Institute *for* Policy Integrity

NEW YORK UNIVERSITY SCHOOL OF LAW

November 5, 2018

To: Carlsbad RMP Team Lead, Bureau of Land Management

Subject: Failure to Consider Alternatives, Option Value, and Energy Substitution

Submitted by: the Institute for Policy Integrity at New York University School of Law[1]

I. BLM Should Not Offer More Lands for Fossil Fuel Leasing, and Instead, Consider Alternatives with the Greatest Amount of Conservation and Wildlife Protection.

In managing federal lands and resources, BLM is directed to follow "multiple use" and "sustained yield" principles pursuant to FLPMA, which require harmonizing energy production with conservation, and managing "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."[2] Consistent with these mandates, and in light of the large amount of acreage currently open to leasing or under active development in the Carlsbad RMP region, BLM should not offer more lands for fossil fuel leasing at this time, and instead, consider alternatives that would afford the greatest amount of conservation and wildlife protection.

Multiple-use is defined as:

> 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…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 non-renewable 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 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) (emphasis added). 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).

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[1] No part of these comments purports to present the views, if any, of New York University.

[2] 43 U.S.C. §§1701(a)-(c) (2012).

Approximately 98% of the Carlsbad region is open to leasing and is proposed to remain open to leasing in the preferred alternative of the Draft RMP. And approximately 75% of the region is already leased and either developed or slated for development. Opening more land to leasing than necessary is contrary to BLM's multiple use and sustained yield mandates. As the Tenth Circuit has held, "[i]t is past doubt that the principle of multiple use does not require BLM to prioritize development over other uses." *New Mexico Ex. Rel. Richardson v. BLM*, 565 F.3d 683, 710 (10th Cir. 2009).

BLM must manage its lands for a variety of uses, not primarily for oil and gas development. 43 U.S.C. § 1712(c)(1). Any decision that leaves the vast majority of the Carlsbad field office open to oil and gas development—as the agency's preferred alternative C would— precludes the long term viability of conservation measures. BLM should not offer more lands for oil, gas, or coal leasing at this time, and instead, should consider the alternatives with the greatest amount of conservation and wildlife protection.

In past RMPs, BLM has designated a large amount of land with low or no oil and gas potential as open to leasing. Often, these lands are leased to private developers, presumably with the hope that energy prices will rise, that new ways to extract marginal energy will be found or that the leases could be sold to another company.[3] Over the last 30 years, production of oil or gas has been reported on only one-quarter of all acreage on federal lands leased for oil and gas drilling.[4] These speculative leases prevent conservation of environmentally valuable areas, and make it very difficult to get a designation that would protect them. And as the next section explains, allowing speculative leasing also transfers the public's valuable option to delay developing these lands to private actors.

II. The RMP, EIS, and any future leasing decisions must consider delayed development alternatives in order to account for the option value of irreversible drilling and development.

BLM is required by law to manage federal fossil fuels to earn "fair market value" for the public and to harmonize energy production with resource conservation.[5] Analyzing delayed development alternatives—both at the RMP/EIS stage and later, if any future lease sales are contemplated—is necessary in order to determine the optimal time to issue any leases in order to secure the public's right to obtain "fair market value" for its resources and to minimize environmental and social risks.[6]

By setting aside more public lands for conservation and recreational opportunities now—as opposed to making it eligible for fossil fuel extraction— BLM will have time to gather important information on environmental risks and sensitivities; economic risks, including changing resource prices; climate change effects; and competing land uses,

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[3] THE WILDERNESS SOCIETY, *No Exit: Fixing the BLM's Indiscriminate Energy Leasing* 5 (2016).
[4] TAXPAYERS FOR COMMON SENSE, *The Cost of Speculation in Federal Oil and Gas Leases* (Oct. 3, 2017, https://www.taxpayer.net/energy-natural-resources/locked-out-the-cost-of-speculation-in-federal-oil-and-gas-leases/#_ftn13.
[5] 43 U.S.C. §§ 1344(a)(3)-(4); §§ 1701(a)(8)-(9).
[6] *See* Jayni Foley Hein, *Federal Lands and Fossil Fuels: Maximizing Social Welfare in Federal Energy Leasing*, 42 HARV. ENVTL. L. REV. 1 (2018); Michael Livermore, *Patience is an Economic Virtue*, 84 U. COLO. L. REV. 581 (2013).

including renewable energy development, recreation, and habitat and watershed protection.

Alternative C ignores the substantial environmental and social benefits of waiting to drill in ecosystems with important conservation and recreational values, and is not ideal in terms of optimizing revenue for the public.

A. There is option value to delaying drilling and other forms of development.

Option value is the informational value of delaying irreversible decisions, such as when and on what terms to sell non-renewable resources to private companies.[7] BLM holds, on behalf of the American public, a perpetual option to develop or lease its fossil fuel resources. When the government sells the right to develop a tract to a private lessee, it extinguishes the perpetual option that it holds on behalf of the American people, and sells a time-limited option to a private actor, valid for the duration of the lease (typically 10-15 years for the initial term of an oil or natural gas lease). Consideration of option value requires that BLM determine when and where exercising its perpetual options would be most socially opportune, including by accounting for environmental, social, and economic ramifications.[8] The value associated with the option to delay can be large, especially when there is a high degree of uncertainty about price, extraction costs, and the social and environmental costs imposed by drilling—each of which are present here with respect to the Carlsbad RMP.

Even if BLM does not account for option value in its timing decisions, oil and gas companies will, and they will time extraction and resource decisions in a manner that is privately optimal, rather than socially optimal. Indeed, option value explains the routine practice of companies purchasing tracts and waiting years to develop them, when conditions are optimal from their perspective, if they ever do develop them.[9] BLM must strategically plan its own RMPs and lease sales in order to maximize social welfare.

In fact, the federal government uses option value in other resource management determinations. Interior's Bureau of Ocean Energy Management ("BOEM") incorporated option value in its offshore oil and gas leasing program for 2017-2022. BOEM stated that: (i) environmental and social cost uncertainties can affect the size, timing and location of leasing; (ii) option value can be a component of the "fair market value" of a lease; and (iii) BOEM can raise minimum bids, rents and royalties for leases to account for option value.[10] BOEM also uses a "hurdle price" analysis to ensure that any areas included in its leasing program are expected to earn positive net economic value.

In fact, BOEM cited option value as a key reason for scheduling certain offshore lease sales in the Alaskan region as late as possible in its five-year schedule of future lease sales—directly in line with the suggestion to consider delayed lease alternatives in this

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[7] Michael Livermore, *Patience Is an Economic Virtue*, 84 U. COLO. L. REV. 581 (2013).
[8] *Id.*
[9] *Id.*
[10] U.S. BUREAU OF OCEAN & ENERGY MGMT., 2017-2022 OUTER CONTINENTAL SHELF OIL AND GAS LEASING DRAFT PROPOSED PROGRAM at 5-20, 8-3-8-19 (2015), https://perma.cc/8AU3-7MS4.

proceeding.[11] The U.S. Court of Appeals for the D.C. Circuit has also confirmed that option value is a valid consideration in federal resource extraction decisions.[12] Recognizing the informational value of waiting for more information before drilling, the D.C. Circuit stated:

> *More is learned with the passage of time: Technology improves. Drilling becomes cheaper, safer, and less environmentally damaging*. Better tanker technology renders oil tanker spills less likely and less damage. The true costs of tapping OCS energy resources are better understood as *more becomes known about the damaging effects of fossil fuel pollutants*. Development of energy efficiencies and renewable energy sources reduces the need to rely on fossil fuels. As safer techniques and more effective technologies continue to be developed, the costs associated with drilling decline. There is therefore a tangible present economic benefit to delaying the decision to drill for fossil fuels to preserve the opportunity to see what new technologies develop and what new information comes to light.[13]

In line with this past agency practice and federal case law, environmental and economic uncertainty support waiting for as much time as possible to develop non-renewable resources, especially areas that have other wildlife, habitat, watershed protection, carbon sink, or recreational values.

BLM should limit the areas it makes available for oil, gas, and coal leasing because there is economic, social, and environmental value in keeping more land protected and off-limits to extraction. Alternative C fails to account for this option value.

B. The RMP/EIS should consider more limited and delayed leasing alternatives, and any potential future lease sales must account for numerous uncertainties that weigh against fossil fuel leasing.

Given the potential for irreversible damage and suboptimal public land uses embedded within preferred Alternative C, the RMP EIS, as well as any potential future fossil fuel lease sales and corresponding environmental analysis, must account for the following uncertainties before determining the scope, location, and terms for the RMP area designation and any subsequent lease sale:

- Current and expected resource prices in the United States and in global energy markets;
- Environmental conditions and risks from drilling including local pollution, habitat effects, and greenhouse gas emissions;
- Current and expected effects of climate change on the ecosystem, which affect environmental sensitivities;
- Information on the cost of drilling in the region and bringing those resources to market;

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[11] *Id*.

[12] *Center for Sustainable Economy v. Jewell*, 799 F.3d 588, 610-11 (D.C. Cir. 2015), https://www.cadc.uscourts.gov/internet/opinions.nsf/AFCFA76C2EEDB01385257E0000563225/$file/12-1431-1540911.pdf.

[13] *Id.* (emphasis added).

- Safety, pollution-capture, and other drilling technologies;
- Energy efficiency, energy conservation, and fuel economy standards that affect fossil fuel demand;
- Laws and regulations governing drilling and development on public lands, air pollution, endangered species, and other environmental concerns; and
- Competing uses of the public lands, including recreational activities, preservation, renewable energy development, cultural and tribal use.

Moreover, BLM should also analyze an alternative that would place strict conditions on any future development of leases, such as delaying all development by any lease holders until more information on environmental, social, and economic uncertainties can be obtained, and placing stringent limitations on surface disturbance, including no-surface occupancy leases. The myriad uncertainties listed above weigh strongly towards delaying lease sales as long as possible, as well as imposing strict conditions on any leases that may be obtained in the future.

Resource price uncertainty is one of many factors that counsels towards leasing as late as possible, if ever. The U.S. Energy Information Administration projects oil prices to remain low for the next few years, with modest price increases expected all the way through 2050.[14] When resource prices are higher, the government is expected to secure higher bids for available tracts, generating more revenue per acre for the public. Delaying development, and/or offering fewer acres open to leasing within the Carlsbad RMP could ultimately generate more total revenue for the public from higher bids due to healthier competition levels, lower production costs due to advances in technology, and higher total royalties given resource price projections.

In addition, it is uncertain what the full impacts of climate change will be on our public lands, and how climate change will affect the environmental risks of drilling. The U.S. Geologic Survey notes these ecosystem and wildlife uncertainties:

> Predicted warming trends for the future will continue to alter plant growth, ice thaw, and other basic landscape processes. These changes will undoubtedly result in different responses by wildlife (fish, birds, and mammals) and the food they rely upon (plants, invertebrates, and fish). However, the type of response by different wildlife populations and their habitats – either positively or negatively – remains largely unknown.[15]

Moreover, more information is needed on the potential economic *benefits* of preserving the lands in their natural condition within the Carlsbad region, rather than allowing drilling. Preserving land within the region without any drilling confers important ecosystem values, watershed protection, and species benefits—some of which are unquantified, and others of which are unquantifiable but nonetheless significant, especially

[14] U.S. ENERGY INFORMATION ADMINISTRATION, Annual Energy Outlook 2018 Table: Petroleum and Other Liquids Prices, https://www.eia.gov/outlooks/aeo/data/browser/#/?id=12-AEO2018&cases=ref2018&sourcekey=0.

[15] US DEPT. OF INTERIOR, US GEOLOGIC SURVEY, ALASKA SCIENCE CENTER, https://alaska.usgs.gov/science/interdisciplinary_science/cae/arctic_coastal_plain.php.

in the era of climate change. More information and analysis on the benefits of preservation and recreation would help BLM make better decisions about management of the Carlsbad region.

III. Unrestrained Leasing Threatens to Negatively Affect Two National Parks in Close Proximity to the RMP Region.

Unrestrained fossil fuel easing threatens to negatively affect the two national parks in close proximity to the RMP area: Guadalupe Mountains National Park and Carlsbad Caverns. These national parks, while managed by the National Park Service ("NPS"), are dependent on proper management of adjacent and nearby BLM lands beyond their boundaries.

Carlsbad Caverns and Guadalupe Mountains National Parks combined generated over $53 million in local economic output and supported 655 jobs in 2017,[16] but widespread or poorly regulated industrial development can have a negative impact on this sustainable economy.

According to the National Parks Conservation Association, "The breadth and density of oil and gas development around Carlsbad Caverns is one of the factors that has already taken a toll on the park's popularity. In the 1980s, Carlsbad received more than 700,000 visitors every year, but from 1993 to 2016 visitation decreased from 690,000 to 470,000, more than 30%."[17] Moreover, NPS advertises the park as "a perfect spot for viewing the wonders of the night sky due to its location far from city lights," but due to widespread flaring in the Permian Basin, "the view from atop Carlsbad Caverns National Park" is now marred by "hundreds of lights and torches glow[ing] amidst the dark."[18]

The draft RMP states that under the agency's preferred alternative C, "long-term economic benefits would be gained from the emphasis on a diversity of public lands uses." But the draft RMP's preferred alternative fails to deliver actual diversity in public lands uses, and fails to account for the long-term benefits—including economic benefits—of *protecting* more land from development.

IV. BLM Must Consider Whether Increased Oil and Gas Production Will Change Consumer Demand and So Increase Downstream Emissions

The draft RMP's analysis of downstream emissions from combusting the oil and gas produced in this planning area[19] fails to assess whether and to what extent the increased supply of oil and gas could affect prices in ways that increases the total demand for and combustion of oil and gas.

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[16] NPS, *2017 National Park Visitor Spending Effects: Economic Contributions to Local Communities, States, and the Nation* (2017), https://www.nps.gov/nature/customcf/NPS_Data_Visualization/docs/NPS_2017_Visitor_Spending_Effects.pdf.

[17] NATIONAL PARKS CONSERVATION ASSOCIATION, *Out of Balance: National Parks and the Threat of Oil and Gas Development* 9 (2017).

[18] *Id*.

[19] BLM, *Draft Resource Management Plan & Environmental Impact Statement: Carlsbad Field Office* 4-270018)*Dra*.

Basic principles of supply and demand predict that increasing the supply of a commodity like oil or gas will lower prices, and that lower prices will lead to increased demand for and consumption of that commodity.[20] If the increased consumption of oil and gas due to the increased supply from the project comes at the expense of energy conservation or of cleaner energy sources like renewables, the end result would be an increase in greenhouse gas emissions.

Multiple courts have recognized the need for agencies to assess such demand effects and energy substitution patterns in their environmental impact statements. Most recently, the U.S. Court of Appeals for the Tenth Circuit explained that it is irrational for an agency to fail to consider how, if its action will help increase the supply of fossil fuels, then the price for that commodity will also drop, demand will rise, and greenhouse gas emissions will increase.[21]

The degree to which production of oil and gas can substitute for other energy sources can be estimated through models. BLM has access to such computer models, as evident the substitution analysis that the agency recently conducted using the MarketSim model in a separate EIS for an onshore oil and gas development project in Alaska.[22] Nevertheless, BLM has conducted no such substitution analysis for this RMP.

Instead, in its calculations of output, labor earnings, and taxes from the RMP, BLM implicitly assumes no substitution of oil or gas. BLM assumes that each unit of oil or gas produced under this RMP will count as additional output and so generate additional employment and taxes in the region. In other words, BLM assumes that the additional production under the RMP will not be offset by decreased consumption of other oil, other gas, or other energy sources elsewhere, and so assumes that the RMP's alleged economic benefits will not be offset by decreased economic benefits elsewhere in the region or nationally.

An energy substitution analysis would change both the estimates of economic costs from emissions and the estimates of economic benefits from energy production. Because

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[20] *See* N. Gregory Mankiw, *Principles of Economics* 74–78, 80–81 (5th ed. 2008).

[21] *WildEarth Guardians v. Bureau of Land Management*, No. 15-8109 at 24 (10th Cir., Sept. 15, 2017) ("this perfect substitution assumption [is] arbitrary and capricious because the assumption itself is irrational (i.e., contrary to basic supply and demand principles).").

Other courts have also addressed this issue. *See Ctr. for Sustainable Economy v. Jewell*, 779 F.3d 588, 609 (D.C. Cir. 2015) ("forgoing additional leasing on the [outer continental shelf] would cause an increase in the use of substitute fuels such as renewables, coal, imported oil and natural gas, and a reduction in overall domestic energy consumption from greater efforts to conserve in the face of higher prices"); *see also Mid States Coal. for Progress v. Surface Transp. Bd.*, 345 F.3d 520, 549–550 (8th Cir. 2003) ("the increased availability of inexpensive coal will at the very least make coal a more attractive option to future entrants into the utilities market"); *Montana Envtl. Info. Ctr.*, 2017 WL 3480262, at *15 (holding that it was "illogical" for the agency to assume that choosing not to approve federal coal leases would have no effect on coal supply, demand, or consumption, because "other coal would be burned in its stead"); *High Country Conservation Advocates*, 52 F. Supp. 3d at 1197 (recognizing that increased production of coal could affect "the demand for coal relative to other fuel sources, and coal that otherwise would have been left in the ground will be burned" (quotation marks omitted)).

[22] *See* BLM, *Alpine Satellite Development Plan for the Proposed Greater Mooses Tooth 2 Development Project: Draft Supplemental Environmental Impact Statement* 309-310 & Appendix H (March 2018).

BLM has not performed such an analysis, the RMP's statements on both economic benefits and downstream emissions are misleading.

Policy Integrity has written to BLM extensively about energy substitution analysis in the past. The agency should consider our report on *BLM's Modeling Choice for the Federal Coal Programmatic Review* (the models discussed are as applicable to oil and gas as to coal, if not more so); our amicus brief in the Tenth Circuit case mentioned above; and our comments on substitution on the Wright Area Remand Environmental Assessments—all of which are attached here.

V. Conclusion

In the Carlsbad RMP, BLM must account for and weigh and the myriad non-extractive uses of these public lands, including protection of important ecological, wildlife, cultural, recreational, scenic, and economic attributes. Further, it must account for the economic, social, and environmental option value associated with allowing public lands to be open to fossil fuel development. Finally, BLM must conduct an energy substitution analysis so as not to mislead the public about the RMP's economic benefits or downstream emissions.

Respectfully submitted,

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Attachment A: Peter H. Howard, *The Bureau of Land Management's Modeling Choice for the Federal Coal Programmatic Review* (Policy Integrity Report, 2016)

Attachment B: Amicus Brief of the Institute for Policy Integrity, *WildEarth Guardians v. BLM*, No. 15-8109 (10th Cir., submitted Feb. 5, 2016)

Attachment C: Comments from the Institute for Policy Integrity, *Errors and Omissions in the Bureau of Land Management's Substitution Analysis in the Wright Area Coal Leasing Remand Environmental Assessment*, Oct. 4, 2018.