Institute *for*
Policy Integrity
NEW YORK UNIVERSITY SCHOOL OF LAW

October 5, 2021

Attn: Bureau of Land Management, Department of the Interior

Re: Comments on Notice of Intent to Conduct a Review of the Federal Coal Leasing Program, 86 Fed. Reg. 46,873 (Aug. 20, 2021)

The Institute for Policy Integrity at New York University School of Law ("Policy Integrity")[1] respectfully submits this comment letter in response to the request for recommendations regarding the federal coal leasing program. Policy Integrity is a nonpartisan think tank dedicated to improving the quality of government decisionmaking through advocacy and scholarship in the fields of administrative law, economics, and public policy, focusing primarily on environmental issues. Policy Integrity has repeatedly called for the Department of the Interior to modernize its coal leasing program through numerous comment letters and reports.

In its recent request for recommendations on reforming the federal coal leasing program, the Bureau of Land Management ("BLM") and Department of the Interior acknowledge that outside experts and the public have raised a variety of concerns about the program in recent years. These include whether American taxpayers are receiving a fair return from the development of these publicly owned resources and whether the department has adequately examined the environmental impacts of federal coal leasing.[2] Coal production causes significant environmental and health impacts, particularly in regard to global climate change, which have been insufficiently considered in prior leasing decisions.[3]

Interior should rationally weigh the externalities associated with coal when assessing lease applications and, consistent with its mandate to serve the public interest, should not approve further coal leasing, renewal, and expansion unless it makes a reasoned determination that the benefits of that leasing exceed the costs to society. As discussed below, the environmental and public-health harms from coal production and combustion—along with the availability of low-cost renewable substitutes—indicate that the costs of coal extraction are far greater than the agency has acknowledged in previous leasing determinations.

To ensure that any future coal leasing and extraction occurs on terms and in volumes that are fairer to American taxpayers and more consistent with the public interest than has been the case until now, Interior should institute additional programmatic reforms including raising royalties and fair market valuations to account for externalities, and ensuring competitive bidding that offers a fairer return to taxpayers. Interior should

[1] This document does not purport to present the views, if any, of New York University School of Law.
[2] *See* Notice of Intent to Conduct a Review of the Federal Coal Leasing Program and to Seek Public Comment, 86 Fed. Reg. 46,873 (Aug. 20, 2021).
[3] *Id.* at 46,876.

also work with other government agencies, including the recently formed Interagency Working Group on Coal and Power Plant Communities, to help ensure that coal communities are not left behind in the energy transition.

We have attached Policy Integrity's report titled ***Priorities for Coal Reform***, which lays out twelve reforms for the federal coal program[4]; Policy Integrity's report titled ***Reconsidering Coal's Fair Market Value***, which describes how outdated policies, longstanding loopholes, and environmental externalities keep American taxpayers from receiving their fair share of value from federal coal leases[5]; and Policy Integrity's report titled ***Illuminating the Hidden Costs of Coal***, which summarizes how Interior can modernize the federal coal program through royalty rate increases and other fiscal reforms.[6] We have also attached a recent Policy Integrity report on federal oil and gas leasing, ***Toward Rationality in Oil and Gas Leasing: Building the Toolkit for Programmatic Reforms***, which has recommendations on quantitative methodologies that are relevant for Interior's evaluation of the coal program.[7]

A. Consistent With Its Mandate to Serve the Public Interest, Interior Should Not Approve Further Leasing Unless It Determines that the Benefits of that Leasing Exceed the Costs

The Secretary of the Interior has broad discretion under the Mineral Leasing Act with respect to when, how, and whether federal coal leases may be offered.[8] Section 201 of that Act authorizes the Secretary to offer lands for coal leasing "in his [or her] discretion."[9] The MLA further states that the Secretary may lease coal as she finds "appropriate and in the public interest."[10] Yet in previous leasing decisions, Interior has given insufficient consideration to the externalities from coal extraction and combustion. Interior should rationally weigh the costs and benefits of any leasing decision and not engage in leasing (including lease renewals and mine expansions) unless the economic benefits of that action exceed its social costs.

Those social costs are substantial. As calculated in a 2015 Policy Integrity report, monetized externalities for coal production and transportation—including methane emissions from mines along with fatalities, greenhouse gas emissions, and air pollution from coal transportation—conservatively accounted for more than 70 percent of coal's

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[4] Jayni Foley Hein, *Priorities for Federal Coal Reform: Twelve Policy and Procedural Goals for the Programmatic Review*, INST. POL'Y INTEGRITY (2016) [hereinafter "*Priorities for Coal Reform*"].
[5] Jayni Foley Hein & Peter Howard, *Reconsidering Coal's Fair Market Value: The Social Costs of Coal Production and the Need for Fiscal Reform*, INST. POL'Y INTEGRITY (2015) [hereinafter "*Reconsidering Coal's Fair Market Value*"].
[6] Jayni Foley Hein & Peter Howard, *Illuminating the Hidden Costs of Coal: Summary for Policymakers*, INST. POL'Y INTEGRITY (2015) [hereinafter "*Illuminating the Hidden Costs of Coal*"].
[7] Rachel Rothschild & Max Sarinsky, *Toward Rationality in Oil and Gas Leasing: Building the Toolkit for Programmatic Reforms*, INST. POL'Y INTEGRITY (2021) [hereinafter "*Toward Rationality in Oil and Gas Leasing*"].
[8] 30 U.S.C. § 201(a)(1); *see Arnold v. Morton*, 529 F.2d 1101, 1105-1106 (9th Cir. 1976); *WildEarth Guardians v. Salazar*, 783 F. Supp. 2d 61, 63 (D.D.C. 2011); *see also* U.S. Department of the Interior, Secretarial Order No. 3338 at 6 (Jan. 15, 2016).
[9] 30 U.S.C. § 201(a)(1) (emphasis added). Indeed, Interior has previously recognized that it has "discretion not to lease in response to any coal lease application. Natural Gas Category Determination; Notice to Lessees for Implementation of the Natural Gas Policy Act of 1978, 44 Fed. Reg. 42,534, 42,594 (July 19, 1979).
[10] *Id*.

economic value at that time.[11] This calculation did not include many nonmonetized environmental harms from coal production and transportation—such as emissions of volatile organic compounds and hazardous air pollutants, water pollution, water use, and habitat disruption[12]—nor did it account for the greenhouse gas emissions and other air pollution resulting from coal combustion. Moreover, as the Interagency Working Group on the Social Cost of Greenhouse Gases has acknowledged, recent evidence indicates that the costs of methane pollution were likely undervalued in that study.[13]

Other researchers have similarly concluded that, in recent years, the social costs of coal production and extraction have very likely exceeded its economic benefits. **In a recent article in *Nature Climate Change*, for instance, a team of researchers found that in the United States, just the local environmental and health impacts of coal—not even accounting for coal's substantial contributions to global climate change—outpace coal's economic benefits**.[14] In an article in *American Economic Review*, a team of researchers including Nobel Laureate William Nordhaus found that the external damages of U.S. coal-fired electric power generation total $68 billion annually,[15] which is "clearly larger than [the industry's value added]."[16] And in a third study, a team of researchers from Harvard Medical School concluded that the external harms from coal extraction, transportation, processing, and combustion exceed or potentially double its market price, causing up to $500 billion in damages borne by annually by the public.[17] Interior should give full consideration to all externalities—upstream, midstream, and downstream—of the coal leasing program, using peer-reviewed studies like these as a guidepost.

Moreover, **because the climate and environmental damage from coal production and consumption are irreversible, there is significant "option value" to delaying extraction until more uncertainties can be resolved**. While considerable research has highlighted coal's health and environmental costs, there remains some uncertainty about energy prices (particularly given the likely shift away from fossil fuels globally to achieve climate targets) and extraction risks, and there is a social benefit to awaiting more information on these matters before deciding whether and when to lease the public's non-renewable energy resources to private companies.[18] As the U.S. Court of Appeals for the D.C. Circuit has indicated with respect to offshore leasing,

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[11] *Illuminating the Hidden Costs of Coal*, *supra* note 6, at 3.
[12] *Id.*
[13] Interagency Working Group on the Social Cost of Greenhouse Gases, Technical Support Document: Social Cost of Carbon, Methane, and Nitrous Oxide – Interim Estimates Under Executive Order 13,990 at 4 (2021) (acknowledging that social cost valuations used in Policy Integrity's 2015 study "likely underestimate societal damages from [greenhouse gas] emissions").
[14] Sebastian Rauner et al., *Coal-Exit Health and Environmental Damage Reductions Outweigh Economic Impacts*, 10 NATURE CLIMATE CHANGE 308, 308 (2020).
[15] Nicholas Z. Muller, Robert Mendelsohn & William Nordhaus, *Environmental Accounting for Pollution in the United States Economy*, 101 AM. ECON. REV. 1649, 1670 (2011) ("For the case of coal-fired power plants, [carbon dioxide] causes an additional $15 billion of damage" on top of other external damages totaling "$53 billion.").
[16] *Id.* at 1665.
[17] Paul R. Epstein et al., *Full Cost Accounting for the Life Cycle of Coal*, in Ecological Economics Reviews (Robert Costanza, Karin Limburg & Ida Kubiszewski eds., 2011).
[18] *See* Michael A. Livermore, *Patience Is an Economic Virtue: Real Options, Natural Resources, and Offshore Oil*, 84 U. COLO. L. REV. 581, 589–614 (2013) (describing option value and key uncertainties in resource extraction).

there is "a tangible present economic benefit to delaying the decision to drill," and failing to account for this effect undervalues public resources.[19]

Interior should also consider the substitution effects of any coal leasing determination, including whether the leasing would displace other fuel sources with fewer externalities—such as renewable energy—over the long-term. Despite the fact that Interior has been propping up the coal industry by supplying leases on favorable terms, domestic coal consumption has dropped roughly in half over the past 30 years,[20] and domestic renewable energy consumption—driven by substantial growth in wind and solar power—recently overtook coal consumption.[21] The U.S. Energy Information Administration expects these trends to continue in the coming decades, with experts projecting that coal plants will continue retiring[22] while renewable energy continues its sharp downward cost trajectory and thereby crowds out demand for fossil fuels.[23] Substitution analyses of coal leasing should be based on reasonable economic assumptions about the long-term trajectories of coal and other fuel sources.

Interior should also consider the economic impacts of any determination with respect to coal leasing. In doing so, it should recognize that while gradual declines in coal production would cause reductions in revenues and employment within the industry, those impacts would not translate into broader macroeconomic effects as empirical research finds little evidence that environmental regulations have significant impact on overall, economy-wide employment.[24] For instance, in recent years coal mining employment has steadily dropped to just 42,500—about half of its 2011 total[25]—while nationwide employment and economic conditions

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[19] *Center for Sustainable Economy v. Jewell*, 779 F.3d 588, 610 (D.C. Cir. 2015).
[20] U.S. Energy Info. Admin., *Annual Energy Outlook 2021, With Projections to 2050* at 7 fig. 3 (2021) [hereinafter "EIA Annual Energy Outlook"].
[21] U.S. Energy Info. Admin., *U.S. Renewable Energy Consumption Surpasses Coal for the First Time in Over 130 Years* (May 28, 2020), https://www.eia.gov/todayinenergy/detail.php?id=43895.
[22] EIA Annual Energy Outlook, *supra* note 20, at 14 fig. 10 (projecting substantial coal plant retirements in the coming years). *See also id.* at 3 ("As coal and nuclear generating capacity retires, new capacity additions come largely from natural gas and renewable technologies."); *id.* at 8 ("Coal use through 2050 generally declines with the retirement of coal-fired electricity generating units in the United States.").
[23] *Id.* at 3 (projecting that "[r]enewable energy incentives and falling technology costs [will] support robust competition with natural gas as coal and nuclear power decrease in the electricity mix."); *id.* at 14 ("[C]apital costs for both wind and solar continue to decline throughout the projection period," i.e. to 2050). *See also* Charles Teplin et al., ROCKY MTN. INST., *The Growing Market for Clean Energy Portfolios* 8 fig. ES-2 (2019), *available at* https://rmi.org/insight/clean-energy-portfolios-pipelines-and-plants/ (showing precipitous decline in cost of clean energy to becoming cheaper than fossil fuels).
[24] *See* Cary Coglianese & Christopher Carrigan, *The Jobs and Regulation Debate*, *in* DOES REGULATION KILL JOBS? 2 (Cary Coglianese, Adam M. Finkel & Christopher Carrigan eds., 2014); Institute for Policy Integrity, *Does Environmental Regulation Kill or Create Jobs?* 2–3 (2017), https://policyintegrity.org/files/media/Jobs_and_Regulation_Factsheet.pdf. Numerous studies find that effects of government regulation on overall employment tend to be small, especially in the long term. *See, e.g.* Anna Belova et al., *Estimating the Job Impacts of Environmental Regulation*, 6 J. BENEFIT-COST ANALYSIS 625 (2015), Timothy J. Bartik, *Social Costs of Jobs Lost Due to Environmental* Regulations (Upjohn Inst. Working Paper 13-193, 2013); Marc A.C. Hafstead & Roberton C. Williams III, *Unemployment and Environmental Regulation in General Equilibrium*, 160 J. PUB. ECON. 50 (2018).
[25] Bureau of Labor Statistics, *Employment, Hours, and Earnings from the Current Employment Statistics survey (National)*, https://data.bls.gov/timeseries/CES1021210001.

have mostly improved.[26] As renewable energy continues its growth[27]—and domestic energy consumption rises[28]—employment gains in the renewable field are likely to make up for, or potentially exceed, the decline in coal employment.[29] While Interior should consider all economic impacts, its mandate to serve the public interest requires a broad perspective. At the same time, as discussed further below, Interior should exercise its authority and work with other government agencies to ensure economic opportunity for coal communities while the nation shifts away from fossil fuels, such as through siting of renewable energy projects.

In short, there are many externalities to the federal coal program that Interior has not adequately considered in prior leasing determinations. Interior should fully consider all externalities in future determinations, and should engage in leasing (including lease renewals and mine expansions) only if it makes a reasoned determination that the benefits of that leasing exceed the full costs to society.

B. Interior Should Pursue Numerous Additional Reforms to Ensure that Any Future Leasing and Extraction Occurs on Terms, and in Volumes, that Are Fairer to Taxpayers and More Consistent with the Public Interest

In addition to ensuring that leasing does not occur unless it is socially beneficial, Interior should take numerous steps to reform the coal program and ensure a fairer return to taxpayers. These include:

- **Interior should increase coal royalty rates to sufficiently account for coal's environmental and public-health effects.** As Policy Integrity explained in a 2015 report, consideration of monetized production and transportation externalities alone supported the imposition of a 70 percent royalty adder.[30] At a minimum, Interior should raise coal royalty rates to at least match those used for offshore oil and gas leases in order to better account for the environmental and human health effects of coal production and thereby better ensure that taxpayers receive fair market value.[31] Federal law requires Interior to obtain "fair market value" for the leasing of public lands, which should include not only a competitive market price of coal resources but also the environmental externalities caused by coal mining, such as increased pollution. This broader

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[26] The August 2021 unemployment rate of 5.2% is substantially lower than the January 2011 unemployment rate of 9.1%. Bureau of Labor Statistics, *Labor Force Statistics from the Current Population Survey*, https://data.bls.gov/timeseries/LNS14000000. Macroeconomic conditions in the United States were particularly strong before the COVID-19 pandemic in early 2020, even though most of the employment decline in the coal industry occurred before that time.
[27] *See supra* notes 21, 23 and accompanying text.
[28] EIA Annual Energy Outlook, *supra* note 20, at 4 fig. 1 (projecting increased domestic energy consumption, even as coal stagnates or declines).
[29] *See* Bureau of Labor Statistics, *Green Growth: Employment Projections in Environmentally Focused Occupations* (Apr. 2018), https://www.bls.gov/careeroutlook/2018/data-on-display/green-growth.htm ("[T]he two occupations that BLS projects to have the fastest employment growth from 2016 to 2026 [are] solar photovoltaic installers (105-percent increase) and wind turbine service technicians (96-percent increase).").
[30] *Illuminating the Hidden Costs of Coal*, *supra* note 6, at 3.
[31] *Id.*

definition is consistent with Interior's dual mandate to earn a fair return on development of energy resources and to preserve and protect the environment.

- **To determine what would constitute "fair market value" for taxpayers, Interior should quantify the externalities associated with coal extraction, transportation, and combustion, which would provide a baseline for Interior to measure the adequacy of the agency's minimum bid for coal leases.[32]** Failure to account for the external costs of coal production amounts to a subsidy for coal producers, as the public bears the burden of mitigation and adapting to such costs, including greenhouse gas emissions—the effects of which will continue to be felt decades from now. In other words, failure to account for the environmental costs of coal production prioritizes short-term coal company profits over long-term taxpayer welfare. Interior's mandate to ensure "fair market value," which requires the agency to obtain fair returns for both "the use of the public lands and their resources,"[33] naturally encompasses these external costs.[34]

- **Interior should evaluate bidding reforms that can help sure fair market value for taxpayers.** For instance, the minimum bid for coal leases has not been changed since 1982 and has failed to keep pace with inflation, which alone would double the minimum bid from its current rate of $100 per acre.[35] Interior should increase these bids to account for inflation as well as other externalities and market failures not reflected in the price for coal but that should factor into the agency's assessment of fair market value.[36] In addition, minimum bids should include the "option value" of delaying a lease sale, *i.e.*, the benefit of waiting for more information on energy prices and extraction risks. These reforms to the bidding process will further ensure that taxpayers receive fair market value for coal leasing on federal lands.

- **Interior should eliminate, or at least amend, its regulation on royalty rate relief.** Independent economic experts as well as the Government Accountability Office have determined that Interior reduces the already low royalty rate in a significant portion of leases, which distorts the market by subsidizing coal production even when it is uneconomical.[37] This practice contravenes the Mineral Leasing Act's intent that such reductions be permitted only when the current royalty rate imposes economic hardship that would otherwise result in abandoning

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32 *Priorities for Federal Coal Reform*, *supra* note 4, at 3–5; *see also id.* at 12–13 (recommending that Interior "evaluate whether the current coal program earns 'fair market value' for taxpayers, by conducting a cost-benefit analysis of the coal program").
33 43 U.S.C. § 1701(a)(9).
34 *Priorities for Federal Coal Reform*, *supra* note 4, at 3.
35 *See also Reconsidering Coal's Fair Market Value*, *supra* note 5, at 8.
36 *Priorities for Federal Coal Reform*, *supra* note 4, at 19.
37 *Id.* at 18–19.

the lease or in less than full recovery of leased coal.[38] It also acts as a subsidy for the coal industry at the expense of American taxpayers.[39]

- **Interior should revise its coal leasing eligibility requirements to mandate that coal companies purchase bonds—effectively, insurance policies—that can be used to pay for reclamation if the company becomes insolvent.[40]** Coal companies currently can apply for leases without proving that they are in compliance with bonding and reclamation requirements set out by the Surface Mining and Reclamation Act of 1977.[41] This greatly increases the financial risk to taxpayers from coal leasing, as companies can begin operations without posting any surety or collateral, only promising to pay once mining has concluded. Because the bonds that coal companies post often fall short of what is required for reclamation, Interior should raise the required bond amount and eliminate exceptions and loopholes in bonding requirements.[42]

- **Interior should eliminate "leasing by application."[43]** Interior's policy of allowing leasing by application in areas like the Powder River basin has allowed private coal companies to perpetuate an uncompetitive leasing market that fails to account for the environmental costs of coal extraction.[44] Leasing by application permits companies to design their own lease boundaries and determine where it is privately optimal to locate a mine. Yet in making these applications, companies do not consider important environmental externalities from their leasing activities. Interior should instead engage in a regional planning process for lease sales that considers the environmental repercussions of coal leasing, as is called for in the Federal Coal Leasing Amendments Act of 1976.[45] This will ensure that the agency exerts more control over whether, when, and where leasing occurs, which will provide for a more competitive leasing processing and better weigh the tradeoffs between competing land uses.[46] For instance, Interior could identify opportunities to accelerate the transition from coal and other fossil fuel production to renewable energy production on federal lands.[47]

- **Interior should follow recommendations from the Government Accountability Office to increase oversight of BLM state offices in appraising the value of coal leases, and reduce instances where BLM accepts bids below**

[38] *Reconsidering Coal's Fair Market Value*, *supra* note 5, at 12.
[39] *Priorities for Federal Coal Reform*, *supra* note 4, at 19.
[40] *Id.* at 20.
[41] *Id*.
[42] *Id.* at 19–20.
[43] *Id.* at 6.
[44] *Reconsidering Coal's Fair Market Value*, *supra* note 5, at 4.
[45] *Id.*
[46] *Priorities for Federal Coal Reform*, *supra* note 4, at 7.
[47] *Id.*

the presale estimate of fair market value. Some BLM state offices have perpetuated uncompetitive lease sales by determining price through comparisons to prior sales or bids, which has led to a pattern of accepting improperly low bids. Other methods for determining lease sale price that look to future projected revenue from a leasing site may provide a fairer return, but still fail to account for the environmental effects of leasing.[48]

- **Interior should require that producers offset greenhouse gas emissions as a condition of extraction.** Although the reforms discussed above will curtail harmful extraction on lands that have not yet been leased, they do little to mitigate the effect on climate change from the land that has already been leased. To mitigate the climate impacts from extraction on these lands, Interior should require offsetting greenhouse gas emissions as a condition of extraction—a form of compensatory mitigation.[49]

- **In reforming the coal program and assessing the environmental and economic impacts of leasing applications, Interior should be guided by the best available research and modeling tools**. Cutting-edge research and modeling tools that Interior can apply to assess reforms to the federal coal program include substitution analysis, the social cost of greenhouse gases, and quantifying option value.[50] These tools are key to assessing coal's externalities for the purposes of setting royalty rates and fair market valuations, and for determining whether to lease in the first place. Interior should ensure consistency in its modeling approach between different fuel sources.

- **Interior, and the federal government more broadly, should work to mitigate adverse impacts on coal communities from the energy transition**. Even though land-management policies may have a negligible impact on overall employment, coal communities are likely to be disproportionately burdened by shifts in the energy market toward renewable energy. Interior can take numerous actions to lessen this burden. For instance, the agency could identify renewable resource generation potential in areas that are expected to experience a decline in fossil-fuel production, and seek to site renewable projects in these areas. Interior could also support local communities and the environment by facilitating investment in coal mine reclamation.

Conclusion

Consistent with its mandate to serve the public interest, Interior should not approve further coal leasing, renewal, and expansion unless it determines—upon full consideration of all

[48] *Reconsidering Coal's Fair Market Value*, *supra* note 5, at 4.
[49] *Toward Rationality in Oil and Gas Leasing*, *supra* note 7, at 37–38.
[50] *Id.* at 10–34.

relevant factors, including externalities—that the benefits of that extraction exceed its costs. To better ensure that any future leasing and extraction occurs on terms that are fairer to American taxpayers and more consistent with the public interest, Interior should also institute reforms to the program including ensuring competitive bidding and raising royalties and fair market valuations to account for externalities.

Sincerely,

Peter Howard, Economics Director
Rachel Rothschild, Legal Fellow
Max Sarinsky, Senior Attorney

Enclosures

1) Jayni Foley Hein, *Priorities for Federal Coal Reform: Twelve Policy and Procedural Goals for the Programmatic Review*, INST. POL'Y INTEGRITY (2016).

2) Jayni Foley Hein & Peter Howard, *Reconsidering Coal's Fair Market Value: The Social Costs of Coal Production and the Need for Fiscal Reform*, INST. POL'Y INTEGRITY (2015).

3) Jayni Foley Hein & Peter Howard, *Illuminating the Hidden Costs of Coal: Summary for Policymakers*, INST. POL'Y INTEGRITY (2015).

4) Rachel Rothschild & Max Sarinsky, *Toward Rationality in Oil and Gas Leasing: Building the Toolkit for Programmatic Reforms*, INST. POL'Y INTEGRITY (2021).