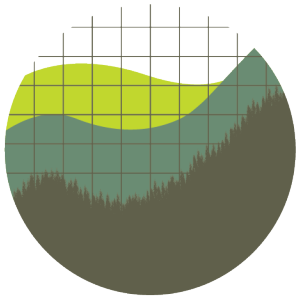

Institute *for*
Policy Integrity
NEW YORK UNIVERSITY SCHOOL OF LAW

December 16, 2018

VIA ELECTRONIC SUBMISSION

Environmental Protection Agency

Attn: Ms. Karen Marsh, Sector Policies and Programs Division (E143–05), Office of Air Quality Planning and Standards
Re: Oil and Natural Gas Sector: Emission Standards for New, Reconstructed, and Modified Sources Reconsideration, 83 Fed. Reg. 52,056 (proposed Oct. 15, 2018)
Docket ID: EPA–HQ–OAR–2017–0483

The Institute for Policy Integrity at New York University School of Law[1] ("Policy Integrity") respectfully submits the following comments to the Environmental Protection Agency ("EPA") regarding proposed changes to the new source performance standards, issued under Section 111 of the Clean Air Act, for methane and volatile organic compound ("VOC") emissions from the oil and natural gas sector ("Proposed Methane Rule").[2] Policy Integrity is a non-partisan think tank dedicated to improving the quality of government decision-making through scholarship in the fields of administrative law, economics, and public policy.

Our comments focus on inadequacies in the cost-benefit analysis accompanying the Proposed Methane Rule. Specifically, we note that EPA should:

- more thoroughly assess the costs and benefits of proposed changes to federal monitoring and repair requirements;
- assess the costs and benefits of proposed state equivalency determinations;
- value forgone methane reductions using the global social cost of methane; and
- perform a break-even analysis for non-methane reductions.

Without completing these additional steps, EPA cannot reasonably conclude that the Proposed Methane Rule is economically justified.

[1] This document does not purport to present New York University School of Law's views, if any.
[2] EPA, Oil and Natural Gas Sector: Emission Standards for New, Reconstructed, and Modified Sources Reconsideration, 83 Fed. Reg. 52,056 (proposed Oct. 15, 2018) [hereinafter Proposed Methane Rule].

Background

On June 3, 2016, EPA finalized a set of performance standards for new, reconstructed, and modified sources of methane and VOCs in the oil and natural gas sector (the "Original Methane Rule").[3] The Original Methane Rule sought to cut methane and VOC emissions from covered sources by establishing emissions standards, operational standards, and monitoring requirements.[4] As a co-benefit, the rule was also expected to reduce emissions of hazardous air pollutants ("HAPs") like benzene, toluene, ethylbenzene, xylene, and n-hexane.[5]

In April 2017, EPA announced it was reconsidering the Original Methane Rule because of President Trump's Executive Order 13,783, which established "a national policy in favor of energy independence."[6] Six months later, the agency issued the current proposal, which would weaken the requirements of the Original Methane Rule in several significant respects.[7] Most notably, the Proposed Methane Rule scales back federal monitoring and repair requirements and allows state programs to substitute for the federal program. To justify these changes, EPA relies on analysis that assigns sharply lower benefits to methane reductions than the Original Methane Rule did and essentially ignores the benefits of non-methane reductions.

Executive Order 12,866 requires agencies to assess the costs and benefits of any economically significant regulatory action, including, but not limited to, "any adverse effects on . . . health, safety, and the natural environment."[8] This assessment should be based "on the best reasonably obtainable scientific, technical, economic, and other information," and effects should be quantified "to the extent feasible."[9] Long-standing guidance on regulatory analysis from the Office of Management and Budget similarly advises that "[s]ound quantitative estimates of benefits and costs, where feasible, are preferable to qualitative descriptions."[10] Because some effects are "too difficult to quantify or monetize given current data and methods," however, agencies must also "carry out a careful evaluation of non-quantified benefits and costs."[11]

Separate from the requirements of Executive Order 12,866, courts have held that "[w]hen an agency decides to rely on a cost-benefit analysis as part of its rulemaking, a serious flaw undermining that analysis can render the rule unreasonable."[12] In weighing a possible

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[3] *See* EPA, Oil and Natural Gas Sector: Emission Standards for New, Reconstructed and Modified Sources, 81 Fed. Reg. 35,824 (June 3, 2016) [hereinafter Original Methane Rule].
[4] *See id.* at 35,824.
[5] *See id.* at 35,827.
[6] *See* EPA, *Review of the 2016 Oil and Gas New Source Performance Standards for New, Reconstructed, and Modified Sources*, 82 Fed. Reg. 16,331, 16,332 (2017).
[7] Proposed Methane Rule, 83 Fed. Reg. at 52,056.
[8] Exec. Order No. 12,866 § 6(a)(3)(C), 58 Fed. Reg. 51,735 (Oct. 4, 1993).
[9] *Id.* §§ 1(b)(7), 6(a)(3)(C).
[10] OFFICE OF MGMT. & BUDGET, EXEC. OFFICE OF THE PRESIDENT, OMB CIRCULAR A-4, REGULATORY ANALYSIS 26 (2003) [hereinafter CIRCULAR A-4].
[11] *Id.* at 26-27.
[12] *Nat'l Ass'n of Home Builders v. EPA*, 682 F.3d 1032, 1040 (D.C. Cir. 2012); *see also Motor Vehicle Mfrs. Ass'n v. State Farm Mut. Auto. Ins. Co.*, 463 U.S. 29, 43 (1983) (arbitrary and capricious standard requires agency to

action, an agency "cannot tip the scales . . . by promoting [the action's] possible benefits while ignoring [its] costs."[13] Furthermore, the Supreme Court has made clear that "'cost' includes more than the expense of complying with regulations; any disadvantage could be termed a cost."[14] Such disadvantages include "harms that regulation might do to human health or the environment."[15]

Accordingly, before eliminating or weakening requirements of the Original Methane Rule, EPA must account for the costs of those changes in the form of forgone climate and health benefits. It is arbitrary and capricious for the agency to emphasize compliance expenditures that industry will avoid under the Proposed Methane Rule while ignoring or minimizing the negative consequences of accompanying increases in methane, VOC, and HAP emissions

I. EPA Must More Thoroughly Assess the Costs and Benefits of Proposed Changes to Federal Monitoring and Repair Requirements

EPA fails to estimate the extent to which many of its proposed changes to federal monitoring and repair requirements will increase emissions relative to the Original Methane Rule. These proposed changes include:

- extension of the deadline for initial monitoring surveys;
- expansion of the technical infeasibility exemption for pneumatic pumps;
- elimination of the requirement that certain certifications be made by a qualified professional engineer;
- exclusion of third-party emissions components from monitoring and repair obligations; and
- reductions in the frequency of required monitoring.

Before finalizing any of these changes, EPA must (1) estimate the emissions increases that will result from them, (2) assess—quantitatively, where possible—the health and welfare costs associated with those emissions increases, and, finally, (3) weigh those costs against the changes' benefits—i.e., avoided compliance expenditures by industry.

A. EPA Must Consider the Cost of Extending the Deadline for Initial Monitoring Surveys

The Original Methane Rule required an initial monitoring survey at well sites and compressor stations within 60 days of starting production.[16] In the Proposed Methane

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"examine the relevant data" and "articulate a satisfactory explanation for its action including a rational connection between the facts found and the choice made" (internal quotation marks omitted)).

[13] *Sierra Club v. Sigler*, 695 F.2d 957, 979 (5th Cir. 1983); *see also California v. U.S. Bureau of Land Mgmt.*, 277 F. Supp. 3d 1106, 1123 (N.D. Cal. 2017) (vacating a delay where agency relied "on precisely the same Regulatory Impact Analysis that it had previously relied on" to support its findings regarding the suspended rule's costs, but ignored that analysis's findings regarding the rule's benefits).

[14] *Michigan v. EPA*, 135 S. Ct. 2699, 2707 (2015).

[15] *Id.*; *see also Competitive Enter. Inst. v. Nat'l Highway Traffic Safety Admin.,* 956 F.2d 321, 326–27 (D.C. Cir. 1992) (holding that the agency should have considered costs in the form of safety risks associated with the smaller size of more fuel-efficient cars).

[16] *See* Original Methane Rule, 81 Fed. Reg. at 35,862, 35,891.

Rule, even though EPA says it has "not received data indicating that initial monitoring cannot be completed within the currently required 60-day timeframe,"[17] the agency solicits comments on extending this deadline to either 90 or 180 days.

EPA cites industry petitioners who claim a 180-day deadline "would not result in significantly more emissions."[18] But the agency does not explain why this contention is credible. Nor does the agency explain what counts as a "significant" emissions increase in the eyes of industry petitioners. Logically, the longer a site is unmonitored, the greater the opportunity for leaks.

EPA cannot reasonably proceed with any change to the deadlines for initial monitoring without estimating how much emissions could increase as a result of that change and weighing the climate and health costs of the additional emissions against the savings that delaying inspections would generate for source owners.

B. EPA Must Consider the Cost of Expanding the Technical Infeasibility Exemption for Pneumatic Pumps

The Original Methane Rule exempted existing well sites from pneumatic pump requirements[19] if implementing the requirements was technically infeasible.[20] "Greenfield sites"—sites with entirely new construction—were ineligible for this exemption, because new sites can be designed to accommodate regulations.[21] In the Proposed Methane Rule, however, EPA seeks to extend the technical infeasibility exemption to greenfield sites to allow for "unique process or control design requirements that may not be compatible with controlling pneumatic pump emissions."[22] For example, the agency says, "a new site may require only a high-pressure flare" to control emissions, "and it is not feasible for a low pressure pneumatic pump discharge to be routed to such a flare."[23] In sum, EPA seems concerned about requiring owners and operators to purchase specific equipment to be compliant.

But the mere fact that the pneumatic pump requirement might constrain design or equipment choices at greenfield sites does not mean that exempting such sites from the requirement is reasonable. Before finalizing an expanded exemption, EPA must estimate the emissions increases that will result from the expansion and weigh the climate and health costs of those additional emissions against any avoided compliance expenditures.

C. EPA Must Consider the Cost of Eliminating the Requirement that Certain Certifications Be Made by a Qualified Professional Engineer

The Original Methane Rule required a qualified professional engineer to certify that closed vent systems ("CVS") used for routing emissions could route all emissions to the control

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[17] Proposed Methane Rule, 83 Fed. Reg. at 52,075.
[18] *Id.*
[19] The Original Methane Rule requires pneumatic pumps at well sites to be routed to an existing emissions control device, Original Methane Rule, 81 Fed. Reg. at 35,844–45.
[20] *See* Proposed Methane Rule, 83 Fed. Reg. at 52,061.
[21] *See id.*
[22] *Id.*
[23] *Id.*

device and determine whether the pneumatic pump requirements would be technically infeasible for a site.[24] The Proposed Methane Rule would allow an in-house engineer with expertise in the design and operation of the CVS or pneumatic pumps to provide both certifications.[25] EPA states that eliminating the qualified professional engineer requirement should not affect emissions but acknowledges that it lacks any evidentiary basis for this claim.[26]

In the Original Methane Rule, EPA argued that independent third-party verification best limits the risk of bias or capture. But, in response to industry concerns about requiring third-party verification for certifying a CVS, EPA took the compromise position of requiring certification by professional engineers who are licensed and disciplined for professional misconduct by state licensure boards.[27] Logically, if EPA now eliminates the requirement that certifications be issued by engineers who are themselves certified and monitored by state licensure boards, it will increase the risk that lower-quality CVS will be approved and unwarranted certificates of infeasibility will be issued, thus increasing emissions relative to the Original Methane Rule.

Even if EPA cannot precisely estimate the extent to which the elimination of the qualified professional engineer requirement will increase emissions, the agency should at least perform a break-even analysis based on the $189 cost difference per certification between using uncertified in-house and professional engineers.[28]

D. EPA Must Consider the Cost of Exempting Certain Third-Party Emissions Components from Monitoring and Repair Obligations

The Proposed Methane Rule would modify monitoring and repair requirements to exclude some emissions components owned and operated by third-party midstream companies.[29] The Original Methane Rule included these entities because EPA assumed midstream operators could contract with producers to meet regulatory requirements.[30] EPA received petitions suggesting that renegotiating contracts is costly and that EPA did not consider these costs when promulgating the Original Methane Rule.[31] EPA says it does not have the data to estimate how this change will affect costs or benefits.[32] But uncertainty about the precise magnitude of a regulatory effect does not justify assigning that effect no value in a cost-benefit analysis.[33] Thus, EPA must make some effort to assess the extent to which

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[24] *See* Original Methane Rule, 81 Fed. Reg. at 35,848.
[25] *See* Proposed Methane Rule, 83 Fed. Reg. at 52,079.
[26] *See* EPA, REGULATORY IMPACT ANALYSIS FOR THE PROPOSED RECONSIDERATION OF THE OIL AND NATURAL GAS SECTOR EMISSIONS STANDARDS FOR NEW, RECONSTRUCTED, AND MODIFIED SOURCES 1-8 n.11 (2018) [hereinafter PROPOSED RULE RIA].
[27] *See* Original Methane Rule, 81 Fed. Reg. at 35,882–83.
[28] *See* PROPOSED RULE RIA at 2-7.
[29] *See* Proposed Methane Rule, 83 Fed. Reg. at 52,058.
[30] *See id.* at 52,076.
[31] *See id.*
[32] *See* PROPOSED RULE RIA at 1-1.
[33] *Ctr. for Biological Diversity v. Nat'l Highway Traffic Safety Admin.*, 538 F.3d 1172, 1200 (9th Cir. 2008) (finding agency reasoning arbitrary and capricious where agency argued that benefits of carbon reductions were "too uncertain to support their explicit valuation and inclusion" in a regulatory cost-benefit analysis).

exempting third-party components from monitoring and repair obligations will increase emissions.

E. EPA Must Consider the Cost of Reducing the Frequency of Monitoring

The Proposed Methane Rule would reduce the frequency of required monitoring at non-low production well sites, low-production well sites, and compressor stations.[34] Although EPA previously concluded that the monitoring frequencies required by the Original Methane Rule were cost-effective,[35] the agency now expresses concern that its modeling—even as updated for this proposal—overestimates the benefits of frequent monitoring.[36]

But even if EPA's model does overstate the emission reductions achieved by, for instance, semiannual monitoring of non-low production well sites as compared to annual monitoring of those sites, the incremental benefits of semiannual monitoring may still be large enough to justify its incremental costs. Thus, before finding that a decrease in monitoring frequency is economically rational, EPA must, for each source type, show that avoided compliance expenditures for source owners outweigh the climate and health costs of forgone emission reductions.

If EPA cannot precisely assess the degree to which its model overstates the benefits of more frequent monitoring, the agency should perform a sensitivity analysis, as recommended by Circular A-4,[37] analyzing how much monitoring can be economically justified for each source type under different assumptions about the incremental emissions reductions achieved by each additional round of monitoring.

II. EPA Must Assess the Costs and Benefits of State Equivalency Determinations

In addition to changing federal monitoring and repair requirements, EPA is proposing an alternative compliance scheme under which facilities may opt to follow state programs that EPA deems *equivalent* to the federal program.[38] Specifically, the Proposed Methane Rule would allow owners and operators in the following states to follow state requirements for monitoring frequencies, repair deadlines, and recordkeeping:[39]

- California (well sites and compressor stations);
- Colorado (well sites and compressor stations);
- Ohio (well sites and compressor stations);

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[34] *See* Proposed Methane Rule, 83 Fed. Reg. at 52,062.
[35] *See id.*
[36] *See, e.g., id.* ("Although under the updated analysis, semiannual monitoring may appear to be cost-effective . . . we may have overestimated the emission reductions and therefore the cost effectiveness" of monitoring).
[37] *See* OMB, CIRCULAR A-4 3 (2003).
[38] *See* Proposed Methane Rule, 83 Fed. Reg. at 52,080.
[39] *See id.* at 52,081. The proposed rule is unclear regarding whether state or federal recordkeeping requirements will apply. Compare *id.* ("The proposed alternative [state] fugitive emissions standards include alternatives for monitoring frequencies, repair deadlines, and recordkeeping."), *with* PROPOSED RULE RIA at 2-10 ("[A]ny additional costs and benefits incurred by facilities in these states to comply with the federal standards beyond the state requirements (e.g., recordkeeping or verification requirements) are not reflected in this RIA."). This discrepancy should be resolved, and, if the state requirements will control, the costs and benefits of the change should also be analyzed.

- Pennsylvania (well sites and compressor stations);
- Texas (well sites); and
- Utah (well sites).[40]

EPA's justification for its state equivalency determinations falls short for two reasons. First, EPA fails to provide any analysis of the costs and benefits of permitting compliance with state programs instead of the federal requirements of the *Original* Methane Rule. Second, EPA fails to adequately assess the costs and benefits of permitting compliance with state programs instead of the federal requirements of the *Proposed* Methane Rule. In effect, EPA has three regulatory alternatives:

(1) maintaining the status quo (i.e., the Original Methane Rule);
(2) adopting the proposed changes to federal monitoring and repair requirements;
(3) adopting the proposed changes to federal monitoring and repair requirements *and* the proposed state equivalency determinations (i.e., the Proposed Methane Rule).

To justify finalization of Alternative 3 (the Proposed Methane Rule), EPA must show that the proposal is not only better than Alternative 1 (the Original Methane Rule), but also better than Alternative 2. Thus, EPA must estimate the impact that permitting sole compliance with state programs will have on methane, VOC, and HAP emissions, as compared to compliance with federal requirements under both the Original and Proposed Methane Rules. The agency must then weigh the climate and health costs of any projected emissions increases against any avoided compliance expenditures for regulated sources.

A. EPA Cannot Reasonably Claim that State Programs Will Achieve the Same Level of Emissions Reduction as the Federal Requirements of the Original *Methane Rule*

EPA's Regulatory Impact Analysis ("RIA") does not include facilities covered by "equivalent" state programs in its estimates of facilities affected by the Proposed Methane Rule. This is because EPA believes that sources in those states "would be expected to control emissions at a comparable level regardless of the reconsidered federal standards."[41] In other words, EPA appears to contend that state programs will achieve the exact same climate and health benefits as the federal requirements of the Original Methane Rule, at the exact same cost. This is almost certainly false.

The Technical Support Document for the Proposed Methane Rule ("TSD") asserts that five states have regulations that meet or exceed the requirements of the Original Methane Rule.[42] However, neither the TSD nor an accompanying memorandum evaluating the state programs (the "State Program Equivalency Memo") contains any analysis to support this

[40] *See* Proposed Methane Rule, 83 Fed. Reg. at 52,095–96.
[41] *See* PROPOSED RULE RIA at 2-10.
[42] EPA, BACKGROUND TECHNICAL SUPPORT DOCUMENT FOR THE PROPOSED RECONSIDERATION OF THE NEW SOURCE PERFORMANCE STANDARDS 40 CFR PART 60, SUBPART OOOOA 70 (2018) [hereinafter TSD]. The TSD states that the Texas program is considered equivalent to the Proposed Methane Rule, but not to the Original Methane Rule. *See id.* at 71–72.

claim. The State Program Equivalency Memo evaluates the requirements of state programs only in comparison to the Proposed Methane Rule.[43]

Furthermore, as discussed below, the State Program Equivalency Memo reveals that many state programs deemed "equivalent" to the federal requirements of Proposed Methane Rule are, in reality, less stringent. And if the state programs are less stringent than the federal requirements of the *Proposed* Methane Rule, they certainly cannot be expected to achieve the same level of emissions reduction as the stricter federal requirements of the *Original* Methane Rule. Indeed, even state programs that could correctly be deemed equivalent to the federal requirements of the Proposed Methane Rule may nevertheless be less stringent than those of the Original Methane Rule.

B. EPA Cannot Reasonably Claim that State Programs Will Achieve the Same Level of Emissions Reduction as the Federal Requirements of the Proposed *Methane Rule*

In the State Program Equivalency Memo, EPA compared the requirements of state programs with the federal requirements of the Proposed Methane Rule and identified six states with programs that EPA deemed equivalent.[44] However, the memo found state programs inequivalent only where the state program lacked a generally applicable framework for monitoring facilities—for example, where there was no instrument monitoring,[45] an unspecified enforcement mechanism,[46] or flexible requirements.[47] Similarly, state programs were not deemed equivalent where the program was mandated by a time-limited consent decree[48] or where the state merely incorporated the requirements of the Original Methane Rule.[49]

No state program was deemed inequivalent for having requirements that were simply insufficiently stringent compared to the federal requirements of the Proposed Methane Rule. As a result, many "equivalent" state programs differ materially from the federal requirements of the Proposed Methane Rule and likely allow for higher emissions. For example:

- Covered Facilities: The requirements of the Colorado, Ohio, and Utah programs do not apply to every well site and compressor station in these states.[50] EPA should clarify whether facilities not currently subject to state requirements would be regulated under the federal requirements, under the state requirements, or under neither, and EPA should explain why that choice is cost-benefit justified.

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[43] *See* EPA, *Memorandum on Equivalency of State Fugitive Emissions Programs for Well Sites and Compressor Stations to Proposed Standards* at 40 CFR Part 60, Subpart OOOOa, 2 (Apr. 12, 2018), *available at* https://www.epa.gov/sites/production/files/2018-09/documents/equivalency_of_state_fugitive_emissions_programs_for_well_sites_and_compressor_stations.pdf [hereinafter State Program Equivalency Memo].
[44] *See id.* at 28.
[45] *See id.* (Montana).
[46] *See id.* at 13 (New Mexico).
[47] *See id.* at 17 (Wyoming).
[48] *See id.* at 14-15 (North Dakota).
[49] *See id.* at 18 (Oklahoma), 26 (West Virginia).
[50] *See id.* at 10–11, 15, 25.

- Definition of Leak: In California, Ohio, and Texas, the programs define leaks, in some or all scenarios, at a higher threshold than federal requirements do.[51] In discussing the California program, EPA argues that the California program's "more frequent monitoring warrants allowance of a higher fugitive definition because larger fugitive emissions will be found faster and repaired sooner, thus reducing the overall length of the emission event."[52] This reasoning is inconsistent with EPA's argument that higher frequency monitoring in the federal program itself will yield minimal emission reduction benefits.[53] Additionally, in all three state programs, leaks that are between the lower federal threshold for a leak and the higher state threshold could remain unrepaired indefinitely, even after detection, because owners and operators are only required to repair leaks with emissions above the applicable state threshold.[54]

- Initial Monitoring Requirements: The California, Colorado, Ohio, and Texas programs all require the initial monitoring survey to occur within 90 days, rather than 60 days,[55] creating the potential for higher volumes of emissions before detection and repair than would occur under the federal requirements if EPA does not finalize a later deadline.[56]

- Repair Requirements: For repairs where a part is ordered, the Colorado and Pennsylvania programs require repairs to be completed within 15 or 10 days, respectively, of a missing part's arrival.[57] Relative to the federal requirements of the Proposed Methane Rule, these state programs create incentives to delay ordering parts for costly repairs and remove incentives for owners and operators to maintain stocks of parts necessary for routine maintenance.[58]

- Delay of Repair Requirements: The Delay of Repair (DOR) requirements in Colorado, Ohio, and Texas establish the state DOR deadline as the "next shutdown" or the "next

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[51] *See id.* at 4, 16, 22.
[52] Proposed Methane Rule, 83 Fed. Reg. at 52,080–81.
[53] *See id.* at 52,064.
[54] Leaks can be identified through a technique called "Method 21," which tests for high concentrations of methane and VOCs. Because the air surrounding facility components may contain background concentrations of these compounds, federal regulations define leaks identified using Method 21 as concentrations of 500 ppm or greater. *See id.* at 52,092. Alternatively, recent advances in imaging techniques allow surveyors to visually identify leaks using optical gas imaging ("OGI"). *See id.* Under both federal and state requirements that approve OGI as a monitoring instrument, any emissions identified using OGI constitute a leak and must be repaired. *See id*; State Program Equivalency Memo at 8, 16, 19, 24.
[55] *See* State Program Equivalency Memo at 6, 8, 16, 23.
[56] EPA does not propose changing the 60-day deadline for the initial monitoring survey in the Proposed Methane Rule, but EPA is soliciting comments on a 90-day or 180-day deadline. *See* Proposed Methane Rule, 83 Fed. Reg. at 52,075.
[57] *See* State Program Equivalency Memo at 8, 18.
[58] As of 2016, the EPA does not agree with extending repair deadlines based on part availability. The preamble to the Original Methane Rule states that "[t]he EPA does not agree that unavailability of supplies or custom parts is a justification for delaying repair (*i.e.*, beyond the 30 days for repair provided in this final rule) since the operator can plan for repair of fugitive emission components by having stock readily accessible or obtaining the parts within 30 days after finding the fugitive emissions." *See* Original Methane Rule, 81 Fed. Reg. at 35,858. EPA does not expressly disavow this position anywhere in the Proposed Methane Rule or State Program Equivalency Memo. If EPA no longer agrees, it should justify the change in its interpretation.

scheduled shutdown."[59] Under federal requirements, if repairs require the facility to be shut-down or it is technically infeasible to repair within 30 days, the repair must be completed within two years or during the next scheduled shutdown, whichever occurs first.[60] Therefore, if the regulated components run for more than two years without shutting down, then these "equivalent" state programs would allow leaks to remain unaddressed for longer than the federal program would. Further, programs that set the DOR deadline as the "next scheduled shutdown" may incentivize owners and operators to avoid formally scheduled shutdowns where repairs are costly and where normal operations do not require periodic pre-scheduled shutdowns.

These discrepancies between state requirements and the federal requirements of the Proposed Methane Rule may allow a higher rate of emissions from state-regulated facilities. For any state program requirement that is less stringent than a corresponding requirement of the federal program, EPA must explain why emissions are nonetheless not expected to increase or why allowing facilities to comply only with the alternative state programs is cost-benefit justified despite the potential for increased emissions.

III. EPA Should Value Forgone Methane Reductions Using the Global Social Cost of Methane

EPA significantly understates the cost of forgone methane reductions by excluding damage from climate impacts occurring outside U.S. borders. For further discussion of this issue, see Policy Integrity's separate comments on the social cost of methane, filed jointly with several other organizations.[61]

IV. EPA Must Perform a Break-Even Analysis for Non-Methane Reductions

The Original Methane Rule was expected to remove 150,000 tons of VOCs from the atmosphere in 2020 and 210,000 tons in 2025.[62] Relative to that baseline, EPA estimates that the Proposed Methane Rule will increase VOC emissions by about 100,000 tons over the 2019–2025 timeframe, assuming semiannual monitoring at compressor stations.[63]

EPA does not monetize the costs associated with forgone VOC reductions in its RIA for the Proposed Methane Rule. The agency claims accurate valuation is impossible because of "data limitations regarding potential locations of new and modified sources affected by this rulemaking."[64] Instead, the agency qualitatively analyzes the health effects of higher VOC emissions, as precursors to both ozone and $PM_{2.5}$.

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[59] *See* State Program Equivalency Memo at 8, 11, 16–17, 23.
[60] *See* Original Methane Rule, 81 Fed. Reg. at 35,858. The Proposed Methane Rule does not propose a change to the requirements, but EPA is soliciting comments on the two-year deadline for delayed repairs. *See* Proposed Methane Rule, 83 Fed. Reg. at 52,076.
[61] Policy Integrity et al., Flawed Monetization of Forgone Benefits in the Proposed Reconsideration of Oil and Natural Gas Sector: Emission Standards for New, Reconstructed, and Modified Sources (Dec. 16, 2018).
[62] *See* Original Methane Rule, 81 Fed. Reg. at 35,827.
[63] Proposed Methane Rule, 83 Fed. Reg. at 52,059. The Proposed Methane Rule is also projected to increase HAPs emissions by 3,800 tons over the same time period.
[64] *See* PROPOSED RULE RIA at 3-14.

But even if EPA cannot precisely estimate the monetary value of VOC reductions that will be forgone under the Proposed Methane Rule, the agency can at least perform break-even analysis for such reductions, as it did for the Original Methane Rule. In the Original Methane Rule's RIA, EPA referenced a range of benefit-per-ton estimates for a break-even analysis involving a regulatory option that appeared net costly when only methane reductions were considered.[65] For the option to be cost-benefit justified, the agency calculated that the value of a VOC ton reduced would have to be $460 in 2020 and $160 in 2025, well within the range supported by studies.[66] In the years since the Original Methane Rule was promulgated, additional studies have been published that could further inform EPA's analysis.[67]

Ultimately, while there may be "a range of values" for the health benefits of VOC reductions (and the costs of forgone reductions), the value "is certainly not zero."[68] Given the availability of monetized damage estimates for VOC emissions, as well as EPA's past reliance on such estimates, the agency cannot reasonably rely on a purely qualitative analysis of VOC-related harms in this rulemaking.[69]

Conclusion

In its analysis supporting the Proposed Methane Rule, EPA emphasizes cost savings that are likely to result from changes to existing performance standards but fails to adequately account for accompanying reductions in the standards' previously identified benefits. This lopsided analytical approach renders the proposal arbitrary and capricious. Before taking any further action on this proposal, EPA should more thoroughly assess the costs and benefits of proposed changes to federal monitoring and repair requirements, assess the costs and benefits of state equivalency determinations, value forgone methane reductions using the global social cost of methane, and perform a break-even analysis for non-methane reductions.

Respectfully,

Isabel Carey
Natalie Jacewicz
Jack Lienke

Institute for Policy Integrity
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[65] *See* ORIGINAL RIA at 5-3 & 5-4.
[66] *See id.*
[67] *See e.g.*, Neal Fann et al., *Assessing Human Health $PM_{2.5}$ and Ozone Impacts from U.S. Oil and Natural Gas Sector Emissions in 2025*, 52 ENVTL. SCI. & TECH. 8095 (2018).
[68] *Ctr. for Biological Diversity v. Nat'l Highway Traffic Safety Admin.*, 538 F.3d 1172, 1200 (9th Cir. 2008)
[69] In addition to repeating its prior break-even analysis for VOC emissions, EPA should consider expanding that analysis to include HAPs. Before determining that the Proposed Methane Rule is cost-benefit justified, EPA should analyze whether any quantified net benefits seem likely to outweigh the unquantified forgone benefits of HAP reductions.