



October 4, 2021

Attn: Bureau of Land Management, Department of the Interior
Re: Notice of Intent to Prepare a Supplemental Environmental Impact Statement for the Coastal Plain Oil and Gas Leasing Program, Alaska, 86 Fed. Reg. 41,989 (Aug. 4, 2021).

The Institute for Policy Integrity at New York University School of Law (“Policy Integrity”)¹ submits this letter in response to the request for comments regarding the Bureau of Land Management’s (“BLM”) Supplemental Environmental Impact Statement to the September 2019 Coastal Plain Oil and Gas Leasing Program EIS.²

Policy Integrity is a nonpartisan think tank dedicated to improving the quality of government decision-making through advocacy and scholarship in the fields of administrative law, economics, and public policy, focusing primarily on environmental issues. Policy Integrity and its staff have previously raised numerous concerns with BLM’s assessment of the effects from leasing in the Coastal Plain of the Arctic National Wildlife Refuge (“ANWR”).³ Established more than 60 years ago as a protected wilderness area, ANWR’s five ecological zones serve as a home to polar bears, grizzly bears, wolves, wolverines, muskoxen, porcupine caribou, and other wildlife.⁴ Drilling in the refuge will not only threaten this unique conservation area; it will also increase oil and gas production at a time when the U.S. is seeking to reduce its dependence on fossil fuels to address the threat of climate change.⁵

Unfortunately, **the Environmental Impact Statement for the Coastal Plain Oil and Gas Leasing Program fell short of BLM’s obligation to assess the effects of oil and gas leasing and to consider reasonable alternatives.**⁶ As Policy Integrity explained in its comments on the draft EIS, BLM failed to sufficiently analyze alternatives that would reduce environmental and social harms from oil and gas development.⁷ The EIS also understated the environmental impacts of oil and gas leasing in the area by assuming that any forgone development in the Coastal Plain will be almost entirely offset by oil and gas production elsewhere—an assumption that both ignores basic economic principles of supply and demand

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 Prepare a Supplemental Environmental Impact Statement for the Coastal Plain Oil and Gas Leasing Program, Alaska, 86 Fed. Reg. 41,989 (Aug. 4, 2021).

³ See Institute for Policy Integrity, Comments on Arctic Coastal Plain Draft EIS (Mar. 13, 2019) (hereinafter “Comments on Arctic Coastal Plain Draft EIS”); Environmental Defense Fund et al., Comments on Failure to Monetize Greenhouse Gas Emissions in the Coastal Plain Oil and Gas Leasing Program Draft Environmental Impact Statement (Mar. 13, 2019) (hereinafter “Joint Comments, Failure to Monetize Greenhouse Gas Emissions”).

⁴ See M. Lynne Corn, Michael Ratner & Kristina Alexander, *Arctic National Wildlife Refuge (ANWR): A Primer for the 114th Congress*, CONG. RSCH. SERV. 2 (2015), <https://tinyurl.com/xuajzx5p>.

⁵ See, e.g., Exec. Order No. 14,008, 86 Fed. Reg. 7619 (Jan. 27, 2021) (announcing the Biden Administration’s policy to “organize and deploy the full capacity of its agencies to combat the climate crisis”).

⁶ See U.S. DEP’T OF INTERIOR, BUREAU OF LAND MGMT., COASTAL PLAIN OIL AND GAS LEASING PROGRAM: FINAL ENVIRONMENTAL IMPACT STATEMENT (2019) (hereinafter “Final EIS”).

⁷ See Comments on Arctic Coastal Plain Draft EIS, *supra* note 3, at 4–7.

and that is inconsistent with the agency’s treatment of economic benefits in the EIS. Furthermore, BLM mischaracterized the environmental effects of leasing by using flawed methodologies, not quantifying numerous harms, and disregarding tools like the social cost of greenhouse gases to assess climate change impacts.

Owing in large part to these analytic oversights and mistakes, BLM selected an alternative that allows for development in “the entire program area” and imposes “the fewest acres with restrictions on activities.”⁸ **Had BLM conducted the proper analysis, it might have selected a different alternative that limited the area available for leasing or imposed other restrictions to minimize the environmental effects of drilling in America’s largest wildlife refuge.** Accordingly, BLM should now correct the deficiencies in its analysis and reconsider whether its chosen alternative best serves the public interest.

When completing the Supplemental EIS, BLM should: 1) analyze one or more alternatives that impose more stringent and cost-benefit justified lease stipulations, timing restrictions, and infrastructure limitations; and 2) update its analysis of the economic and environmental effects of oil and gas development in the Coastal Plain to ensure BLM is not overstating the economic benefits of leasing while understating its environmental harms.

I. BLM should analyze one or more alternatives that would better mitigate the environmental and social harms from leasing in the Coastal Plain.

BLM is required to conduct two lease sales within the Alaskan Coastal Plain under the 2017 Tax Cuts and Jobs Act (“Tax Act”), which instructed the agency to “administer a competitive oil and gas program for the leasing, development, production, and transportation of oil and gas in and from the Coastal Plain.”⁹ The Tax Act specifies that BLM should conduct two lease sales “of at least 400,000 acres each” within ten years after the enactment of the Tax Act; the first sale must occur no later than December 22, 2021 and the second sale no later than December 22, 2024.¹⁰

To assess the potential for BLM to comply with the Tax Act while minimizing environmental harms from oil and gas drilling in the Coastal Plain, the Supplemental EIS should analyze development alternatives that impose more stringent limitations on leases and development while improving public welfare.¹¹ In response to comments from Policy Integrity and others to the draft EIS, BLM did explore the possibility of reducing the amount of land offered in alternative “D2” to 800,000 acres, which “reflects the total minimum acreage that [the Tax Act] requires to be offered.”¹² However, the final EIS did not examine a number of additional restrictions on leasing activities that would further mitigate the environmental harms from oil and gas drilling in the Coastal Plain. It also did not assess the value of deferring any

⁸ Final EIS, *supra* note 6, at 3-27.

⁹ Tax Cuts and Jobs Act of 2017, Pub.L. No. 115-97, 131 Stat. 2054 (2017), https://eplanning.blm.gov/epl-front-office/projects/nepa/102555/141879/174233/Tax_Act.pdf.

¹⁰ *Id.*

¹¹ See Comments on Arctic Coastal Plain Draft EIS, *supra* note 3, at 6-7.

¹² Final EIS, *supra* note 6, at ES-4, 2-3 (“Based on public comments received on the Draft EIS, the amount of land available for leasing under Alternative D2 has been reduced from 1,037,200 to 800,000 acres.”).

lease sales above the mandatory minimums set by the Tax Act in order to gain additional information about market conditions and other critical factors.

For example, BLM did not consider the possibility of requiring more stringent methane capture techniques in oil and gas development and operations, which would prevent wasteful and harmful methane leakage and flaring that contribute to climate change. Indeed, the agency made the entirely unfounded assertion that “a relatively short-lived GHG like methane cannot have a large impact on global climate.”¹³ When BLM analyzed the costs and benefits of methane capture requirements in 2016, it concluded that benefits of such capture techniques would exceed the burdens.¹⁴ BLM has the responsibility under NEPA to consider such reasonable stipulations here and should do so in the supplemental EIS.

In the final EIS, BLM also failed to consider several other leasing stipulations that Policy Integrity and other organizations suggested to better protect the fragile ANWR ecosystem, such as reducing land use disturbance through more no-surface occupancy (“NSO”) restrictions, limitations on activities like seismic testing, and more stringent time restrictions with respect to activities on or near critical habitats.¹⁵

An environmentally protective alternative would thus not only lease the minimum acreage required in the Tax Act, as laid out in alternative D2. It would also assess the ability for stipulations like methane capture, NSO clauses, and others to mitigate the environmental harms from leasing in the Coastal Plain.¹⁶ BLM should correct these omissions and now consider such an alternative.

II. BLM should update its analysis of the economic and environmental effects of oil and gas development in the Coastal Plain.

In preparing the EIS, BLM made numerous analytical errors when assessing the economic and environmental effects of drilling in the Coastal Plain, which led the agency to vastly overstate the economic benefits and understate the environmental costs of its leasing activity. Recent court decisions further underscore that BLM must revise its approach to assessing the effects of oil and gas development to ensure compliance with NEPA.¹⁷

A. Flaws in BLM’s energy substitution analysis—using a model that has now been rejected by federal courts—caused the agency to significantly underestimate net greenhouse gas emissions.

¹³ *Id.* at S-621.

¹⁴ See the various comments from Policy Integrity to BLM on its rescission and revision of certain waste prevention requirements, *available at* <https://policyintegrity.org/projects/update/comments-on-the-rescission-of-blms-waste-prevention-rule>.

¹⁵ See Comments on Arctic Coastal Plain Draft EIS, *supra* note 3, at 6–7.

¹⁶ Waste Prevention, Production Subject to Royalties, and Resource Conservation, 81 Fed. Reg. 83,008, 83,014 (Nov. 18, 2016) (concluding that methane leakage and flaring requirements would produce net benefits between \$46 and \$204 million per year).

¹⁷ See, e.g., *Ctr. for Biological Diversity v. Bernhardt*, 982 F.3d 723 (9th Cir. 2020) (finding BOEM acted arbitrarily and capriciously by failing to quantify the emissions resulting from foreign oil consumption in its EIS as required by NEPA).

Oil and gas drilling in the Coastal Plain will increase the supply of these fossil fuel resources in the energy market. Basic economic principles establish that increasing the supply of commodities like oil or gas will lower prices, and that lower prices will subsequently lead to increased demand for and consumption of these commodities.¹⁸ If the increased consumption of oil and gas due to the increased supply from the project comes at the expense of energy conservation, or reduces use of cleaner energy sources like renewables, the end result would be an increase in greenhouse gas emissions.

In the EIS for leasing in the Coastal Plain, BLM attempts to model these energy market dynamics through a substitution analysis using the MarketSim model developed by the Bureau of Ocean Energy Management (“BOEM”). However, BLM’s energy substitution analysis contains serious methodological flaws, omissions, and limitations that cause the agency to improperly minimize the action’s greenhouse gas emissions.

One of the most significant issues with BLM’s substitution analysis is the agency’s omission of the effects on foreign energy markets. BLM acknowledged that “the MarketSim model considers only the U.S. supply and demand for petroleum; thus, the accuracy of the change (increase) in petroleum demand estimated from MarketSim projections is limited, given its scope is just the US market.”¹⁹ This oversight is especially glaring given that MarketSim can in fact “estimate a foreign reduction in consumption . . . for oil,” yet this projection is omitted from the model’s final results.²⁰ As Policy Integrity noted in our comments on the draft EIS, because BLM’s calculation of net downstream emissions depends on this energy substitution analysis, the significant omission of effects on global consumption translates into a massive underestimate of net downstream emissions.²¹

BLM responded to these criticisms by asserting that any increase in the amount of oil and gas from leasing in the Coastal Plain will be “small in a global context.”²² As a result, the agency claimed, “the proposed action, by itself, would not measurably affect climate change adaptation or mitigation challenges in the Arctic or globally.”²³ Yet as recent court decisions have noted, refusing to assess the climate-related impacts of projects by framing them as “miniscule” in a global context is “dishonest and a prescription for climate disaster.”²⁴ The mere fact that emissions from the Coastal Plain may constitute a seemingly “very small portion” of global greenhouse gas emissions, in other words, does not mean that it does not “constitute[] a gargantuan source of . . . pollution on its own terms.”²⁵

In addition to disregarding impacts on foreign consumption, the MarketSim model includes numerous other flaws. Most notably, perhaps, the model assumes near constant demand for oil and gas for up to 70 years into the future.²⁶ But this assumption is not compatible with

¹⁸ See N. GREGORY MANKIW, PRINCIPLES OF ECONOMICS 74–78, 80–81 (2008).

¹⁹ Final EIS, *supra* note 6, at 3-7.

²⁰ BUREAU OF OCEAN ENERGY MGMT., OCS OIL AND NATURAL GAS: POTENTIAL LIFECYCLE GREENHOUSE GAS EMISSIONS AND SOCIAL COST OF CARBON 23 (2016) [hereinafter “Potential Lifecycle Greenhouse Gas Emissions”].

²¹ See Comments on Arctic Coastal Plain Draft EIS, *supra* note 3, at 15.

²² Final EIS, *supra* note 6, at Appendix S-615.

²³ *Id.*

²⁴ See *California v. Bernhardt*, 472 F. Supp. 3d 573, 623 (N.D. Cal. 2020) (citing Kevin M. Stack & Michael P. Vandenberg, *The One Percent Problem*, 111 COLUM. L. REV. 1385, 1393 (2011)).

²⁵ *Sw. Elec. Power Co. v. EPA*, 920 F.3d 999, 1032 (5th Cir. 2019) (internal quotation marks omitted).

²⁶ See Potential Lifecycle Greenhouse Gas Emissions, *supra* note 20, at 20.

international efforts to avoid the worst potential effects of climate change,²⁷ and in fact BLM acknowledged in the final EIS that this assumed energy trajectory represents a “worst-case scenario outcome.”²⁸ As Policy Integrity explained in a recent report, Interior can fix this issue by calibrating its substitution model to more realistic NEMS emissions scenarios, rather than relying solely on the base case that assumes near-constant fossil-fuel demand.²⁹ Additionally, the agency should seek to correct other flaws with MarketSim, including its assumption of no technological advances that would improve energy efficiency and equivalent supply-side elasticities between onshore and offshore oil leasing.³⁰ A full account of the numerous flaws with MarketSim as well as suggestions for improving the model or developing a replacement can be found in Policy Integrity’s attached comments on the Draft EIS and Sections III.A.3–4 of the attached report.

In response to Policy Integrity’s criticisms of BLM’s decision not to include effects on foreign energy markets and suggestions for how the agency could better address these impacts, BLM asserted that agencies are not required to model the impact of their actions on global energy markets.³¹ However, a recent U.S. Court of Appeals for the Ninth Circuit decision rejects this argument and makes any future NEPA analyses that rely on MarketSim in its current form legally precarious.³² In *Center for Biological Diversity v. Bernhardt*, the Ninth Circuit evaluated the EIS for an extraction project off the coast of Northern Alaska. Using MarketSim, BOEM concluded that the project would lead to a reduction in net greenhouse gas emissions, in part because of its exclusion of impacts on foreign energy markets. The Ninth Circuit held that the model irrationally omitted these impacts on foreign oil demand from domestic oil production,³³ and that BOEM’s failure to consider this critical substitution effect was “insufficient to satisfy NEPA’s requirements.”³⁴ Relying on the Ninth Circuit’s holding, the District of Alaska recently vacated BLM’s approval of the Willow Master Development Plan that also relied on MarketSim, rejecting the agency’s attempt to distinguish its usage on the grounds that it found (like it did here) that the challenged project would cause a limited increase in global greenhouse gas emissions rather than a net decrease.³⁵

Given these legal precedents, BLM must correct these deficiencies with MarketSim in order to adequately model the environmental effects of proposed alternatives for leasing in the Coastal Plain. By relying on the flawed, current version of MarketSim, the agency minimized the action’s greenhouse gas emissions and did not satisfy its obligations under NEPA.

²⁷ See Rachel Rothschild & Max Sarinsky, *Toward Rationality in Oil and Gas Leasing*, INST. POL’Y INTEGRITY 19 (2021), https://policyintegrity.org/files/publications/Toward_Rationality_in_Oil_and_Gas_Leasing_%282%29.pdf [hereinafter “*Toward Rationality*”].

²⁸ Final EIS, *supra* note 6, at S-656.

²⁹ *Toward Rationality*, *supra* note 27, at 16–17.

³⁰ See Comments on Arctic Coastal Plain Draft EIS, *supra* note 3, at 19.

³¹ See Final EIS, *supra* note 6, at S-655.

³² See *Ctr. for Biological Diversity v. Bernhardt*, 982 F.3d 723, 736–40 (9th Cir. 2020).

³³ See *id.* at 738 (“The record belies BOEM’s contention that it could not have summarized or estimated foreign emissions with accurate or credible scientific evidence.”).

³⁴ *Id.*

³⁵ *Sovereign Inupiat for a Living Arctic v. Bureau of Land Mgmt.*, No. 3:20-CV-00290-SLG, 2021 WL 3667986, at *10–14 (D. Alaska Aug. 18, 2021).

Additionally, BLM inappropriately applied substitution analysis only to the project's environmental harms while ignoring how substitution reduces the project's economic benefits. On the one hand, BLM discounted the project's environmental impacts by claiming that most of them would occur regardless as a result of substitute oil and gas production in other areas, while on the other it attributed a wealth of economic benefits to the plan without any mention of this substitution effect. Of course, if BLM was indeed accurate that most of the plan's oil and gas production would be offset through increased production elsewhere under a "no action" alternative (which we dispute, as discussed above), this would also mean that many of the supposed economic benefits of the plan would also occur under the "no action" scenario due to increased production. And indeed, recent BLM projections suggest that a considerable percentage of the substitute production would be domestic, which would mean that a sizeable amount of the economic benefits of the no action alternative would likewise accrue to U.S. entities.³⁶

BLM cannot assume that environmental impacts will occur regardless of the alternative chosen but that there will be unique economic benefits from leasing in the Coastal Plain. As it reconsiders the final EIS, BLM should apply substitution consistently between the project's costs and benefits, thereby ensuring a balanced analysis that has thus far been lacking.³⁷

B. BLM failed to reasonably assess the impacts of greenhouse gas emissions from oil and gas leasing in the Coastal Plain by disregarding the social cost of greenhouse gases

Despite receiving a significant number of comments urging BLM to value the environmental effects of increased greenhouse gas emissions from leasing in the Coastal Plain,³⁸ the agency refused to monetize any climate damages in the final EIS using the social cost of greenhouse gases.³⁹ BLM's reasons for not doing so were 1) that then-President Trump had disbanded the Interagency Working Group that provided the technical analysis for the social cost of greenhouse gases; 2) that BLM was not obligated to value these effects under NEPA; and 3) that the methodology did not need to be used for program decisions like leasing that are not agency rulemakings.⁴⁰ As detailed below, these are inadequate justifications, particularly given the Biden administration's reinstatement of the Working Group and recent court precedents indicating that NEPA *does* require monetization of climate change impacts using the social cost of greenhouse gases, including for non-regulatory decisions.

³⁶ See BLM, DRAFT EASTERN COLORADO RESOURCE MANAGEMENT PLAN & ENVIRONMENTAL IMPACT STATEMENT—VOLUME 3 B-74 (2019) (stating that according to BLM's MarketSim analysis 71.3 percent of the projected production from leasing under the plan would be offset by additional domestic onshore production while 18.2 percent would be offset by increased foreign imports).

³⁷ See *Johnston v. Davis*, 698 F.2d 1088, 1094–95 (10th Cir. 1983) (disapproving of "misleading" statements resulting in "an unreasonable comparison of alternatives"); *Hughes River Watershed Conservancy v. Glickman*, 81 F.3d 437, 446 (4th Cir. 1996) ("For an EIS to serve these functions" of taking a hard look and allowing the public to play a role in decisionmaking, "it is essential that the EIS not be based on misleading economic assumptions"); *Sierra Club v. Sigler*, 695 F.2d 957, 979 (5th Cir. 1983) (holding that an agency's "skewed cost-benefit analysis" was "deficient under NEPA"). See also *Bus. Roundtable v. SEC*, 647 F.3d 1144, 1148–49 (D.C. Cir. 2011) (criticizing an agency for "inconsistently and opportunistically fram[ing] the costs and benefits of the rule").

³⁸ See, e.g., Joint Comments, Failure to Monetize Greenhouse Gas Emissions, *supra* note 3.

³⁹ See Final EIS, *supra* note 6, at F-2.

⁴⁰ See *id.*

In one of his first actions upon taking office, President Biden reestablished the Interagency Working Group on the Social Cost of Greenhouse Gases and directed it to provide estimates “monetizing the value of changes in greenhouse gas emissions resulting from regulations and other relevant agency actions.”⁴¹ The Working Group has since reconvened and released interim estimates of the social-cost metrics that readopt its prior valuations from 2016 (adjusted for inflation), as conservative values.⁴² In doing so, the Working Group reaffirmed its previous numbers as reflecting the best available science, though it acknowledged that these valuations “likely *underestimate* societal damages from [greenhouse gas] emissions,” and began a process to update these valuations by January 2022.⁴³ President Biden has also signaled an openness to use the metric broadly in agency decision-making, including project- or program-level NEPA assessments and other decision-making contexts.⁴⁴

The Biden administration’s emphasis on applying the social cost of greenhouse gases to environmental impact assessments accords with recent judicial decisions finding that BLM’s mere quantification of greenhouse gas emissions does not satisfy the agency’s obligations under NEPA.⁴⁵ For example, in a July 2020 decision, the U.S. District Court for the Northern District of California rejected a NEPA assessment for a BLM regulation that relaxed rules for methane flaring and leakage because the agency had only quantified greenhouse gas emissions in that assessment.⁴⁶ Relying on precedent from the Ninth Circuit, the court held that BLM “must communicate the ‘*actual* environmental effects resulting from emissions’ of greenhouse gas, not just quantify them” to fulfill its obligations under NEPA.⁴⁷ And while the Court recognized that “NEPA does not mandate any particular methodology,” it explained that the statute requires “that an agency use state of the art science to make sound scientific decisions.”⁴⁸ The court highlighted the Working Group’s social cost of greenhouse gas estimates as a state-of-the-art methodology that would fulfill the agency’s duty under NEPA to assess climate impacts, rejecting BLM’s argument that the tool was “too speculative” to apply.⁴⁹

The U.S. District Court for the District of Montana reached a similar conclusion earlier this year, finding the Office of Surface Mining Reclamation and Enforcement’s (“OSM”) environmental impact assessment of a coal mine extension violated NEPA because the agency did not evaluate climate impacts using the social cost of greenhouse gases after quantifying the

⁴¹ Exec. Order No. 13,990 § 5(b)(ii)(A), 86 Fed. Reg. 7037 (Jan. 25, 2021),

⁴² See 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 10 (2021).

⁴³ *Id.* at 3–4 (emphasis added).

⁴⁴ Toward Rationality, *supra* note 27, at 19.

⁴⁵ These recent decisions reaffirm longstanding judicial precedents emphasizing that agencies must fully assess a project’s climate change effects to comply with NEPA. See, e.g., *Ctr. for Biological Diversity v. Nat’l Highway Traffic Safety Admin.*, 538 F.3d 1172, 1217 (9th Cir. 2008); *Border Power Plant Working Grp. v. U.S. Dep’t of Energy*, 260 F. Supp. 2d 997, 1028-29 (S.D. Cal. 2003).

⁴⁶ See *California v. Bernhardt*, 472 F. Supp. 3d 573, 623 (N.D. Cal. 2020). BLM did apply monetized valuations of greenhouse gas emissions in its regulatory cost-benefit analysis. While the court rejected that analysis because BLM disregarded the Working Group’s well-established valuations in favor of unreviewed valuations that purported to ignore all effects beyond U.S. borders, the court broadly supported the monetization of climate impacts in all relevant assessments. *Id.* at 608–14.

⁴⁷ *Id.* at 623 (quoting *Center for Biological Diversity v. NHTSA*, 538 F.3d 1172, 1216 (9th Cir. 2008)) (internal alterations omitted).

⁴⁸ *Id.* at 624.

⁴⁹ *Id.* at 623.

projected increase in emissions. Notably, the court held that because OSM “quantif[ie]d] the socioeconomic benefits of the mine expansion” being challenged, it must also “take a hard look at the costs of the greenhouse gas emissions” through the social cost of greenhouse gases.⁵⁰ The court rejected the agency’s reasons for not applying the methodology, holding that the tool is not too uncertain to use in a NEPA analysis.⁵¹ To the contrary, the court recognized the widespread “consensus that [the Working Group’s] estimates constitute the best available science about monetizing the impacts of greenhouse gas emissions,” and praised the methodology as a “viable model tool for monetizing the costs of greenhouse gas emissions.”⁵²

Beyond these decisions involving BLM and other Interior subagencies, federal courts have held in numerous contexts that use of the social cost of greenhouse gases reflects the best method for an agency to assess climate impacts under NEPA, and that volumetric emission estimates (even when combined with percentage comparisons to geographic inventories or qualitative descriptions of climate-change impacts) are insufficient. Perhaps most notably, a recent decision from the U.S. Court of Appeals for the D.C. Circuit held that the Federal Energy Regulatory Commission (“FERC”) did not satisfy its obligations under NEPA by merely quantifying the greenhouse gas emissions from the challenged energy project.⁵³ Instead, the court found, FERC was obligated to use a framework “generally accepted within the scientific community” to examine the actual environmental impacts from the project’s greenhouse gas emissions.⁵⁴ The Court further recognized that the agency had “declined to dispute” that the social cost of greenhouse gases “is a generally accepted method for estimating the impact of greenhouse gas emissions”—indeed, it has been used in dozens of rulemakings and other agency actions—and thereby “may have been obligated to use the social cost of carbon protocol in its EIS.” And as previously referenced, the Ninth Circuit has also held that mere quantification of greenhouse gas emissions coupled with percentage comparisons to geographic inventories—the precise approach that BLM took in this EIS—is insufficient for analyzing actual environmental impacts as NEPA requires.⁵⁵

Instead of relying on the well-established social cost of greenhouse gases protocol to measure climate impacts, BLM endorsed widely discredited theories (which the agency did not even substantiate through citation) that there “is not a climate crisis” and that a warming planet can actually make society more prosperous.⁵⁶ This unsupported pseudoscience does not stand in for the evidence-based analysis that NEPA demands. In contrast to BLM’s speculative theories about the impacts of climate change, the social cost of greenhouse gases uses evidence-based models to assess both the positive and negative impacts of climate change. On net, it finds, climate change is extremely harmful to society and—contrary to BLM’s unsupported assertion—will result in net welfare loss rather than society-wide prospering.

In light of these legal precedents indicating that BLM cannot satisfy its NEPA obligations by merely quantifying greenhouse gas emissions from leasing projects—along with the Working Group’s reinstatement of its social cost valuations—BLM should monetize the climate change

⁵⁰ *WildEarth Guardians v. Bernhardt*, No. CV 17-80-BLG-SPW, 2021 WL 363955, at *9 (D. Mont. Feb. 3, 2021).

⁵¹ *See id.*

⁵² *Id.* at *10.

⁵³ *Vecinos para el Bienestar de la Comunidad Costera v. FERC*, 6 F.4th 1321, 1327–30 (D.C. Cir. 2021).

⁵⁴ *Id.* (quoting 40 C.F.R. § 1502.21(c)(4)).

⁵⁵ *Ctr. for Biological Diversity*, 538 F.3d at 1215–17.

⁵⁶ Final EIS, *supra* note 6, at S-686.

impacts from leasing in the Coastal Plain using the values set forth by the Interagency Working Group in February 2021.⁵⁷ The Supplemental EIS should also discuss the implications of this analysis for selecting among the proposed alternatives, carefully considering the climate impacts of each alternative in relation to other project benefits and burdens.

C. BLM failed to quantify any ecosystem service values, non-use values, or passive use values.

As BLM acknowledged in both the draft and final EIS, oil and gas leasing in the Coastal Plain will harm the local Alaskan ecosystem, diminishing “[t]he non-use and passive use values of the Coastal Plain and its other ecosystem service values.”⁵⁸ BLM nevertheless failed to quantify the value of these lost environmental benefits, claiming that to do so was “outside the scope, funding, and time constraint of this EIS.”⁵⁹ Yet as Policy Integrity explained in its comments on the draft EIS, BLM ignored important literature that would have allowed the agency to quantify and monetize at least some of the relevant values and provide lower-bound estimates of these foregone ecosystem benefits.⁶⁰ Furthermore, the failure to quantify an otherwise quantifiable environmental is arbitrary when the agency chooses, as BLM did, to conduct an economic impact analysis that monetized the action’s alleged economic benefits to federal, state and local governments as well as the oil and gas industry.⁶¹

A number of research studies specifically provide valuations for preservation of the ANWR ecosystem, and there is a substantial literature on valuing ecosystem services in general.⁶² These analyses calculate the economic value of preserving an environmental resource—a key component being the “nonuse” value that individuals place in preservation of natural resources that they do not intend to use.⁶³ As the National Research Council notes, it is especially crucial to estimate nonuse values when policymakers are considering the tradeoffs of developing or preserving a natural resource, because “failure to include some measure of the value of ecosystem services . . . will implicitly assign them a value of zero.”⁶⁴

The National Research Council has determined that there are numerous ecosystem nonuse values that may be significant in ANWR, may be threatened by the action under review, and may be quantifiable given existing literature. Among the potentially relevant ecosystem service values that the National Research Council lists are fishing, wild resources, potable water and other water resources, recreation, genetic material and the maintenance of biodiversity,

⁵⁷ See INTERAGENCY WORKING GROUP ON SOCIAL COST OF GREENHOUSE GASES, TECHNICAL SUPPORT DOCUMENT: SOCIAL COST OF CARBON, METHANE, AND NITROUS OXIDE INTERIM ESTIMATES UNDER EXECUTIVE ORDER 13990 (Feb. 2021), https://www.whitehouse.gov/wp-content/uploads/2021/02/TechnicalSupportDocument_SocialCostofCarbonMethaneNitrousOxide.pdf.

⁵⁸ Final EIS, *supra* note 6, at 3-326.

⁵⁹ *Id.* at 3-322; S-915.

⁶⁰ See Comments on Arctic Coastal Plain Draft EIS, *supra* note 3, at 24-25.

⁶¹ See Final EIS, *supra* note 6, at B-27–B-28 (assessing the expected job benefits, labor income, and state and federal government revenue from oil and gas development).

⁶² See e.g., NATIONAL RESEARCH COUNCIL, VALUING ECOSYSTEM SERVICES: TOWARD BETTER ENVIRONMENTAL DECISION-MAKING 5 (2005); R. Costanza et al., *The Value of the World’s Ecosystem Services and Natural Capital*, 387 NATURE 253 (1997); R.C. Bishop & M. P. Welsh, *Existence Values in Benefit-Cost Analysis and Damage Assessment*, 68 LAND ECON. 405 (1992); A.M. FREEMAN, THE MEASUREMENT OF ENVIRONMENTAL AND RESOURCE VALUES: THEORY AND METHODS RESOURCES FOR THE FUTURE (1993).

⁶³ NATIONAL RESEARCH COUNCIL, *supra* note 62, at 5.

⁶⁴ *Id.*

scientific and educational opportunities, nutrient retention and cycling, purification of air and water, flood control, storm protection, habitat function, shoreline and river bank stabilization.⁶⁵ Nonuse ecosystem service values include cultural heritage, resources for future generations, existence of species, and existence of wild places.⁶⁶

As Policy Integrity noted in its prior comments, many of these key values can be quantified and monetized.⁶⁷ For example, BLM could seek to monetize the contribution of preserving key portions of ANWR to Alaska's recreation economy. A 2018 National Park Service report states that 2.786 million visitors to national parks in Alaska spent nearly \$1.3 billion in the state in 2017. That spending resulted in 18,903 jobs and had a cumulative benefit to the state economy of \$1.89 billion.⁶⁸ Nevertheless, the final EIS section on recreation contains almost no quantification, and no monetization, of impacts.⁶⁹

Furthermore, BLM may be able to value the loss of these ecosystem benefits even without quantifying them individually, as there is peer-reviewed literature on Americans' willingness to accept drilling in the refuge. Overall, while there are some economic benefits to drilling in the Coastal Plain, the average U.S. household places a significant value on reducing fossil fuel development in ANWR.⁷⁰ Study after study has found that the refuge has a special level of nonuse value in the minds of Americans.⁷¹ For instance, a 1992 study on the Exxon Valdez oil spill "revealed that many Americans who have not visited Alaska and never intend to do so nevertheless place high values on maintaining the pristine and unique but fragile coastal and aquatic ecosystems of Alaska."⁷² In connection to the Exxon Valdez spill, "the District of Columbia Circuit of the U.S. Court of Appeals held that nonuse value should be part of the economic damages due to releases of oil or hazardous substances that injure natural resources."⁷³ While this case is specific to tort damages from an oil spill, it suggests that nonuse value should also be taken into consideration as economic damages to natural resources by other means, including under NEPA.

BLM cannot ignore this important literature on the quantification and monetization of existence value and other significant ecosystem service benefits. The National Research Council provides a useful set of guidelines for valuation of ecosystem services, should BLM need such direction.⁷⁴ And even if the agency concludes that monetization is not feasible for many key ecosystem services, it must nonetheless give careful qualitative consideration to any unquantified ecosystem services. Monetized estimates from the literature can serve as key guideposts in that

⁶⁵ See *id.* at 46, 80.

⁶⁶ See *id.*

⁶⁷ See Comments on Arctic Coastal Plain Draft EIS, *supra* note 3, at 24–26.

⁶⁸ NATIONAL PARK SERVICE (2018), <https://www.nps.gov/subjects/socialscience/vse.htm>.

⁶⁹ See Final EIS, *supra* note 6, at 3-288–3-296.

⁷⁰ See M. J. Kotchen & N. E. Burger, *Should We Drill in the Arctic National Wildlife Refuge? An Economic Perspective* 35 ENERGY POL'Y 4720 (2007).

⁷¹ See, e.g., R.T. Carson et al., *Contingent Valuation and Lost Passive Use: Damages from the Exxon Valdez Oil Spill*, 25 ENV'T & RES. ECON. 257 (2003); S. Colt, *The Economic Importance of Healthy Alaska Ecosystems*, INST. SOC. & ECON. RSCH., UNIV. OF ALASKA (2001).

⁷² NATIONAL RESEARCH COUNCIL, *supra* note 62, at 47.

⁷³ S. Liu et al., *Valuing Ecosystem Services: Theory, Practice, and the Need for a Transdisciplinary Synthesis*, 1185 ANN. N.Y. ACAD. SCI. 54, 61 (2010).

⁷⁴ See NATIONAL RESEARCH COUNCIL, *supra* note 62, at 253.

analysis, and help the agency better assess—in conjunction with more accurate valuations of climate costs as detailed above—the relative merits of competing alternatives.

D. BLM failed to consider the option value of delaying lease sales

As it revises its analysis, BLM should assess the informational value of delaying any lease sales above the 800,000 minimum set by the Tax Act when choosing among various leasing alternatives.

The informational value of delay is known as “option value,” and it has long been considered a relevant factor for federal leasing and mineral decisions by agencies, courts, and economists.⁷⁵ As Policy Integrity has noted in prior comments to BLM on leasing federal lands for fossil-fuel development, 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, which are all present in the Coastal Plain.⁷⁶ The oil and gas industry leases land that it does not ultimately drill because it recognizes the option value of holding those leases. By leasing more land than required under the Tax Act, BLM transfers the public’s option value to private industry, without having analyzed that option value in the first place.⁷⁷

Recent studies by the U.S. Energy Information Administration (“EIA”) underscore the high degree of informational uncertainty regarding the economic profitability of oil and gas leasing in ANWR. The EIA has determined that “future oil prices are highly uncertain,” certain “international conditions” have the potential to “drive prices to extreme, sustained deviations from the Reference case price path,” and “extraction technologies and practices” for tight oil and shale gas “continue to evolve rapidly.”⁷⁸ Specifically with regards to ANWR, the EIA reports “inherent uncertainty about market dynamics” for ANWR production,⁷⁹ as well as key uncertainties throughout Alaskan production, including “untested” offshore potential.⁸⁰ All that price uncertainty creates option value, which BLM has failed to consider. Instead, BLM’s entire analysis “assum[es]...favorable market prices,”⁸¹ even though BLM admits the “uncertainties” over “future prices of oil and gas.”⁸² It is unreasonable for BLM to base its entire analysis across all alternatives on an assumption of continuing favorable prices, when a framework exists—option value—to consider the value of waiting for more information in the face of great uncertainty over market prices.

There is also considerable uncertainty about how oil and gas drilling will affect the ecosystems and wildlife within the Refuge and Coastal Plain. Many species in the area are already threatened or endangered—polar bears have critical breeding ground in the Coastal Plain

⁷⁵ See, e.g., *Center for Sustainable Economy v. Jewell*, 799 F.3d 588, 610–11 (D.C. Cir. 2015).

⁷⁶ See INST. POL’Y INTEGRITY, *Comments on Failure to Monetize Greenhouse Gas Emissions or Consider Option Value in the Supplemental Environmental Analysis for Greenhouse Gas Emissions Related to Oil and Gas Leasing in Utah* (Oct. 27, 2020).

⁷⁷ Michael Livermore, *Patience Is an Economic Virtue*, 84 U. COLO. L. REV. 581 (2013).

⁷⁸ Energy Information Association, *Annual Energy Outlook* 32 (2019).

⁷⁹ *Id.* at 46.

⁸⁰ Energy Information Association, *Oil and Gas Supply Module 14* (2019), <https://www.eia.gov/outlooks/aeo/assumptions/pdf/oilgas.pdf>.

⁸¹ Final EIS, *supra* note 6, at 3-2.

⁸² *Id.* at 3-1.

itself—and adding development and pollution may have devastating, permanent consequences including species loss. Among the many important environmental characteristics that the EIS admits are currently uncertain or unknown are the subsurface flow paths to perennial springs that could be disturbed by drilling and fracking,⁸³ the population trends of ringed seals,⁸⁴ and the location of polar bear dens that might be harmed by oil and gas development.⁸⁵ Lease sales and development should be delayed until these environmental consequences are better understood.

In addition, it is uncertain what the full impacts of climate change will be in the region, 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.⁸⁶

Scientists also seek out the Refuge to study the general impacts of climate change, including how plant and wildlife adopt to a warming climate—unknown information that will be important to overall U.S. efforts to address climate change. All of these areas of informational uncertainty should be considered by BLM in the Supplemental EIS.

CONCLUSION

BLM’s reconsideration of this EIS offers the agency the opportunity to correct many analytical limitations that have plagued prior analyses and caused it to disregard key environmental impacts from fossil-fuel extraction. As it proceeds with its review, BLM must address these issues with the Final EIS in order to ensure that it considers the full effects of drilling on the local and global environment and bases its decision on the best available scientific and economic information.

Sincerely,

Rachel Rothschild, Legal Fellow
Max Sarinsky, Senior Attorney

⁸³ *See id.* at 2-7.

⁸⁴ *See id.* at 3-173.

⁸⁵ *See id.* at 3-192–3-193.

⁸⁶ US GEOLOGIC SURVEY, CHANGING ARCTIC ECOSYSTEMS: MEASURING AND FORECASTING THE RESPONSE OF ALASKA’S TERRESTRIAL ECOSYSTEM TO A WARMING CLIMATE (2012), <https://pubs.usgs.gov/fs/2012/3144/pdf/fs20123144.pdf>.

Attachments

- 1) Institute for Policy Integrity, Comments on Arctic Coastal Plain Draft EIS (Mar. 13, 2019).
- 2) Environmental Defense Fund et al., Comments on Failure to Monetize Greenhouse Gas Emissions in the Coastal Plain Oil and Gas Leasing Program Draft Environmental Impact Statement (Mar. 13, 2019).
- 3) Rachel Rothschild & Max Sarinsky, *Toward Rationality in Oil and Gas Leasing*, INST. POL'Y INTEGRITY (2021).