life therein and to provide for the enjoyment of the same in such manner and by such means as will leave them unimpaired for the enjoyment of future generations. Through the General Authorities Act as amended, Congress directed that “the authorization of activities shall be construed and the protection, management and administration of these areas shall be conducted in light of the high public value and integrity of the National Park System and shall not be exercised in derogation of the values and purposes for which these various areas have been established, except as many have been or shall be directly and specifically provided by Congress.” These authorities, among others, provide a framework for the Secretary of the Interior to be proactive in protecting the resources and values of the National Park System and for bureaus within the Department to mitigate the impacts of their discretionary activities on the resources and values of park units.

Paleontological Resources Preservation Act (PRPA) - 16 U.S.C. § 470aaa et seq.

This statute states that federal agencies “shall manage and protect paleontological resources on Federal land using scientific principles and expertise.” In areas determined to have high or undetermined potential for significant paleontological resources, the agency must implement an adequate program for mitigating the impact of development, including surveys, monitoring, salvage, identification and reporting, and other activities required by law.

White House Guidance and Initiatives Executive Order (EO) 13604 on Improving Performance of Federal Permitting and Review of Infrastructure Projects (March 28, 2012).

The EO calls for more timely and efficient Federal permitting and review of infrastructure projects while improving environmental and community outcomes. To achieve that objective, the order calls on agencies to integrate reforms into project planning processes “so that projects are designed appropriately to avoid, to the extent practicable, adverse impacts on public health, security, historic properties and other cultural resources, and the environment, and to minimize or mitigation impacts that may occur.”

A Federal Plan for Modernizing the Federal Permitting and Review Process for Better Projects, Improved Environmental and Community Outcomes, and Quicker Decisions (June 2012).

The Plan calls on Federal agencies to identify opportunities to improve mitigation processes by integrating intra- and inter-agency processes and encouraging mitigation planning at the regional, watershed and landscape levels, and to move away from addressing mitigation at the end of project development and on a project-by-project basis.

Presidential Memorandum on Modernizing Federal Infrastructure Review and Permitting Regulations, Policies, and Procedures (May 17, 2013).

The Memorandum recognizes landscape- and watershed-level mitigation practices as means by which agencies have achieved better outcomes for communities and the environment and realized substantial time savings in review and permitting. The Memorandum directs an interagency leadership team to, among other things, expand the use of IT tools to facilitate monitoring of mitigation commitments and “identify improvements to mitigation policies to provide project developers with added predictability, facilitate landscape-scale mitigation based on conservation plans and regional environmental assessments, facilitate interagency mitigation plans where appropriate, ensure accountability and the long-term effectiveness of mitigation activities, and utilize innovative mechanisms where appropriate.”

Implementation Plan for the Presidential Memorandum on Modernizing Infrastructure Permitting (March 2014).

The Plan includes actions to identify policy changes to promote in-advance, landscape-scale mitigation; to facilitate high-quality and efficient permitting and review processes; to identify best practices for early engagement with tribal, state, and local governments; and to expand innovative mitigation approaches that facilitate landscape-level mitigation planning, consistent and transparent standards for applying the mitigation hierarchy, and use of in-lieu fee program and mitigation banks. The overall goal of the plan is to “modernize the Federal permitting and review process for major infrastructure projects to reduce uncertainty for project applicants, reduce the aggregate time it takes to conduct reviews and make permitting decisions by half, and produce measurably better environmental and community outcomes.”

Appendix 1. Key Executive Policies Aimed at Reducing Carbon Emissions from Federal Activities

In the past ten years under two presidents, the White House has issued a number of broad policy announcements aimed at reducing carbon emissions from activities of federal agencies in the form of Executive Orders and associated implementing instructions and guidance. These statements have laid out important targets and timetables for assessing and reducing the government's carbon footprint but have repeatedly failed to include the carbon consequences of development of federally-managed energy resources in the statements and implementing guidance.

This memo summarizes the key policy statements currently in effect, and attempts to assess whether a gap exists in the existing management approach to reducing the carbon emissions from federal activities. Attached is an in-depth look at elements of the Orders.

Summary of Policies

Key policies issued by the White House aimed at reducing the role that the federal agencies themselves play in contributing to climate emissions or reporting on the emissions of federal activities:

Executive Order 13423, Strengthening Federal Environmental, Energy, and Transportation Management, was signed by President Bush on January 24, 2007. This EO instructs Federal agencies to conduct their environmental, transportation, and energy-related activities under the law in support of their respective missions in an environmentally, economically and fiscally sound, integrated, continuously improving, efficient, and sustainable manner. The Order sets goals in several key areas including energy efficiency, power and material acquisition, renewable energy and sustainable buildings.

Executive Order 13514, Federal Leadership in Environmental, Energy, and Economic Performance, was signed by President Obama on October 5, 2009. This EO expanded on the energy reduction and environmental performance requirements for Federal agencies identified in EO 13423. The goal of EO 13514 was "to establish an integrated strategy towards sustainability in the Federal Government and to make reduction of greenhouse gas emissions (GHG) a priority for Federal agencies."

In addition to agency requirements for producing guidance, recommendations, and plans, EO 13514 laid out numerical and non-numerical targets, including 2020 GHG emissions reduction targets Federal Government-wide of 28 percent for *direct* and 13 percent for *indirect* emissions, increasing renewable energy procurement and generation on agency

property and pursuing opportunities with vendors and contractors to reduce GHG emission. EO 13514 also called for specific management strategies to improve sustainability including agency-specific policies and practices to reduce scope of three GHG emissions in agency operations.

EO 13514 was revoked and targets superseded by EO 13693, although much of the implementing guidance remains intact as implementing guidance for relevant provisions in the new EO.

Executive Order 13693, Planning for Federal Sustainability in the Next Decade, was signed by President Obama on March 19, 2015. This is currently the flagship EO related to greenhouse gas performance for the federal government. The EO lays out an aggressive policy statement:

“It is hereby ordered as follows...Federal leadership in energy, environmental water, fleet, buildings, and acquisition management will continue to drive national greenhouse gas reductions and support preparations for the impacts of climate change... Through a combination of more efficient Federal operations such as those outlined in this Executive order...we have the opportunity to reduce agency direct greenhouse gas emissions by at least 40 percent over the next decade while at the same time fostering innovation, reducing spending, and strengthening the communities in which our Federal facilities operate...priority should first be placed on reducing energy use and cost, then on finding renewable or alternative energy solutions... Employing this strategy for the next decade calls for expanded and updated Federal environmental performance goals with a clear overarching objective of reducing greenhouse gas emissions across Federal operations and the Federal supply chain”

This EO replaces several prior orders and policy statements, updating 2020 goals with 2025 goals, as well as clarifying several policy issues. The majority of implementing guidance in place at the agency level will continue to apply but may need to be updated.

The EO creates a government-wide organization and governance structure, including a steering committee, chief sustainability officers in each major agency, regional working groups, and a training. The Order sets a 40% emissions reduction target by 2025 using a 2008 baseline. The Order establishes an energy intensity goal and sets a 25% clean energy target and a 30% renewable energy

target by 2025. None of these targets applies to energy development on public lands.

The EO does require agencies to account for and report emissions from federal activities, but this requirement does not address federal lands energy development. Implementing a provision of the Order (and its predecessor), the Council on Environmental Quality (CEQ) has developed *Guidance on Federal Greenhouse Gas Accounting and Reporting* that establishes government-wide requirements for measuring and reporting greenhouse gas (GHG) emissions associated with Federal agency operations.

Executive Order 13642, Making Open and Machine Readable the New Default for Government Information, was signed by President Obama on May 9, 2013.

The Order declares as a statement of policy that, “Openness in government strengthens our democracy, promotes the delivery of efficient and effective services to the public, and contributes to economic growth.” To improve the discoverability and usability of data assets, the Order requires agencies to develop and Enterprise Data Inventory, which accounts for all data assets created or collected by the agency, and a Public Data Listing, which contains a list of all data assets that are or could be made available to the public. The Order requires agencies to develop protocols for ensuring that the public can directly engage the agency, data are made available to the public wherever possible and, if not, reasons for not releasing data are documented.

Analysis of Current Policies and Implementing Guidance

Although there are several government-wide emissions reduction policies, there are no reduction goals addressing emissions resulting from fossil energy leasing and development.

In-place policies set a GHG reduction goal for federal activities, targets for clean and renewable energy procurement, and requirements for improved building efficiency – but there is no target or even discussion of the carbon consequences of public lands energy development.

Agencies are not required to report on the carbon emissions of fossil energy development at the planning or project permit level, and there is no policy requirement to maintain an inventory of likely emissions from fossil energy resources already under lease. Federal agencies are required to submit GHG inventories pursuant to the Order. The CEQ has developed government-wide requirements for measuring and reporting GHG emissions associated with federal agency operations. However, the guidance does not require nor recommend reporting on the likely emissions from federal lands fossil fuel development, although such emissions are referenced for possible voluntary reporting. The Interior Department has declined to report on emissions resulting from production, transport or end-use of fossil energy produced from federal lands and waters.

Additionally, CEQ been developing guidance that describes how Federal departments and agencies should consider the effects of greenhouse gas emissions and climate change in their NEPA reviews for individual projects. This *Guidance for Greenhouse Gas Emissions and Climate Change Impacts*, still in draft, explains that agencies should consider both the potential effects of a proposed action on climate change, as indicated by its estimated greenhouse gas emissions, and the implications of climate change for the environmental effects of a proposed action. The guidance also emphasizes that agency analyses should be commensurate with projected greenhouse gas emissions and climate impacts, and should employ appropriate quantitative or qualitative analytical methods to ensure useful information is available to inform the public and the decision-making process in distinguishing between alternatives and mitigations. The current version applies to all proposed Federal agency actions, including land and resource management actions, but has not been finalized and does not provide a standard methodology advanced for estimating the carbon consequences of federal lands energy production.

The existing policy framework supports measuring, disclosing and taking steps to manage the carbon consequences of public lands energy development. The existing policy framework clearly seeks to address all opportunities to improve the environmental performance of federal operations and to enhance access to open data assets describing key federal operations. The absence of policy to address public lands energy development is a gap that represents a blind spot for efforts to credibly ensure the federal government is leading by example.

Conclusion

The government cannot manage what it doesn't measure. While the government has made significant steps to improve the performance of federal activities, there is a fundamental lack of understanding of how much our own management of publicly-owned fossil energy resources contributes to global warming. Existing policies do not address the disclosure, measurement or management of the carbon consequences of global warming—the Obama administration can and should become the first administration in history to acknowledge and address it. A policy commitment to publically measure the carbon impact of fossil fuels on federal lands, including a target to reduce it, is consistent with standing Executive Orders and implementing policies. Including this missing piece will go a long ways towards ensuring that federal lands are put to use as part of a climate solution and not a climate problem.

Table 1. Executive Orders Addressing Federal Agency Greenhouse Gas Emissions

Executive Order	Implementing Instructions	Inventory/Reporting Requirements	Key GHG Reduction Goals	Agency Requirements/ Exceptions
E.O. 13693 (March 19, 2015) Planning for Federal Sustainability in the Next Decade	<ul style="list-style-type: none"> - Implementing Instructions for EO 13693 Planning for Federal Sustainability in the Next Decade of June 10, 2015; - Sustainable Locations for Federal Facilities of September 15, 2011; - Sustainable Practices for Designed Landscapes of October 31, 2011, as supplemented on October 22, 2014; - Federal Greenhouse Gas Accounting and Reporting Guidance [Revision 1] of June 4, 2012; and - Federal Agency Implementation of Water Efficiency and Management Provisions of EO 13514 of July 10, 2013 	<ul style="list-style-type: none"> - Principal agencies (those responsible for the majority of GHG emissions and those managing the federal fleet) are subject to the OMB scorecard process - OMB annually reports on Federal agencies' and departments' progress toward meeting sustainability goals. A Steering Committee meets four times a year to receive and discuss reports 	<ul style="list-style-type: none"> - 40% emissions reductions by FY2025 (FY2008 baseline) for scope 1 and 2 emissions (excluding federal lands energy development) - Continue progress in scope 3 emissions reductions of 13% by FY2020 (off FY2008 baseline) for six types of indirect emissions (excluding federal lands energy development) - 25% of their total facility energy (electric and thermal) is from clean energy sources by 2025. - 30% renewable energy target by 2025 - Reduce energy intensity in Federal buildings by 2.5% per year between 2015 and 2025 (total 25% reduction off FY2015 baseline). - Reduce per-mile GHG emissions from Federal fleets by 30% from 2014 levels by 2025, and increase the percentage of zero emission and plug in hybrid vehicles in Federal fleets. - Relative to the baseline of the agency's building energy use, reduce building 	<ul style="list-style-type: none"> - Agencies submit GHG emissions goal within 90 days of EO (replaces FY2020 targets set under EO 13514) - Established Determining Agency Reduction Targets 2 tool (DART II) to assist agencies in setting targets

Executive Order	Implementing Instructions	Inventory/Reporting Requirements	Key GHG Reduction Goals	Agency Requirements/ Exceptions
			energy intensity by 2.5% through the end of FY2025 - If agency operates fleet of >20 vehicles, they must improve agency fleet and vehicle efficiency by no less than 4% by the end of FY2017	
E.O. 13423 (January 24, 2007) Strengthening Federal Environmental Energy, and Transportation Management	<ul style="list-style-type: none"> - Instructions for Implementing EO 13423 of March 29, 2007 - DOI Departmental Manual 515 DM 4 of August 13, 2008 - USDA Departmental Regulation 1058-001 of January 16, 2009 - BLM Instruction Memorandum 2012-104 of April 24, 2012 - Presidential Memorandum regarding Federal Fleet Performance of May 24, 2011 	<ul style="list-style-type: none"> - Each agency is required to provide compliance data to DOE no later than Dec. 31 of each year, starting with the FY 2007 data and each year thereafter. - Each agency shall implement internal policies that will ensure accurate tracking of vehicle acquisitions. 	<ul style="list-style-type: none"> - Reduce GHGs by 3% annually or 300% by 2015 - Increase alternative fuel consumption at least 10% annually - Reduce petroleum consumption in fleet vehicles by 2% annually through 2015 	<ul style="list-style-type: none"> - All agencies that operate 20 or more motor vehicles with the U.S. must comply with these instructions.
Executive Order 13642 (May 9, 2013) Making Open and Machine Readable the New Default for Government Information	<ul style="list-style-type: none"> - Office of Management and Budget Memorandum M-13-13 of May 9, 2013 	<ul style="list-style-type: none"> - None 	<ul style="list-style-type: none"> - None 	<ul style="list-style-type: none"> - Agencies must develop an Enterprise Data Inventory within six months - Agencies must create a Public Data Listing

<p>Executive Order 13514 (October 5, 2009)</p> <p>Federal Leadership in Environmental, Energy, and Economic Performance</p>	<p><i>Revoked and/or superseded by EO 13693</i></p> <ul style="list-style-type: none"> - Instructions on Implementing EO 13514 Presidential Memorandum on Renewable Energy Target of December 5, 2013 - Presidential Challenge on Performance Contracting of May 24, 2014 	<p>-</p>	<ul style="list-style-type: none"> - 28% reduction by 2020 (2008 baseline) for federal activities for scope 1 and 2 emissions (excluding federal lands energy) - Agencies set emissions reduction targets for FY2020 for two types of GHG emissions (excluding federal lands energy) - Set overall target of 13% reductions in scope 3 emissions by FY2020 (off FY2008 baseline) for six types of indirect emissions: employee commuting, business air travel, business ground travel, transmission, and distribution losses from purchased electricity use, contracted solid waste disposal and contracted waste water treatment 	<p>-</p>
---	---	----------	--	----------

From: [Culver, Nada L](#)
To: [Klein, Elizabeth A](#)
Subject: RE: [EXTERNAL] TWS views on oil and gas review
Date: Thursday, April 29, 2021 9:37:12 AM

I think we will. I'm still doing a few oil and gas company meetings so it only seems fair to do some with the conservation community. Thanks so much for your willingness to join.

Nada Wolff Culver
Deputy Director, Policy and Programs
Bureau of Land Management
Cell: 202-255-6979
nculver@blm.gov

From: Klein, Elizabeth A <Elizabeth_Klein@ios.doi.gov>

Sent: Thursday, April 29, 2021 7:59 AM

To: Culver, Nada L <nculver@blm.gov>

Subject: RE: [EXTERNAL] TWS views on oil and gas review

Their comments are ... voluminous, for sure. I will leave it to you all to decide whether to set something up with Alex. If you decide yes, I'm happy to join!

From: Culver, Nada L <nculver@blm.gov>

Sent: Thursday, April 29, 2021 9:55 AM

To: Klein, Elizabeth A <Elizabeth_Klein@ios.doi.gov>

Subject: RE: [EXTERNAL] TWS views on oil and gas review

Thanks, Liz. I was going to email to ask if you want us to just proceed to meet with Alex and whomever else he wants to bring or you'd like to be part of that meeting – and/or read all the appendices. Just let me know.

Nada Wolff Culver
Deputy Director, Policy and Programs
Bureau of Land Management
Cell: 202-255-6979
nculver@blm.gov

From: Klein, Elizabeth A <Elizabeth_Klein@ios.doi.gov>

Sent: Thursday, April 29, 2021 7:28 AM

To: Chase Huntley <chuntley@twos.org>

Cc: Drew McConville <drew_mcconville@twos.org>

Subject: RE: [EXTERNAL] TWS views on oil and gas review

Thanks very much for sending these along. I think we also received a meeting request from Alex D. I know Team ASLM appreciates the input, is diligently reviewing all comments, and working hard on its report. To focus on that effort, not sure whether they're doing additional meetings on comments received, but will get back to Alex for sure. Always happy to generally connect otherwise and have some holes on Monday if you want to give me a call then. New work number is 202-227-0949.

From: Chase Huntley <chuntley@twos.org>

Sent: Monday, April 26, 2021 9:45 PM

To: Klein, Elizabeth A <Elizabeth_Klein@ios.doi.gov>

Cc: Drew McConville <drew_mcconville@twos.org>

Subject: [EXTERNAL] TWS views on oil and gas review

This email has been received from outside of DOI - Use caution before clicking on links, opening attachments, or responding.

Hi Liz! Happy spring! I hope you are doing well and settling into the new position. Perhaps of interest to your role on the departmental climate task force, I'm sharing the attached comments we submitted as part of the first round of input on the comprehensive oil and gas review. Our comments emphasize a few key points:

- There should be a net zero target for fossil fuel development on federal public lands, and how it could be done.
- The necessity of protecting the Arctic to that end, pointing to comments submitted on the Refuge and the NPR-A.
- The urgent need to eliminate subsidies to oil and gas developers and to ensure producers are bearing the climate cost.

We included a toolkit of recommendations (Appendix A) at the end of the letter. I've also attached for reference the remaining appendices.

I'd love to connect with you to hear how things are going and, if it would be helpful, to talk further about these issues.

Best,

Chase.

Chase Huntley (*he/him/his*)

Vice President for Strategy

The Wilderness Society | The Wilderness Society Action Fund

p 202-429-2605

m 202-725-7305

Disclaimer

The information contained in this communication from the sender is confidential. It is intended solely for use by the recipient and others authorized to receive it. If you are not the recipient, you are hereby notified that any disclosure, copying, distribution or taking action in relation of the contents of this information is strictly prohibited and may be unlawful.

From: [Schwartz, Melissa A](#)
To: [Alonso, Shantha R](#); [Anderson, Robert T](#); [Kelly, Katherine P](#); [Klein, Elizabeth A](#); [Roberts, Lawrence S](#); [Wallace, Andrew G](#); [Taylor, Rachael S](#); [Decker, Danielle K](#); [Rezaeerood, Paniz](#); [Gray, Morgan](#); [Beaudreau, Tommy P](#)
Cc: [Daniel-Davis, Laura E](#); [Feldgus, Steven H](#); [Cherry, Tyler A](#); [Grandy, John W](#)
Subject: CLOSE HOLD: Oil and gas litigation update
Date: Monday, August 16, 2021 2:38:35 PM
Attachments: [Draft Oil Gas Statement 8-16-21 115pm.docx](#)

PRE-DECISIONAL

All –

Around 5pm today, the Department of Justice will file an appeal of the district court decision in *Louisiana v. Biden*. Once filed, we will issue a statement from Interior. The attached is the latest version, **THOUGH NOT FINAL** til it is sent. Laura is taking lead on notifications for groups, the Hill and Governors.

I am attaching the draft for your awareness (it is closed for internal edits). Please refer questions to Laura or Tommy, there is a lot of nuance here that we have to be mindful of. **OCL and OIEA**, please plan to distribute the press release once it hits your boxes, but not before. **Rachael**, I did not include your career staff but Niall will need to send appropriators after it's out.

Please flag any questions,

M

Interior Issues Statement on Oil and Gas Leasing Program

The Department of the Interior (Interior) confirmed today that the Department of Justice (DOJ) has appealed the preliminary injunction entered by the district court in *Louisiana v. Biden*, which enjoined Interior from implementing the pause in new federal oil and gas leasing as set forth in Section 208 of Executive Order 14008. DOJ is appealing that decision to the United States Court of Appeals for the Fifth Circuit. Federal onshore and offshore oil and gas leasing will continue as required by the district court while the government's appeal is pending.

The appeal of the preliminary injunction is important and necessary. Together, federal onshore and offshore oil and gas leasing programs are responsible for significant greenhouse gas emissions and growing climate and community impacts. Yet the current programs fail to adequately incorporate consideration of climate impacts into leasing decisions or reflect the social costs of greenhouse gas emissions including, for example, in royalty rates. Furthermore, past operation of the programs did not adequately reflect the breadth of the Interior Secretary's stewardship responsibilities, including conserving wildlife habitat, protecting historic and cultural resources, ensuring that public lands are available for multiple uses, protecting marine, coastal, and human environments, meeting trust responsibilities to American Indian and Alaska Native Tribes, and providing a fair return to taxpayers. Moreover, the federal oil and gas programs inadequately account for environmental harms to lands, waters, and other resources, foster speculation by oil and gas companies, and frequently leave impacted communities out of important conversations about how they want the public lands and waters managed.

These issues have been the subject of numerous critical reports over decades by the Government Accountability Office (GAO), Interior's Office of Inspector General (OIG), Congressional Committees, and other independent reviewers. For example, the federal oil and gas program has been on GAO's "High Risk List" for more than a decade, which notes programs and operations that are "vulnerable to waste, fraud, abuse, or mismanagement, or in need of transformation." GAO has issued frequent reports outlining serious concerns with the onshore and offshore oil and gas leasing programs. As far back as 1989, GAO noted that BLM "is not exercising balanced stewardship over the public lands." In just the last three years, GAO has highlighted deficiencies with noncompetitive leasing, royalty relief policies, data collection, ensuring a fair return, and bonding and reclamation practices in the onshore program, and about decommissioning liabilities, safety and environmental oversight, fiscal returns from the leasing program, and pipeline safety and decommissioning in the offshore program.

The OIG has regularly highlighted energy management in its annual reports of "Major Management and Performance Challenges facing the U.S. Department of the Interior," stating, "many of DOI's energy programs are vulnerable to waste, fraud, and mismanagement, which can jeopardize public safety and environmental integrity and increase the financial burden on the American public."

Interior will proceed with leasing consistent with the district court's injunction during the appeal. In complying with the district court's mandate, Interior will continue to exercise the authority and discretion provided under the law to conduct leasing in a manner that takes into account the program's many deficiencies. Separately, Interior continues to review the programs' noted

DRAFT / DELIBERATIVE

shortcomings, including completing a report. The Department also will undertake a programmatic analysis to address what changes in the Department's programs may be necessary to meet the President's targets of cutting greenhouse gas emissions in half by 2030 and achieving net zero greenhouse gas emissions by 2050.

Pursuant to resolution of another litigation matter involving leasing activity on the public lands, Interior will release a notice of intent to conduct a review of the federal coal leasing program later this week.

From: [Schwartz, Melissa A](#)
To: [Alonso, Shantha R](#); [Anderson, Robert T](#); [Kelly, Katherine P](#); [Klein, Elizabeth A](#); [Roberts, Lawrence S](#); [Wallace, Andrew G](#); [Taylor, Rachael S](#); [Decker, Danielle K](#); [Rezaeerood, Paniz](#); [Gray, Morgan](#); [Beaudreau, Tommy P](#)
Cc: [Daniel-Davis, Laura E](#); [Feldgus, Steven H](#); [Cherry, Tyler A](#); [Grandy, John W](#)
Subject: RE: CLOSE HOLD: Oil and gas litigation update
Date: Monday, August 16, 2021 2:58:20 PM

Also – folks may be asked about the coal review mentioned at the bottom of the statement. You may remember we had teed this up last week (this week? It's all a blur). For your awareness but not to share, that notice will be in the Reading Room on Thursday. We will re-share the release with you on Wednesday.

From: Schwartz, Melissa A

Sent: Monday, August 16, 2021 3:39 PM

To: Alonso, Shantha R <shantha_alonso@ios.doi.gov>; Anderson, Robert T <Robert.Anderson@sol.doi.gov>; Kelly, Katherine P <Kate_Kelly@ios.doi.gov>; Klein, Elizabeth A <Elizabeth_Klein@ios.doi.gov>; Roberts, Lawrence S <lawrence_s_roberts@ios.doi.gov>; Wallace, Andrew G <andrew_wallace@ios.doi.gov>; Taylor, Rachael S <rachael_taylor@ios.doi.gov>; Decker, Danielle K <danielle_decker@ios.doi.gov>; Rezaeerood, Paniz <paniz_rezaeerood@ios.doi.gov>; Gray, Morgan <Leslie_Morgan_Gray@ios.doi.gov>; Beaudreau, Tommy P <tommy_beaudreau@ios.doi.gov>

Cc: Daniel-Davis, Laura E <laura_daniel-davis@ios.doi.gov>; Feldgus, Steven H <steve_feldgus@ios.doi.gov>; Cherry, Tyler A <tyler_cherry@ios.doi.gov>; Grandy, John W <john_grandy@ios.doi.gov>

Subject: CLOSE HOLD: Oil and gas litigation update
PRE-DECISIONAL

All –

Around 5pm today, the Department of Justice will file an appeal of the district court decision in *Louisiana v. Biden*. Once filed, we will issue a statement from Interior. The attached is the latest version, **THOUGH NOT FINAL** til it is sent. Laura is taking lead on notifications for groups, the Hill and Governors.

I am attaching the draft for your awareness (it is closed for internal edits). Please refer questions to Laura or Tommy, there is a lot of nuance here that we have to be mindful of. **OCL and OIEA**, please plan to distribute the press release once it hits your boxes, but not before. **Rachael**, I did not include your career staff but Niall will need to send appropriators after it's out.

Please flag any questions,

M

From: [Schwartz, Melissa A](#)
To: [Alonso, Shantha R](#); [Anderson, Robert T](#); [Kelly, Katherine P](#); [Klein, Elizabeth A](#); [Roberts, Lawrence S](#); [Wallace, Andrew G](#); [Taylor, Rachael S](#); [Decker, Danielle K](#); [Rezaeerood, Paniz](#); [Gray, Morgan](#); [Beaudreau, Tommy P](#)
Cc: [Daniel-Davis, Laura E](#); [Feldgus, Steven H](#); [Cherry, Tyler A](#); [Grandy, John W](#)
Subject: RE: CLOSE HOLD: Oil and gas litigation update
Date: Monday, August 16, 2021 3:15:58 PM
Attachments: [Draft Oil Gas Statement 8-16-21 final 413 pm.docx](#)

PRE-DECISIONAL

Updated version attached

From: Schwartz, Melissa A

Sent: Monday, August 16, 2021 3:39 PM

To: Alonso, Shantha R <shantha_alonso@ios.doi.gov>; Anderson, Robert T <Robert.Anderson@sol.doi.gov>; Kelly, Katherine P <Kate_Kelly@ios.doi.gov>; Klein, Elizabeth A <Elizabeth_Klein@ios.doi.gov>; Roberts, Lawrence S <lawrence_s_roberts@ios.doi.gov>; Wallace, Andrew G <andrew_wallace@ios.doi.gov>; Taylor, Rachael S <rachael_taylor@ios.doi.gov>; Decker, Danielle K <danielle_decker@ios.doi.gov>; Rezaeerood, Paniz <paniz_rezaeerood@ios.doi.gov>; Gray, Morgan <Leslie_Morgan_Gray@ios.doi.gov>; Beaudreau, Tommy P <tommy_beaudreau@ios.doi.gov>

Cc: Daniel-Davis, Laura E <laura_daniel-davis@ios.doi.gov>; Feldgus, Steven H <steve_feldgus@ios.doi.gov>; Cherry, Tyler A <tyler_cherry@ios.doi.gov>; Grandy, John W <john_grandy@ios.doi.gov>

Subject: CLOSE HOLD: Oil and gas litigation update

PRE-DECISIONAL

All –

Around 5pm today, the Department of Justice will file an appeal of the district court decision in *Louisiana v. Biden*. Once filed, we will issue a statement from Interior. The attached is the latest version, **THOUGH NOT FINAL** til it is sent. Laura is taking lead on notifications for groups, the Hill and Governors.

I am attaching the draft for your awareness (it is closed for internal edits). Please refer questions to Laura or Tommy, there is a lot of nuance here that we have to be mindful of. **OCL and OIEA**, please plan to distribute the press release once it hits your boxes, but not before. **Rachael**, I did not include your career staff but Niall will need to send appropriators after it's out.

Please flag any questions,

M

Interior Issues Statement on Oil and Gas Leasing Program

The Department of the Interior (Interior) confirmed today that the Department of Justice (DOJ) has appealed the preliminary injunction entered by the district court in *Louisiana v. Biden*, which enjoined Interior from implementing the pause in new federal oil and gas leasing as set forth in Section 208 of Executive Order 14008. DOJ is appealing that decision to the United States Court of Appeals for the Fifth Circuit. Federal onshore and offshore oil and gas leasing required by the district court's order will continue while the government's appeal is pending.

The appeal of the preliminary injunction is important and necessary. Together, federal onshore and offshore oil and gas leasing programs are responsible for significant greenhouse gas emissions and growing climate and community impacts. Yet the current programs fail to adequately incorporate consideration of climate impacts into leasing decisions or reflect the social costs of greenhouse gas emissions including, for example, in royalty rates. Furthermore, past operation of the programs did not adequately reflect the breadth of the Interior Secretary's stewardship responsibilities, including conserving wildlife habitat, protecting historic and cultural resources, ensuring that public lands are available for multiple uses, protecting marine, coastal, and human environments, meeting trust responsibilities to American Indian and Alaska Native Tribes, and providing a fair return to taxpayers. Moreover, the federal oil and gas programs inadequately account for environmental harms to lands, waters, and other resources, foster speculation by oil and gas companies, and frequently leave impacted communities out of important conversations about how they want the public lands and waters managed.

These issues have been the subject of numerous critical reports over decades by the Government Accountability Office (GAO), Interior's Office of Inspector General (OIG), Congressional Committees, and other independent reviewers. For example, the federal oil and gas program has been on GAO's "High Risk List" for more than a decade, which notes programs and operations that are "vulnerable to waste, fraud, abuse, or mismanagement, or in need of transformation." GAO has issued frequent reports outlining serious concerns with the onshore and offshore oil and gas leasing programs. As far back as 1989, GAO noted that BLM "is not exercising balanced stewardship over the public lands." In just the last three years, GAO has highlighted deficiencies with noncompetitive leasing, royalty relief policies, data collection, ensuring a fair return, and bonding and reclamation practices in the onshore program, and about decommissioning liabilities, safety and environmental oversight, fiscal returns from the leasing program, and pipeline safety and decommissioning in the offshore program.

The OIG has regularly highlighted energy management in its annual reports of "Major Management and Performance Challenges facing the U.S. Department of the Interior," stating, "many of DOI's energy programs are vulnerable to waste, fraud, and mismanagement, which can jeopardize public safety and environmental integrity and increase the financial burden on the American public."

Interior will proceed with leasing required by the district court's injunction during the appeal. In complying with the district court's mandate, Interior will continue to exercise the authority and discretion provided under the law to conduct leasing in a manner that takes into account the program's many deficiencies. Separately, Interior continues to review the programs' noted

shortcomings, including completing a report. The Department also will undertake a programmatic analysis to address what changes in the Department's programs may be necessary to meet the President's targets of cutting greenhouse gas emissions in half by 2030 and achieving net zero greenhouse gas emissions by 2050.

Pursuant to resolution of another litigation matter involving leasing activity on the public lands, Interior will release a notice of intent to conduct a review of the federal coal leasing program later this week.

From: [U.S. Department of the Interior](#)
To: [Klein, Elizabeth A](#)
Subject: Interior Issues Statement on Oil and Gas Leasing Program
Date: Monday, August 16, 2021 4:13:44 PM

Having trouble viewing this email? [View it as a Web page.](#)

US Department of the Interior News Release



Date: Monday, August 16, 2021
Contact: Interior_Press@ios.doi.gov

Interior Issues Statement on Oil and Gas Leasing Program

WASHINGTON – Please see below for a statement from the Department of the Interior:

“The Department of the Interior (Interior) confirmed today that the Department of Justice (DOJ) has appealed the preliminary injunction entered by the district court in *Louisiana v. Biden*, which enjoined Interior from implementing the pause in new federal oil and gas leasing as set forth in Section 208 of Executive Order 14008. DOJ is appealing that decision to the United States Court of Appeals for the Fifth Circuit. Federal onshore and offshore oil and gas leasing will continue as required by the district court while the government’s appeal is pending.

“The appeal of the preliminary injunction is important and necessary. Together, federal onshore and offshore oil and gas leasing programs are responsible for significant greenhouse gas emissions and growing climate and community impacts. Yet the current programs fail to adequately incorporate consideration of climate impacts into leasing decisions or reflect the social costs of greenhouse gas emissions including, for example, in royalty rates. Furthermore, past operation of the programs did not adequately reflect the breadth of the Interior Secretary’s stewardship responsibilities, including conserving wildlife habitat, protecting historic and cultural resources, ensuring that public lands are available for multiple uses, protecting marine, coastal, and human environments, meeting trust responsibilities to American Indian and Alaska Native Tribes, and providing a fair return to taxpayers. Moreover, the federal oil and gas programs inadequately account for environmental harms to lands, waters, and other resources, foster speculation by oil and gas companies, and frequently leave impacted communities out of important conversations about how they want the public lands and waters managed.

“These issues have been the subject of numerous critical reports over decades by the Government Accountability Office (GAO), Interior’s Office of Inspector General (OIG), Congressional Committees, and other independent reviewers. For example, the federal oil and gas program has been on GAO’s ‘High Risk List’ for more than a decade, which notes programs and operations that are ‘vulnerable to waste, fraud, abuse, or mismanagement, or in need of transformation.’ GAO has issued frequent reports outlining serious concerns with the onshore and offshore oil and gas leasing programs. As far back as 1989, GAO noted that BLM ‘is not exercising balanced stewardship over the public lands.’ In just the last three years, GAO has highlighted deficiencies with noncompetitive leasing, royalty relief policies, data collection, ensuring a fair return, and bonding and reclamation practices in the onshore program, and about decommissioning liabilities, safety and environmental oversight, fiscal returns from the leasing program, and pipeline safety and decommissioning in the offshore program.

“The OIG has regularly highlighted energy management in its annual reports of ‘Major Management and Performance Challenges facing the U.S. Department of the Interior,’ stating, ‘many of DOI’s energy programs are vulnerable to waste, fraud, and mismanagement, which can jeopardize public safety and environmental integrity and increase the financial burden on the American public.’

“Interior will proceed with leasing consistent with the district court’s injunction during the appeal. In complying with the district court’s mandate, Interior will continue to exercise the authority and discretion provided under the law to conduct leasing in a manner that takes into account the program’s many deficiencies. Separately, Interior continues to review the programs’ noted shortcomings, including completing a report. The Department also will undertake a programmatic analysis to address what changes in the Department’s programs may be necessary to meet the President’s targets of cutting greenhouse gas emissions in

half by 2030 and achieving net zero greenhouse gas emissions by 2050.

“Pursuant to resolution of another litigation matter involving leasing activity on the public lands, Interior will release a notice of intent to conduct a review of the federal coal leasing program later this week.”

###

About the U.S. Department of the Interior

The Department of the Interior (DOI) conserves and manages the Nation's natural resources and cultural heritage for the benefit and enjoyment of the American people, provides scientific and other information about natural resources and natural hazards to address societal challenges and create opportunities for the American people, and honors the Nation's trust responsibilities or special commitments to American Indians, Alaska Natives, and affiliated island communities to help them prosper.



U.S. Department of the Interior | 1849 C Street NW, Washington, DC



[Update subscription](#) | [Unsubscribe](#) | [Help](#) | [Contact Us](#)

This email was sent to elizabeth_klein@ios.doi.gov by: U.S. Department of the Interior - 1849 C Street, N.W. - Washington DC 20240 - 202-208-3100



From: [Drew McConville](#)
To: [Klein, Elizabeth A](#)
Subject: Automatic reply: [EXTERNAL] TWS views on oil and gas review
Date: Thursday, April 29, 2021 8:29:05 AM

Hi - it's Thurs, April 29 and I'll be from around 9 to 1 pm. Please text me at (b) (6) for urgent matters.

Disclaimer

The information contained in this communication from the sender is confidential. It is intended solely for use by the recipient and others authorized to receive it. If you are not the recipient, you are hereby notified that any disclosure, copying, distribution or taking action in relation of the contents of this information is strictly prohibited and may be unlawful.