



June 1, 2020

Office of NEPA Policy and Compliance
ATTN: NEPA / NG Procedures
U.S. Department of Energy
1000 Independence Avenue SW
Washington, DC 20585

Via the Federal eRulemaking Portal

Re: DOE's Proposed Revisions to its National Environmental Policy Act Implementing Procedures Regarding Natural Gas Exports (Docket ID DOE-HQ-2020-0017)

To Whom It May Concern:

The Sabin Center for Climate Change Law submits these comments in response to the notice of proposed rulemaking ("NPRM") issued by the Department of Energy ("DOE" or "Department") on May 1, 2020.¹ The NPRM outlines proposed changes to DOE's National Environmental Policy Act ("NEPA") implementing procedures regarding authorizations of natural gas imports and exports under section 3 of the Natural Gas Act ("NGA"). The changes would, among other things, categorically exclude natural gas export approvals from environmental review under NEPA. As discussed below, the Sabin Center strongly opposes the proposed categorical exclusion for the following reasons:

- The proposal does not meet the NEPA standards for a categorical exclusion.
- The proposal unlawfully segments the environmental review of natural gas export approvals, which, under NEPA, must be analyzed in a single environmental impact statement with other connected actions.
- In determining that natural gas export approvals do not typically result in a significant environmental impact, DOE impermissibly ignores indirect effects, including upstream and downstream greenhouse gas emissions.
- Because only DOE is obligated to assess upstream and downstream greenhouse gas emissions associated with natural gas exports, the proposal would unlawfully exclude such emissions from the federal government's analysis.
- The lifecycle analyses cited by DOE in the NPRM are fatally flawed because they significantly underestimate methane emissions during natural gas production and improperly fail to account for the rise of renewable energy in overseas markets.

¹ National Environmental Policy Act Implementing Procedures, 85 Fed. Reg. 25340 (May 1, 2020) [hereinafter "NPRM"].

I. Standard for Establishing a Categorical Exclusion Under NEPA

The courts have made clear that, in establishing a categorical exclusion, DOE “must document that the action to be undertaken is insignificant because the ‘threshold question in a NEPA case is whether a proposed project will significantly affect the environment.’”² An agency’s decision to create a categorical exclusion will be considered arbitrary and capricious if:

It failed to consider adequately the unique characteristics of the applicable geographic areas, the degree to which effects on the quality of the environment were controversial or the risks were unknown, the degree to which the [categorical exclusions] might establish a precedent for future actions with significant effects or represented a decision in principle about future considerations, the degree to which the actions might affect endangered species, and whether there existed cumulative impacts from other related actions.³

DOE has not undertaken this analysis. The proposal makes the conclusory assertion that “DOE has determined that transport of natural gas by marine vessel normally does not pose the potential for significant environmental impacts.”⁴ This statement relies solely on a technical report that discusses marine vessel safety and concludes that natural gas is unlikely to leak during transport.⁵ By only considering one potential pathway for environmental impacts (i.e., leaks during natural gas transportation), the report fails to demonstrate that the proposal has no significant effect on the environment as required by NEPA.⁶

As discussed further in Section III below, DOE has previously recognized that natural gas exports can affect the environment in numerous ways, including by inducing upstream natural gas production, and has “candidly discussed significant risks associated with increased gas production.”⁷ DOE cannot now claim that, “‘based on its experience, [natural gas exports] do not cause significant environmental impacts.’”⁸

In addition to considering the other environmental impacts listed above, DOE must perform a cumulative impacts analysis for the proposed categorical exclusion.⁹ “That an impacts analysis

² *Sierra Club v. Bosworth*, 510 F.3d 1016, 1027 (9th Cir. 2007) (quoting *Blue Mountains Biodiversity Project v. Blackwood*, 161 F.3d 1208, 1212 (9th Cir. 1998)); see also *Colorado Wild Heartwood v. U.S. Forest Serv.*, 435 F.3d 1204, 1218-19 (10th Cir. 2006) (“when developing the new [categorical exclusions], pursuant to CEQ Regulations and Guidance, the [DOE must] consider types of actions that, ‘based on its experience, do not cause significant environmental impacts’”) (quoting 48 Fed. Reg. 34265).

³ *Sierra Club*, 510 F.3d at 1027 (citing 40 C.F.R. § 1508.27(b)).

⁴ NPRM, *supra* note 1 at 25342.

⁵ Department of Energy Technical Support Document, Notice of Proposed Rulemaking, National Environmental Policy Act Implementing Procedures (May 2020).

⁶ *Sierra Club*, 510 F.3d at 1027.

⁷ *Sierra Club v. DOE*, 867 F.3d 189, 201 (D.C. Cir. 2017)

⁸ *Colorado Wild Heartwood*, 435 F.3d at 1218-19 (quoting 48 Fed. Reg. 34265).

⁹ *Id.*; see also *Heartwood, Inc. v. U.S. Forest Serv.*, 73 F. Supp. 2d 962, 976 (S.D. Ill. 1999) (“40 C.F.R. § 1504.8 allows categorical exclusions only for categories of actions that have been found to *not have* individual or cumulative effects on the environment.”) (emphasis in original).

be done is of critical importance in a situation such as here, where the categorical exclusion is nationwide in scope.”¹⁰ DOE has failed to take this mandatory step.

Finally, “[w]hen developing a new or revised categorical exclusion, Federal agencies must be sure the proposed category captures the entire proposed action. Categorical exclusions should not be established or used for a segment or an interdependent part of a larger proposed action.”¹¹ As discussed in Part II below, the proposal impermissibly segments natural gas exports from other connected actions. For these reasons, DOE’s proposal does not meet the standard imposed by NEPA, CEQ regulations, and applicable case law.

II. Required Environmental Review of Natural Gas Exports

The D.C. Circuit Court of Appeals has affirmed that “authorizations to export natural gas . . . require an environmental review under NEPA.”¹² An environmental review is also required prior to authorization of the construction and operation of natural gas export terminals. DOE has delegated the power to authorize terminals to the Federal Regulatory Energy Commission (“FERC”),¹³ and the NGA designates FERC as “the lead agency for purposes of coordinating all applicable Federal authorizations and for the purposes of complying with [NEPA].”¹⁴ Thus, FERC takes the lead in supervising the NEPA environmental review, with DOE participating as a “cooperating agency.”¹⁵ DOE can adopt FERC’s environmental analysis as its own for any additional NEPA review required for an export-authorization request.¹⁶ “But DOE must independently review the Commission’s work and conclude that DOE’s own ‘comments and suggestions have been satisfied.’”¹⁷ Put differently, DOE must actively participate in the environmental review process, and ensure that FERC’s analysis sufficiently addresses not only the impacts of constructing and operating the export terminal, but also the action that DOE takes: approving the exports. The proposed rule change would run afoul of this clear requirement by removing DOE from the process. The fact that FERC would continue to conduct environmental reviews when authorizing export terminals does not, by itself, satisfy the requirements of NEPA. Indeed, as discussed in Part III below, DOE is required to analyze impacts that may fall outside FERC’s review.

DOE’s proposal would also unlawfully segment natural gas export authorizations. “An agency impermissibly ‘segments’ NEPA review when it divides connected . . . federal actions into separate projects and thereby fails to address the true scope and impact of the activities that should be under consideration.”¹⁸ As the NPRM recognizes, before a proposed action such as

¹⁰ *Sierra Club*, 510 F.3d at 1028.

¹¹ Establishing, Applying, and Revising Categorical Exclusions under the National Environmental Policy Act, Nancy H. Sutley, Chair, Council on Environmental Quality (Nov. 23, 2010) at 5.

¹² *Sierra Club v. FERC*, 827 F.3d 36, 41 (D.C. Cir. 2016) (citing 42 U.S.C. § 4332(2)(C)).

¹³ U.S. Department of Energy, Delegation Order No. 00-004.00A § 1.21.A (May 16, 2006).

¹⁴ 15 U.S.C. § 717n(b)(1).

¹⁵ 40 C.F.R. § 1501.6(b).

¹⁶ *Sierra Club*, 827 F.3d at 41.

¹⁷ *Id.* (citing 40 C.F.R. § 1506.3(c)).

¹⁸ *Delaware Riverkeeper Network v. Fed. Regulatory Comm’n*, 753 F.3d 1304, 1313, 1314 (D.C. Cir. 2014).

an export authorization can be categorically excluded from NEPA, DOE must ensure that the “the proposal has not been segmented to meet the definition of a categorical exclusion, [and] there are no connected or related actions with cumulatively significant impacts.”¹⁹ The D.C. Circuit has raised, without answering, the question of whether FERC’s construction authorizations and DOE’s export authorizations are “connected actions” for purposes of NEPA review in the natural gas export context.²⁰ The Sabin Center submits that they are.

NEPA’s implementing regulations define “connected actions” to include those actions that “[c]annot or will not proceed unless other actions are taken previously or simultaneously.”²¹ “Connected actions” also include actions that “[a]re interdependent parts of a larger action and depend on the larger action for their justification.”²² Similarly, the D.C. Circuit has indicated that a project without substantial independent utility is more likely to be considered “connected” to other related actions.²³

DOE’s action in approving natural gas exports and FERC’s action in approving the construction and operation of export terminals are “connected actions” because:

- DOE’s approval of natural gas exports “cannot or will not proceed unless” FERC had previously authorized the construction and operation of the terminal from which the exports will occur.²⁴
- DOE’s and FERC’s actions are interdependent parts of the overall natural gas export process, and neither are justified unless the other occurs.²⁵ DOE could not justify approving natural gas exports through a facility whose construction or operation had not been approved by FERC. Nor could FERC’s action in approving construction of an export terminal be justified without an expectation that the terminal will be used, which generally requires DOE’s approval.²⁶
- DOE’s approval of natural gas exports has no substantial independent utility absent a facility from which the export will take place.²⁷

DOE cannot categorically exclude natural gas export approval from its environmental review because the action is “connected” to FERC’s actions within the meaning of NEPA. Instead, DOE

¹⁹ NPRM, *supra* note 1, at 25342; *see also* Sutley, *supra* note 11 at 5 (“When developing a new or revised categorical exclusion, Federal agencies must be sure the proposed category captures the entire proposed action. Categorical exclusions should not be established or used for a segment or an interdependent part of a larger proposed action.”).

²⁰ *Sierra Club*, 827 F.3d at 45-46 (citing 40 C.F.R. § 1508.25(a)(1)).

²¹ 40 C.F.R. § 1508.25(a)(1)(ii).

²² *Id.* § 1508.25(a)(1)(iii).

²³ *Delaware Riverkeeper*, 753 F.3d at 1315-16.

²⁴ *See* 40 C.F.R. § 1508.25(a)(1)(ii).

²⁵ *See id.* § 1508.25(a)(1)(iii).

²⁶ The only, narrow exception is natural gas exports to a country with which the United States has a free trade agreement requiring national treatment for trade in natural gas. Those exports are deemed to be consistent with the public interest and therefore automatically authorized. 15 U.S.C. § 717b(c).

²⁷ *Delaware Riverkeeper*, 753 F.3d at 1315-16.

and FERC must jointly assess the greenhouse gas and other impacts of the full natural gas export process, including construction and operation of the export terminal and the export itself, in a single environmental impact statement (“EIS”).²⁸ By segmenting and then categorically excluding the export approval, DOE would impermissibly limit the scope of NEPA review.

III. Requirement to Consider Upstream and Downstream Greenhouse Gas Emissions

DOE seeks to justify its proposed categorical exclusion for natural gas export approvals by arguing that such approvals do not normally “pose the potential for significant environmental impacts.”²⁹ However, to reach that conclusion, DOE has impermissibly narrowed the scope of its environmental review under NEPA. DOE is not, as it claims, required to limit its review solely to the environmental impacts resulting directly from the transportation of natural gas for export. Rather, an EIS prepared jointly by FERC and DOE must also consider indirect impacts, including those associated with upstream natural gas production and downstream use. Those activities result in, among other things, significant greenhouse gas emissions that contribute to climate change. Multiple federal courts have held that NEPA requires federal agencies to evaluate the direct and indirect climate change-related impacts of their actions.³⁰

Under NEPA’s implementing regulations, agencies must consider both direct environmental effects that are “caused by [a proposed] action and occur at the same time and place” and indirect effects that are “caused by the action and are later in time or farther removed in distance, but are still reasonably foreseeable.”³¹ The D.C. Circuit Court of Appeals has held that NEPA “requires a reasonably close causal relationship between the environmental effect and the alleged cause,” which is analogous to “the familiar doctrine of proximate cause from tort law.”³²

DOE erroneously claims that upstream and downstream emissions do “not have a sufficiently close causal connection” to its approval of natural gas exports because it has “no authority to prevent” them.³³ To support that claim, DOE points to the D.C. Circuit Court of Appeal’s 2016 decision in *Sierra Club v. FERC*,³⁴ but reliance on that case is inapposite. The case concerned the scope of environmental review required to be conducted by FERC when approving a natural gas export terminal. The court held that FERC is not required to consider the effects of export-induced natural gas production because it is DOE (not FERC) that is ultimately responsible for

²⁸ See *id.* at 1314.

²⁹ NPRM, *supra* note 1, at 25342.

³⁰ See, e.g., *Sierra Club v. Fed. Energy Regulatory Comm’n*, 867 F.3d 1357, 1363; *Ctr. for Biological Diversity v. Nat’l Highway Traffic Safety Admin.*, 538 F.3d 1172, 1215-1217 (9th Cir. 2008).

³¹ 40 C.F.R. § 1508.8 (defining “effects” to include direct and reasonably foreseeable indirect effects).

³² *Sierra Club*, 827 F.3d at 47 (quoting *Dep’t of Transp. v. Public Citizen*, 541 U.S. 752, 767 (2004)). For a more detailed discussion of NEPA’s requirements, see Michael Burger & Jessica Wentz, *Downstream and Upstream Greenhouse Gas Emissions: The Proper Scope of NEPA Review*, 41 HARV. ENVTL. L. REV. 109 (2017); Michael Burger & Jessica Wentz, *Evaluating the Effects of Fossil Fuel Supply Projects on Greenhouse Gas Emissions and Climate Change Under NEPA*, 44 WM. & MARY ENVTL. L. & POL’Y REV. 423 (2020).

³³ NPRM, *supra* note 1, at 25341.

³⁴ 827 F.3d 36 (D.C. Cir. 2016).

approving exports.³⁵ The court clarified that “objections concerning the environmental consequences stemming from the actual export of natural gas, . . . including increased emissions and induced production” must be directed at DOE and questioned, but ultimately did not decide, whether DOE has an independent obligation to consider such consequences.³⁶ Subsequent D.C. Circuit precedent demonstrates that it does.

The D.C. Circuit Court of Appeals has made clear that, where an agency has authority to act on information about downstream greenhouse gas emissions, it will be considered a legally relevant cause of those emissions and must consider them to the extent they are reasonably foreseeable.³⁷ Thus, for example, the court has held that FERC must consider reasonably foreseeable downstream greenhouse gas emissions when approving natural gas pipelines.³⁸ The court reasoned that the downstream emissions are causally linked to FERC’s approval decision because, when making that decision, FERC can act on information about greenhouse gas emissions and could refuse to approve a pipeline on the basis that it was “too harmful to the environment.”³⁹ The same logic applies to DOE’s approval of natural gas exports. Under section 3 of the NGA, before approving exports, DOE must find that they will be in the public interest.⁴⁰ As DOE has itself recognized, the public interest test requires consideration of environmental impacts, including upstream and downstream impacts.⁴¹ DOE has legal authority to act on those impacts and could refuse to approve natural gas exports if it determined that the resulting environmental harm was too great. DOE’s approval is, therefore, a legally relevant cause of the upstream and downstream emissions. For this reason, DOE is incorrect when it asserts that “the regasification and ultimate burning of [natural gas] in foreign countries are beyond the scope of DOE’s NEPA review.”⁴²

Consistent with the legal requirements discussed above, DOE has previously considered upstream and downstream greenhouse gas emissions as part of its NEPA environmental review

³⁵ *Id.* at 47-48.

³⁶ *Id.* at 45.

³⁷ See *Sierra Club v. Fed. Energy Regulatory Comm’n*, 867 F.3d 1357, 1363 (D.C. Cir. 2017) (“FERC’s environmental impact statement did not contain enough information on the greenhouse-gas emissions that will result from burning the gas that the pipelines will carry.”); see also *WildEarth Guardians v. Zinke*, 368 F. Supp. 3d 41, 74 (D.D.C. 2019) (BLM must analyze downstream emissions in oil and gas lease environmental assessments); *San Juan Citizens All. v. United States Bureau of Land Mgmt.*, 326 F. Supp. 3d 1227 (D.N.M. 2018) (same).

³⁸ *Sierra Club*, 867 F.3d at 1373.

³⁹ *Id.*

⁴⁰ 15 U.S.C. § 717b.

⁴¹ See e.g., U.S. Dep’t of Energy, DOE/FE Order No. 3784, Order Granting Blanket Authorization to Export Liquefied Natural Gas by Vessel from the Kenai LNG Facility near Kenai Alaska, and Vacating Prior Export Authorizations 3 (2016); U.S. Dep’t of Energy, Office of Fossil Fuels, Order No. 3357-B, Freeport LNG Expansion 43, 45-54 (2014).

⁴² NPRM, *supra* note 1, at 25341. The fact that the natural gas is ultimately burnt overseas does not enable DOE to ignore the associated environmental impacts. NEPA expressly directs agencies to consider “worldwide” environmental problems. See 42 U.S.C. § 4332(F).

of export approvals.⁴³ In the NPRM, DOE claims that it only ever considered such emissions in its public interest review under the NGA,⁴⁴ but the D.C. Circuit Court of Appeals has determined that is not the case.⁴⁵ Indeed, in *Sierra Club v. DOE*, the D.C. Circuit expressly rejected the claim that DOE relied solely on FERC's EIS (which did not consider upstream emissions) to fulfill its own NEPA obligations, finding that DOE commissioned further analysis of upstream and downstream emissions and used that "to justify its hard look under NEPA."⁴⁶ The court approved of DOE's consideration of such emissions in that case.⁴⁷

In sum, the upstream and downstream greenhouse gas emissions associated with natural gas exports must be analyzed under NEPA as "indirect effects." Only DOE is obligated to consider those emissions.⁴⁸ DOE's proposed rule change would unlawfully prevent the federal government from including those indirect effects in its NEPA analysis of natural gas exports.

IV. DOE's Assessment of Lifecycle Greenhouse Gas Emissions

Despite claiming that it is not required to consider upstream and downstream greenhouse gas emissions, DOE points to two lifecycle emissions analyses,⁴⁹ which it asserts further support its proposed action.⁵⁰ The lifecycle analyses are, however, flawed in two important respects.

First, both analyses significantly underestimate methane emissions during natural gas production and transportation. The first analysis, published in 2014, estimated an emissions rate of 1.1 to 1.6 percent for domestically-produced natural gas delivered to export terminals.⁵¹ In the updated analysis, published in 2019, that estimate was revised down to 0.7 percent.⁵² Recent studies have, however, put the emissions rate at over two percent.⁵³ While the difference may

⁴³ See e.g., *Sierra Club*, 867 F.3d at 197 (noting that DOE "evaluated the upstream and downstream greenhouse-gas emissions (CO₂ and methane) from producing transporting, and exporting [liquefied natural gas]" as part of its NEPA review of the Freeport export project).

⁴⁴ NPRM, *supra* note 1, at 25341.

⁴⁵ See e.g., *Sierra Club*, 867 F.3d at 197.

⁴⁶ *Sierra Club*, 867 F.3d at 197.

⁴⁷ *Id.* at 201-202.

⁴⁸ Although natural gas exports require "connected actions" by both FERC and DOE, FERC is not required to consider upstream and downstream emissions. *Sierra Club*, 827 F.3d at 47-48.

⁴⁹ U.S. Department of Energy National Energy Technology Laboratory, Life Cycle Greenhouse Gas Perspective on Exporting Liquefied Natural Gas from the United States (2014), <https://www.energy.gov/fe/downloads/life-cycle-greenhouse-gas-perspective-exporting-liquefied-natural-gas-united-states>; U.S. Department of Energy, Life Cycle Greenhouse Gas Perspective on Exporting Liquefied Natural Gas From the United States; Notice of Availability of Report Entitled Life Cycle Greenhouse Gas Perspective on Exporting Liquefied Natural Gas From the United States: 2019 Update and Request for Comments, 84 FR 49278 (Sept. 19, 2019).

⁵⁰ NPRM, *supra* note 1, at 25341.

⁵¹ 2014 Life Cycle Analysis, *supra* note 49, at 6.

⁵² 2019 Life Cycle Analysis, *supra* note 49, at 27.

⁵³ See e.g., Ramon A. Alvarez et al., *Assessment of Methane Emissions from the U.S. Oil and Gas Supply Chain*, 361 SCIENCE 186 (2018) (estimating emissions from production, transportation (excluding local distribution) and storage at 12.72 teragrams in 2015, which represents 2.25% of gross natural gas production in that year). Other studies have found even higher emissions rates in some areas. See e.g., Yuzhong Zhang et al., *Quantifying Methane Emissions from the Largest Oil-Producing Basin in the United*

appear small, because of the high global warming potential of methane, even a slight increase in emissions can eliminate the benefits of switching from coal to natural gas.⁵⁴ Indeed, DOE's own analysis indicates that, if the emissions rate exceeds 1.4 percent, using natural gas exported from the U.S. to generate electricity in Asia may result in higher life cycle emissions than using local coal (on a twenty global warming potential basis).⁵⁵ In Europe, the breakeven point is slightly higher at 1.9 percent, but that is still below current estimates of emissions rates.⁵⁶ It is, therefore, far from clear that "the use of U.S. [natural gas] exports for power production in European and Asian markets will not increase global . . . emissions" as DOE claims.⁵⁷

Second, even if electricity generation using U.S. natural gas would result in lower emissions than the use of local coal, that is the wrong comparison. In Europe, in particular, the primary alternative to natural gas for electricity generation is not coal but rather renewables. In 2019, renewable generation supplied almost 35 percent of electricity in the European Union ("EU"), more than double the amount supplied by coal (15 percent).⁵⁸ From 2010 to 2019, coal-fired generation in the EU declined by 74 percent, while renewable generation increased by 58 percent.⁵⁹ That trend is expected to continue in coming decades as the cost of renewable generation continues to decline and governments take further steps to curb greenhouse gas emissions. The European Green Deal, announced in 2019, commits the EU to achieving greenhouse gas neutrality by 2050.⁶⁰ This will likely require the complete elimination of coal-fired generation and many governments have already adopted policies to phase out use of the fuel.⁶¹ As of March 2020, thirteen EU member states had committed to eliminating coal use within the next fifteen to eighteen years, and two others were actively considering doing the

States from Space, 6 *Science Advances* 1 (2020) (estimating an emissions rate of approximately 3.7% in the Permian basin).

⁵⁴ The "global warming potential" of a greenhouse gas reflects the amount of heat it traps in the earth's atmosphere relative to carbon dioxide. Methane has a twenty-year global warming potential of 84 to 87, meaning that it traps up to 87 times more heat in the earth's atmosphere than carbon dioxide on a pound for pound basis, in the first twenty years after it is released. See U.S. Environmental Protection Agency, *Understanding Global Warming Potentials*, GREENHOUSE GAS EMISSIONS, <https://www.epa.gov/ghgemissions/understanding-global-warming-potentials> (last updated Feb. 14, 2017).

⁵⁵ 2014 Life Cycle Analysis, *supra* note 49, at 14-15.

⁵⁶ *Id.*

⁵⁷ NPRM, *supra* note 1, at 25341.

⁵⁸ Christian Redl et al., *The European Power Sector in 2019: Up-to-Date Analysis on the Electricity Transition 9* (2020), https://www.agora-energiewende.de/fileadmin2/Projekte/2019/Jahresauswertung_EU_2019/172_A-EW_EU-Annual-Report-2019_Web.pdf.

⁵⁹ *Id.* at 6-7.

⁶⁰ European Commission, *Communication from the Commission to the European Parliament, the European Council, the Council, the European Economic and Social Committee and the Committee of the Regions on the European Green Deal*, COM(2019) 640 (Dec. 11, 2019).

⁶¹ To achieve greenhouse gas neutrality, coal-fired generation will have to be eliminated, or deployed with carbon capture and sequestration, which is not currently economically feasible. See *generally*, Marcia Rocha et al., *A Stress Test for Coal in Europe Under the Paris Agreement: Scientific Goal Posts for a Coordinated Phase-Out and Divestment* (2017), <https://climateanalytics.org/media/eu-coalstresstest-report-2017.pdf>.

same.⁶² Despite this, however, DOE continues to compare natural gas to coal and ignore renewables.⁶³

We note that, in *Sierra Club v. DOE*, the D.C. Circuit Court of Appeals dismissed a challenge to the Department's failure to consider the potential for renewable generation in its 2014 life cycle analysis.⁶⁴ The court concluded that DOE had not acted arbitrarily by excluding renewables because the Department explained that, given uncertainties regarding the future use of different fuels for electricity generation, any analysis of renewables would be "too speculative to inform the public interest determination."⁶⁵ That argument is no longer available, however. Following adoption of the European Green Deal and the various governments' commitments to phase out coal, there is now much greater certainty regarding future fuel use. Indeed, DOE now knows that coal is not an option in many countries, whereas renewables are. DOE must, therefore, consider renewables in its lifecycle analysis. In conducting its analysis, DOE can make use of existing modeling tools that account for renewables, including:

- the Bureau of Ocean Energy Management's Market Simulation Model (MarketSim),⁶⁶ and
- ICF International's Integrated Planning Model (IPM).⁶⁷

DOE proposes categorically excluding natural gas export approvals from NEPA review by arguing that such approvals do not normally pose the potential for significant environmental impacts. In doing so, DOE impermissibly narrows the scope of NEPA analysis by ignoring indirect effects, including upstream and downstream greenhouse gas emissions. To the extent that DOE considers lifecycle emissions, it relies on analyses that are flawed in at least two respects: a failure to adequately estimate methane emissions and an inaccurate view of the alternatives to natural gas. Furthermore, because only DOE has the authority and obligation to consider lifecycle greenhouse gas emissions caused by natural gas exports, the proposal would prevent the federal government from analyzing such emissions at all, in direct contravention of

⁶² Austria has pledged to eliminate coal use by 2020, France and Sweden by 2022, Portugal and Slovakia by 2023, Ireland and Italy by 2025, Greece by 2028, Finland and the Netherlands by 2029, Denmark and Hungary by 2030, and Germany by 2035 to 2028. The Czech Republic and Spain are actively considering eliminating coal use. See Christian Redl et al., *supra* note 58, at 27. For further information about countries' policies, see Grantham Research Institute on Climate Change and the Environment & Sabin Center for Climate Change Law, *Climate Change Laws of the World*, <https://climate-laws.org/>.

⁶³ Neither of DOE's life cycle analyses even mention the potential for renewable generation. Rather, both analyses focus solely on fossil fuels, comparing emissions from the use of U.S. natural gas to those associated with using local coal and natural gas.

⁶⁴ *Sierra Club*, 867 F.3d at 202.

⁶⁵ *Id.* It should be noted that, while the court held that DOE's decision to exclude renewables was not arbitrary, it did not consider whether that decision affected the validity or usefulness of the findings.

⁶⁶ See U.S. Department of the Interior, Bureau of Ocean Energy Management, Consumer Surplus and Energy Substitutes for OCS Oil and Gas Production: The 2015 Revised Market Simulation Model (MarketSim) (2015), <http://www.boem.gov/renewable-energy/market-simulation-model>.

⁶⁷ See ICF International, *Integrated Planning Model (IPM)*, TECHNOLOGY, icf.com/technology/ipm.

NEPA's requirement that indirect effects be assessed. For these reasons, the Sabin Center strongly opposes the proposal.

Sincerely,



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Attachments (2):

- (1) Michael Burger and Jessica Wentz, *Downstream and Upstream Greenhouse Gas Emissions: The Proper Scope of NEPA Review*, 41 HARVARD ENVIRONMENTAL LAW REVIEW 109 (2017)
- (2) Michael Burger and Jessica Wentz, *Evaluating the Effects of Fossil Fuel Supply Projects on Greenhouse Gas Emissions and Climate Change Under NEPA*, 44 WILLIAM AND MARY ENVIRONMENTAL LAW AND POLICY REVIEW 423 (2020)