

**Testimony of Jayni Hein  
Policy Director  
Institute for Policy Integrity  
New York University School of Law  
Before the Subcommittee on Energy and Mineral Resources  
U.S. House of Representatives, Committee on Natural Resources**

**Legislative Hearing on H.R. 5577 (Rep. Garret Graves) to amend the Outer Continental Shelf Lands Act to allow for internet-based oil and natural gas leasing**

**July 6, 2016**

### **Introduction**

Good morning and thank you for inviting me to testify before this subcommittee. I am Jayni Foley Hein, the Policy Director at the Institute for Policy Integrity at New York University School of Law, a non-partisan think tank dedicated to improving the quality of government decisionmaking through advocacy and scholarship in the fields of administrative law, economics, and public policy. The views I express today are my own and do not represent the views, if any, of New York University.

I have authored numerous reports and academic articles on natural resources and climate change topics. From 2011 to 2014, I served as Executive Director of UC Berkeley School of Law's Center for Law, Energy & the Environment. Previously, I served as an attorney at Latham & Watkins LLP in San Francisco, where my practice focused on environmental and regulatory law. I earned my J.D., Order of the Coif, from UC Berkeley School of Law, and my B.A., with highest distinction, from the University of Virginia.

Much of my recent work has focused on federal oil, gas, and coal leasing. Over the course of the last year, I published "Next Steps to Reform the Regulations Governing Offshore Oil and Gas Planning and Leasing" in the *Alaska Law Review* (co-authored with Andrew Hartsig, Michael Levine, and Jason Schwartz), which focuses on improving the Bureau of Ocean Energy Management's offshore leasing planning and lease sale processes. I also authored four reports on federal fossil fuel leasing, including "Harmonizing Preservation and Production: How Modernizing the Department of the Interior's Fiscal Terms for Oil, Gas, and Coal Leases Can Ensure a Fair Return to the American Public," which discusses overarching reforms for federal onshore and offshore fossil fuel leasing. Additional reports focused on federal coal leasing and reform, including: "Priorities for Federal Coal Reform: Twelve Policy and Procedural Goals for the Programmatic Review" and "Illuminating the Hidden Costs of Coal" (co-authored with Peter Howard). I also published an article in the *Georgetown Environmental Law Review*: "Legal Pathways to Reducing Greenhouse Gas Emissions under Section 115 of the Clean Air Act," co-authored with Michael Burger, Ann Carlson, Michael Gerrard, Jason Schwartz, and Keith Benes.

My testimony before this subcommittee is adapted from the 2016 *Alaska Law Review* article that I co-authored with Andrew Hartsig, Michael Levine, and Jason Schwartz. It

recommends reforms that the Department of the Interior's Bureau of Ocean Energy Management (BOEM) can adopt to continue to move towards a more rational, transparent, and balanced federal offshore leasing program.

## Summary

The Outer Continental Shelf Lands Act (OCSLA) requires the Secretary of the Interior to develop five-year schedules that specify the timing for offshore leasing activity, after weighing the "economic, social, and environmental values of the renewable and nonrenewable resources."<sup>1</sup> When making these decisions, the agency should strive to consider all relevant factors, and to quantify all costs and benefits as fully and as accurately as possible—these norms are enshrined in legal precedents<sup>2</sup> and executive orders.<sup>3</sup>

H.R.5577, the Innovation in Offshore Leasing Act, calls for modernizing the Nation's offshore leasing program to "ensure the best return to the Federal taxpayer, reduce fraud, and ensure a fair and competitive leasing process." My testimony provides overarching recommendations for further modernizing federal offshore leasing and for ensuring a fair return to taxpayers.

My comments cover four main topics. Interior should: (1) continue to increase transparency and public participation in the offshore leasing process; (2) improve the regulations that underlie BOEM's five-year planning process; (iii) build on recent progress addressing environmental, social, and economic uncertainty in its five-year Program and lease sales; and (iv) advance efforts to account for the environmental and social costs of fossil fuel leasing through royalty rate and other fiscal reform.

## I. Interior Should Continue to Increase Transparency and Public Participation in the Offshore Leasing Process

Interior should continue to improve transparency and public participation in the decision-making processes for offshore leasing. As President Obama stated on his first day in office, "[o]penness will strengthen our democracy and promote efficiency and effectiveness in Government."<sup>4</sup> This principle is particularly important as public scrutiny of offshore oil and gas activities has grown in the wake of the *Deepwater Horizon* accident and Shell's failed 2012 drilling season, and as the need to take action to address greenhouse gas

---

<sup>1</sup> 43 U.S.C. § 1344(a) (2010).

<sup>2</sup> *California v. Watt* ("Watt I"), 688 F.2d 1290, 1317 (D.C. Cir. 1981) (holding courts can review Interior's leasing discretion for arbitrariness and failure to consider relevant factors); *Motor Veh. Mfrs. Ass'n v. State Farm Ins.*, 463 U.S. 29, 43 (1983) (agency decisions are arbitrary if they entirely fail to consider an important aspect of the problem).

<sup>3</sup> Exec. Order No. 12,866 § 1(a), 58 Fed. Reg. 51,735, 51,735 (Oct. 4, 1993) (codified at 45 C.F.R. pt. 88); Exec. Order No. 13,563 § 1(a), 76 Fed. Reg. 3821, 3821 (Jan. 18, 2011) (affirming cost-benefit principles specified in Exec. Order 12,866).

<sup>4</sup> Memorandum on Transparency and Open Government, 2009 DAILY COMP. PRES. DOC. 1 (Jan. 21, 2009).

emissions is increasingly recognized.<sup>5</sup> Transparency with respect to management of Outer Continental Shelf activities can help the American public be assured that it is receiving fair market value for any offshore energy production and that the risks of any oil spills or other negative externalities are being fairly evaluated and considered.<sup>6</sup>

To implement the president's commitment to open government, federal agencies were directed to take three important steps: publish information online; improve the quality of government information; and create and institutionalize a culture of open government.<sup>7</sup> Interior has created and updated an Open Government Plan through which it has taken some important steps to further transparency related to Outer Continental Shelf activities.<sup>8</sup> The United States has spent more than three years working toward implementation of the Extractive Industries Transparency Initiative (EITI), "a global standard that promotes revenue transparency and accountability in the extractive sector" by requiring "report[s] in which governments and companies publicly disclose royalties, rents, bonuses, taxes and other payments from oil, gas, and mineral resources."<sup>9</sup> And Interior has gone beyond the requirements of EITI and is planning to publish all revenue data collected from extractive companies operating on federal lands.<sup>10</sup>

In addition, with regard to exploration operations in the Arctic Ocean, BOEM allowed for public comments on the NEPA process related to Shell's exploration plan and approval of its oil spill response plan, and the Bureau of Safety and Environmental Enforcement (BSEE) made public the letters denying requests for suspensions of operations on Chukchi and Beaufort Sea leases.<sup>11</sup> There is no formal requirement for such comment periods, and

---

<sup>5</sup> Indeed, drilling for oil and gas in the Arctic Ocean became a campaign issue for some presidential candidates even in the early stages of the 2016 race. *See, e.g.,* Alan Rappeport, *Disagreeing with President, Hillary Clinton Says She Opposes Drilling in Arctic Ocean*, N.Y. TIMES (Aug. 18, 2015). The issue also prompted twelve U.S. Senators to send a letter urging President Obama not to authorize drilling in the Arctic Ocean. *See* Letter from Jeffrey Merkley, et al., United States Senators to Barack Obama, President of the United States (Sept. 25, 2015), <http://www.sanders.senate.gov/download/sanders-whitehouse-on-arctic-drilling-?inline=file>.

<sup>6</sup> *See* 43 U.S.C. § 1344(a)(4) (2012) (requiring that "[l]easing activities . . . be conducted to assure receipt of fair market value for the lands leased and the rights conveyed by the Federal Government."). *See also* JAYNI FOLEY HEIN, INST. FOR POLICY INTEGRITY, HARMONIZING PRESERVATION AND PRODUCTION: HOW MODERNIZING THE DEPARTMENT OF THE INTERIOR'S FISCAL TERMS FOR OIL, GAS, AND COAL LEASES CAN ENSURE A FAIR RETURN TO THE AMERICAN PUBLIC 7 (June 2015) [hereinafter HEIN, HARMONIZING PRESERVATION].

<sup>7</sup> Peter R. Orszag, Memorandum for the Heads of Executive Departments and Agencies: Open Government Directive, M-10-06, 2-4 (Dec. 8, 2009).

<sup>8</sup> DEP'T OF THE INTERIOR, OPEN GOVERNMENT PLAN 3.0 (June 2014).

<sup>9</sup> DEP'T OF THE INTERIOR, U.S. EXTRACTIVE INDUSTRIES TRANSPARENCY INITIATIVE FACT SHEET 1 (Feb. 2015).

<sup>10</sup> U.S. EXTRACTIVE INDUS. TRANSPARENCY INITIATIVE, EITI ANNUAL ACTIVITY REPORT 2014 2, 7-8 (June 30, 2015), [https://eiti.org/files/usa\\_2014\\_annual\\_activity\\_report\\_aar.pdf](https://eiti.org/files/usa_2014_annual_activity_report_aar.pdf).

<sup>11</sup> Press Release, BOEM, BOEM Invites Public Comment to Inform Environmental Assessment and Analysis of Chukchi Sea Exploration Plan (Apr. 10, 2015); BSEE, Letter of Response to Statoil Suspension of Operations Request (Oct. 16, 2015); BSEE, Letter of Response to Shell Suspension of

BSEE has not made letters like these public in the past.

Using the notice-and-comment rulemaking process to formalize practices that promote transparency and openness will help build trust, improve public participation in the decision-making process, and fulfill President Obama's pledge to ensure openness in government.<sup>12</sup> New regulations could require that federal regulators post on their websites—in a proactive and timely fashion—all non-privileged information related to exploration activities, including permitting, inspections, monitoring, and enforcement. For example, regulations should require BOEM and BSEE to post on their websites proposed plans and plan revisions, requests for modification, approvals, and similar documents. In addition, BOEM and BSEE could be required to make available to the public information on monitoring and enforcement activities, as well as data concerning incidents and near-misses.

Transparency and public participation also would be improved by regulations designed to ensure that the public has an opportunity to review and provide feedback on all non-confidential aspects of exploration plans. While public notice and comment is already required in any environmental impact statement (EIS) process, BOEM can ensure that all agency environmental assessments, including those related to the evaluation of Outer Continental Shelf exploration plans, are available for public notice and comment. Addressing these issues systematically in BOEM's planning, leasing, and exploration regulations would help ensure better decisions, accountability, and public participation.

## **II. Interior Should Clarify and Improve BOEM's Five-Year Program Planning Process**

In the five-year planning process, BOEM determines which areas of the Outer Continental Shelf (OCS) will be available for oil and gas leasing, and it schedules lease sales during the relevant five-year period. The plan, therefore, is the initial, broadest-scale step at which the government decides whether large swaths of the ocean will be made available for leasing to companies.

The regulations governing BOEM's five-year OCS leasing program, however, largely mirror the relevant statutory directives.<sup>13</sup> The five-year program regulations offer little guidance about how to best satisfy the broad statutory mandate to craft a schedule of oil and gas lease sales that will best meet national energy needs while balancing the potential for environmental damage, discovery of oil and gas, and adverse impacts on the coastal

---

Operations Request (Oct. 16, 2015).

<sup>12</sup> Organizations seeking information from Interior related to OCS activities have historically been required to submit requests pursuant to the Freedom of Information Act (FOIA). This process, though important, can be cumbersome for both the requestor and government agency. It has led to litigation and inefficiency. Increasing publicly available information should not displace FOIA obligations, but it could eliminate the inefficiencies that result when the agency requires FOIA requests for non-privileged information that could simply be made available.

<sup>13</sup> For example, compare 43 U.S.C. § 1344(c)(1) (2012) with 30 C.F.R. § 556.16(a) (2012).

zone.<sup>14</sup> It is, perhaps, no coincidence that the five-year leasing program process has been subject to significant controversy, and a substantial number of the programs promulgated by Interior have been challenged in court. BOEM has the discretion under existing law to revise the regulations governing the preparation of five-year OCS oil and gas leasing programs so that they provide useful guidance.

***More effective description of the factors to be considered under OCSLA Section 18(a)(2).***

OCSLA Section 18(a)(2) specifies that the “[t]iming and location of exploration, development, and production of oil and gas among the oil- and gas-bearing physiographic regions of the [O]uter Continental Shelf shall be based on a consideration of” nine enumerated factors.<sup>15</sup> There is, however, no meaningful regulatory interpretation of the manner in which the agency should evaluate these factors. Some of the factors are considered quantitatively, others only qualitatively. More specific regulatory guidance would foster more consistent and transparent decisions and would help prevent uncertainty and controversy.

For example, Section 18(a)(2)(B) requires consideration of “an equitable sharing of developmental benefits and environmental risks among the various regions.”<sup>16</sup> BOEM seeks to meet this obligation using a net benefits calculation.<sup>17</sup> However, the manner in which BOEM has undertaken this calculation has not always been transparent, which has resulted in allegations that the agency obscured the specific costs faced by individual regions and in legal challenges.<sup>18</sup> Regulations could define the factors and data the agency will consider in its “equitable sharing” calculus, require transparent disclosure of the gross costs and benefits experienced by each individual region (as well as onshore regions) of various leasing or “no sale” options, and establish guidelines for the net benefits calculation that would draw on the best available scientific and economic information, including the social cost of carbon.

***Better direction for the balancing required under OCSLA Section 18(a)(3).***

OCSLA Section 18(a)(3) requires the Secretary to “select the timing and location of leasing, to the maximum extent practicable, so as to obtain a proper balance between the potential for environmental damage, the potential for the discovery of oil and gas, and the

---

<sup>14</sup> 43 U.S.C. § 1344(a).

<sup>15</sup> § 1344(a)(2).

<sup>16</sup> *Id.* § 1344(a)(2)(B).

<sup>17</sup> *See, e.g.*, U.S. DEP’T. OF THE INTERIOR, BOEM, PROPOSED OUTER CONTINENTAL SHELF OIL AND GAS LEASING PROGRAM 2017–2022 at 8-1 to 8-25 (March 2016) [hereinafter BOEM, PROPOSED PROGRAM 2017–2022]; U.S. DEP’T. OF THE INTERIOR, BOEM, PROPOSED FINAL OUTER CONTINENTAL SHELF OIL AND GAS LEASING PROGRAM 2012–2017 116–19 (June 2012) [hereinafter BOEM, PROPOSED FINAL PROGRAM 2012–2017].

<sup>18</sup> *See, e.g.*, *Ctr. for Sustainable Econ. v. Jewell*, 779 F.3d 588 (D.C. Cir. 2015); *Ctr. for Biological Diversity, et al. v. Dep’t of the Interior*, 563 F.3d 466 (D.C. Cir. 2009).

potential for adverse impact on the coastal zone.”<sup>19</sup> The agency has interpreted this obligation as a balance among the nine factors enumerated in Section 18(a)(2).

At present, there are no regulations to help BOEM find the right balance between the risk of harm to the environment and potential benefits from the pursuit of oil and gas. As a result, when explaining its approach to balancing in the 2012–2017 five-year program, BOEM has resorted to quoting extensively from the D.C. Circuit’s opinions evaluating challenges to its earlier balancing efforts.<sup>20</sup> Instead of reacting to court challenges, BOEM should promulgate its own regulations to provide guidance and standards that promote consistency and ensure compliance with the statute’s balancing mandate.

At times, BOEM has balanced its Section 18(a) considerations through a cost-benefit analysis, an approach endorsed by the D.C. Circuit<sup>21</sup> and arguably required by Executive Orders.<sup>22</sup> At the same time, BOEM has also asserted that Section 18(a)(3) balancing cannot be reduced to a formula.<sup>23</sup>

Even if an “inflexible formula” is not appropriate, the critical balancing would nonetheless benefit from regulatory guidance. Effective regulations could require consideration of specific factors and the use of certain methods that would help decision-makers as they evaluate and balance the relevant information. For example, when considering the potential for environmental damage or adverse impacts on the coastal zone, regulations could require BOEM to consider factors including, but not limited to: (i) the degree to which scientists understand the marine ecosystem and its capacity to absorb impacts that could result from OCS development; (ii) the presence or absence of unique or endemic species that could be affected by OCS oil and gas operations; and (iii) other stressors, beyond new oil and gas activity, that affect ecosystem functioning or resilience. Regulatory interpretation of Section 18(a)(3) that requires consideration or use of particular factors or methods would help remove at least some of the uncertainty that has plagued past balancing efforts.

***Require identification of important marine areas and adequate baseline scientific information.***

To ensure that decision-makers have a strong understanding of the ocean

---

<sup>19</sup> 43 U.S.C. § 1344(a)(3).

<sup>20</sup> BOEM, PROPOSED FINAL PROGRAM 2012–2017 at 191–93.

<sup>21</sup> State of Cal. By & Through Brown v. Watt, 668 F.2d 1290, 1317–18 (D.C. Cir. 1981) (finding it “reasonable to conclude that within the section’s proper balance there is some notion of ‘costs’ and ‘benefits’”).

<sup>22</sup> Michael A. Livermore, *Patience is an Economic Virtue: Real Options, Natural Resources, and Offshore Oil*, 84 U. COLO. L. REV. 581, 627 (2013).

<sup>23</sup> *Id.* at 588. In the Proposed 2017–2022 Program, BOEM similarly states, “[OCSLA] does not specify what the balance should be or how the factors should be weighed to achieve that balance, leaving to the Secretary the discretion to reach a reasonable determination under the existing circumstances.” BOEM, PROPOSED PROGRAM 2017–2022 at 2-5.

environments that may be affected by their choices, BOEM's regulations should guarantee that certain information is available before an area can be included in a five-year program. At the broadest level, the availability of specific baseline scientific information will ensure informed decision-making. For example, a quantitative understanding of the marine environment, including robust food web models and identified important ecological areas, will help more fully evaluate choices about the potential effects of oil and gas operations on the OCS. Regulations should specify that, unless and until such data is available for a given area of the OCS, that area should not be made available for leasing in a five-year program.

In addition, at the five-year program stage, identification of important marine areas within each region, as well as measures necessary to preserve the integrity and function of those important areas, will help ensure good planning decisions. Important marine areas may include areas of high productivity or diversity; areas that are important for feeding, migration, or the lifecycle of species; areas of biogenic habitat, structure forming habitat, or habitat for endangered or threatened species; or areas important for subsistence purposes. If necessary to preserve ecological integrity and functioning, regulations should require that important marine areas be excluded from the five-year program.

President Obama has recognized the value of this approach. In January 2015, he signed a Presidential Memorandum withdrawing from oil and gas leasing several important areas in the U.S. Arctic Ocean: Hanna Shoal, Barrow Canyon, a 25-mile buffer along the Chukchi coast, and two smaller subsistence-use areas in the Beaufort Sea.<sup>24</sup> In issuing this memorandum, the President exercised his authority under OCSLA Section 12(a).<sup>25</sup>

BOEM has built on this approach in its Proposed 2017-2022 Program. The agency has identified a series of "Environmentally Important Areas," in the Beaufort and Chukchi Seas.<sup>26</sup> The agency has identified particular values of these areas and intends the evaluation in the program and accompanying EIS "to serve as a foundation to inform future analysis and related leasing decisions concerning these environmentally important areas."<sup>27</sup> Regulations specifically requiring protection of disproportionately important areas would continue this momentum and ensure that BOEM takes proactive steps during the five-year planning process to protect such areas.<sup>28</sup>

Once important areas are identified, they must also be protected. Regulations, therefore, should impose specific, stringent precautions that must be in place before the sale of any OCS leases that could be reasonably expected to impact important marine areas.

---

<sup>24</sup> Memorandum on the Withdrawal of Certain Areas of the United States Outer Continental Shelf Offshore Alaska from Leasing Disposition, 2015 DAILY COMP. PRES. DOC. 59 (Jan. 27, 2015).

<sup>25</sup> *Id.*

<sup>26</sup> BOEM, PROPOSED PROGRAM 2017-2022 at 4-1, 11-1 to 11-3.

<sup>27</sup> *Id.*

<sup>28</sup> *See, e.g.*, Stan Senner, et al., Comment Letter on 2017-2022 Proposed Oil and Gas Leasing Program and Environmental Impact Statement (Mar. 30, 2015), <http://www.regulations.gov/#documentDetail;D=BOEM-2014-0096-14343>.

These rules would help protect areas in which leasing is prohibited and ensure the ongoing health of areas where leasing is not prohibited but where specific ecosystem functions merit other forms of protection. For example, operators could be required to locate exploration and development activities within lease blocks so that they minimize the potential for sound and other impacts to important areas. Requirements like these would help BOEM better meet its balancing obligations and ensure authorized activities will not harm the health and functioning of the marine ecosystem.

***Codify the “targeted approach” to OCS leasing for frontier areas.***

In its 2012–2017 program, BOEM introduced a “targeted approach” to OCS leasing in the U.S. Arctic Ocean.<sup>29</sup> BOEM has continued that approach in the Proposed 2017–2022 Program.<sup>30</sup> Instead of opening an entire program area to OCS leasing, BOEM’s targeted approach excludes areas of lower petroleum potential that have high environmental or ecological importance. BOEM can refine and codify this “targeted” approach to leasing in its five-year program regulations.

The area-wide leasing approach that BOEM has followed since the 1980s is not mandated by OCSLA or BOEM’s existing regulations. It is a relic of former Secretary of the Interior James Watt’s commitment to “lease one billion acres” offshore.<sup>31</sup> The area-wide approach, in which tens of millions of acres may be offered in single lease sales, makes effective environmental analysis very difficult, may limit competition, and seems to serve a limited political purpose for many areas in which there appears to be little industry interest or capability.

A targeted leasing approach has substantial benefits, and BOEM can take steps to codify it in regulation. Without a formal rulemaking, it is possible that future administrations would eliminate targeted leasing in the Arctic and continue area-wide leasing elsewhere. Exclusion of important marine areas to preserve ecological integrity and functioning, as described above, could be an important component of this approach. Currently, BOEM begins from the premise that an entire planning area will be included in the program and requires specific justification for removing areas. Regulations could reverse this premise and allow leasing only in areas in which potential benefits can be shown to outweigh risks. BOEM regulations could also consider placing an upper limit on the percentage of an OCS planning area that may be included in any one five-year leasing program.

Limiting the geographic scope of lease sales—for example by codifying BOEM’s “targeted approach” to leasing—would have the additional benefit of fostering more meaningful environmental NEPA analysis at the lease sale stage. It may also increase competition among companies for individual lease blocks.

---

<sup>29</sup> BOEM, PROPOSED FINAL PROGRAM 2012–2017 at 5-6.

<sup>30</sup> BOEM, PROPOSED PROGRAM 2017–2022 at S-8, 11-1.

<sup>31</sup> NAT’L COMM’N, DEEP WATER, at 63.



### **III. Interior Should Build on Recent Progress Addressing Environmental, Social, and Economic Uncertainty, or Option Value, in Its Five-Year Program and Lease Sales.**

Option value is the value of waiting for more information on energy prices and extraction risks before deciding whether or when to offer for lease the public's energy resources to private companies.<sup>32</sup> The concept's most familiar application is in the financial markets, where investors calculate the value of options to wait for more information on stock prices before deciding whether to buy or sell shares.<sup>33</sup> The same methodology can be applied to environmental, social, and technological uncertainties. Option value is applicable to the decisions made at the five-year planning stage, as well as the lease sale stage (as described below). At the planning stage, BOEM can account for differences in environmental and social uncertainties among the OCS regions to allow for more effective regional comparisons.<sup>34</sup>

BOEM's failure to consider option value at the planning stage was one of the subjects of a challenge to the agency's 2012–2017 five-year program.<sup>35</sup> In that case, the petitioner argued that OCSLA required BOEM to explicitly consider and quantify the option value of delaying leasing in specific regions of the Outer Continental Shelf. The D.C. Circuit ultimately upheld the 2012–2017 program, finding that quantification techniques were “not yet so well established that [BOEM] was required to use them” in the planning process. However, the court recognized that there is “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.”<sup>36</sup> The D.C. Circuit's ruling “strongly suggests that future advancements in option value research could compel the agency to better quantify the option value associated with its leasing practices, which could pay enormous dividends to the American people by prioritizing lower-risk leasing and securing more favorable financial terms.”<sup>37</sup>

BOEM recognized the importance of a more robust discussion of option value in its most recent proposed five-year program for 2017 to 2022. For the first time, the agency includes some qualitative discussion of option value.<sup>38</sup> In addition to accounting for option value during the planning stage, BOEM should account for the value of the government's option to wait to sell leases when setting minimum bids for lease tracts.<sup>39</sup> In its proposed

---

<sup>32</sup> Livermore, *supra* note 22, at 627.

<sup>33</sup> HEIN, HARMONIZING PRESERVATION, *supra* note 6, at 13.

<sup>34</sup> See 43 U.S.C. § 1344(a)(2)(G) (requiring consideration of relative sensitivity of different areas of the OCS).

<sup>35</sup> *Ctr. for Sustainable Econ. v. Jewell*, 779 F.3d 588, 610 (D.C. Cir. 2015).

<sup>36</sup> *Id.*

<sup>37</sup> Comments from Jayni Foley Hein, et. al., Inst. for Pol'y Integrity at NYU School of Law, to BOEM (Mar. 30, 2015), [http://policyintegrity.org/documents/Comments\\_to\\_BOEM\\_2017-2022\\_Offshore\\_Program.pdf](http://policyintegrity.org/documents/Comments_to_BOEM_2017-2022_Offshore_Program.pdf).

<sup>38</sup> BOEM, PROPOSED PROGRAM 2017–2022 at 10-2 to 10-13.

<sup>39</sup> Livermore, *supra* note 22, at 630.

program for 2017–2022, BOEM discusses the possibility of raising minimum bids in lease sales to account for option value. BOEM notes that raising the minimum bid may increase buyer selectivity, elevating “the efficiency of the lease sale process.”<sup>40</sup> However, BOEM stopped short of a full quantitative analysis of the value of waiting for more information on oil prices and environmental costs before scheduling lease sales.<sup>41</sup>

In addition, BOEM will now consider environmental and social costs in its “hurdle price” analysis that helps determine whether and when to offer areas for lease. At the program development stage, BOEM uses the hurdle price to identify areas that show current economic promise, while deferring other timing, composition, and sale design decisions to the lease sale stage.<sup>42</sup> For the first time, BOEM’s proposed program for 2017–2022 added an estimate of the known environmental and social costs into the hurdle price calculation and now considers both the private and social costs of exploration and development in determining the hurdle price.<sup>43</sup> This is a positive step; however, BOEM’s application of the hurdle-price analysis fails to account for environmental and social cost uncertainty, which is also relevant to optimal timing and would help ensure a more fair return to the public.<sup>44</sup>

It is notable that BOEM adjusted its analysis to reflect the best available information and economic tools. The fact that the agency had to be challenged in court to do so, however, underscores the advantages that could be gained by crafting effective regulations that encourage or require the use of the best available analytical tools. BOEM should take additional steps to strengthen its analysis in line with best practices and OCSLA’s mandate to balance economic, social, and environmental values. Specifically, BOEM should:

- Weigh option value when deciding where and when to issue leases at both the program and lease sale stages, and only issue leases if the economic, social, and environmental benefits outweigh the costs; and
- Further improve its hurdle price analysis by accounting for economic, environmental and social uncertainty.

Promulgating regulations relating to economic analysis of OCS lease sales would clarify and modernize BOEM’s analytical methods and have significant benefits for the agency.

---

<sup>40</sup> BOEM, PROPOSED PROGRAM 2017–2022 at 10-20. *See also* HEIN, HARMONIZING PRESERVATION, *supra* note 6, at 15.

<sup>41</sup> *Id.*

<sup>42</sup> BOEM, PROPOSED PROGRAM 2017–2022 at 10-13.

<sup>43</sup> *Id.* at 10-12, 10-14.

<sup>44</sup> *See* HEIN, HARMONIZING PRESERVATION, *supra* note 6 at 15–17; Comments from Jayni Foley Hein et al., Inst. for Pol’y Integrity at NYU School of Law, to BOEM (Mar. 30, 2015), [http://policyintegrity.org/documents/Comments\\_to\\_BOEM\\_2017-2022\\_Offshore\\_Program.pdf](http://policyintegrity.org/documents/Comments_to_BOEM_2017-2022_Offshore_Program.pdf) (“BOEM can calculate a ‘social hurdle price’ by modifying the agency’s existing dynamic programming model to include externalities associated with drilling and the corresponding uncertainty underlying them . . .”).

Updating regulations to account for option value would likely increase revenue to the federal government, make lease sales more equitable, and allow BOEM to prevent potential litigation.

#### **IV. Interior Should Advance Efforts to Account for the Environmental and Social Costs of Fossil Fuel Leasing through Royalty Rate and Other Fiscal Reform.**

As President Obama noted in his 2016 State of the Union Address, “Rather than subsidize the past, we should invest in the future — especially in communities that rely on fossil fuels. That’s why I’m going to push to change the way we manage our oil and coal resources, so that they better reflect the costs they impose on taxpayers and our planet.” A robust definition of “fair market value” that maximizes social welfare should account for the market price of the fossil fuel resource as well as the social and environmental cost of production—the cost to American taxpayers of production on public lands due to non-internalized externalities (costs borne by the public, not by the responsible party).<sup>45</sup>

Oil and gas operations result in significant air, water, and noise pollution, among other impacts. In addition, these activities can contribute both directly and indirectly to climate change, through “upstream” emissions associated with oil and gas operations and through “downstream” emissions from the burning of fossil fuels.<sup>46</sup> Often, companies do not pay for the full cost of these impacts—also known as externalities, or shared costs borne by third parties—because these costs do “not rise to the level of actionable legal claims,”<sup>47</sup> and other policy tools that could help internalize these costs, like a national carbon tax, are not currently in place.

Cumulatively, however, these costs are significant and quantifiable.<sup>48</sup> For example, the Environmental Protection Agency (EPA) and other federal agencies use the social cost of carbon to estimate the climate benefits of rulemakings.<sup>49</sup> BOEM estimates that offshore leases under its 2012–2017 program could generate up to 148 million tons of carbon

---

<sup>45</sup> See Jayni Foley Hein and Peter Howard, *Illuminating the Hidden Costs of Coal*, INSTITUTE FOR POLICY INTEGRITY, NYU SCHOOL OF LAW (Dec. 2015), available at [http://policyintegrity.org/files/publications/Hidden\\_Costs\\_of\\_Coal.pdf](http://policyintegrity.org/files/publications/Hidden_Costs_of_Coal.pdf); Jayni Foley Hein and Peter Howard, *Reconsidering Coal’s Fair Market Value*, INSTITUTE FOR POLICY INTEGRITY, NYU SCHOOL OF LAW (Oct. 2015), available at [http://policyintegrity.org/files/publications/Coal\\_fair\\_market\\_value.pdf](http://policyintegrity.org/files/publications/Coal_fair_market_value.pdf).

<sup>46</sup> See, e.g., Jessica Goad & Matt Lee-Ashley, *The Clogged Carbon Sink: U.S. Public Lands Are the Source of 4.5 Times More Carbon Pollution Than They Can Absorb*, CTR. FOR AMERICAN PROGRESS (Dec. 5, 2013), <https://www.americanprogress.org/issues/green/news/2013/12/05/80277/the-clogged-carbon-sink-u-s-public-lands-are-the-source-of-4-5-times-more-carbon-pollution-than-they-can-absorb/>.

<sup>47</sup> HEIN, HARMONIZING PRESERVATION, *supra* note 6, at 18.

<sup>48</sup> *Id.*

<sup>49</sup> U.S. ENVTL. PROT. AGENCY, *The Social Cost of Carbon* (last updated Dec. 11, 2015), <http://www3.epa.gov/climatechange/EPAactivities/economics/scc.html>.

dioxide-equivalent emissions;<sup>50</sup> the current social cost of carbon is about \$40 per ton of greenhouse gases emitted in 2015.<sup>51</sup> Cumulatively, accounting for these costs could generate billions of dollars that would help offset climate damages.

BOEM currently does not quantify or charge lessees for these costs. The agency, however, has authority to adjust its rent and royalty provisions to account for impairment of recreational interests and environmental and social externalities.<sup>52</sup> OCSLA contains no specific limit on BOEM's ability to charge rent,<sup>53</sup> and the agency has not specified the manner in which it decides the rental rates for offshore leases. Similarly, OCSLA establishes a minimum royalty rate, but does not impose a ceiling on that rate.<sup>54</sup>

Addressing externalities and more fairly capturing costs is one of the driving factors behind the recently announced review of the federal coal program and moratorium on new coal leasing. Coal royalty rates are also set by regulation, and there is a direct parallel to oil and gas rent and royalty rates, especially as both programs are managed by Interior. Several recent studies have identified large potential federal and state revenue gains from increasing coal royalty rates; similar benefits could be achieved for offshore leasing.<sup>55</sup>

Clarifying the manner in which rental and royalty rates are established would also help provide certainty and confidence that the public is receiving fair market value for its resources—not just from a short-term perspective, but from a long-term perspective that accounts for the externality costs of fossil fuel production, transportation, and combustion. In establishing more comprehensive rental and royalty rate regulations, BOEM could specify a methodology through which at least some climate and other quantifiable externalities are paid by the lessee, as opposed to the taxpayer, who ultimately bears the burden of mitigating and adapting to climate change damages.<sup>56</sup>

## Conclusion

I am grateful to have been invited to testify today and will be happy to answer any questions you might have.

---

<sup>50</sup> U.S. DEP'T OF THE INTERIOR, BUREAU OF OCEAN ENERGY MGMT. OUTER CONTINENTAL SHELF OIL AND GAS LEASING PROGRAM: 2012–2017 tbl. 4.4.4-2 (July 2012), [http://www.boem.gov/uploadedFiles/BOEM/Oil\\_and\\_Gas\\_Energy\\_Program/Leasing/Five\\_Year\\_Program/2012-2017\\_Five\\_Year\\_Program/2012-2017\\_Final\\_PEIS.pdf](http://www.boem.gov/uploadedFiles/BOEM/Oil_and_Gas_Energy_Program/Leasing/Five_Year_Program/2012-2017_Five_Year_Program/2012-2017_Final_PEIS.pdf).

<sup>51</sup> INTERAGENCY WORKING GROUP ON THE SOCIAL COST OF CARBON, TECHNICAL UPDATE OF THE SOCIAL COST OF CARBON FOR REGULATORY IMPACT ANALYSIS at 3 (2013) (giving the central estimate of \$38 per ton, in 2007 dollars, for emissions in the year 2015).

<sup>52</sup> HEIN, HARMONIZING PRESERVATION, *supra* note 6, at 19.

<sup>53</sup> *See* 43 U.S.C. § 1337(b)(6) (allowing the Secretary full discretion to prescribe rental provisions at the time the lease is offered).

<sup>54</sup> *See id.* § 1337(a); HEIN, HARMONIZING PRESERVATION, *supra* note 6, at 20–23.

<sup>55</sup> *See, e.g.,* Vulcan Philanthropy, *Federal Coal Leasing Reform Options: Effects on CO2 Emissions and Energy Markets: Summary of Modeling Results* (Jan. 26, 2016).

<sup>56</sup> *See, e.g.,* HEIN, HARMONIZING PRESERVATION, *supra* note 6, at 20–23.