



Institute for
Policy Integrity

NEW YORK UNIVERSITY SCHOOL OF LAW

January 31, 2022

To: Environmental Protection Agency

Subject: Comments on “Standards of Performance for New, Reconstructed, and Modified Sources and Emissions Guidelines for Existing Sources: Oil and Natural Gas Sector Climate Review,” 86 Fed. Reg. 63,110 (Nov. 15, 2021)

Docket ID: EPA-HQ-OAR-2021-0317

The Institute for Policy Integrity at New York University School of Law (“Policy Integrity”)¹ respectfully submits the following comments to the Environmental Protection Agency (“EPA”) on its proposed Standards of Performance for New, Reconstructed, and Modified Sources and Emissions Guidelines for Existing Sources: Oil and Natural Gas Sector Climate Review.²

Policy Integrity is 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. We commend EPA for its efforts to control methane emissions from new and existing sources in the oil and gas industry. We make the following recommendations to strengthen EPA’s final rule and maximize net benefits:

- **EPA should propose supplemental standards to cover abandoned wells, flares, and other equipment within the oil and gas source category.** EPA seeks comment on whether to regulate additional leaky equipment in the oil and gas source category. Given the broad definition of the source category, and this additional equipment’s large contribution to methane emissions, EPA should issue any additional standards that the agency determines are cost-benefit justified.
- **EPA should expand its distributional analysis to evaluate the impacts of the Proposed Rule and alternatives.** In addition to baseline conditions, EPA should also analyze the distributional impacts of its proposed standards and alternatives in order to evaluate the relative distributional impacts of its available regulatory options.
- **EPA should strengthen its Regulatory Impact Analysis to fully capture the benefits of strong standards.** EPA should extend the timeframe of its analysis rather than assuming zero benefits past 2035. In addition, EPA should consider quantifying co-benefits from reducing non-methane volatile organic compounds, particulate matter, and hazardous air pollutants. Finally, EPA should consider disaggregating costs and benefits by source type to demonstrate that its proposed standards and guidelines are individually, as well as cumulatively, net beneficial.

¹ This document does not purport to represent the views, if any, of New York University School of Law.

² 86 Fed. Reg. 63,110 (Nov. 15, 2021) (Docket ID EPA-HQ-OAR-2021-0317).

I. The Proposed Rule Is Laudable for Significantly Reducing Methane Emissions in a Legally Sound and Cost-Beneficial Manner

In this Proposed Rule, EPA is regulating both new and existing sources pursuant to section 111(b) and (d) of the Clean Air Act. For the first time, EPA has proposed standards to reduce methane emissions from existing sources in the oil and gas sector—the largest source of methane in the United States. The Proposed Rule is expected to reduce emissions of climate-forcing methane by 920 million tons of CO₂e by 2035, with roughly 85% of that reduction due solely to the standards proposed for existing sources.³

The Proposed Rule builds on earlier standards for control of methane and volatile organic compounds (“VOCs”) for new sources and is well grounded in EPA’s authority under the Clean Air Act. By regulating existing sources, EPA wisely avoids the problem of grandfathering. And the Proposed Rule is necessary to correct market failures that are currently producing unaddressed externalities to the public. In addition, EPA has appropriately monetized the benefits of reducing methane emissions through its use of the social cost of methane.

A. The Proposed Rule Is Legally Sound

Under Clean Air Act section 111, once EPA determines that a source category causes or contributes to air pollution that is anticipated to endanger public health or welfare, it is required to promulgate standards of performance for air pollutants emitted by new sources in that category (“New Source Performance Standards” or “NSPS”) and then establish emission guidelines for states to establish their own standards of performance for pollutants emitted by existing sources in that same category (“Emission Guidelines” or “EGs”).⁴ The standards of performance issued by EPA for new sources must “reflect[] the degree of emission limitation achievable through the application of the best system of emission reduction [“BSER”] which (taking into account the cost of achieving such reduction and any non-air quality health and environmental impact and energy requirements) the Administrator determines has been adequately demonstrated.”⁵

In its 2020 rulemaking—now vacated by the Congressional Review Act⁶—EPA failed to provide a reasoned explanation for its rollback of earlier methane standards, and finalized a rule that would have increased emissions of methane and other pollutants.⁷ Conversely, in this rulemaking EPA has properly obeyed its statutory mandate under section 111 and established net-beneficial

³ See EPA, *Preliminary Regulatory Impact Analysis for the Proposed Standards of Performance for New, Reconstructed, and Modified Sources and Emissions Guidelines for Existing Sources: Oil and Natural Gas Sector Climate Review*, at 5-2 tbl.5-1 (2021), <https://perma.cc/STW8-NN9K> [hereinafter “2021 PRIA”] (projected reduction of 140 million tons CO₂e from the new source standards and 790 million tons CO₂e from the existing source guidelines through 2035).

⁴ Clean Air Act § 111(a)(1), (b)(1)(A), (d).

⁵ Clean Air Act § 111(a)(1).

⁶ Joint Resolution of June 30, 2021, Pub. L. No. 117-23, 135 Stat. 295; see also 86 Fed. Reg. at 63,149. By disapproval of the 2020 NSPS through the Congressional Review Act, the 2016 NSPS that regulated new sources of methane and VOCs in the oil and gas industry (including sources in the transmission and storage segment) was automatically reinstated. *Id.* at 63,151.

⁷ See Jack Lienke & Richard Revesz, *The EPA’s New Climate Rule Avoids an Old Mistake*, SLATE (Nov. 5, 2021), <https://slate.com/news-and-politics/2021/11/epa-new-methane-rule-climate-change.html>; see also Inst. for Pol’y Integrity, Comments on Oil and Natural Gas Sector: Emission Standards for New, Reconstructed, and Modified Sources Review (Nov. 25, 2019).

standards of performance for new sources and emission guidelines for existing sources that will protect human health and the environment. In the Proposed Rule, EPA correctly recognizes that the legal predicate for regulation of methane emissions from existing sources under section 111(d) has already been met with the promulgation (and, subsequent reinstatement) of the 2016 methane standards for new sources under section 111(b).⁸ Building on its prior standards, EPA has carefully evaluated BSER for both new and existing sources throughout the oil and gas sector and established reasonable, cost-beneficial standards that will result in significant pollution reductions.

B. The Proposed Rule Avoids an Undesirable “Old Plant Effect”

Regulating new sources, alone, without regulating existing sources at the same time, can perversely encourage existing sources to stay in operation longer than they otherwise would.⁹ This is because new-source-only standards make constructing a new source relatively more expensive (and operating an old source relatively cheaper) than it would be if the level of regulation were consistent across all sources.¹⁰ Academics call the resulting distortion of retirement decisions the “old plant effect,” and it can significantly extend the operating lives of highly polluting facilities.¹¹ By coordinating regulation of new and existing sources, EPA laudably mitigates the potential for such distortion.

C. The Proposed Rule Is Necessary to Correct a Market Failure

The Proposed Rule is necessary to correct a market failure leading oil and gas producers to capture less pollution than is socially optimal. Since methane (a primary component of natural gas) is a valuable commodity, private operators have some incentive to avoid methane leaks, as some methane can be profitably captured and resold.¹² However, the upfront cost of buying and installing leak detection, repair, and prevention equipment may deter some companies from addressing leaks at their wells.

Absent regulation, oil and gas producers will only capture as much methane and VOC emissions as they can profitably do, from a private welfare-maximizing perspective.¹³ But greenhouse gas and VOC emissions also impose significant costs on society—such as negative climate, health,

⁸ 86 Fed. Reg. at 63,148.

⁹ See Inst. for Pol’y Integrity, Comments on Oil and Natural Gas Sector: Emission Standards for New and Modified Sources at 9–11 (Dec. 4, 2015) (explaining benefits of regulating new and existing sources together).

¹⁰ See Richard L. Revesz & Jack Lienke, STRUGGLING FOR AIR: POWER PLANTS AND THE “WAR ON COAL” 30–35 (2016); Jonathan Remy Nash & Richard L. Revesz, *Grandfathering and Environmental Regulation: The Law and Economics of New Source Review*, 101 NW. U. L. REV. 1677 (2007); see also Richard L. Revesz & Allison L. Westfahl Kong, *Regulatory Relief and Optimal Transition Relief*, 105 NW. U. L. REV. 1581 (2015).

¹¹ Nash & Revesz, *supra* note 10, at 1708.

¹² See ICF INT’L, ECONOMIC ANALYSIS OF METHANE EMISSION REDUCTION OPPORTUNITIES IN THE U.S. ONSHORE OIL AND NATURAL GAS 1-1 (March 2014) (prepared for Environmental Defense Fund), https://www.edf.org/sites/default/files/methane_cost_curve_report.pdf; see also U.S. EPA, Lessons Learned from Natural Gas STAR Partners (Oct. 2003), http://www3.epa.gov/gasstar/documents/ll_dimgasproc.pdf. (“A survey of equipment leaks and estimated repair costs at four gas plants found that for a payback of 6 months or less, 78 percent of leaking components were cost-effective to repair. In addition, 92 percent of leak repairs were found to payback in less than 1 year, and 94.5 percent of leaks paid back in less than 4 years.”).

¹³ Richard Revesz, *Making Sense of Methane Regulation*, THE HILL (Sept. 1, 2015), available at <http://thehill.com/blogs/pundits-blog/energy-environment/252383-making-sense-of-methane-regulation>.

and welfare impacts—that are not reflected in the market price of methane.¹⁴ In the absence of regulation, these costs will be borne not by the polluting firm, but by society as a whole.¹⁵ Therefore, voluntary programs are insufficient to reach optimal levels of methane reduction. Because methane and VOCs are externalities that impose costs on society—which can be estimated using tools like the Social Cost of Methane—regulation is required to capture all of the methane and VOC emissions that are cost-benefit justified from a social welfare-maximizing perspective.¹⁶

D. The Proposed Rule Appropriately Monetizes the Benefits of Methane Reduction

Finally, EPA monetized the methane reductions of the Proposed Rule by using the Social Cost of Methane, and found the Rule to be benefit-cost justified on this basis, with net benefits of \$48 billion through 2035.¹⁷ Policy Integrity—along with Center for Climate and Energy Solutions, Clean Air Task Force, Environmental Defense Fund, Food & Water Watch, Montana Environmental Information Center, Natural Resources Defense Council, Sierra Club, Union of Concerned Scientists, and Western Environmental Law Center—submitted separate comments in support of the use of the Social Cost of Methane.¹⁸

II. In Order to Maximize Net Social Welfare, EPA Should Propose Supplemental Standards for Additional Sources in the Oil and Gas Sector, Including Abandoned Wells and Flares

In its Proposed Rule, EPA seeks comment on regulating several additional sources of pollution in the oil and gas source category, including abandoned and unplugged wells, flares, pipeline pigging operations, and tank truck loading operations.¹⁹ EPA should regulate these additional sources to the extent that doing so will increase net benefits for society.

The additional sources undoubtedly fit within the oil and gas source category,²⁰ as EPA has already concluded that the category is broad enough to include any equipment that is part of the sequence of functions that are interrelated and necessary for getting distributed gas ready for distribution.²¹

Furthermore, the benefits of regulating these additional sources standards are likely substantial, as EPA recognizes that abandoned and unplugged wells, flares, pipeline pigging operations, and tank truck loading operations generate significant methane emissions.²² Abandoned and idled wells have a particularly strong need for federal regulation given that such idling is frequently

¹⁴ *Id.*

¹⁵ *Id.*

¹⁶ Jayni Hein, Inst. For Pol’y Integrity, *Capturing Value: Science and Strategies to Curb Methane Emissions from the Oil and Natural Gas Sector* at 8 (December 2014).

¹⁷ 2021 PRIA, *supra* note 3, at 5-7 tbl.5-4 (reporting net benefits of \$48 billion for EPA’s primary proposal).

¹⁸ Filed under separate cover to the rulemaking docket.

¹⁹ 86 Fed. Reg. at 63,240.

²⁰ *Priority List and Additions to the List of Categories of Stationary Sources*, 44 Fed. Reg. 49,222 (Aug. 21, 1979) (listing Crude Oil and Natural Gas Production as a source category determined to contribute significantly to air pollution anticipated to endanger public health or welfare in accordance with CAA § 111(b)(1)(A)).

²¹ *Oil and Natural Gas Sector: Emission Standards for New, Reconstructed, and Modified Sources*, 81 Fed. Reg. 35,823, 35,832 (Aug. 2, 2016).

²² *Id.* at 63,240–45.

the result of market failures due to owner/operator bankruptcy with insufficient bonding or market conditions making continued production unprofitable.²³

Proposing supplemental standards for these sources would thus better fulfill EPA's statutory mandate to determine the *best* overall system of emission reduction for the source category, as well as with President Biden's recent memorandum reaffirming the principles of Executive Orders 12,866 and 13,563²⁴—including that agencies should select regulatory alternatives that “maximize net benefits” while also accounting for distributive impacts and equity.²⁵ Accordingly, EPA should fully evaluate the costs and benefits to controlling emissions from these additional sources and propose supplemental standards to the extent that such controls are net beneficial.

III. EPA Should Expand Its Distributional Analysis Beyond Baseline Conditions to Evaluate the Impacts of the Proposed Rule and Alternatives

EPA conducts an extensive distributional analysis in the Proposed Rule's accompanying Regulatory Impact Analysis (“RIA”) that qualitatively and quantitatively identifies disparities in the populations exposed to emissions from the oil and gas source category.²⁶ However, this analysis fails to capture the distributional impacts of the Proposed Rule. Instead, it evaluates only the current baseline emissions emitted from the source category and concludes without support that communities experiencing disproportionate impacts in the baseline scenario “may realize disproportionate improvements in air quality resulting from emissions reductions.”²⁷ EPA cannot reasonably conclude that disadvantaged communities will see disproportionate improvements without analyzing the impacts of the Proposed Rule on baseline conditions.

EPA's analysis, while thorough, fails to evaluate the distributional impact of the Proposed Rule itself. A baseline understanding of disproportionate burdens created by the source category is helpful, but must be accompanied by an analysis that evaluates the distribution of impacts resulting from the Proposed Rule and any marginal differences from adopting EPA's proposed alternatives. Indeed, President Biden's Memorandum on Modernizing Regulatory Review calls for analysis that reveals rules' “distributional *consequences* . . . to ensure that regulatory initiatives appropriately benefit and do not inappropriately burden disadvantaged, vulnerable, or marginalized communities.”²⁸ And evaluation of alternatives is crucial to a meaningful analysis to avoid an agency merely concluding the distributional impacts of its regulatory approach are acceptable without knowing whether the distributional impacts of an available regulatory alternative are significantly more desirable.²⁹

²³ *Id.* at 63,240.

²⁴ Memorandum on Modernizing Regulatory Review, 86 Fed. Reg. 7223, 7223 (signed Jan. 20, 2021; published Jan. 26, 2021).

²⁵ Exec. Order 12,866 § 1(a), 58 Fed. Reg. 51,735, 51,735 (Oct. 4, 1993).

²⁶ 2021 PRIA, *supra* note 3, at 4-43.

²⁷ *Id.* at 4-43.

²⁸ Memorandum on Modernizing Regulatory Review § 2(b)(ii), 86 Fed. Reg. 7223, 7223 (Jan. 25, 2021) (emphasis added).

²⁹ See Richard Revesz & Samantha Yi, *Distributional Consequences and Regulatory Analysis*, 52 ENV. LAW __, *35 (forthcoming 2022), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3927277.

EPA should conduct a distributional analysis of the Proposed Rule and its alternatives to determine whether another approach may be more advantageous to disadvantaged communities.

IV. EPA Should Consider Expanding and Strengthening Its Cost-Benefit Analysis

In its RIA, EPA shows that the monetized benefits of its proposed standards greatly exceed monetized costs.³⁰ For a variety of reasons, however, the analysis likely underestimates the full benefits of the Proposed Rule.

A. EPA Should Consider Extending the Time Horizon of Its Analysis

The RIA limits its analysis to impacts that occur between 2023 and 2035.³¹ Even though EPA concedes that “it would be desirable to analyze impacts beyond 2035,” it concludes that “limited information available to model long-term changes in practices and equipment use in the oil and natural gas industry make the choice of a longer time horizon infeasible.”³² It further claims that, “[i]n a dynamic industry like oil and natural gas, technological progress is likely to change control methods to a greater extent over a longer time horizon, creating more uncertainty about impacts of the” proposed standards.³³

However, as *Circular A-4* notes, “[t]he time frame for [an agency’s] analysis should cover a period long enough to encompass all the important benefits and costs likely to result from the rule.”³⁴ Even if predicting the impacts these proposed standards will have after 2035 is difficult, failing to include any impacts after that time is tantamount to assuming those impacts would be negligible or zero. The greater likelihood is that new standards would have long-term effects that—while perhaps difficult to predict with precision—would be nontrivial compared to the baseline. Put differently, EPA’s proposed standards would very likely change the oil and gas sector in ways that would last well beyond 2035, compared to a world in which it changed nothing, even if more precise predictions would be difficult to develop.

However, even if EPA conducts such an analysis, it should explicitly note that its proposed standards are cost-beneficial no matter whether it chooses to use a 13- or 30-year time horizon.³⁵ Thus, while this change would better capture the full benefits its proposed standards would create, EPA need not rely on this change to justify the standards as cost-beneficial.

B. EPA Should Consider Quantifying the Co-Benefits of Reducing VOC and HAP Emissions

EPA declines to monetize a number of benefits that the Proposed Rule would yield, including the benefits of reducing VOC and hazardous air pollutant (“HAP”) emissions. The RIA does report how many tons of each pollutant its proposed standards would abate, but it does not assign any

³⁰ See 2021 PRIA, *supra* note 3, at 5-7 tbl.5-4 (reporting net benefits of \$48 billion for EPA’s “Primary Proposal”).

³¹ *Id.* at 2-12.

³² *Id.*

³³ *Id.*

³⁴ Off. of Mgmt. & Budget, *Circular A-4*, at 15 (2003), <https://perma.cc/X8JM-YZMT> [hereinafter “*Circular A-4*”]

³⁵ See 2021 PRIA, *supra* note 3, at 5-7 tbl.5-4 (reporting net benefits of \$48 billion for the primary proposal using a 13-year time horizon).

monetary value to such figures.³⁶ As a result, EPA’s estimate of total monetized benefits understates the health and environmental gains from the rule.

EPA discusses two categories of benefits associated with reducing VOC emissions: those related to ozone and those related to fine particulate matter (PM_{2.5}).³⁷ EPA claims it cannot monetize ozone-related benefits because underlying data are too spatially coarse to derive meaningful estimates.³⁸ EPA then claims that it cannot monetize PM_{2.5}-related benefits because “it is unlikely that the VOC emissions reductions projected to occur under this proposal would have a large contribution to ambient secondary organic carbon aerosols.”³⁹

Yet, in prior analyses of its regulations of the oil and gas sector, EPA has monetized the value of VOC reductions. For instance, in an RIA for a 2016 rule related to methane in the oil and gas sector (the 2016 Rule), EPA presented a range of epidemiology studies estimating the value of reducing a ton of VOC in 2012 dollars: \$300 to \$7,500.⁴⁰ Even conservatively presenting results at the low end of that range—say, \$300, updated for inflation—would yield a more comprehensive picture of the benefits of EPA’s proposed standards. Put differently, it would better capture the fact that, while there may be “a range of values” for VOC emission-reduction benefits, that value “is certainly not zero.”⁴¹

Similarly, EPA claims that, “[w]ith the data available, it was not possible to estimate the change in emissions of each individual HAP,” and that “methodology and data limitations” preclude “monetize[ing] the health benefits of reductions in HAP.”⁴² As with VOCs, EPA should present any quantitative information available to it, even if incomplete or uncertain.⁴³

C. EPA Should Note that Its Proposed Standards for Each Source Type Within the Category Are Net Beneficial

The RIA makes unambiguously clear that its proposed standards for new and existing sources, on the whole, are net beneficial.⁴⁴ But EPA should further disaggregate its analysis to show that, in addition to the entire proposal taken as a whole, *each individual proposed policy change* is net beneficial. For example, it should report net benefits for proposed standards for each type of regulated source—e.g., net benefits for the BSER that applies to well sites, to gathering and boosting stations, and so on.

³⁶ See *id.* at 5-8 tbl.5-4 (estimating that EPA’s “Primary Proposal” would abate 12,000,000 short tons of VOC emissions and 480,000 short tons of HAP emissions).

³⁷ See *id.* at 3-4 (“VOC emissions are precursors to secondary formation of PM_{2.5} and ozone on a broader regional scale.”).

³⁸ *Id.* at 3-16 to -17.

³⁹ *Id.* at 3-19.

⁴⁰ See EPA, *Regulatory Impact Analysis of the Final Oil and Natural Gas Sector: Emission Standards for New, Reconstructed, and Modified Sources* 4-22 (2016), <https://perma.cc/5LY4-KFXL>.

⁴¹ *Ctr. for Biological Diversity v. Nat’l Highway Traffic Safety Admin.*, 538 F.3d 1172, 1200 (9th Cir. 2008).

⁴² 2021 PRIA, *supra* note 3, at 3-22.

⁴³ *Circular A-4*, *supra* note 34, at 27 (“If you are not able to quantify the effects, you should present any relevant quantitative information along with a description of the unquantified effects[.]”).

⁴⁴ See 2021 PRIA, *supra* note 3, at 5-7 tbl.5-4 (reporting net benefits of \$48 billion for EPA’s Primary Proposal).

EPA has all of the data needed to perform such calculations. The RIA already reports cumulative emission reductions and compliance costs through 2035 by source type⁴⁵—which presumably required data on how much emissions would be abated each year of the analysis. As it did for the overall analysis, EPA could multiply each year’s methane emission reductions by the social cost of methane corresponding to that year, then discount back to present value. (It could do the same for any other pollutants with monetized per-ton costs; for more on monetizing the costs of pollutants besides methane, see section IV.B, *supra*.) EPA could subtract the net compliance costs for each BSER from its benefits to report its net benefits. Extending its analysis in this way would demonstrate that, in addition to a net beneficial *set* of proposed standards, *each individual* proposed standard is net beneficial and therefore creates value for society.

EPA should also disaggregate another aspect of its analysis: the net benefits of each alternative standard. The RIA reports the net benefits of its primary set of BSER standards, along with less stringent and more stringent standards, and a co-proposal.⁴⁶ This information confirms that the primary proposal carries the highest net benefits of any alternative.⁴⁷ But it does not show whether more stringent standards could carry higher net benefits within one or more source types. Without a more granular analysis, the public cannot know whether EPA’s primary proposal would forego some net benefits for individual BSERs. If EPA does find such opportunities for higher net benefits for some BSERs, it should pursue them, or at least explain rigorously why it declines to do so.

Respectfully,

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⁴⁵ See *id.* at 2-38 tbl.2-11 (showing projected emission reductions for well site fugitives, gathering and boosting stations fugitives, transmission and storage compressor station fugitives, natural gas processing plant equipment leaks, pneumatic pumps, pneumatic controllers, reciprocating compressors, centrifugal compressors, liquids unloading, and storage vessels).

⁴⁶ See *id.* at 5-7 tbl.5-4.

⁴⁷ See *id.* (reporting net benefits of \$48 billion for the primary proposal, and less for each other alternative).

Attachments

1.	Inst. for Pol’y Integrity, Comments on Oil and Natural Gas Sector: Emission Standards for New and Modified Sources (Dec. 4, 2015)
2.	Inst. for Pol’y Integrity, Comments on Oil and Natural Gas Sector: Emission Standards for New, Reconstructed, and Modified Sources Review (Nov. 25, 2019)
3.	Brief for Inst. for Pol’y Integrity as Amicus Curiae, <i>California, et al., vs. Andrew Wheeler</i> , No. 20-1357 (D.C. Cir. Dec. 14, 2020)