April 23, 2018

To: Catherine Cook, Acting Division Chief, Fluid Minerals Division, U.S Bureau of Land Management

CC: Office of Information and Regulatory Affairs, OIRA_Submission@omb.eop.gov

RE: Comments on Proposed Rule on Waste Prevention, Production Subject to Royalties, and Resource Conservation; Rescission or Revision of Certain Requirements, and related Regulatory Impact Analysis

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We, sixty-six law professors who have expertise in natural resources law, public lands law, environmental law, administrative law, and related fields, provide these comments concerning the Bureau of Land Management's (BLM) notice of proposed rulemaking, *Waste Prevention, Production Subject to Royalties, and Resource Conservation; Rescission or Revision of Certain Requirements*, 83 Fed. Reg. 7924 (Feb. 22, 2018) (2018 Proposed Rule) and the supporting Regulatory Impact Analysis (2018 RIA). The notice issued for the 2018 Proposed Rule signals BLM's intent to revise its approach to natural gas venting, flaring, and leaks from onshore federal and Indian leases. Specifically, BLM proposes to rescind its November 2016 rule, entitled *Waste Prevention, Production Subject to Royalties, and Resource Conservation*, 81 Fed. Reg. 83,008 (Nov. 18, 2016) (2016 Rule), and reinstate (a slightly modified version of) BLM's prior approach to natural gas waste, which was detailed in the bureau's 1979 *Notice to Lessees and Operators of Onshore Federal and Indian Oil and Gas Leases, Royalty or Compensation for Oil and Gas Lost* (NTL-4A). We oppose the proposed rule and urge BLM to allow the 2016 Rule to take effect.

We believe the course of action detailed in the 2018 Proposed Rule would be inconsistent with BLM's statutory obligations and constitute arbitrary and capricious decisionmaking for at least five reasons:

- First, reinstating NTL-4A would not fulfill BLM's obligation under the Mineral Leasing Act (MLA), 30 U.S.C. §§ 188-287, to prevent waste of natural gas from federal and Indian oil and gas leases.

- Second, that approach would not fulfill BLM's separate obligations under the Federal Land Policy and Management Act (FLPMA), 43 U.S.C. §§ 1701-87, to protect the public lands and associated resources from environmental harm, and particularly to "prevent unnecessary or undue degradation" of those lands.

- Third, BLM's revised definition of waste is both unjustified and incoherent, and hence is arbitrary and capricious in violation of the Administrative Procedure Act (APA), 5 U.S.C. § 706(2)(A).

- Fourth, BLM proposes to rely on an irrational cost-benefit analysis included in the 2018 RIA, also violating the APA requirement of reasoned agency decisionmaking.

- Fifth, the proposed rule would improperly deprive BLM of the discretion to ensure that the federal government receives fair and accurate royalty payments for avoidable losses of methane from oil well operations, a policy that is even less-stringent than that previously included in NTL-4A.

This is not an exhaustive catalogue of the legal errors and poor policy judgments reflected in the 2018 Proposed Rule, but we view these errors, which we detail below, as fatal to BLM's decisionmaking process. Each of them is independently sufficient to demonstrate that BLM should not finalize the 2018 Proposed Rule and will assume significant legal risk if it chooses to do so.

I. The 2018 Proposed Rule's Approach to Waste of Natural Gas Would Violate the Mineral Leasing Act.

The 2016 Rule imposed modernized requirements on oil and gas producers to implement reasonable measures to avoid waste of natural gas, including restriction on venting and flaring practices, and requirements related to leak detection and remediation. The 2018 Proposed Rule would turn back the clock and reinstate NTL-4A, which was issued almost four decades ago, in 1979, and which the non-partisan Government Accountability Office (GAO) found inadequately controlled waste of federally owned natural gas resources. *See* GAO, FEDERAL OIL AND GAS LEASES: OPPORTUNITIES EXIST TO CAPTURE VENTED AND FLARED NATURAL GAS, WHICH WOULD INCREASE ROYALTY PAYMENTS AND REDUCE GREENHOUSE GASES, GAO-11-34 (Oct. 2010) (GAO REPORT). The oil and gas industry has changed dramatically in the last four decades, as have the technologies available to control venting and flaring and detect and remediate leaks; returning to an antiquated regulatory regime is neither sensible policymaking nor consistent with the MLA.

The MLA provides the framework by which BLM issues, regulates, and enforces leases for oil and gas development on federal lands. The MLA is "intended to promote wise development of . . . natural resources and to obtain for the public a reasonable financial return on assets that 'belong' to the public," *California Co. v. Udall*, 296 F.2d 384, 388 (D.C. Cir. 1961); *see also Boesche v. Udall*, 373 U.S. 482, 481 (1986) (identifying prevention of waste as one of the key purposes of the MLA). To achieve these goals, the MLA sets out a range of requirements for the leases that BLM issues for the development of federal oil and gas resources. In particular, the MLA requires that "[a]ll leases of lands containing oil or gas, made or issued under [the MLA], shall be subject to the condition that the lessee will, in conducting his explorations and mining operations, use all reasonable precautions to prevent waste of oil or gas developed in the land." 30 U.S.C. § 225. In other words, BLM not only has the power but the affirmative duty to prevent waste from oil and gas development on federal lands.

The MLA imposes additional relevant requirements on leases issued under the Act, and concomitant duties on BLM to enforce those requirements. All leases must "contain provisions for the purpose of insuring the exercise of reasonable diligence, skill, and care in the operation of" the lease. 30 U.S.C. § 187. Failure to prevent waste from a lease is an example of a lessee's failure to use "reasonable diligence, skill, and care" in lease operation. In addition, lessees are required to pay royalties on any wasted resources. *See* 30 U.S.C. § 1756 ("Any lessee is liable for royalty payments on oil and gas lost or wasted from a lease site when such loss or waste is due to negligence on the part of the operator of the lease, or due to the failure to comply with any rule or regulation, order or citation issued under this chapter or any mineral leasing law."). Provisions of the 2016 Rule that defined waste and required royalty payments on avoidable waste fulfilled BLM's obligations under these provisions.

In addition, the MLA provides BLM with both the authority and the obligation to regulate environmental impacts from the development of federal oil and gas resources. The Act requires BLM to "regulate all surface-disturbing activities conducted pursuant to any lease," and to "determine reclamation and other actions as required in the interest of conservation of surface resources." 30 U.S.C. § 226(g). BLM must ensure that all leases contain provisions "for the protection of the interests of the United States . . . and for the safeguarding of the public welfare." 30 U.S.C. § 187.[1] These interests include protection of the environment. *See Natural Resources Defense Council, Inc. v. Berklund*, 458 F. Supp. 925, 936 n.17 (D.D.C. 1978). In addition, BLM may suspend leases "in the interest of conservation of natural resources," 30 U.S.C. § 209, a concept that includes environmental protection. *See Copper Valley Machine Works v. Andrus*, 653 F.2d 595, 601 & nn.7-8 (D.C. Cir. 1981); *Hoyl v. Babbitt*, 129 F.3d 1377, 1380 (10th Cir. 1997); *Getty Oil Co. v. Clark*, 614 F. Supp. 904, 916 (D. Wyo. 1985). Again, the preamble to the 2016 Rule, as well as the record supporting that rule, made clear that the 2016 Rule was designed to meet BLM's statutory obligation to address the significant environmental impacts caused by methane emissions related to the development of federal oil and gas resources.

BLM justifies, in part, its 2018 Proposed Rule because "BLM is not confident that all provisions of the 2016 final rule would survive judicial review." 83 Fed. Reg. at 7927 (Feb. 22, 2018). We strongly disagree. BLM plainly had authority to issue the 2016 Rule because the MLA vests BLM with broad authority to carry out the Act's purposes. *See* 30 U.S.C. § 189 (authorizing the Secretary of the Interior to "prescribe necessary and proper rules and regulations and to do any and all things necessary to carry out and accomplish

[1] In order to avoid superfluity, these requirements must mean something more than the other specific lease provisions listed in section 187. *See Advocate Health Care Network v. Stapleton*, 137 S. Ct. 1652, 1659 (2017) ("Our practice, however, is to 'give effect, if possible, to every clause and word of a statute.") (quoting *Williams v. Taylor*, 529 U.S. 362, 404 (2000)).

the purposes of this chapter").[2] That other federal agencies or states may have complementary or concurrent authority over methane emissions related to the development of federal oil and gas resources does not affect BLM's authority and obligation under the MLA.

The 2016 Rule fulfilled BLM's waste prevention obligations under the MLA. The preamble to that rule provides a thorough overview of the evidence that BLM's prior approach to waste, set forth in NTL-4A, was inadequate to meet the agency's statutory obligations related to waste prevention. Yet BLM now proposes to repeal the 2016 Rule and reinstate a weakened version of NTL-4A. Doing so would violate BLM's obligations under the relevant sections of the MLA and would be arbitrary and capricious under the APA.

II. The 2018 Proposed Rule's Approach to Waste of Natural Gas Would Violate the Federal Land Policy and Management Act.

FLPMA also imposes obligations on BLM to protect the public lands and associated resources from environmental harm; rescinding the 2016 Rule and reverting to NTL-4A would violate these FLPMA obligations in addition to BLM's MLA obligations. Most fundamentally, FLPMA requires BLM to "by regulation or otherwise, take any action necessary to prevent unnecessary or undue degradation of the [public] lands." 43 U.S.C. § 1732(b). These obligations are distinct: BLM must prevent degradation that is unnecessary, and *also* degradation that is undue. *See Mineral Policy Center v. Norton,* 292 F. Supp. 2d 30, 38 (D.D.C. 2003). BLM can satisfy its obligation to prevent unnecessary or undue degradation through the imposition of appropriate mitigation measures. *See Theodore Roosevelt Conservation Partnership v. Salazar*, 661 F.3d 66, 76 (D.C. Cir. 2011) (explaining that "something more than the usual effects anticipated from appropriately mitigated development" may constitute "unnecessary or undue degradation"). BLM is authorized to use regulations to fulfill this mandate, 43 U.S.C. § 1740, including regulations of the "use, occupancy and development of [the] public lands," 30 U.S.C. § 1732(b).

To the extent that effective mitigation is available to reduce or address the environmental harms caused by a land use, such as oil and gas development, those harms are "unnecessary" in the literal sense of that word—i.e. the land use could occur without imposing the harm, because the harm could be addressed through appropriate mitigation. Where available, BLM has an obligation to require resource users to implement such mitigation measures to avoid "unnecessary" degradation. The preamble and the record to the 2016 Rule make clear that methane emissions from the development of federal oil and gas resources cause degradation of the public lands, through their contribution to climate change, impairment of air quality, and other mechanisms. *See, e.g.*, 81 Fed. Reg. at 83,014, 83,020-21. Methane releases that could be ameliorated through appropriate

[2] All leases, including existing leases, are subject to regulations under the MLA. See 43 C.F.R. § 3161.1(a).

mitigation measures, such as those required by the 2016 Rule, fall within the scope of "unnecessary and undue degradation" of the public lands and must be addressed by BLM.[3]

FLPMA also requires BLM to manage the public lands according to the principles of multiple use and sustained yield, a mandate that provides ample legal authority to support the requirements imposed by the 2016 Rule and cautions against reverting to NTL-4A as the 2018 Proposed Rule would. 43 U.S.C. §§ 1702(c), 1732(a). Multiple use "means the 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." 43 U.S.C. § 1702(c). The "resource values" that BLM is charged with managing include "renewable and nonrenewable resources," and encompass environmental resources like "watershed, wildlife and fish, and natural scenic, scientific, and historical values" alongside extractive uses like "timber, [and] minerals." 43 U.S.C. § 1702(c); *see New Mexico ex rel. Richardson v. BLM*, 565 F.3d 683, 710 (10th Cir. 2009) (identifying "conservation to protect environmental values" as among the multiple uses for which BLM must manage); *Lower Valley Power & Light*, 82 IBLA 216, 223 (1984) ("It is well established that the BLM may use its discretionary authority to protect environmental and other land use values."). Management under the multiple use mandate requires BLM to avoid "permanent impairment to the productivity of the land and the quality of the environment." 43 U.S.C. § 1702(c); *see also Utah v. U.S. Dep't of the Interior*, 535 F.3d 1184, 1187 (10th Cir. 2008) ("BLM must strike a balance that avoids 'permanent impairment of the productivity of the land and the quality of the environment.").

The definition of the term "sustained yield" reinforces the notion that BLM has broad authority to ensure the long-term health of the public lands. Sustained yield means "the achievement and maintenance in perpetuity" of the renewable uses, including the conservation of environmental resources, of the public lands. 43 U.S.C. § 1702(c).

FLPMA's statement of congressional policy underscores BLM's authority and obligation to require resources users to ameliorate the environmental harms they cause. The Act declares a policy that "the public lands be managed in a manner that will protect the quality of scientific, scenic, historical, ecological, environmental, air and atmospheric, water resources, and archeological values," and that "the United States receive fair market value of the use of the public lands." 43 U.S.C. § 1701(a)(8)-(9). As the preamble and the record to the 2016 Rule establish, preventable releases of methane harm these resources on the public lands. *See, e.g.*, 81 Fed. Reg. at 83,014, 83,020-21. Waste of the type addressed by the 2016 Rule also reduces royalty revenue in contravention of the fair market value principle. *See id.* at 83,009.

[3] While FLPMA does require that the agency must "provide for compliance with applicable pollution control laws," 43 U.S.C. § 1712(c)(8), that provision does not prevent BLM from taking its own steps to prevent degradation of the public lands from pollution. Indeed, the agency is required to take those steps. 43 U.S.C. § 1732(b).

In short, the waste regulated by the 2016 Rule degrades air quality on the public lands, impairs the multiple uses BLM is charged with managing, and contributes to climate change and other environmental harms that will "permanent[ly] impair[]" the productivity of the public lands in ways that will harm the "long-term needs of future generations." 43 U.S.C. § 1702(c). Repealing the 2016 Rule and replacing it with a weakened version of the almost-forty-year-old NTL-4A would therefore be arbitrary and capricious, and would leave BLM vulnerable to a charge that it has failed to live up to its obligations under FLPMA.

III. The 2018 Proposed Rule's Definition of Waste Is Arbitrary and Capricious.

A further legal flaw in the current proposal relates to the proposed modification of BLM's definition of the term "waste." Currently, BLM's rules define "waste of oil or gas" as "any act or failure to act by the operator that is not sanctioned by the authorized officer as necessary for proper development and production and which results in: (1) A reduction in the quantity or quality of oil and gas ultimately producible from a reservoir under prudent and proper operations; or (2) *avoidable* surface loss of oil or gas." 43 C.F.R. § 3160.0-5 (emphasis added). Clarifying this definition, the 2016 Rule explains the circumstances in which a loss of gas is deemed avoidable:

> A loss of gas is deemed *unavoidable* when an operator has complied with all applicable requirements and taken prudent and reasonable steps to avoid waste, and the gas is lost from one of the operations or sources specified in this final regulation, subject to certain limitations. The specified operations and sources include emergencies; well drilling, completions, and tests; normal operations of pneumatic devices and storage vessels; liquids unloading; leaks; equipment or pipeline maintenance requiring depressurization; and residual gas after stripping of natural gas liquids. A loss of gas is also deemed unavoidable when gas is flared from a well that is not connected to a gas pipeline, provided the BLM has not otherwise determined that the loss of gas is avoidable. *All other losses of gas*, as well as any gas flared in violation of the capture requirement (regardless of whether the well is connected to a pipeline), are deemed *avoidable* and subject to royalties. 81 Fed. Reg. at 83,013 (Nov. 18, 2016) (emphasis added).

In other words, as relevant here, the current BLM rules define "waste" of gas as an unsanctioned act or failure to act that results in a loss of gas *other* than those losses that BLM specifically concluded, after a case-by-case review, could not reasonably be avoided during rule-compliant well operations.

To identify the list of unavoidable losses detailed above, BLM reviewed practices at a large variety of well operations on the public lands, and evaluated the circumstances under which the operators could cost-effectively capture gas from their wells. BLM engaged in this exercise in large part in response to a 2010 study by the nonpartisan GAO, which concluded that NTL-4A did not adequately control waste. The GAO found

that "around 40 percent of natural gas estimated to be vented and flared on onshore Federal leases could be economically captured with currently available control technologies." GAO REPORT at 2. In reviewing the available data, BLM agreed with GAO that some of the then-current practices on federal lands were unreasonable, even though they complied with NTL-4A, because operators were choosing to vent or flare, or to ignore leaks, rather than taking readily available and cost-effective measures to eliminate those losses.

In the 2018 Proposed Rule, BLM proposes to replace that carefully tailored definition of waste—which was based on a review of (1) oil and gas operations across the federal lands, and (2) the costs and efficacy of various technologies to control venting, flaring, and leaks, and which responded to specific recommendations and findings by the GAO—with a definition that would turn solely on an assessment of operators' marginal costs of gas capture. Specifically, BLM has now concluded—with little analysis—that "it is not appropriate for 'waste prevention' regulations to impose compliance costs greater than the value of the resources they are expected to conserve." 83 Fed. Reg. 7928. Accordingly, the proposed rule would define "waste of oil or gas" as "any act or failure to act by the operator that is not sanctioned by the authorized officer as necessary for proper development and production, *where compliance costs are not greater than the monetary value of the resources they are expected to conserve*, and which results in: (1) A reduction in the quantity or quality of oil and gas ultimately producible from a reservoir under prudent and proper operations; or (2) avoidable surface loss of oil or gas." 83 Fed. Reg. 7946 (emphasis added). In other words, the proposed rule would limit the existing definition of "waste of oil or gas" to situations in which the operator's marginal compliance costs to conserve gas do not exceed the value of that gas. By redefining waste to exclude avoidable releases of natural gas, the 2018 Proposed Rule would forgo significant royalty revenue and fail to "obtain for the public a reasonable financial return on [public] assets." *California Co.*, 296 F.2d at 388. The proposed definition thus fails to advance a key policy objective of the MLA and, in addition, it has no historical basis, is incoherent, and ignores the availability of cost-effective techniques to reduce methane leakage.

a. The Proposed Definition of Waste Runs Contrary to Common Law Definitions of That Term.

BLM's proposed definition is deeply flawed. Most fundamentally, there is no precedent in the common law related to waste of a valuable resource for exclusively defining "waste" as occurring where the marginal cost of resource loss is positive (i.e. the present value of the lost resource exceeds the cost of capture). On the contrary, the common law addresses the waste of a valuable resource precisely *because* the party in control of the resource (here, the operator) does not have adequate economic incentive to limit the loss of that resource, and the resulting resource loss harms another interested party (here, the public). In other words, the entire purpose of the common law rule is to require resource users to act to protect the interests of third parties where doing so is *not* in the resource users' economic self-interest.

As Richard A. Posner has explained:

> [T]he common law doctrine of waste … mediates between the competing interests of [a present user of property (here, the operator)] and [the owner of the property (here, the public)]. [The present user] will have an incentive to maximize not the value of the property—that is, the present value of the entire stream of future earnings obtainable from it—but only the present value of the earnings stream obtainable during his expected [use (here, the lease)]. … The law of waste forbids this.

RICHARD A. POSNER, ECONOMIC ANALYSIS OF LAW 74-75 (9th ed. 2014). Posner gives the example of a logger who will "want to cut timber before it has attained its mature growth even though the present value of the timber would be greater if the cutting of some or all of it were postponed if the added value from waiting would inure to the" forest owner. *Id.* The same reasoning applies to oil and gas operators, who will want to extract and sell whatever oil and gas they can during the life of their lease, even though the present value of the reservoir would be greater if the extraction of some or all of it were postponed until better or cheaper technologies were available to capture more of the gas. Operators do so at the expense of the public, whose interest in federal oil and gas resources is not time limited, and who would enjoy a higher royalty if the present value of the reservoir were maximized.

The common law addresses the competing incentives in this situation by prohibiting the present user from exploiting the resource in a way that maximizes the present value of the user's earnings stream at the expense of the overall value of the resource. Yet BLM instead proposes to sanction a calculus that would *encourage* the present user (the operator) to think only about its own earnings stream, and to control gas losses only when the user could make a profit by so doing. Under this approach, the public would lose out on royalty payments that would have been made had gas not been wasted. BLM's proposed definition is therefore contrary to the central premise of the common law of waste.

b. The Proposed Definition of Waste Is Incoherent.

The proposed definition is also illogical and ill-defined, for at least four reasons. First, the proposal includes no discussion of the time horizon over which the operator should evaluate (a) its compliance costs, and (b) the value of the resources that compliance is expected to conserve. Yet some investments in gas capture could take years or decades to pay for themselves. Suppose, for example, that BLM required operators to install gathering lines and compressors at a well, to ensure that any captured gas could be transported to market. Whether and when the net present value of that investment would be positive depends on the time horizon over which profits are measured, as well as other variables including the future market for the captured gas.

A second significant logical flaw in the proposed definition concerns BLM's focus on the market value of the captured gas. That narrow focus fails to recognize that while captured

gas has net positive value for the operator, vented, flared, or leaked gas has net *negative* value for society, in the form of environmental and public health externalities, and forgone future energy production and royalty payments. Any economic calculation of the present value of an investment in gas capture technologies, therefore, should consider as offsets for that investment *both* the value of the gas that can be captured (value that would accrue to the operator as profits and to the public as royalties) *and* the value of the externalities that can be avoided.

Third, BLM's proposed definition of waste fails to recognize that operators may not yet have sufficient information to assess the net present value of an investment in gas detection and capture technology. Take, for example, the 2016 Rule's requirement that operators conduct semi-annual leak inspections at well sites, and quarterly inspections at compressor stations. Until an operator has invested in the necessary leak detection equipment and begun conducting regular inspections and reporting the findings to BLM, the operator cannot accurately assess—and BLM, in turn, cannot accurately evaluate—whether the cost of compliance with the monitoring requirement exceeds the value of any gas saved by finding and repairing leaks.

Finally, fourth, the proposed definition would not create an adequate incentive for operators to develop new gas detection and capture technologies. If the net present value of compliance is currently negative, then the proposed rule would waive the compliance obligation altogether, and thus eliminate any incentive for operators to investigate and develop cheaper compliance options.

c. The Proposed Definition of Waste Arbitrarily Ignores Economically Viable Opportunities to Reduce Methane Leakage.

Requiring implementation of available technology is often the most effective and efficient means of ensuring the use of that technology, even where the technology is already cost-effective. The costs of implementing innovative control technology always decline with significant deployment and commercialization of the technology, but here it is abundantly clear that the technologies needed to comply with the 2016 Rule are cost-effective already, and their costs would continue to decline with increasing utilization. Methane loss-avoidance technology has advanced dramatically since the 1970s. By failing to require implementation of available loss-avoidance technology, and instead basing the waste definition on marginal compliance costs, the proposed rule abandons opportunities to further reduce both methane leakage and technology costs. Moreover, the proposal hinders development of even more successful, cost-effective technology to reduce leakage. These opportunities typically arise in the context of regulations that foster deployment and diffusion of new technology and ensures reduction in cost of deployment over time. *See, e.g.*, Margaret Taylor, et al., *Control of SO2 Emissions from Power Plants: A Case of Induced Technological Innovation in the U.S.*, 72 TECH. FORECASTING & SOCIAL CHANGE 69 (2005); Nicholas A. Ashford & Ralph P. Hall, *The Importance of Regulation-induced Innovation for Sustainable Development*, 3 SUSTAINABILITY 270 (2011).

As discussed above, the 2016 Rule relied on the findings of a 2010 GAO report that synthesized data from a 2008 EPA report and other sources. The report found that up to 40% of methane loss could be avoided with implementation of existing technology that was unavailable or infeasible when NTL-4A was enacted. *See* GAO REPORT at 2. The payback period for capital investment in these solutions is short, making them generally cost-effective. In light of those developments, it makes no sense to return to a rule based on marginal compliance costs rather than on the availability of cost-effective new technology. The impact of the proposal would be to return to a regime from over 40 years ago that would ignore innovation since that time.

IV. The Cost-Benefit Analysis on Which BLM Relies Was Arbitrary and Capricious.

BLM justifies rescinding the 2016 Rule, in part, because BLM determined that the rule would "generate[] fewer benefits than initially estimated." 83 Fed. Reg. at 7925-26. BLM supports this statement by reference to a revised RIA issued to accompany the 2018 Proposed Rule.[4] The MLA and FLPMA may not require BLM to rely on cost-benefit analysis to evaluate a proposed rule, *cf. Michigan v. EPA*, 135 S. Ct. 2699, 2711 (2015), but since the agency has relied on the cost-benefit analysis contained in the RIA as justification for its proposal, that analysis must be rational and accurate. *See* 5 U.S.C. § 706(2)(A). The RIA falls well short of that mark for numerous reasons, including fatal methodological errors that were brought to BLM's attention in comments submitted in response to its earlier decision to delay the 2016 Rule based on a similar cost-benefit analysis.[5] We focus our comments on four errors.

First and most importantly, the RIA takes a blinkered view of the "climate benefits" of the reduction in methane emissions that would have occurred under the 2016 Rule, evaluating only the "domestic social cost of methane." RIA at 33. A fixation on domestic costs makes no sense for a global problem like climate change, because "climate change

[4] U.S. Bureau of Land Management, Regulatory Impact Analysis for the Proposed Rule to Rescind or Revise Certain Requirements of the 2016 Waste Prevention Rule (Feb. 5, 2018) ("RIA").

[5] Comments submitted by the Environmental Defense Fund, the Institute for Policy Integrity, the Natural Resource Defense Council, the Sierra Club, and the Union of Concerned Scientists catalogue many of these defects, none of which BLM has satisfactorily addressed in its 2018 RIA. These defects include, but are not limited to, BLM's use of an inappropriate interest rate and timespan for analysis, failure to run a sensitivity analysis, and neglect of unquantified climate and public health benefits. *See* Environmental Defense Fund, et al., Comments on Proposed Rule, Regulatory Impact Analysis, and Environmental Assessment on the Delay and Suspension of Certain Requirements for Waste Prevention and Resource Conservation, Docket: RIN 1004- (Nov. 6, 2017). As law professors, some of whom do not have formal training in economic methodology, we recognize the importance of these defects but primarily address our comments to non-methodological concerns.

'involves a global externality,' meaning that carbon released in the United States affects the climate of the entire world." *Zero Zone Inc. v. Department of Energy*, 832 F.3d 654, 679 (7th Cir. 2016). In such a context, ignoring the global climate-inducing effects of BLM's action from the analysis does not constitute rational decisionmakng. *See CBD v. NHTSA*, 538 F.3d 1172, 1203 (9th Cir. 2008); *High Country Conservation Advocates v. Forest Service*, 52 F. Supp. 3d 1174, 1191 (D. Colo. 2014) (ruling that agency failed to adequately disclose climate inducing effects because it did not use a protocol that would calculate a global social cost of carbon).

Excluding a significant "global externality" from a cost benefit analysis is not only bad economics, it also ignores the United States' moral obligation to consider harms caused to other countries and to global commons, like the Earth's climate. *Cf.* Executive Order 12,114, *Environmental Effects Abroad of Major Federal Actions* § 2.4(a), 44 Fed. Reg. 1957 (Jan. 4, 1979) (requiring analysis of impacts to global commons and to the environment of foreign countries). Moreover, the international effects of climate change will indisputably and directly impact the United States' own interests, including within our borders, meaning that by excluding foreign climate effects from analysis, BLM also excludes concomitant *domestic costs*, which the RIA purports to analyze. For example, the National Defense Authorization Act for Fiscal Year 2018, signed by President Trump less than three months before BLM issued its proposed rule, found that "climate change is a direct threat to the national security of the United States" and that "[a]s global temperature rise, droughts and famines can lead to more failed states, which are breeding grounds of extremist and terrorist organizations." H.R. 2810-75, § 335(a)(9), (b)(1). Manifestations of climate change outside of the United States's borders will similarly effect U.S. businesses with interests abroad, global economic markets, U.S. cross-border water supplies, and a host of other economic and non-economic domestic interests. By entirely excluding from analysis climate change occurring outside the United States, the RIA significantly understates the "domestic social cost of carbon" that it purports to identify as the appropriate metric for analysis.

Second, BLM's justification for calculating only a domestic social cost of methane misconstrues the relevant guidance document issued by the Office of Management and Budget (OMB). *See* RIA at 33. The RIA correctly quotes OMB Circular A-4 as advising an agency that "[w]here you choose to evaluate a regulation that is likely to have effects beyond the borders of the United States, these effects should be reported separately." *Id.* (quoting OMB Circular A-4 at 15). BLM concludes from that sentence that it need not calculate any costs that will occur beyond the borders of the United States, but that conclusion does not follow from the quoted text. OMB Circular A-4 advises agencies to disaggregate, not entirely disregard, the domestic and international effects of their actions. Such disaggregation is likely impossible to do for climate change because of the interconnected nature of the problem and the harms it will cause, but disaggregating international and domestic costs is the most that OMB Circular A-4 can be viewed as advising. Instead, the only step the text from OMB Circular A-4 indicates is voluntary is carrying out a cost-benefit analysis at all—i.e., the word "choose" is connected grammatically to the evaluation of a regulation at all, not the evaluation of certain effects of a regulation. This may refer to the fact that agencies need not always engage in cost-

benefit analysis as part of their rulemaking process, for example, where they propose rules that are not found to be significant. Regardless of the meaning of this stray phrase in OMB Circular A-4, agencies cannot rely on *irrational* cost-benefit analyses to make their decisions, for to do so would be arbitrary and capricious. OMB Circular A-4 provides no justification for entirely and unreasonably neglecting the global effects of climate change, as BLM has done here. Moreover, as already explained, the global effects of climate change will lead to domestic impacts, such as harms to national security, and therefore BLM's analysis fails even to accurately estimate domestic effects.

Third, the RIA's estimation of the domestic social cost of methane is also irrational because it relies on an outdated model, and therefore does not constitute the "best available science and economics," as required by Executive Order 13,783, issued by President Trump on March 28, 2017. Promoting Energy Independence and Economic Growth, Executive Order 13783 § 5, 82 Fed. Reg. 16,093, 16,095 (Mar. 31, 2017). The RIA explains it estimates the domestic cost of methane based on "an ensemble of three integrated assessment models (IAMs): DICE 2010, FUND 3.8, and PAGE 2009." RIA at 71. The DICE model has, however, been updated twice since DICE 2010, *see Revisiting the Social Cost of Carbon*, 114 PROCEEDINGS OF THE NATIONAL ACADEMIES OF SCIENCES 1518, 1518 (2017), and therefore does not constitute the best available science.

Fourth, the RIA excludes benefits attributable to the 2016 Rule if those same benefits would be generated by implementation of New Source Performance Standards subparts OOOO and OOOOa that EPA promulgated in 2016 (the "2016 NSPS"). *See* RIA at 8-9, 21-22, 55. For example, the RIA explains that several of the 2016 Rules requirements "would practically impact only existing wells," because the 2016 NSPS would impose similar requirements to new and modified ones. RIA at 55. This analysis overlooks the fact that EPA has already announced its intention to review the 2016 NSPS and "if appropriate, [] initiate reconsideration proceedings to suspend, revise or rescind" them. EPA, Review of the 2016 Oil and Gas New Source Performance Standards for New, Reconstructed, and Modified Sources, 82 Fed. Reg 16,331, 16,331 (Apr. 4, 2017). In light of that formal announcement by EPA, it is foreseeable and even likely that the agency will revise or rescind the 2016 NSPS, and therefore, it is irrational for BLM to presume that the 2016 NSPS will remain in place when BLM estimates the benefits that the 2016 Rule would produce if allowed to go into effect.

V. The 2018 Proposed Rule Would Improperly Take Away BLM's Discretion to Ensure that the Government Receives Royalties for Avoidable Losses of Methane from Oil Well Operations.

The proposed rule would take away BLM's discretion to assess royalties for fugitive methane emissions from oil well operations, and instead require the agency to defer to state standards and to assess royalties only for venting and flaring in violation of state agencies' substantive standards. The proposal would thus create financial incentives for well operators to vent or flare rather than to take steps to address avoidable waste of federal natural resources. Moreover, the proposal would deprive the federal government of the opportunity to receive royalties to compensate it for this avoidable waste.

As the proposal notes: "Operator royalty obligations for vented or flared gas from oil wells in NTL-4A was, for the most part, dependent on an 'avoidable loss' determination by the BLM." 83 Fed. Reg. at 7927. At the same time, NTL-4A "allowed for the BLM to ratify or accept the venting or flaring rules, regulations, or orders of the appropriate State regulatory agency." 83 Fed. Reg. at 7927. The 2016 rule tightened this royalty requirement, eliminating the option for BLM to simply rely on state standards and ensuring that "an operator's royalty obligations for venting or flaring are determined by the avoidable/unavoidable loss definitions and the gas capture requirement thresholds." *Id.*

Under the proposed rule, by contrast to both the 2016 Rule and NTL-4A, BLM would bind itself absolutely to state standards and waive all royalties for avoidable losses that do not stem from violations of those state standards. According to the proposal:

> This change both simplifies an operator's obligations by aligning Federal and State venting and flaring requirements for oil-well gas and allows for region-specific regulation of oil-well gas that accounts for regional differences in production, markets, and infrastructure. An operator would owe royalty on any oil-well gas flared in violation of applicable State or tribal requirements.

Id.

Notwithstanding BLM's assertion that the proposal merely implement's NTL-4A's concept of deference to state standards, the proposal in fact would go much further, eliminating all of BLM's discretion to impose royalties for losses of methane that BLM itself believes to be avoidable. This aspect of the 2018 Proposed Rule would be even less stringent than rules imposed in the 1970s under NTL-4A. Even if state standards provide incentives for an operator to vent and flare rather than deploy cost-effective loss-avoidance technology, under the proposed rule, BLM would be powerless to determine that losses are avoidable, depriving the federal government of the opportunity to receive royalties for waste of federal natural resources.

With this proposal, BLM would effectively abdicate its responsibility to determine which losses of federal natural resources are avoidable and thus royalty-bearing, and to assess royalties accordingly. Careless oil well operators in states with lax regulations would obtain the benefit of this rule, at the expense of the public fisc and the environment, and in violation of BLM's obligation to prevent unnecessary and undue degradation.

* * *

For the reasons we have discussed, we believe that the 2018 Proposed Rule is both unlawful and bad policy. Should BLM decide to finalize the rule, we believe the agency will face significant litigation risk when inevitably a legal challenge is brought. We urge BLM to reconsider its approach and allow the 2016 Rule to go into effect.

Sincerely yours,

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