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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,” 87 Fed. Reg. 74,702 (Dec. 6, 2022)

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 (Supplemental Proposal).² The Supplemental Proposal builds upon the November 2021 proposal to control methane emissions from new and existing sources in the oil and gas industry (2021 Proposed Rule).³

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 in the Supplemental Proposal to build upon the 2021 Proposed Rule and reduce additional emissions in a cost-effective manner. We make the following recommendations to further strengthen EPA’s final rule and its underlying analysis:

- **EPA should strengthen its Regulatory Impact Analysis to fully capture the benefits of these standards.** For one, EPA should extend the timeframe of its analysis to quantify net benefits past 2035. In addition, when possible, EPA should consider monetizing co-benefits from reducing non-methane volatile organic compounds, particulate matter, and hazardous air pollutants. When monetization is not possible, EPA should consider better quantifying those impacts and collecting the information necessary to better monetize and quantify similar impacts in future analyses. Finally, EPA should consider further quantifying the impacts of the super-emitter response program or using a breakeven analysis to supplement a qualitative assessment.

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

² *Standards of Performance for New, Reconstructed, and Modified Sources and Emissions Guidelines for Existing Sources: Oil and Natural Gas Sector Climate Review*, 87 Fed. Reg. 74,702 (proposed Dec. 6, 2022) (to be codified at 40 C.F.R. pt. 60) [hereinafter Supplemental Proposal].

³ See *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 (proposed Nov. 15, 2021) (to be codified at 40 C.F.R. pt. 60). Consistent with the Regulatory Impact Analysis, when we refer to the net benefits of the Supplemental Proposal, we include the net benefits of the provisions of the 2021 Proposed Rule that have not been updated. See EPA, REGULATORY IMPACT ANALYSIS OF THE SUPPLEMENTAL PROPOSAL FOR THE STANDARDS OF PERFORMANCE FOR NEW, RECONSTRUCTED, AND MODIFIED SOURCES AND EMISSIONS GUIDELINES FOR EXISTING SOURCES: OIL AND NATURAL GAS SECTOR CLIMATE REVIEW 1 (2022), <https://perma.cc/5GBL-VK9S> [hereinafter RIA].

- **EPA should expand its distributional analysis beyond a baseline analysis to better evaluate the impacts of the Supplemental Proposal and its alternatives.** EPA should quantify additional impacts important to its distributional analysis for which it has the necessary data and, in cases where it lacks sufficient information to quantify these effects, it should collect the required data and conduct the relevant analyses. In addition, EPA should contextualize these distributional impacts with an analysis of the cumulative environmental burdens for impacted communities. EPA should incorporate the results of the distributional analysis into its decisionmaking. In doing so, EPA should consider treating distributional consequences akin to unquantified effects.
- **EPA should require states to adhere to best practices for distributional analysis when they seek a variance to apply less stringent standards for specific facilities.** EPA should provide instruction on how to identify affected communities based on the physical properties of each pollutant and how to decide which communities are vulnerable based on cumulative exposure and susceptibility factors. States should be required to conduct distributional analyses of the proposed less stringent standard and the alternative if the variance is not granted. EPA should support states' analyses by providing data.
- **EPA's equivalency determination for the methane charge should be quantitative and reflect a multi-year comparison.** EPA should make a quantitative assessment to support the equivalency determination, or, at a minimum, explain why future regulatory changes to the program would require a quantitative analysis. A multi-year comparison, rather than an assessment based on full-implementation strategy, would better ensure equivalency is properly found only when justified by comparable total emissions reductions.
- **EPA should reconsider the proposed uniform three-year timeline for compliance with state plans.** EPA may find that it can increase net benefits by accelerating compliance timelines for select types of designated facilities, or even more narrowly for certain subcategories of designated facilities. For example, the logistical concerns that EPA cites to justify the three-year timeline do not apply to the super-emitter response program.

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I. EPA Should Expand and Strengthen Its Cost-Benefit Analysis

In the Regulatory Impact Analysis (RIA), EPA demonstrates that the Supplemental Proposal sets standards at a level of stringency that is net beneficial, with the monetized benefits alone greatly exceeding the monetized costs.⁴ However, EPA makes analytical assumptions that lead it to likely underestimate the full benefits of the Supplemental Proposal. We recommend EPA update these assumptions in the ways discussed below to better reflect the full benefits of the rule.

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

The RIA limits its analysis to impacts that occur between 2023 and 2035.⁵ EPA should better explain the justification for and expected implications of the selected time horizon, including whether the agency expects—as is often the case—that significant benefits will accrue beyond 2035.⁶ 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.”⁷ 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.⁸ EPA should consider how other agencies have made predictions for the oil and gas industry further into the future.⁹

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.”¹⁰ Even if predicting the impacts that these proposed standards will have after 2035 is difficult, failing to assess (either quantitatively or qualitatively) any impacts after that time would be 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

⁴ RIA, *supra* note 3, at 161–62 tbl.5-4 (projecting net benefits of \$34 billion with a 3 percent discount rate).

⁵ *Id.* at 27.

⁶ See LANCE BOWMAN, INST. FOR POL’Y INTEGRITY, ENHANCING CONSIDERATION OF TIME FRAMES IN COST-BENEFIT ANALYSIS 2 (2022). Other agencies have considered the impacts of oil and gas activities for decades into the future. See, e.g., BUREAU OF OCEAN ENERGY MGMT., BOEM 2022-030, 2023–2028 NATIONAL OUTER CONTINENTAL SHELF OIL AND GAS LEASING PROPOSED PROGRAM DRAFT PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT iii (2022), <https://perma.cc/7PS7-PK9R> [hereinafter BOEM 2022 PEIS] (determining the potential environmental impacts from lease sales held under the 2023–2028 Program, under assumption that the environment may be affected by oil and gas activities during the 40 to 70 years when they may occur).

⁷ RIA, *supra* note 3, at 27.

⁸ *Id.*

⁹ See, e.g., BOEM 2022 PEIS, *supra* note 6, at iii; ENERGY INFO. AGENCY, ANNUAL ENERGY OUTLOOK 2022 WITH PROJECTIONS TO 2050: NARRATIVE 2, 26–36 (2022), <https://perma.cc/D5D7-T4JJ> (modeling the production and consumption of oil and natural gas until 2050 under multiple assumptions and methodologies including consideration of technological changes, laws, and regulations).

¹⁰ Off. of Mgmt. & Budget, *Circular A-4*, at 15 (2003), <https://perma.cc/X8JM-YZMT> [hereinafter *Circular A-4*].

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.

In the RIA, EPA itself acknowledges that “some amount of both benefits and costs would likely continue after 2035,” and “note[s] that toward the end of [their] analytical time horizon, undiscounted net costs are relatively steady from year to year (Table 2-9) while undiscounted monetized climate benefits (Table 3-4) are rising each year.” On this basis, EPA concludes, “It is therefore plausible that significant net benefits would continue in the years after 2035.”¹¹ EPA additionally estimates that the Supplemental Proposal will reduce 3,500,000 short tons of methane, 920,000–960,000 short tons of volatile organic compound (VOC) emissions, and 37,000–39,000 short tons of hazardous air pollutants (HAPs), annually between 2026 and 2035.¹² For VOCs and HAPs, the annual reductions are all projected to increase between 2026 to 2035. If comparable emissions reductions of these pollutants continue for some number of years after 2035, that would yield significant non-climate benefits. Given these trends in annual costs and benefits and the continuation of the standards past 2035, it is highly likely that the Supplemental Proposal will result in additional benefits after 2035.

EPA should seek to extend its analysis to take into account the likelihood that the standards will reduce emissions beyond 10 years. Even if EPA does not extend its analytical timeframe, it should include a discussion of benefits beyond 2035 as an unquantified benefit. Lastly, while extending the time horizon would better capture the full benefits of its proposed standards, EPA can still find that the standards are cost-beneficial without this information.

B. EPA Should Monetize Ozone Health Benefits and Better Quantify the Benefits of Reducing VOC and HAP Emissions

In the Supplemental Proposal, EPA foregoes quantifying and monetizing key non-climate benefits, including the health benefits associated with reducing ozone exposure from methane emissions and the benefits of reducing VOC and HAP emissions.¹³ To the extent quantification and monetization of these benefits is possible with available data, EPA should do so.¹⁴ Doing so would be consistent with EPA’s recognition that “[w]hen adequate data and resources are available, the EPA has generally quantified several health effects associated with exposure to ozone.”¹⁵ Below we discuss the relevant data limitations noted by EPA in its discussion of ozone and other health benefits of reduced emissions from the Supplemental Proposal.

1. EPA Should Monetize Ozone Health Benefits Related to Reducing Methane

EPA should monetize the ozone exposure health benefits associated with reductions to methane emissions from the Supplemental Proposal. Failing to do so leads to significant underestimation

¹¹ RIA, *supra* note 3, at 167.

¹² *Id.* at 64 tbl.3-2.

¹³ *Id.* at 61 tbl.3-1.

¹⁴ See *Circular A-4*, *supra* note 10, at 45 (“To the extent feasible, you should quantify all potential incremental benefits and costs. . . You should develop quantitative estimates and convert them to dollar amounts if possible.”).

¹⁵ RIA, *supra* note 3, at 80.

of the benefits associated with the Supplemental Proposal. Indeed, EPA’s Scientific Advisory Board’s (SAB) draft report explains that published literature demonstrates that “the monetized value of this ozone-attributable health response is comparable to the climate-related social cost of methane, so that leaving out this impact leads to a large underestimate of the total benefits.”¹⁶

The SAB notes that deriving a monetized estimate of the health benefits of reducing exposure to ozone via methane emissions reduction is not analytically dependent on precise modeling of the spatial distribution of methane emissions given “the relatively long (decadal) residence time of methane in the atmosphere.”¹⁷ The SAB advises that EPA can draw from published literature and the experience of scientists from EPA for estimating a monetized value.¹⁸ This literature suggests that the value could be tens of billions of dollars in health benefits between 2023-2035.¹⁹ Considering this, EPA should heed the SAB’s recommendation to monetize these benefits. If EPA believes it cannot provide these monetized benefits, then it should explain its reasoning.

EPA should also consider incorporating its estimate of the health benefits associated with reducing exposure to methane-related ozone into the social cost of methane.²⁰ If it chooses not to incorporate these effects into the social cost of methane, then it should include these monetized impacts in its assessment of other costs and benefits in the RIA.

2. EPA Should Recognize the Magnitude of Co-Benefits Resulting from Reducing VOC Emissions in Its Primary Analysis

In the RIA, EPA qualitatively discusses the co-benefits of VOC emissions reductions and reports the total VOC emissions reductions expected from the Supplemental Proposal, but EPA does not assign any monetary value to these reductions except in Appendix C.²¹ As a result, EPA’s estimate of total monetized benefits understates the health and environmental gains from the

¹⁶ SCIENCE ADVISORY BOARD OIL AND GAS CLIMATE RULE REVIEW WORKGROUP, SCIENCE ADVISORY BOARD REGULATORY REVIEW REPORT OF SCIENCE SUPPORTING EPA DECISIONS FOR THE PROPOSED RULE: STANDARDS OF PERFORMANCE FOR NEW, RECONSTRUCTED, AND MODIFIED SOURCES AND EMISSIONS GUIDELINES FOR EXISTING SOURCES: OIL AND NATURAL GAS SECTOR 14 (2023) (draft report), https://sab.epa.gov/ords/sab/f?p=114:19:14980960002727:::RP,19:P19_ID:982 (scroll to “Draft Report(s)” and click hyperlink below) (last visited Feb. 13, 2023) [hereinafter, SAB DRAFT REPORT].

¹⁷ *Id.* at 14.

¹⁸ *Id.*

¹⁹ The United Nations Environment Programme estimates the monetized mortality effects due to ozone from methane emissions to be \$2,500 per metric ton of methane. UNITED NATIONS ENVIRONMENT PROGRAMME, GLOBAL METHANE ASSESSMENT: BENEFITS AND COSTS OF MITIGATING METHANE EMISSIONS (2021) <http://www.unep.org/resources/report/global-methane-assessment-benefits-and-costs-mitigating-methane-emissions>. For illustrative purposes, if EPA used that number to estimate a lower-bound estimate (because it excludes morbidity effects), it would find that the Supplemental Proposal could generate approximately \$66.8 billion in health benefits from reduced ozone-related methane from 2023 to 2035. This calculation assumes EPA’s estimated reductions in methane emissions due to the Supplemental Proposal (RIA *supra* note 3, at 162 tbl.5-4) of 36,000,000 short tons, converted to 32,658,649 metric tons, where the emissions reductions are distributed equally annually, and a 3 percent discount rate.

²⁰ See Kevin R. Cromar et al., *Global Health Impacts for Economic Models of Climate Change: A Systematic Review and Meta-Analysis*, 19 ANNALS AM. THORACIC SOC. 1,203 (2022).

²¹ RIA, *supra* note 3, at 161–62 tbl.5-4 (estimating that the Supplemental Proposal would abate about 9,700,000 short tons of VOC emissions).

rule—most likely significantly. While appropriately recognizing the limitations and uncertainties underlying its calculations in Appendix C, EPA should discuss the magnitude of the monetized health benefits it estimates from reducing VOC emissions in its main regulatory analysis.

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}).²² EPA explains that, to calculate ozone impacts from changes in VOC emissions, it requires information about the spatial patterns in these emissions changes, and further, to estimate the ozone health effects from the Supplemental Proposal it requires information on the relative proximity of expected VOC and ozone changes to population.²³ EPA explains that it “ha[s] not characterized VOC emissions changes at a finer spatial resolution than the national total due to data and resource constraints.”²⁴

However, in Appendix C, EPA presents an illustrative screening analysis of ozone-related health benefits based on modeled oil and natural gas VOC contributions to ozone concentrations as they occurred in 2017, but it does “not include the results of this screening analysis in the estimate of benefits (and net benefits) projected from this proposal.”²⁵ This analysis estimates that the combined monetized benefits of avoided morbidity health effects and avoided long-term ozone mortality would be \$7.2 billion between 2023–2035 (under a 3% discount rate).²⁶ While EPA acknowledges the various uncertainties and limitations of this calculation, if it considers this to be an accurate representation of the rough magnitude of the benefits associated with VOC emission reductions, it should discuss its approximate size and significance in the main analysis while recognizing the relevant limitations.

In the RIA’s discussion of both ozone and PM_{2.5}-related impacts of VOC emissions, EPA states that “in future regulatory impact analyses supporting other regulations, the EPA plans to account for the emissions impacts of the oil and natural gas [new source performance standards] and [existing source emissions guidelines] in the baseline for the analysis.”²⁷ Given the magnitude of ozone health effects associated with VOC emissions, EPA should prioritize estimating the spatial distribution of VOC changes so that it might include a better monetized estimate of these health effects for relevant future rules.

3. EPA Should Continue to Improve Its Accounting of the Benefits of Reducing HAP Emissions for Future Regulations

EPA qualitatively discusses the co-benefits of HAP emissions reductions in the RIA and reports the total HAP emissions reductions expected from the Supplemental Proposal, but it does not break those reductions down by individual pollutants or assign any monetary value to such

²² *Id.* at 79, 81–82. EPA explains that it does not monetize PM_{2.5}-related benefits due to its need for air-quality monitoring and 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.” *Id.* at 82. Accordingly, this paragraph instead focuses on the ozone-related impacts.

²³ *Id.* at 79.

²⁴ *Id.*

²⁵ *Id.*

²⁶ *Id.* at 208.

²⁷ *Id.* at 82.

figures.²⁸ As a result, EPA’s estimate of total monetized benefits understates the health and environmental gains from the rule again. Even if EPA is currently unable to monetize the benefits of reducing HAP emissions, it should strive to improve that capacity for its analysis of future regulations.

In the RIA’s qualitative discussion of the HAP-related impacts, EPA explains 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 “monetiz[ing] the health benefits of reductions in HAP.”²⁹ As with VOCs, EPA should present any additional quantitative information available to it, such as the estimation of individual HAP reductions from the Supplemental Proposal, even if incomplete or uncertain, and acknowledge any relevant limitations of that information.³⁰ In accordance with SAB’s recommendation, EPA should prioritize estimating the HAP-related benefits associated with future regulations, as failing to do so leads to an underestimation of monetized benefits.³¹ An assessment of HAP emission reductions for the Supplemental Proposal and its alternatives, as compared to only a baseline discussion of HAP emission effects for the oil and gas industry, would provide more useful information for improving the distributional analysis to more fully examine effects on near-source communities.

C. EPA Appropriately Monetizes Climate Benefits Using the Social Cost of Methane

EPA properly relies on the interim estimates of the social cost of methane (“SC-CH₄”) from the Interagency Working Group (“IWG”) in the RIA. EPA also includes a sensitivity analysis of the monetized climate benefits with updated estimates of the SC-CH₄ from EPA’s draft September 2022 “Report on the Social Cost of Greenhouse Gases: Estimates Incorporating Recent Scientific Advances.” EPA finds that “for all emissions years the range of the climate benefits resulting from this sensitivity analysis is higher in magnitude than the monetized climate benefits using the IWG’s recommended interim SC-CH₄ estimates.”³² The September 2022 update faithfully implements the roadmap laid out in 2017 by the National Academies of Sciences, and, while it represents a significant increase over the climate-damage valuations from the IWG, that increase is consistent with the widespread economic consensus, including the IWG’s own repeated recognition that its valuations are underestimates.³³

Therefore, the monetized climate benefits in the RIA are likely lower-bound estimates, and EPA underestimate the Supplemental Proposal’s associated climate benefits. Indeed, even the higher

²⁸ *Id.* at 161–62 tbl.5-4 (estimating that the Supplemental Proposal would abate about 390,000 short tons of HAP emissions).

²⁹ *Id.* at 84–85.

³⁰ *Circular A-4*, *supra* note 10, 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 . . .”).

³¹ SAB DRAFT REPORT, *supra* note 16, at 15.

³² RIA, *supra* note 3, at 191.

³³ See NAT’L ACADS. SCIS., ENG’G & MED., VALUING CLIMATE DAMAGES: UPDATING ESTIMATION OF THE SOCIAL COST OF CARBON DIOXIDE (2017); INTERAGENCY WORKING GROUP, TECHNICAL SUPPORT DOCUMENT: SOCIAL COST OF CARBON, METHANE, AND NITROUS OXIDE INTERIM ESTIMATES UNDER EXECUTIVE ORDER 13990 4 (2021).

estimates from the September 2022 report are conservative.³⁴ Policy Integrity, along with a coalition of environmental groups, has submitted separate comments in support of the Supplemental Proposal's use of the SC-CH₄ from the IWG³⁵ and inclusion of the updated draft estimates of climate benefits in the sensitivity analysis.³⁶

D. EPA Should Better Quantify the Benefits of the Super-Emitter Response Program

While there are significant uncertainties related to predicting specific super-emitter events, EPA should work to better quantify the net benefits of the super-emitter response program to the extent possible. While it is fully appropriate for EPA to consider the benefits of the super-emitter response program even if it is unable to fully quantify them,³⁷ EPA should consider whether it can provide a range of possible emissions reductions based upon the modeling information in Appendix D or other information. EPA should also consider performing a breakeven analysis to identify the minimum amount of emissions reductions necessary to justify the program.³⁸ EPA should then explain why it believes the emissions reductions exceed the breakeven point.

Given that super-emitter events have such large mass emissions rates (100 kg/hr or greater) and the super-emitter response program could decrease the length of these events significantly, its potential benefits stand to be quite large. Further, EPA estimates that the additional cost to

³⁴ EPA, EPA EXTERNAL REVIEW DRAFT OF REPORT ON THE SOCIAL COST OF GREENHOUSE GASES: ESTIMATES INCORPORATING RECENT SCIENTIFIC ADVANCES 2 (2022).

³⁵ Groups Center for Climate and Energy Solutions, Clean Air Task Force, Earthjustice, Environmental Defense Fund, Institute for Policy Integrity at New York University School of Law, Montana Environmental Information Center, Natural Resources Defense Council, Sierra Club, Union of Concerned Scientists, Western Environmental Law Center, Comments on the Consideration of the Interagency Working Group's Social Cost of Greenhouse Gases Valuations in Standards of Performance for New, Reconstructed, and Modified Sources and Emissions Guidelines for Existing Sources: Oil and Natural Gas Sector Climate Review, Docket ID No. EPA-HQ-OAR-2021-0317 (document number pending) (submitted Feb. 13, 2023).

³⁶ Center for Climate and Energy Solutions, Clean Air Task Force, Earthjustice, Environmental Defense Fund, Institute for Policy Integrity at New York University School of Law, Montana Environmental Information Center, Natural Resources Defense Council, Sierra Club, Union of Concerned Scientists, Western Environmental Law Center, Comments on the EPA External Review Draft of Report on the Social Cost of Greenhouse Gases, Docket ID No. EPA-HQ-OAR-2021-0317-1460 (submitted Feb. 13, 2023); Institute for Policy Integrity at New York University School of Law, Comments on the EPA External Review Draft of Report on the Social Cost of Greenhouse Gases, Docket ID No. EPA-HQ-OAR-2021-0317 (document number pending) (submitted Feb. 13, 2023).

³⁷ See Exec. Order No. 13,563 § 1, 76 Fed. Reg. 3821, 3821 (Jan. 18, 2011) (affirming Exec. Order No. 12,866); accord Exec. Order No. 12,866 § 1(a), 58 Fed. Reg. 51,735, 51,735 (Sept. 30, 1993) ("Costs and benefits shall be understood to include both quantifiable measures (to the fullest extent that these can be usefully estimated) and qualitative measures of costs and benefits that are difficult to quantify, but nevertheless essential to consider."). Circular A-4, which provides further guidance on conducting regulatory analysis from the Office of Management & Budget, further cautions agencies against ignoring the potential magnitude of direct unquantified benefits, because the most efficient alternative may not have the "largest quantified and monetized . . . estimate." *Circular A-4, supra* note 10; see also EPA, GUIDELINES FOR PREPARING ECONOMIC ANALYSIS 7-49 (2014), <https://perma.cc/9JZH-FKK5> [hereinafter EPA ECONOMIC ANALYSIS GUIDELINES].

³⁸ See *Circular A-4, supra* note 10, at 2 (instructing that if the agency determines that the non-quantified benefits or costs are important, agencies to carry out a threshold or breakeven analysis to evaluate their significance and to "indicate, where possible, which non-quantified effects are most important and why"); EPA ECONOMIC ANALYSIS GUIDELINES, *supra* note 37, at 7-50 (discussing the appropriateness of using breakeven analysis).

regulated entities of a program that would merely require owners to perform a root-cause analysis and take corrective action if they are notified of a super-emitter emissions event³⁹ stands to be quite small. EPA already determined that there would be “no associated monitoring cost for owners and operators” because “owners and operators do not bear the cost of monitoring and detecting super-emitter emissions events.”⁴⁰ EPA’s choice to not quantify the impacts of this program thus likely leads the agency to again undercount the net benefits of the Supplemental Proposal.

II. EPA Should Expand Its Distributional Analysis

EPA properly includes an environmental justice analysis in the RIA. But EPA should strengthen the distributional analysis in this section to more fully capture the distributional impacts of the Supplemental Proposal. To further improve its analysis, EPA should look to recent scholarship, which has identified key features of meaningful distributional analysis.⁴¹ We further urge EPA to consider the recommendations of its SAB on improving the environmental justice analysis for the Supplemental Proposal.⁴²

EPA should strengthen the consideration of distributional impacts in the Supplemental Proposal in five key ways: (1) estimate the distributional impacts of the Supplemental Proposal and its alternatives in addition to the baseline; (2) address data limitations and further quantify important impacts; (3) integrate consideration of cumulative environmental burdens on affected communities; (4) fully integrate the results of its analysis into its final decision; and (5) treat distributional effects like unquantified impacts in its decisionmaking. These practices would be consistent with EPA’s Guidelines on Conducting Economic Analyses which clarify that “evaluating a program’s distributional effects is an important complement to benefit-cost analysis.”⁴³ By improving its distributional analysis, EPA can improve its understanding of how to reduce harms to overburdened communities and fulfill its strategic goal to advance environmental justice.⁴⁴

A. EPA Should Estimate the Distributional Impacts of the Supplemental Rule and Its Alternatives

In the RIA, EPA conducts a baseline analysis, which identifies existing disparities in the populations exposed to emissions from the oil and gas source category through both qualitative

³⁹ Supplemental Proposal, *supra* note 2, at 74,712 tbl.3.

⁴⁰ *Id.* at 74,752, 74,755.

⁴¹ See, e.g., Richard L. Revesz & Burçin Ünel, *Just Regulation: Improving Distributional Analysis in Agency Rulemaking* (Inst. for Pol’y Integrity, Working Paper, 2022); Richard L. Revesz & Samantha P. Yi, *Distributional Consequences and Regulatory Analysis*, 52 ENV’T L. 53, 57 (2022); JACK LIENKE ET AL., INST. FOR POL’Y INTEGRITY, MAKING REGULATIONS FAIR: HOW COST-BENEFIT ANALYSIS CAN PROMOTE EQUITY AND ADVANCE ENVIRONMENTAL JUSTICE (2021); Richard L. Revesz, *Regulation and Distribution*, 93 N.Y.U. L. REV. 1489, 1492 (2018); see also Caroline Cecot & Robert W. Hahn, *Incorporating Equity and Justice Concerns in Regulation*, REGUL. & GOVERNANCE (2022).

⁴² SAB DRAFT REPORT, *supra* note 16, at 15–19.

⁴³ EPA ECONOMIC ANALYSIS GUIDELINES, *supra* note 37, at 10-1.

⁴⁴ See, e.g., EPA, FY 2022–2026 EPA STRATEGIC PLAN 32–34 (2022), <https://perma.cc/3YXC-ZUAB>.

and quantitative means.⁴⁵ However, this baseline analysis, by its nature, does not analyze the distributional impacts of the Supplemental Proposal or its alternatives. Instead, EPA’s analysis finds, at a general level, that the current negative impacts of methane, HAP, and VOC emissions fall disproportionately on certain communities, and the agency accordingly believes that the Supplemental Proposal, by reducing these emissions in general, will improve health and welfare in these communities.⁴⁶

A baseline understanding of disproportionate burdens created by the source category is helpful but should be accompanied by an analysis that evaluates the distribution of impacts resulting from the Supplemental Proposal and any incremental differences from adopting EPA’s proposed alternatives. Indeed, President Biden’s Memorandum on Modernizing Regulatory Review calls for analysis of “distributional *consequences* . . . to ensure that regulatory initiatives appropriately benefit and do not inappropriately burden disadvantaged, vulnerable, or marginalized communities.”⁴⁷ To fully assess how the rule will affect environmental justice community health and welfare, EPA should analyze the distributional consequences of the Supplemental Proposal.

In addition, EPA should analyze the distributional implications of each alternative—consistent with *Circular A-4*’s guidance that “‘an examination of alternative approaches’ [is] one of the three basic elements of ‘a good regulatory analysis.’”⁴⁸ This analytical step is a natural extension of EPA’s existing alternatives analysis, which already assesses the costs and benefits of a more stringent alternative and a less stringent alternative.⁴⁹ By considering alternatives in its assessment of distributional impacts, EPA would be better able to weigh not only the respective net benefits, but also the distribution of costs and benefits when comparing alternatives. If the distribution of impacts under one alternative is desirable enough—for example, because it increases the health and safety of already unfairly overburdened communities—that may justify selecting that alternative over one with greater net benefits but a less desirable distribution of impacts.

Per the SAB’s recommendation, EPA should also integrate considerations of “the effect of the rule on potential future installations beyond present-day facilities” in future environmental justice analyses.⁵⁰ Future installations are by their nature beyond the scope of a baseline analysis, but should be part of an analysis of the distributional effects of the Supplemental Proposal and its alternatives since they would also be affected by the regulations.

⁴⁵ RIA, *supra* note 3, at 104–136.

⁴⁶ *Id.* at 136.

⁴⁷ Memorandum on Modernizing Regulatory Review § 2(b)(ii), 86 Fed. Reg. 7223, 7223 (Jan. 25, 2021) (emphasis added).

⁴⁸ Revesz & Yi, *supra* note 41, at 64 (quoting *Circular A-4*, *supra* note 10, at 2).

⁴⁹ See RIA, *supra* note 3, at 55–59.

⁵⁰ SAB DRAFT REPORT, *supra* note 16, at 18.

As in the 2021 Proposed Rule, EPA cites data limitations as its reason for conducting an analysis of only the baseline distribution of emissions from oil and natural gas sources.⁵¹ Specifically, it references “data limitations that prevent us from analyzing spatially differentiated outcomes.”⁵²

As the SAB has also recommended, EPA should include more quantitative information on the influence of rulemaking on exposures and health in near-source communities.⁵³ EPA should conduct the spatial analysis necessary to include these effects of HAPs, NO₂, and ozone related to VOCs in its distributional analysis of future regulations and their alternatives. In particular, EPA should consider the distributional effects of reduced air toxic emissions from flaring, given that the Supplemental Proposal is expected to reduce flaring and flaring emissions have been demonstrated to have a disproportionate effect on Hispanic communities.⁵⁴

We commend EPA for considering the respective health impacts of the multiple pollutants affected by this rule and for recognizing the need to conduct an analysis with granular data that considers the effects on disaggregated populations. But EPA should still continue to refine its analysis to extend beyond a baseline scenario.

B. EPA Should Consider the Cumulative Burden of Environmental Impacts in Its Distributional Analysis

As the SAB notes, “[c]ommunities near oil and gas installations are candidates for consideration as ‘Environmental Justice’ communities as they have high exposure to air toxics, are subject to exposure through other media and are at risk for psychological and social stress from extractive industries.”⁵⁵ For communities that carry high cumulative burdens, an additional burden has more impact than it would on a community that has little risk exposure.⁵⁶ Consequently, removing a burden—in this case, methane and co-emissions—would have a larger positive benefit for an overburdened community than it would for an average community. The RIA does not contextualize the disproportionate environmental burden of pollution from oil and gas sources within the cumulative environmental burdens borne by affected communities. This is an additional way in which EPA fails to fully value the environmental justice impacts of the rulemaking.⁵⁷

⁵¹ Compare 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 4-9 (2021) [hereinafter, PRIA], with RIA, *supra* note 3, at 106.

⁵² RIA, *supra* note 3, at 106.

⁵³ *Id.* at 18.

⁵⁴ *Id.* at 17 (citing J.E. Johnston et al., *Environmental Justice Dimensions of 28 Oil and Gas Flaring in South Texas: Disproportionate Exposure Among Hispanic Communities*, 54 ENV'T SCI. & TECH. 6289 (2020)).

⁵⁵ SAB DRAFT REPORT, *supra* note 16, at 19 (citations omitted).

⁵⁶ EPA, TECHNICAL GUIDANCE FOR ASSESSING ENVIRONMENTAL JUSTICE IN REGULATORY ANALYSIS 18 (2016), <https://perma.cc/4GLL-KNEE> [hereinafter EJ TECHNICAL GUIDANCE].

⁵⁷ *Cf. id.* (“An analysis that considers risks from only one source can inaccurately characterize the potential for health risks if the populations for which risk is being estimated are also exposed to a stressor from the other sources.”).

EPA recently released guidance further recognizing the need to consider cumulative impacts on environmental justice communities under the Clean Air Act and other programs,⁵⁸ but EPA has guidance on conducting cumulative risk assessments going back over two decades.⁵⁹ Per SAB’s recommendation, EPA should consider the cumulative burden on communities affected by the Supplemental Proposal.

C. EPA Should Weigh Distributional Impacts in Its Decisionmaking

EPA should not only improve its environmental justice analysis, but fully weigh the distribution of impacts in its decisionmaking as consistent with Executive Orders and guidance documents.

For almost 30 years, Executive Orders and related guidance documents have directed EPA to consider distributional impacts in regulatory decisionmaking. Executive Order 12,866, issued by President Clinton in 1993, instructs agencies to incorporate equity considerations, including “distributive impacts,” into their cost-benefit analyses and regulatory decisions.⁶⁰ *Circular A-4*—the Office of Management and Budget’s principal guidance on cost-benefit analysis—further instructs agencies to “provide a separate description of distributional effects (i.e., how both benefits and costs are distributed among sub-populations of particular concern) so that decision makers can properly consider them along with the effects on economic efficiency,” and to do so “quantitatively to the extent possible.”⁶¹ In 2011, President Obama issued Executive Order 13,563, which reaffirmed Executive Order 12,866 and further emphasized the importance of considering “equity, human dignity, fairness, and distributive impacts.”⁶²

Separate from these directives on cost-benefit analysis, Executive Orders and associated guidance instruct EPA and other agencies to weigh environmental justice considerations in their decisionmaking. In 1994, President Clinton issued Executive Order 12,898, which requires agencies to identify and seek to address the adverse environmental and human-health impacts of all federal administrative programs (including regulations) on minority and low-income populations.⁶³ The White House Council on Environmental Quality⁶⁴ and later the Interagency

⁵⁸ EPA, EPA LEGAL TOOLS TO ADVANCE ENVIRONMENTAL JUSTICE: CUMULATIVE IMPACTS ADDENDUM (2023), <https://perma.cc/SMN2-EV6Z>.

⁵⁹ EPA, FRAMEWORK FOR CUMULATIVE RISK ASSESSMENT, EPA-630-P-02-001F (2003), <https://perma.cc/75ZM-4EG5>; EJ TECHNICAL GUIDANCE, *supra* note 56, at 24 tbl.5.1 (listing sources of EPA guidance on cumulative risk assessment).

⁶⁰ Exec. Order No. 12,866 § 1(b)(5), 58 Fed. Reg. 51,735, 51,736 (Oct. 4, 1993).

⁶¹ *Circular A-4*, *supra* note 10, at 14.

⁶² Exec. Order No. 13,563, 76 Fed. Reg. 3821 (Jan. 21, 2011).

⁶³ Exec. Order No. 12,898 § 1-101, 59 Fed. Reg. 7629, 7629 (Feb. 16, 1994) (“To the greatest extent practicable and permitted by law, . . . each Federal agency shall make achieving environmental justice part of its mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low-income populations . . .”).

⁶⁴ COUNCIL ON ENV’T QUALITY, ENVIRONMENTAL JUSTICE: GUIDANCE UNDER THE NATIONAL ENVIRONMENTAL POLICY ACT (1997), <https://perma.cc/AU6U-U7XF>.

Working Group on Environmental Justice⁶⁵ and EPA⁶⁶ provided subsequent guidance on analyses conducted under Executive Order 12,898.

On President Biden's first day in office, he reaffirmed Executive Order 12,866 and called for OMB to develop "procedures that take into account the distributional consequences of regulations, including as part of any quantitative or qualitative analysis of the costs and benefits of regulations, to ensure that regulatory initiatives appropriately benefit and do not inappropriately burden disadvantaged, vulnerable, or marginalized communities."⁶⁷

As the RIA demonstrates, there are important distributional effects of the Supplemental Proposal, and for reasons discussed in this comment, the benefits in the distributional analysis are likely significantly undervalued. Consistent with the discussed directives, EPA should fully account for distributional effects in its decisionmaking.

D. EPA Can Treat Distributional Benefits Similarly to Unquantified Impacts

EPA has several potential ways to apply these long-standing directives to consider distributional effects. One way is to treat desirable (or undesirable) distributional effects as unquantified benefits (or costs) that it compares alongside other costs and benefits.⁶⁸ This comparison would mean valuing distributional impacts similarly to any other unquantified cost or benefit in its analysis. In this way, the agency can understand the tradeoffs in scenarios in which the value of achieving certain distributional goals merits leaving at least some net benefits on the table. Again, this is consistent with the treatment of unquantified effects. EPA, like other agencies, is expected to weigh unquantified effects against monetized costs and benefits in accordance with its judgment and expertise.⁶⁹

EPA has a long history of considering unquantified effects, including in the Supplemental Proposal, where EPA has explained that many benefits were unable to be quantified.⁷⁰ EPA guidance is also clear that EPA should consider unquantified costs and benefits in its analysis.⁷¹ In cases, with "potentially important effects that cannot be quantified, the analyst should include a qualitative discussion of benefits results" and that "discussion should explain . . . the reasons for believing that these non-quantified effects may be important for decision making."⁷² EPA should apply the same treatment to distributional effects.

⁶⁵ FED. INTERAGENCY WORKING GRP. ON ENV'T JUST., PROMISING PRACTICES FOR EJ METHODOLOGIES IN NEPA REVIEWS (2016), <https://perma.cc/PY2D-VRYS>.

⁶⁶ EJ TECHNICAL GUIDANCE, *supra* note 56.

⁶⁷ Modernizing Regulatory Review: Memorandum for the Heads of Executive Departments and Agencies § 2(b)(ii), 86 Fed. Reg. 7223, 7223 (Jan. 26, 2021) (reporting the memorandum issued on January 20, 2021).

⁶⁸ See Revesz & Yi, *supra* note 41, at 96–97 (discussing why this approach should be preferred).

⁶⁹ See *Entergy Corp. v. Riverkeeper, Inc.*, 556 U.S. 208, 235 (2009) (Breyer, J., concurring in part and dissenting in part) (writing approvingly of EPA's ability to "describe environmental benefits in non-monetized terms and to evaluate both costs and benefits in accordance with its expert judgment and scientific knowledge").

⁷⁰ RIA, *supra* note 3, at 10, 60.

⁷¹ EPA ECONOMIC ANALYSIS GUIDELINES, *supra* note 37, at 7-49.

⁷² *Id.*

Additionally, EPA should coordinate internally and externally with other agencies and with OMB to conduct its distributional analysis for this rule in a manner that contributes to achieving a standardized approach to distributional analysis across the federal government.

III. EPA Should Require States to Adhere to Best Practices for Distributional Analysis When They Seek a Variance to Impose Less Stringent Standards for Specific Facilities

Under certain circumstances, the Supplemental Proposal allows states to apply a standard at a specific facility that is less stringent than the presumptive standard.⁷³ Among other possible justifications, a less stringent standard may be appropriate if compliance with the presumptive standard would be unreasonably expensive based on the facility's remaining useful life.⁷⁴

According to the Supplemental Proposal, certain procedural and substantive restrictions apply when states ask EPA to ratify less stringent standards at a facility. Procedurally, in calculating the lower standard, the state must "consider" the health and environmental impacts to "any community most affected by and vulnerable to impacts from the designated facility."⁷⁵

Substantively, when a state specifically relies on a facility's remaining useful life (as opposed to other factors, like physical impossibility), the state must further demonstrate that applying the less stringent standard "will not result in negative impacts to the surrounding communities, including those most affected by and vulnerable to the health and environmental impacts."⁷⁶

The Supplemental Proposal provides almost no instruction to states about how to consider impacts to or demonstrate lack of harm to vulnerable communities. EPA should instruct states on how to identify affected communities, how to decide who is vulnerable, and how to analyze impacts to vulnerable communities from adopting less stringent standards.

A. EPA Should Instruct States on How to Identify Affected Communities

EPA should instruct states that the first step toward considering community impacts is identifying which communities would be affected by a less stringent standard. To identify affected communities, states should first determine which pollutants would be more prevalent under the less stringent standard—and by how much.⁷⁷ Then, states should identify the relevant affected communities for each of these pollutants in light of the pollutant's media, exposure pathways, and exposure factors related to human behaviors.⁷⁸ Affected communities may include not only the individuals who live within the areas where people are exposed, but also anyone who works or recreates there.

⁷³ Supplemental Proposal, *supra* note 2, at 74,817.

⁷⁴ *Id.*

⁷⁵ EPA, PROPOSED REGULATORY TEXT FOR EMISSIONS GUIDELINES §60.5365c(g) (2022), <https://perma.cc/SE6S-QMT2>.

⁷⁶ *Id.* §60.5365c(e)(1)(vii).

⁷⁷ See EJ TECHNICAL GUIDANCE, *supra* note 56, at 16.

⁷⁸ See *id.*

As discussed above, the pollutants affected by the Supplemental Proposal vary in their spatial effects. For example, EPA advises that HAP emissions from the oil and gas sector “increase exposure to carcinogens and other toxic pollutants primarily near the emission source,” whereas VOC emissions are precursors to ozone and PM_{2.5} at a “broader regional scale.”⁷⁹ EPA could assist states by providing information on which pollutants would generally be expected to increase as a result of less stringent standards and information about their typical spatial distributions, exposure pathways, and exposure factors. It would be the responsibility of states to apply this information at the facility level in light of site-specific considerations. At a specific facility, it could be possible to analyze how wind patterns would shape the distribution of air pollutants under a less stringent standard.⁸⁰

In short, to analyze exactly which communities would be affected by a less stringent standard, it is necessary to think through which pollutants will increase and how the physical properties of those pollutants will translate into increased doses for individuals in specific areas. If states attempted to identify affected communities by selecting inappropriate (e.g., too large) geographic units, that would create an inaccurate picture of whose health might be impacted by adopting a less stringent standard. The same would be true if a state did not take into account which communities live downwind of an air pollutant.

B. EPA Should Provide Guidance on How to Identify Vulnerable Communities Among the Affected Communities

Neither the Supplemental Proposal nor the proposed regulatory text provides authoritative guidance on how states should identify, among all affected communities, the subset of people who are particularly vulnerable. Instead, the Supplemental Proposal notes generally that “increased vulnerability of communities may be attributable, among other reasons, to both an accumulation of negative and lack of positive environmental, health, economic, or social conditions within these populations or communities.”⁸¹ EPA further explains that “communities of color . . . , low-income communities, tribal and indigenous populations, and communities in the United States that potentially experience disproportionate health or environmental harms and risks as a result of greater vulnerability to environmental hazards” have historically met these criteria.⁸²

EPA should provide additional direction on identifying vulnerable communities so that states can more accurately assess how adopting less stringent standards for specific facilities would affect these groups. Increasing the accuracy of state assessments would improve the quality of decisionmaking and prevent harm to vulnerable communities that might have been obscured by flawed or incomplete analyses. Additionally, more guidance from EPA on identifying vulnerable communities would help standardize states’ analyses, which would allow EPA to more

⁷⁹ RIA, *supra* note 3, at 72.

⁸⁰ See Revesz & Yi, *supra* note 41, at 86.

⁸¹ Supplemental Proposal, *supra* note 2, at 74,829.

⁸² *Id.* EPA makes clear that vulnerability to pollution is “not limited” to these listed communities. *Id.*

consistently evaluate requests to adopt less stringent standards and thus promote regulatory certainty for states.⁸³

There are multiple types of guidance that EPA could offer states in the final rule about how to identify vulnerable communities among the affected communities. EPA might enumerate minimum considerations relevant for identifying vulnerable groups. These considerations might include any factors that dictate a community's cumulative dose of a pollutant, such as proximity to other sources of emissions and shared behavior (e.g., occupation).⁸⁴ Separately, a community may be vulnerable to a pollutant, not because of other exposures, but because of other factors that cause it to suffer worse health harms than others would experience at the same dose.⁸⁵ These susceptibility factors include pre-existing disease, age, access to medical care, stress, diet, and exposure to similarly acting toxins.⁸⁶

Additionally, because states may face data constraints when identifying vulnerable communities, EPA could help states by including certain data and resources in the final rule. For example, for each pollutant that is relevant in this context, EPA might indicate which communities have historically been most vulnerable. Or EPA might point states to resources that would help them estimate cumulative doses and susceptibility factors for each pollutant. EPA may also advise whether there is any overlap between the factors that would make a community vulnerable to increased pollution from a less stringent standard at a particular facility and the factors that cause a community to be "disadvantaged" (and thus prioritized for Justice40 investments) according to the Council on Environmental Quality's recent Climate and Economic Justice Screening Tool.⁸⁷ Similarly, EPA could examine whether any data available through EPA's EJ Screen tool (e.g., ozone or air toxics cancer risk) may assist states in identifying communities that would be vulnerable to increased pollution from application of a less stringent standard at a facility.⁸⁸

C. EPA Should Direct States to Conduct Disaggregated Distributional Analyses of Adopting the Less Stringent Standard and Adopting the More Stringent Presumptive Standard

Finally, EPA should clarify that states must consider the distributional impacts of both the proposed less stringent standard and the alternative if the variance is not granted (i.e., the presumptive level of stringency in the applicable emission guideline from the final rule). For each analysis, benefits to each vulnerable community should be disaggregated and, whenever possible, the states' analyses should be quantitative to facilitate comparison. To that end, EPA could help states by providing any available information on quantifying the health harms from the relevant pollutants.

⁸³ *Id.* at 74,818 ("[P]roviding a clear analytical framework for EG OOOOc for the invocation of [remaining useful life and other factors] will provide regulatory certainty for states and the regulated community as they seek to craft satisfactory plans that the EPA can ultimately approve.").

⁸⁴ EJ TECHNICAL GUIDANCE, *supra* note 56, at 16–17.

⁸⁵ *Id.* at 15.

⁸⁶ *Id.* at 19.

⁸⁷ See *Methodology*, COUNCIL ON ENV'L QUALITY, <https://screeningtool.geoplatform.gov/en/methodology#3/33.47/-97.5> (last visited Feb. 13, 2023).

⁸⁸ See *EJScreen: Environmental Justice Screening and Mapping Tool*, EPA, <https://www.epa.gov/ejscreen> (last visited Feb. 13, 2023).

Once a state has analyzed the allocation of benefits under both scenarios, it would then be in a position to make an informed decision as to whether to pursue a less stringent standard. And, from the perspective of EPA, disaggregating the benefits of each proposed variance would put the agency in a position to evaluate whether ratifying the less stringent standard would harm vulnerable communities, which as noted above, is prohibited by the Supplemental Proposal when states are relying on a facility's remaining useful life.

IV. EPA's Equivalency Determination for the Methane Charge Should Be Quantitative and Reflect a Multi-Year Comparison

The Inflation Reduction Act established a methane charge that applies unless compliance with standards of performance for new and existing oil and gas operations “will result in equivalent or greater emissions reductions as would be achieved by the [2021 Proposed Rule], if such rule had been finalized and implemented.”⁸⁹ In the Supplemental Proposal, EPA explains that its current comparison of the emissions reductions achieved by the 2021 Proposed Rule and the Supplemental Proposal is qualitative and that it “does not believe that it is appropriate to quantitatively compare the emissions reductions” between these two proposals.⁹⁰ EPA further suggests that this qualitative comparison should reflect only the stringency of the respective rules when each is fully phased in.⁹¹

EPA should quantitatively compare the total emissions reductions of the rules, taking into account their stringencies in each year. Whether EPA adopts this approach for the final rule or not, it should explain that a quantitative review represents a best practice for future equivalency determinations, for the reasons explained below. If it chooses not to apply a quantitative approach here, it should explain why this case is the exception because the Supplemental Proposal tracks so closely with the 2021 Proposed Rule, as they are part of the same rulemaking.

A. The Equivalency Determination Should Be Quantitative to Facilitate Accurate Comparison

EPA states that quantitative comparison would be inappropriate because the Supplemental Proposal includes updated assumptions and methodologies that impact both the baseline and policy scenarios.⁹² EPA believes the Supplemental Proposal to be more stringent than the 2021 Proposed Rule, but, due to these changes in assumptions and methodologies, EPA's current estimate of methane reduction for the Supplemental Proposal is 36 million short tons compared to the prior estimate of 41 million short tons for the 2021 Proposed Rule.⁹³

A qualitative approach may be appropriate under the unique circumstances of this rulemaking because the differences between the final rule and the 2021 Proposed Rule will likely be

⁸⁹ 42 U.S.C. § 7436(f)(6)(ii).

⁹⁰ Supplemental Proposal, *supra* note 2, at 74,721.

⁹¹ *Id.* (“The EPA believes that the appropriate temporal comparison should be based on when requirements are fully implemented by the sources (*i.e.*, if a state phases in installation of zero-emitting pneumatic controllers over more than one year, the comparison should be made at the point that the emission guidelines require full use of zero-emitting controllers).”).

⁹² *Id.*

⁹³ Compare RIA, *supra* note 3, at 64 tbl.3-2, with PRIA, *supra* note 51, at 3-5 tbl.3-2.

relatively minor and point in the direction of increased stringency. But, even though the similarities between the design of the 2021 Proposed Rule and the Supplemental Proposal make it possible for EPA to find the Supplemental Proposal at least equivalent without a quantitative analysis, EPA should conduct a quantitative equivalency determination to set a standard of best practice for appropriate review in future rulemakings. Critically, qualitative comparisons for subsequent rulemakings may not always be so straightforward.

For example, the agency could promulgate a new regulation in the future that is more stringent in some ways but less stringent in other ways than the 2021 Proposed Rule. A quantitative approach would better indicate whether that new regulation is at least as stringent as the 2021 Proposed Rule. EPA has an opportunity now to set a best practice for future rulemakings that quantitative analysis is most appropriate for the equivalency determination.

To conduct a quantitative equivalency determination, EPA could analyze the 2021 Proposed Rule using the same assumptions and methodologies that EPA now uses for the Supplemental Proposal. This would allow an apples-to-apples comparison of the emissions reductions from the two regulations.

B. Considering Stringency in Each Year Would Allow for More Accurate Comparisons

EPA solicits comments on whether the appropriate temporal comparison for equivalency determinations should be based on (a) when the regulations' respective requirements are fully implemented or (b) a multi-year comparison that accounts for stringency in each year.⁹⁴ EPA says it currently prefers the former but is seeking comment on whether that is the best approach.⁹⁵

EPA's preferred approach (comparing full-implementation stringency) could undermine Congress's intent that the methane charge be suspended only when EPA has sufficiently regulated methane emissions. For example, a future administration might promulgate a new methane regulation that is as stringent as the 2021 Proposed Rule when each is fully implemented, yet the new regulation might take a decade or longer to ramp up to that stringency. The delay might be due to a glide path to stringency within the new rule,⁹⁶ or elongated deadlines for submission, approval, and compliance with state plans,⁹⁷ or both. If the equivalency determination were to depend only on stringency when the respective rules are fully implemented, these rules would be "equivalent." However, under the slow-ramping rule, the total

⁹⁴ Supplemental Proposal, *supra* note 2, at 74,721.

⁹⁵ *Id.*

⁹⁶ See, e.g., *Standards of Performance for New and Existing Stationary Sources: Electric Utility Steam Generating Units*, 70 Fed. Reg. 28,606, 28,617–28,621 (May 5, 2005) (establishing decreasing caps on mercury emissions that achieved maximum stringency in 15 years); *Carbon Pollution Emission Guidelines for Existing Stationary Sources: Electric Utility Generating Units*, 80 Fed. Reg. 64,662, 64,667 (Oct. 23, 2015) (establishing increasingly stringent performance rates that reach maximum stringency in 15 years); *Standards of Performance for Stationary Compression Ignition Internal Combustion Engines*, 71 Fed. Reg. 39,154, 39,157 tbl.1 (July 11, 2006) (achieving full stringency in nine years).

⁹⁷ See Supplemental Proposal, *supra* note 2, at 74,831–74,837.

emissions reductions would be far less than the 2021 Proposed Rule, so a suspension of the methane charge would be unjustified.

V. EPA Should Reconsider Whether to Accelerate the Timeline for Compliance with State Plans for Select Performance Standards

The Supplemental Proposal provides that state plans must require compliance with emissions standards within three years, an increase from the two-year timeline of the 2021 Proposed Rule.⁹⁸ EPA considered requiring different compliance timelines for different facilities in order to reduce emissions sooner, but ultimately proposed this uniform three-year timeline.⁹⁹ EPA summarized its concerns that requiring all facilities to come into compliance at the same time could (1) increase costs (e.g., by causing facilities to compete for a limited supply of specialized equipment) and (2) necessitate difficult planning for the implementation of such comprehensive regulations across so many distinct facilities.¹⁰⁰

EPA should reconsider whether the benefits of the proposed three-year uniform deadline may be overstated and whether the urgency of the health and environmental harms that state plans will address merits a shorter deadline for compliance to increase net benefits for society. The D.C. Circuit vacated the EPA’s 2019 amendments to the Section 111(d) implementing regulations—which substantially extended the deadlines for sources’ compliance with state plans—because EPA “g[a]ve no consideration to the need for speed” in preventing harm to human health and the environment.¹⁰¹ Here, EPA has given some consideration to the need for speed, but, given the Supplemental Proposal’s significant health and environmental benefits, EPA should reevaluate the feasibility of a more aggressive compliance schedule that would allow these benefits to be realized sooner.

To select which standards of performance merit an earlier compliance deadline, EPA should apply the nine factors that it identified for this very purpose in the Supplemental Proposal (e.g., supply-chain issues).¹⁰² However, in lieu of the existing second and ninth factors (“[t]he cost of equipment” and “overall methane emissions reduction that will result from control of existing sources under the [emissions guideline]”), it would be preferable to examine net benefits. Compared to methane emissions reductions alone, looking to net benefits would allow for consideration of all relevant costs and benefits—including benefits from methane’s co-emissions—when evaluating whether to prioritize compliance with one standard of performance over another.

In particular, these factors indicate that EPA should substantially shorten the timeline for existing sources to comply with the super-emitter response program. EPA’s concerns about the costs of simultaneous implementation across the sector and planning burdens do not apply to this

⁹⁸ *Id.* at 74,834–36.

⁹⁹ *Id.* at 74,836.

¹⁰⁰ *Id.* at 74,835.

¹⁰¹ *Am. Lung Ass’n v. Env’t Prot. Agency*, 985 F.3d 914, 991 (D.C. Cir. 2021), *rev’d and remanded on other grounds sub nom. W. Virginia v. Env’t Prot. Agency*, 142 S. Ct. 2587 (2022).

¹⁰² Supplemental Proposal, *supra* note 2, at 74,835 tbl.38.

program, which would merely require owners to perform a root-cause analysis and take corrective action if they are notified of a super-emitter emissions event.¹⁰³ Indeed, EPA already determined that there would be “no associated monitoring cost for owners and operators” because they “do not bear the cost of monitoring and detecting super-emitter emissions events.”¹⁰⁴ Further, the Supplemental Proposal selected a 5-day action deadline for super-emitter events instead of a 14-day deadline because, given the scale of super-emitter event emissions, “it is imperative that mitigation is achieved in a timely manner.”¹⁰⁵ For the same reasons that 14 days is too long to wait before acting on a single super-emitter event, three years is too long to wait for the entire program.

In instances where EPA has differentiated between subcategories of affected facilities, EPA should further consider accelerating compliance for select subcategories if doing so appears more net beneficial than subjecting all designated facilities to the same deadline. This approach would better address the urgency of the situation without incurring the full costs that would come with accelerating compliance for all facilities affected by a broader emissions guideline. Staggering compliance across tiers within a single emissions guideline could reduce the planning burden on entities in a given year and help prevent bottlenecks for specialized equipment and services by spreading compliance deadlines out over time.

For instance, consider fugitive emissions at wells, a category that EPA already divides into four tiers with different monitoring requirements based on the number of wells at the site and the presence of major equipment.¹⁰⁶ EPA could apply the same nine factors discussed above to designate one or more tiers of wells subject to an accelerated compliance timeline. EPA could conduct a similar assessment for its four potential subcategories for pneumatic controllers (well sites, gathering and boosting stations, transmission and storage compressor stations, and natural gas processing plants).¹⁰⁷

This tiering of compliance deadlines may increase net benefits relative to waiting three years for all four tiers because a subset of the Supplemental Proposal’s benefits would be achieved sooner and thus accrue over an additional period of time. While annual costs would also accrue over the additional time, the benefits would most likely exceed the costs to the same extent as they are projected to do so for future years.

Respectfully,

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¹⁰³ *Id.* at 74,712 tbl.3.

¹⁰⁴ *Id.* at 74,752, 74,755.

¹⁰⁵ *Id.* at 74,751.

¹⁰⁶ *Id.* at 74,712 tbl.3.

¹⁰⁷ RIA, *supra* note 3, at tbl.1-2.