



May 2, 2016

Dr. Jill Lewandowski
Bureau of Ocean Energy Management
45600 Woodland Road VAM-OEP
Sterling, VA 20166

Re: Proposed Outer Continental Shelf Oil and Gas Leasing Program: 2017-2022, Draft Programmatic Environmental Impact Statement

Dear Dr. Lewandowski,

The Sabin Center for Climate Change Law submits these comments on the draft programmatic environmental impact statement (“DPEIS”) for the proposed 2017-2022 Outer Continental Shelf Oil and Gas Leasing Program (“Proposed Program”).

We believe that the Proposed Program is precisely the sort of federal action that calls for a comprehensive and accurate evaluation of both direct and indirect greenhouse gas (“GHG”) emissions. It establishes a framework for the production of massive quantities of oil and gas, which will generate billions of tons of carbon dioxide equivalent (“CO₂e”) when combusted.¹ It is important for the Bureau of Ocean Energy Management (“BOEM”) to consider these impacts at the programmatic stage, so that it can make prudent decisions about how and whether to permit future oil and gas development in the Outer Continental Shelf (“OCS”).

While we appreciate the efforts BOEM has taken to disclose GHG emissions in the DPEIS and other program documents, we are concerned about BOEM’s failure to calculate and disclose downstream GHG emissions associated with transportation and combustion of oil and gas resources that may be produced under the Proposed Program, BOEM’s failure to account for GHG emissions in its cost-benefit analysis, and BOEM’s failure to evaluate the Proposed Program’s consistency with the Obama administration’s climate policies.

We submit the following recommendations on how BOEM should revise its analysis of GHG emissions in the DPEIS and other documents prepared for the Proposed Program:

- (1) BOEM should account for downstream emissions from transportation, processing and end-use of OCS oil and gas in the DPEIS.

¹ BOEM estimates that leases executed under the Proposed Program will generate 2,524 – 13,139 million barrels of oil and 8,951-39,218 billion cubic feet of natural gas. BOEM, 2017-2022 OUTER CONTINENTAL SHELF OIL AND GAS LEASING PROPOSED PROGRAM 5-10 (2016), <http://www.boem.gov/2017-2022-Proposed-Program-Decision/> (“Decision Document”). Applying EPA emission factors for natural gas and crude oil, the combustion of these fuels would generate approximately 1,685 – 8,329 million tons (MT) of CO₂, as well as methane (CH₄) and nitrous oxide (N₂O) emissions.

- (2) BOEM should account for the cost of GHG emissions in the cost-benefit analysis that underpins the Proposed Program and is incorporated by reference into the DPEIS.
- (3) BOEM should evaluate whether the Proposed Program is consistent with federal and state climate change policies and targets, particularly our Intended Nationally Determined Contribution (INDC) to reduce GHG emissions.

Each recommendation is discussed in detail below.

1. BOEM Should Account for All Downstream GHG Emissions in the DPEIS

The DPEIS contains a very brief analysis of GHG emissions, accompanied by a table that lists: (i) the total CO_{2e} emissions from the proposed action for each leasing area, and (ii) cumulative emissions in the leasing area. The DPEIS also contains two tables comparing the estimated CO_{2e} emissions from the Proposed Program and the current program (2012-2017), and concludes that emissions will increase under the Proposed Program.²

The DPEIS does not fully explain how BOEM calculated CO_{2e} emissions. It notes that the CO_{2e} emissions for the proposed action include emissions from “exploration, development, and production” of oil and gas, including emissions from the “use of combustion engines in vessels, construction, drilling, and other equipment as well as through deliberate or accidental release of CH₄.”³ But there is no break-down of emissions from specific sources or activities. As for cumulative emissions in the leasing area—the DPEIS merely notes that such emissions include “current operations, the Proposed Action, and expected future development beyond the Proposed Action.”⁴

Nowhere does the DPEIS indicate that BOEM has accounted for downstream emissions from the transportation or end-use of OCS oil and gas. Nor is there any explanation for why BOEM has omitted these emissions from its analysis.⁵

² BOEM, OUTER CONTINENTAL SHELF OIL AND GAS LEASING PROGRAM: 2017-2022, DRAFT PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT 4-5 (2016), http://boemococeaninfo.com/u/dpeis/dpeis_volume_1.pdf (“DPEIS”).

³ *Id.* at 4-3 – 4-4.

⁴ *Id.* at 4-4.

⁵ While the DPEIS does not mention any downstream GHG emissions, it is clear that BOEM did account for these in the draft economic analysis that underpins the Proposed Program. There, BOEM provided a GHG inventory that quantified emissions from the production and transportation of OCS oil and gas. However, BOEM did not quantify emissions from end-use in that document, stating that such emissions would be “roughly equivalent” under the Proposed Program and the No Sale alternative. It is not possible to confirm whether BOEM took the same approach in the DPEIS because BOEM used different exploration and development (“E&D”) scenarios to inform its GHG estimates in the two documents: the Economic Analysis emission estimates are based on a “medium” E&D scenario, whereas the DPEIS estimates are based on a “high” E&D scenario. As a result, the documents contain very different GHG inventories. BOEM, DRAFT ECONOMIC ANALYSIS METHODOLOGY FOR THE 2017-2022 OUTER CONTINENTAL SHELF OIL AND GAS LEASING PROGRAM 3-1 – 3-2 (2016) (“Economic Analysis”). *See also* BOEM, FORECASTING ENVIRONMENTAL AND SOCIAL EXTERNALITIES ASSOCIATED WITH OUTER CONTINENTAL SHELF (OCS) OIL AND GAS DEVELOPMENT – VOLUME 1: THE 2015 REVISED OFFSHORE ENVIRONMENTAL COST MODEL (OECM), BOEM Study 2015-052 (2015) (this document, referred to in the Economic Analysis, contains a more detailed inventory of GHG emissions from specific sources).

We recommend that BOEM revise the DPEIS to account for and quantify all downstream emissions, including emissions from the transportation, processing and end-use of OCS oil and gas. This approach is consistent with the requirements of the National Environmental Policy Act (“NEPA”), as they have been interpreted by the Council on Environmental Quality (“CEQ”) and federal courts.

NEPA requires agencies to evaluate both direct and indirect environmental effects from projects. Indirect effects are “caused by the action and are later in time or farther removed in distance, but are still reasonably foreseeable.”⁶ Such effects include “growth inducing effects related to induced changes in the pattern of land use, population density or growth rate, and related effects on air and water and other natural systems, including ecosystems.”⁷

CEQ has issued draft guidance explaining how this requirement should apply to GHG emissions. The guidance states that NEPA analysis should include “emissions from activities that have a reasonably close causal relationship to the Federal action, such as those that may occur as a predicate for the agency action (often referred to as upstream emissions) and as a consequence of the agency action (often referred to as downstream emissions).”⁸ To illustrate this point, the guidance notes that the NEPA analysis for a proposed open pit mine could include emissions from “clearing land for the extraction, building access roads, transporting the extracted resource, refining or processing the resource, and using the resource.”⁹ CEQ’s interpretation of NEPA is entitled to substantial deference.¹⁰ It is also consistent with the case law on indirect effects and GHG emissions.

Since 2014, there have been five district court decisions regarding the scope of downstream emissions that must be evaluated in NEPA reviews for proposals involving the extraction of coal.¹¹ In four of these cases, the courts determined that the responsible agencies failed to take the requisite “hard look” at downstream emissions from the combustion of the coal.¹² In the fifth case, the court held that the agency’s analysis of downstream emissions was adequate, in part

⁶ 40 C.F.R. § 1508.8(b)

⁷ *Id.*

⁸ CEQ, *Revised Draft Guidance for Federal Departments and Agencies on Consideration of Greenhouse Gas Emissions and the Effects of Climate Change in NEPA Reviews*, 79 Fed. Reg. 77,802, 77,826 (Dec. 24, 2014)

⁹ *Id.*

¹⁰ *Robertson v. Methow Valley Citizens Council* (1989) 490 U.S. 332, 355 (1989) (CEQ regulations entitled to “substantial deference”); *Andrus v. Sierra Club*, 442 U.S. 347, 358 (1979) (same).

¹¹ There is also a 2009 decision from the Ninth Circuit Court of Appeals requiring analysis of downstream emissions from transporting and processing gold in the EIS for a proposed gold mine. There was considerable overlap between the issues in that case and those involving the scope of downstream emissions that must be analyzed for coal extraction. *S. Fork Band Council Of W. Shoshone Of Nevada v. U.S. Dep’t of Interior*, 588 F.3d 718 (9th Cir. 2009).

¹² *High Country Conservation Advocates v. United States Forest Serv.*, 52 F. Supp. 3d 1174 (D. Colo. 2014) (USFS must consider downstream emissions from coal combustion); *Dine Citizens Against Ruining Our Env’t v. United States Office of Surface Mining Reclamation & Enft*, 82 F. Supp. 3d 1201 (D. Colo. 2015) (OSM must consider downstream emissions from coal combustion); *WildEarth Guardians v. United States Office of Surface Mining, Reclamation & Enft*, 104 F. Supp. 3d 1208, 1230 (D. Colo. 2015) (OSM must consider downstream emissions from coal combustion); *Wildearth Guardians v. U.S. Office of Surface Mining, Reclamation & Enft*, No. CV 14-103-BLG-SPW, 2015 WL 6442724 (D. Mont. Oct. 23, 2015) report and recommendation adopted in part, rejected in part sub nom. *Guardians v. U.S. Office of Surface Mining, Reclamation & Enft*, No. CV 14-103-BLG-SPW, 2016 WL 259285 (D. Mont. Jan. 21, 2016) (OSM failed to take hard look at environmental impacts when issuing FONSI, including downstream GHG emissions).

because the agency had already disclosed emissions from coal combustion.¹³ Notably, all of these cases have found that there is a sufficient causal connection between the extraction of coal and downstream emissions from the combustion of the coal, and such emissions are a reasonably foreseeable effect of coal production.¹⁴

In one of these cases, as well as another case involving the federal approval of a rail line intended to transport coal, reviewing courts rejected the argument that an agency need not consider emissions from combustion because there are “perfect substitutes” to fossil fuels and the same amount of fuel will eventually be consumed regardless of whether the agency approves the action.¹⁵ As noted by a district court in Colorado, this argument is illogical at best because an increase in the supply of coal will impact prices and demand relative to other fuel sources, and “coal that otherwise would have been left in the ground will be burned.”¹⁶

The courts have not yet had opportunity to define an agency’s obligation to evaluate emissions from the transportation or processing of fossil fuels, but the Ninth Circuit held that NEPA required analysis of conventional air pollutants from the transportation and processing of gold ore where there was sufficient information about the transportation route and processing activities to generate a reasonable estimate of those emissions.¹⁷

Demonstrating that such analysis is feasible, many federal agencies have begun to account for downstream emissions in their NEPA reviews. For example, the United States Forest Service (“USFS”) conducted a life cycle assessment for an oil and gas leasing decision in 2013, which quantified emissions from transport, refining, and end-use.¹⁸ In 2015, USFS prepared a revised DPEIS for the Colorado Roadless Rule coal mining exemptions that included a much more detailed analysis of GHG emissions from mining, transportation (both within the U.S. and to overseas markets) and combustion.¹⁹ Notably, that action was also a programmatic action which did not directly authorize the extraction of coal, but rather opened lands for future coal development. The Bureau of Land Management (“BLM”) also recently published an EIS in which it acknowledged that “the burning of the coal is an indirect impact that is a reasonable progression of the mining activity”²⁰ and quantified emissions from combustion.²¹ Finally, the Department of Interior has announced a three-year moratorium on federal coal leasing, pending a

¹³ *Wildearth Guardians v. OSM*, No. 12-CV-85-ABJ (D. Wyoming 2015).

¹⁴ For a more detailed explanation of the case law, see Michael Burger and Jessica Wentz, *Downstream and Upstream Greenhouse Gas Emissions: The Proper Scope of NEPA Review*, 41 HARVARD ENVTL. L. REV. ___ (forthcoming 2016) (attached).

¹⁵ *High Country Conservation Advocates v. United States Forest Serv.*, 52 F. Supp. 3d 1174, 1198 (D. Colo. 2014); *Mid States Coal. for Progress v. Surface Transp. Bd.*, 345 F.3d 520, 549 (8th Cir. 2003).

¹⁶ *High Country Conservation Advocates v. United States Forest Serv.*, 52 F. Supp. 3d at 1198.

¹⁷ *S. Fork Band Council Of W. Shoshone Of Nevada v. U.S. Dep’t of Interior*, 588 F.3d 718, 725 (9th Cir. 2009)

¹⁸ U.S. FOREST SERV., RECORD OF DECISION AND FINAL ENVIRONMENTAL IMPACT STATEMENT, OIL AND GAS LEASING ANALYSIS, FISHLAKE NATIONAL FOREST 169 (Aug. 2013) (Table 3.12-7: GHG emissions from transportation, offsite refining and end-use are 299,627 MT CO₂e; total direct and indirect emissions are 365,336 MT CO₂e). *See also id.*, Appendix E/SIR-2 (more detailed calculations of direct and indirect emissions).

¹⁹ U.S. FOREST SERV., RULEMAKING FOR COLORADO ROADLESS AREAS, SUPPLEMENTAL DRAFT ENVIRONMENTAL IMPACT STATEMENT (Nov. 2015) at 33.

²⁰ BUREAU OF LAND MGMT., FINAL SUPPLEMENTAL ENVIRONMENTAL IMPACT STATEMENT FOR THE LEASING AND UNDERGROUND MINING OF THE GREENS HOLLOW FEDERAL COAL LEASE TRACT, UTU-84102, 287 (Feb. 2015).

²¹ *Id.* at 286.

reevaluation of the leasing program's environmental, social and economic effects, including effects on downstream GHG emissions.²²

BOEM's emissions inventory in the economic analysis underpinning the Proposed Program provides further evidence that an analysis of downstream emissions is feasible for this action. In that document, BOEM provides estimates of transportation-related emissions for OCS oil and gas that would be produced under the Proposed Program as well as transportation emissions for oil and gas that would substitute OCS resources under the No Sale alternative.²³ BOEM did not quantify end-use emissions in that document, but it did evaluate how fossil fuel consumption would differ under the Proposed Program and No Sale alternative.²⁴

In light of all of these factors, we believe that:

- BOEM has an obligation to evaluate downstream emissions from the transportation and end-use of oil and gas that will be produced as a result of the Proposed Program.
- BOEM has an obligation to quantify those emissions. For transportation emissions, BOEM can use the same methodology to calculate emissions that it employed in the economic analysis document. For combustion emissions, BOEM can refer to emissions factors developed by the Environmental Protection Agency ("EPA") and the Energy Information Administration ("EIA").²⁵ A variety of other data sets and modeling tools are available to calculate emissions from processing OCS oil and gas.²⁶
- BOEM cannot circumvent its obligation to quantify end-use emissions by stating that such emissions will be "roughly equivalent" under the proposed action and the no action alternative because other fossil fuels would be substituted for OCS oil and gas, as this "perfect substitution" argument has been rejected by federal courts in past cases.

It is particularly important that BOEM estimate emissions from end-use, as this is the most significant source of GHG emissions from OCS oil and gas. To provide a sense of what results might be expected from such analysis: BOEM anticipates that the leases executed during this five year program will produce 8,951 – 39,218 billion cubic feet ("bcf") of natural gas. Using EPA's emission factors, we can estimate that the combustion of all of this gas in stationary sources would produce 536 – 2,349 million tons ("MT") of CO₂. For crude oil, BOEM anticipates that the leases will result in 2,524 – 13,139 million barrels of oil, which corresponds with 1,149 – 5,980 MT CO₂ in combustion emissions. According to EPA's equivalencies calculator, the combined emissions from both oil and gas under the high production scenario would be equivalent to the GHG emissions generated from 1.7 billion passenger vehicles in one

²² Order No. 3338, Discretionary Programmatic Environmental Statement to Modernize the Federal Coal Program (Dept. of Interior, Jan 15, 2016).

²³ Economic Analysis at 3-1 (the Economic Analysis estimates are based on a different exploration and development ("E&D") scenario than the DPEIS, but the same methodology could be used to calculate emissions under the DPEIS E&D scenario).

²⁴ *Id.* at 3-2.

²⁵ See, e.g., ENERGY INFO. ADMIN., ELECTRIC POWER ANNUAL 2014, Appendix, Table A.3: Carbon Dioxide Uncontrolled Emission Factors (Feb. 2016); EPA, *Emissions Factors (2014)*, https://www.epa.gov/sites/production/files/2015-07/documents/emission-factors_2014.pdf.

²⁶ See Wentz and Burger, *supra* note 14 (the Appendix of this report includes a list of modeling tools and data sets).

year, or the electricity use in 1.2 billion homes in one year.²⁷ These figures do not include methane and nitrous oxide emissions. In sum: end-use emissions are potentially substantial and should be reflected in the GHG inventory.

Finally, regarding BOEM's assessment of how downstream emissions will differ under the Proposed Program and the No Sale alternative: we believe that such an analysis is appropriate and useful to include in the DPEIS, but BOEM should reevaluate its conclusions about fossil fuel demand under the No Sale alternative when updating the DPEIS with this information.

In the economic analysis document, BOEM concludes that total GHG emissions will be substantially higher under the No Sale alternative because most of the unproduced OCS oil and gas will be replaced with fossil fuels from other domestic sources and international imports.²⁸ BOEM reaches this conclusion based on its estimation of GHG emissions from production and transportation, including emissions from the round-trip transportation of imported oil and gas.²⁹ BOEM does not actually quantify end-use emissions, but it does conclude these would be "roughly equivalent" due to its projections about fossil fuel substitution.³⁰

BOEM reaches this conclusion by using the Energy Information Agency (EIA)'s 2015 Reference Case to calculate future demand for oil and gas in the United States. The problem with the Reference Case is that it reflects a business-as-usual forecast that does not account for present and future actions aimed at reducing fossil fuel consumption in the United States. Specifically, the Reference Case does not account for the implementation of current regulations and policies, such as the Clean Power Plan and the federal moratorium on new coal leases.³¹ The Reference Case also reflects a scenario in which we would completely fail to meet our domestic and international climate goals. To illustrate this point: under the Reference Case, the United States will have 445% higher GHG emissions than the level we have committed to in our INDC.³² In sum, "BOEM is dismissing the climate impact of drilling for fossil fuels... because its model assumes we will not act on climate and will accept a catastrophic level of climate change."³³

We urge BOEM to reevaluate its projections of fossil fuel demand and consumption under the No Sale alternative, and to consider a future baseline in which the United States does meet the targets set forth in our INDC.

2. BOEM Should Account for the Costs of GHG Emissions in its Cost-Benefit Analysis

BOEM has conducted a cost-benefit analysis of the Proposed Program, consistent with Section 18 of OCSLA, which is incorporated by reference into the DPEIS.³⁴ This analysis accounts for both economic benefits and environmental costs, and is intended to inform BOEM's decision

²⁷ EPA, *GHG Equivalencies Calculator*, <https://www.epa.gov/energy/greenhouse-gas-equivalencies-calculator>.

²⁸ Economic Analysis at 3-1 – 3-2.

²⁹ *Id.*

³⁰ *Id.* at 3-2.

³¹ For a more detailed explanation of why the 2015 EIA Reference Case is not an appropriate baseline for this analysis, see Lorne Stockman, *Government Assumes U.S. Will Fail Climate Goals in Its 5-Year Offshore Drilling Proposal* (2016), <http://priceofoil.org/content/uploads/2016/04/5YearPlan-ClimateTest.pdf> (attached).

³² *Id.*

³³ *Id.* at 2.

³⁴ DPEIS at 2-21 – 2-23

about whether and how to go forward with the Proposed Program. But without any explanation, BOEM has omitted GHG emissions from its cost estimates. This is a problematic omission, since the climate impacts of the program will likely be significant, especially when accounting for downstream emissions from oil and gas end-use.

We urge BOEM to use the Social Cost of Carbon (SCC) and other available tools to assign a cost value to both direct and indirect GHG emissions that will occur under the Proposed Program, including the downstream emissions described in Section 1 of these comments.³⁵ This will ensure that such emissions are accounted for in the decision-making process.

This recommendation is consistent with federal case law. In *Center for Biological Diversity v. NHTSA*, the 9th Circuit Court of Appeals held that it was arbitrary and capricious for an agency to ignore the impacts of GHG emissions in a regulatory impact analysis, even when there is uncertainty about those impacts: “[W]hile the record shows there is a range of values, the value of carbon emissions reduction is certainly not zero.”³⁶ More recently, in *High Country Conservation Advocates v. USFS*, a district court in Colorado required the use of the federal SCC in a cost-benefit analysis underpinning the approval of federal coal leases.³⁷ These cases have put agencies on notice that they must account for the environmental and social impacts of GHG emissions when evaluating the costs and benefits of rulemakings and other types of actions.

3. BOEM Should Consider Whether the Proposed Program is Consistent with Federal and State GHG Targets and Climate Policies

The regulations implementing NEPA require federal agencies to consider whether a proposed action is consistent with the objectives of federal, regional, state and local land use plans, policies and controls.³⁸ Based on this requirement, CEQ’s revised draft guidance on NEPA and climate change instructs agencies to provide a frame of reference for decision-makers by disclosing the extent to which a project’s GHG emissions are consistent with the goals of Federal, state, and local climate change policies.³⁹ BOEM should therefore discuss whether the proposed action and its GHG emissions are consistent with federal, state and local GHG

³⁵ The SCC is a tool developed by the federal government to estimate the costs of GHG emissions that are either released or avoided as a result of agency rulemakings. It provides a comprehensive estimate of climate change damages, including changes in net agricultural productivity, human health, property damages from increased flood risk, and changes in energy system costs. For more details, see EPA, *The Social Cost of Carbon*, <https://www3.epa.gov/climatechange/EPAactivities/economics/scc.html>. There is also a peer reviewed methodology that can be used to calculate the social costs of methane and nitrous oxide, which has been used by EPA in prior rulemakings. See Marten et al., *Incremental CH₄ and N₂O Mitigation Benefits Consistent with the US Government’s SC-CO₂ estimates*, 15 CLIMATE POLICY 272 (2015); EPA, REGULATORY IMPACT ANALYSIS OF THE PROPOSED EMISSION STANDARDS FOR NEW AND MODIFIED SOURCES IN THE OIL AND NATURAL GAS SECTOR, 4-14 (2015); EPA, REGULATORY IMPACT ANALYSIS FOR THE PROPOSED REVISIONS TO THE EMISSION GUIDELINES FOR EXISTING SOURCES AND SUPPLEMENTAL PROPOSED NEW SOURCE PERFORMANCE STANDARDS IN THE MUNICIPAL SOLID WASTE LANDFILLS SECTOR, 4-10 – 4-14 (2015).

³⁶ *Center for Biological Diversity v. Nat’l Highway Traffic Safety Admin.*, 538 F.3d 1172, 1200 (9th Cir. 2008).

³⁷ *High Country Conservation Advocates v. United States Forest Serv.*, 52 F. Supp. 3d 1174, 1190-91 (D. Colo. 2014).

³⁸ 40 C.F.R. § 1502.16(c). See also 40 C.F.R. § 1506.2(d) (where there is an inconsistency with state or local plans or laws, the statement “should describe the extent to which the agency would reconcile its proposed action with the plan or law”).

³⁹ CEQ, *Revised Draft Guidance for Federal Departments and Agencies on Consideration of Greenhouse Gas Emissions and the Effects of Climate Change in NEPA Reviews*, 79 Fed. Reg. 77,802, 77,826 (Dec. 24, 2014).

emission targets and climate change policies in the DPEIS for this proposal. In particular, BOEM should consider consistency with the following federal policies and programs:

International Commitments: The U.S. is a party to the United Nations Framework Convention on Climate Change (UNFCCC) and has agreed to reduce its GHG emissions under the 2015 Paris Agreement. In the negotiations leading up to the finalization of the Paris Agreement, the U.S. announced that it intended to reduce economy-wide GHG emissions by 26-28% below 2005 levels by 2025.⁴⁰ This will require a reduction of approximately 1,234 – 1,381 MtCO₂e in 2025 (as compared with 2013 emissions).⁴¹ Even with the Clean Power Plan and other existing regulations, the U.S. is not yet on track to achieve these reductions—additional measures will be needed to meet the 2025 target.⁴² In this context, federal agencies should avoid undertaking new actions that will substantially increase GHG emissions.

The first step towards gauging consistency with our international commitment is to estimate the total GHG emissions that will occur under the Proposed Program, including emissions from the end-use of proposed oil and gas. Without this information, it is impossible for BOEM to determine how the program would affect our ability to meet our GHG emission targets. Even if BOEM concluded that incremental emissions from the proposed rulemaking would only constitute a small proportion of the needed reductions (e.g., 1% or less), they may nonetheless represent a sizeable impediment to achieving the target. This is because nationwide measures that could be used to “fill the gap” also represent relatively small proportions of the needed reductions. For example, the World Resources Institute estimates that nationwide energy efficiency improvements and fuel switching in the industrial sector could contribute around 3% of the target.⁴³

BOEM should also consider whether the Proposed Program is consistent with the key objective of the Paris Agreement—to limit global warming to “well below” a 2 °C increase above pre-industrial temperatures, and seek to limit it to 1.5 °C.⁴⁴ The only way to achieve this goal is to refrain from extracting and using the majority of the planet’s known fossil fuel reserves.⁴⁵ President Obama cited this need to keep fossil fuels in the ground as one of the reasons for rejecting the Keystone Pipeline.⁴⁶ BOEM should evaluate whether the quantity of oil and gas that

⁴⁰ UNITED STATES, INTENDED NATIONALLY DETERMINED CONTRIBUTION, SUBMISSION TO THE UNFCCC SECRETARIAT (2015), <http://www4.unfccc.int/submissions/indc/Submission%20Pages/submissions.aspx>.

⁴¹ These figures are based on the EPA GHG inventory estimates for 2005 GHG emissions and 2013 emissions (which were used as a baseline for current emissions, since these are the most recent estimates). EPA, INVENTORY OF U.S. GREENHOUSE GAS EMISSIONS AND SINKS: 1990-2013 (2015).

⁴² C2ES, *Achieving the United States’ Intended Nationally Determined Contribution* (June 2015), <http://www.c2es.org/docUploads/achieving-us-indc.pdf>.

⁴³ Karl Hausker, *Delivering on the U.S. Climate Commitment: A 10-Point Plan Toward a Low-Carbon Future* (World Resources Institute, 2015), <http://www.wri.org/blog/2015/05/10-steps-achieve-us-emissions-reduction-target>.

⁴⁴ *Paris Agreement, Article 2*, FCC/CP/2015/L.9 (Dec. 12, 2015).

⁴⁵ According to a recent scientific study, 80% of global coal reserves, 50% of gas reserves, and about 30% of oil reserves must remain unused to meet a 2 °C target. Christophe McGlade & Paul Ekins, *The Geographical Distribution of Fossil Fuels Unused When Limiting Global Warming to 2 °C*, 517 NATURE 187 (2015).

⁴⁶ Statement by the President on the Keystone XL Pipeline (Nov. 6, 2015), <https://www.whitehouse.gov/the-press-office/2015/11/06/statement-president-keystone-xl-pipeline> (“ultimately, if we’re going to prevent large parts of this Earth from becoming not only inhospitable but uninhabitable in our lifetimes, we’re going to have to keep some fossil fuels in the ground rather than burn them and release more dangerous pollution into the sky”).

may be produced under the Proposed Program would exceed the share of oil and gas from U.S. reserves that can be extracted and consumed under both the 2 °C and 1.5 °C scenarios.

Clean Power Plan: EPA recently adopted the Clean Power Plan to reduce CO₂ emissions from the power sector 32% below 2005 levels by 2030. States are responsible for developing and implementing plans to achieve the emissions reduction targets set forth in the plan. To achieve these reductions, it will be necessary to replace some amount of existing coal-fired electric capacity with natural gas and renewables. BOEM should consider whether the Proposed Program would contribute to the attainment of these targets, and should also consider how the implementation of the Clean Power Plan may affect its predictions about fossil fuel use and substitution.

4. Conclusion

The Proposed Program, if approved, will significantly increase the rate at which oil and gas are extracted from federal lands. It is important for BOEM to fully consider the effect of this action on fossil fuel consumption and the corresponding implications for global climate change, and to present this information in a fashion that is accessible for decision-makers and the public. The recommendations outlined above are intended to help BOEM account for GHG emissions in a manner that is consistent, thorough and accurate, and that accounts for existing commitments and policies aimed at reducing fossil fuel consumption. We hope that you will consider these recommendations. Please do not hesitate to contact us with any questions.

Sincerely,



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