



September 24, 2019

VIA ELECTRONIC SUBMISSION

Environmental Protection Agency

Attn: Elineth Torres, Sector Policies and Programs Division (D205-02), Office of Air Quality Planning & Standards

Re: Reclassification of Major Sources as Area Sources Under Section 112 of the Clean Air Act, 84 Fed. Reg. 36,304 (proposed July 26, 2019)

Docket ID: EPA-HQ-OAR-2019-0282

The Institute for Policy Integrity (“Policy Integrity”) at New York University School of Law¹ respectfully submits the following comments to the Environmental Protection Agency (“EPA” or the “agency”) regarding the proposed abandonment of its longstanding “Once-In, Always In” policy to permit the reclassification of major sources as area sources (“Proposed Rule”).² Policy Integrity is a non-partisan think tank dedicated to improving the quality of government decisionmaking through advocacy and scholarship in the fields of administrative law, economics, and public policy.

Our comments focus on inadequacies in EPA’s assessment of the Proposed Rule’s costs and benefits. Specifically, we note that EPA fails to:

- conclude that the Proposed Rule’s benefits justify its costs—and to provide an analysis that could support such a conclusion;
- conduct its illustrative emissions analyses against an appropriate baseline;
- make reasonable assumptions in its illustrative emissions analyses;
- account for the possibility of inadequate state enforcement; and
- monetize the health and environmental effects of emissions changes.

These analytic shortcomings render the Proposed Rule arbitrary and capricious.

¹ This document does not purport to present New York University School of Law’s views, if any.

² See EPA, Reclassification of Major Sources as Area Sources Under Section 112 of the Clean Air Act, 84 Fed. Reg. 36,034 (proposed July 26, 2019) [hereinafter Proposed Reclassification Rule].

I. EPA Fails to Conclude That the Proposed Rule’s Benefits Justify Its Costs—and To Provide an Analysis That Could Support Such a Conclusion (Comment C—other)

Executive Order 12,866 instructs agencies to “propose or adopt a regulation only upon a reasoned determination that the benefits of the intended regulation justify its costs,” and after considering “all costs and benefits of available regulatory alternatives, including the alternative of not regulating.”³ But in the Proposed Rule, EPA fails to make such a determination. Instead, it claims total ignorance “as to the magnitude, direction, and distribution of changes in emissions across the broad array of affected sources resulting from this rulemaking.”⁴ As a result, EPA cannot possibly conclude that compliance cost savings associated with the Proposed Rule will justify any associated health and environmental harms, because the agency has no idea what those harms might be.

For an economically significant action like the Proposed Rule, Executive Order 12,866 requires agencies to provide “to the extent feasible, a quantification of [the proposal’s] costs,” with costs defined to include “any adverse effects on . . . health, safety, and the natural environment.”⁵ The Office of Management and Budget’s longstanding guidance document on regulatory analysis, Circular A-4, similarly instructs agencies to attempt to “quantif[y] and express[] in monetary units” all costs and benefits, as this “provides decision makers with a clear indication of the most efficient alternative.”⁶ The Circular further explains that when it is “not . . . possible to express in monetary units all of the important benefits and costs,” the agency must still perform a sufficient analysis to “determin[e] how important the non-quantified benefits or costs may be in the context of the overall analysis.”⁷ Here, though interagency commenters urged EPA to “estimate both the potential emission reductions and increases under this proposed policy change,”⁸ EPA failed to provide any indication of the aggregate emissions changes that might result from the Proposed Rule.

By failing to offer any assessment of the Proposed Rule’s aggregate emissions impacts, EPA violates not only Executive Order 12,866 but also the Administrative Procedure Act (“APA”). Under the APA, agency decisions must be “based on consideration of the relevant factors”⁹ and “[a]gencies have long treated cost as a centrally relevant factor when deciding whether to regulate.”¹⁰ As interagency commenters observed, “by not commenting on the likely direction of the change (increase or decrease)” in emissions, EPA “falls short of even a qualitative

³ Exec. Order No. 12,866 § 1(a), (b)(6), 58 Fed. Reg. 51,735, 51,735-36 (Oct. 4, 1993).

⁴ Proposed Reclassification Rule, 84 Fed. Reg. at 36,332.

⁵ Exec. Order No. 12,866 § 6(a)(3)(C)(ii).

⁶ OFFICE OF MGMT. & BUDGET, EXEC. OFFICE OF THE PRESIDENT, CIRCULAR A-4, at 2 (2003), *available at* <https://www.whitehouse.gov/sites/whitehouse.gov/files/omb/circulars/A4/a-4.pdf> [hereinafter CIRCULAR A-4].

⁷ *Id.*

⁸ EO12866 Review – EPA Major Source-Area Source Definition (ID: EPA-HQ-OAR-2019-0282-0130), at 25 cmt. A14 (Mar. 21, 2019) [hereinafter EO12866 Review of Proposed Rule].

⁹ *Motor Vehicle Mfrs. Ass’n v. State Farm Mut. Auto Ins. Co.*, 463 U.S. 29, 42 (1983).

¹⁰ *Michigan v. EPA*, 135 S. Ct. 2699, 2707 (2015).

assessment” of the rule’s pollution-related costs.¹¹ Accordingly, the agency has “failed to consider an important aspect of the problem,” and the proposed action is arbitrary and capricious.¹²

EPA defends its failure to consider emissions impacts by insisting that it has “very limited information on how many sources may choose to limit their [potential to emit hazardous air pollutants (“HAPs”)] to below major source thresholds and reclassify to area source status as a result of this action.”¹³ Without data on how many sources are expected to reclassify, the agency claims, it cannot “provide precise estimates of changes in emissions for all source categories that could be impacted by this action.”¹⁴

But an agency’s uncertainty about the precise magnitude of a regulatory effect does not justify assigning that effect no weight in the agency’s cost-benefit analysis.¹⁵ While there may be “a range of values” for the rule’s potential emissions effects, the value “is certainly not zero.”¹⁶ Both Circular A-4 and EPA’s own Guidelines for Economic Analysis provide ample guidance on how EPA can account for uncertainty in its presentation of costs and benefits.¹⁷ What EPA cannot do is disclaim responsibility to assess a primary consequence of its action, as it does in the Proposed Rule.

II. EPA Fails To Assess the Proposed Rule’s Emissions Impacts Against an Appropriate Baseline (Comments C–10, C–56 & C–57)

EPA’s three illustrative analyses of potential emissions impacts, discussed in more detail in section III of these comments, have a common, fundamental failing: they do not acknowledge that restraints on major-source emissions may become more stringent in the future; instead, EPA assumes that current major-source emissions standards will remain constant for the Proposed Rule’s lifespan. Accordingly, EPA does not conduct its analysis against the appropriate baseline.

As explained in EPA’s peer-reviewed *Guidelines for Economic Analysis*, the baseline of an economic analysis is “a reference point that reflects the world without the proposed regulation.”¹⁸ However, a baseline “does not necessarily mean that no change in current conditions will take place.”¹⁹ Instead, the baseline should incorporate changes expected to occur

¹¹ EO 12866 Interagency Comments on U.S. Environmental Protection Agency Draft Proposed Rule Titled, “Reclassification of Major Sources as Area Sources Under Section 112 of the Clean Air Act,” RIN 2060-AM75 (ID: EPA-HQ-OAR-2019-0282-0132), at 3 (Mar. 21, 2019) [hereinafter Interagency Comments].

¹² *State Farm*, 463 U.S. at 43.

¹³ Proposed Reclassification Rule, 84 Fed. Reg. at 36,327.

¹⁴ *Id.* at 36,307.

¹⁵ See *Ctr. for Biological Diversity v. Nat’l Highway Traffic Safety Admin.*, 538 F.3d 1172, 1192, 1200 (9th Cir. 2008) (finding agency reasoning arbitrary and capricious where agency argued that benefits of carbon dioxide reductions were “too uncertain to support their explicit valuation and inclusion” in a regulatory cost-benefit analysis).

¹⁶ *Id.* at 1200.

¹⁷ See EPA, GUIDELINES FOR PREPARING ECONOMIC ANALYSIS, at 11-1 to 11-11 (Dec. 2010), available at <https://www.epa.gov/sites/production/files/2017-08/documents/ee-0568-50.pdf>; CIRCULAR A-4, *supra* note 6, at 38-42.

¹⁸ EPA, GUIDELINES FOR PREPARING ECONOMIC ANALYSIS, *supra* note 17, at 5-1.

¹⁹ *Id.*

over the lifespan of the rule. Failure to integrate such change distorts the economic analysis by failing to capture the rule’s impact in relation to expected future conditions.

Here, under an appropriate baseline scenario, EPA can expect existing maximum available control technology (“MACT”) standards for at least some source categories affected by the Proposed Rule to increase in stringency over time—and, in turn, for emissions from those sources to decrease. This is because, under the residual risk provision of Section 112(f)(2)(A), EPA must promulgate new standards for major sources every eight years where necessary “to provide an ample margin of safety to protect public health.”²⁰ The technology review provision of Section 112(d)(6) similarly requires the Administrator to “review, and revise as necessary,” the MACT and GACT standards “promulgated under this section no less often than every 8 years.”²¹ EPA complies with both subsections by conducting a single risk and technology review for each MACT standard.²²

By enabling major sources to reclassify as area sources, the Proposed Rule will spare them the obligation of complying with any future increase in the stringency of their current MACT standards. Thus, the Proposed Rule could cause a source’s emissions to increase from *baseline* levels, even if the source’s emissions do not increase from *current* levels. Because EPA’s analysis does not integrate future increases in MACT-standard stringency into its baseline, the analysis fails to capture these forgone emission-reduction benefits.

III. EPA’s Illustrative Analyses Rely on Unreasonable Assumptions (Comments C–10, C–56, C–57, C–58 & C–59)

In lieu of an aggregate estimate, EPA presents three illustrative analyses of the Proposed Rule’s potential emissions impacts. In the first analysis, EPA evaluates the potential for changes in emissions among the 34 sources that have begun or completed the reclassification process since EPA issued a guidance document in January 2018 announcing its new position on reclassification (“34 Source Analysis”).²³ In the second, EPA calculates the potential for changes in emissions among a subset of sources in six sample categories eligible for reclassification

²⁰ Clean Air Act, 42 U.S.C.S. § 7412(f)(2)(A).

²¹ § 7412(d)(6).

²² Risk and technology reviews periodically increase the stringency of MACT standards. *See, e.g.*, National Emissions Standards for Hazardous Air Pollutants for Primary Aluminum Reduction Plants, 80 Fed. Reg. 62,390 (Oct. 15, 2015) (codified at 40 C.F.R. pt. 63); National Emissions Standards for Hazardous Air Pollutants From Secondary Lead Smelting, 77 Fed. Reg. 556 (Jan. 5, 2012) (codified at 40 C.F.R. pt. 63). To develop an accurate baseline, EPA can review its own data to assess how frequently and how significantly risk and technology reviews increase the stringency of MACT standards. *See* EPA, *Risk and Technology Review* (June 7, 2019), <https://www3.epa.gov/ttn/atw/risk/rtrpg.html>.

²³ *See* Elineth Torres, Memorandum on Documentation of the Emission Impacts Analysis for the Proposed Rulemaking “Reclassification of Major Sources as Area Sources under Section 112 of the Clean Air Act” (ID: EPA-HQ-OAR-2019-0282), at 2 (May 2019) [hereinafter Emissions Impacts Memorandum]. In January 2018, EPA issued a guidance document announcing EPA’s withdrawal of the agency’s 1995 guidance document establishing the OIAI policy. *See* William L. Wehrum, Memorandum on Reclassification of Major Sources as Area Sources Under Section 112 of the Clean Air Act (Jan. 25, 2018), *available at* https://www.epa.gov/sites/production/files/2018-01/documents/reclassification_of_major_sources_as_area_sources_under_section_112_of_the_clean_air_act.pdf. Relying on this policy change announcement, 34 sources have reclassified or are close to reclassifying from major source to area source.

under the Proposed Rule, based on an assumption that those sources will, following reclassification, emit up to 75% of the major-source threshold (“Potential Emission Impacts Illustrative Analysis”).²⁴ In the third, EPA identifies circumstances under which five sample source categories might find it economically advantageous to *reduce* emissions in order to become eligible for reclassification (“125% Scenario Analysis”).²⁵ None of these analyses is an adequate substitute for an assessment of the Proposed Rule’s aggregate emissions impacts. Furthermore, all three rely on unreasonable assumptions.

A. EPA’s “34 Source Analysis” Unreasonably Assumes That Permit Restrictions Are Permanent and Relies on a Nonrepresentative Sample (Comments C–25 & C–39)

In the 34 Source Analysis, EPA asserts that, of the 34 sources that have reclassified since the January 2018 interpretation change or are in the process of reclassifying, none will increase their emissions as a result of reclassification.²⁶ But in making this claim, EPA relies on a patently unreasonable assumption—namely, that wherever a source’s federally enforceable permits require the control by which the source emits below major-source thresholds, reclassification will not result in emissions increases. For example, EPA states that “if permits reflect the use of compliant materials (i.e., low-HAP or no-HAP coatings/resins) as the method of compliance with the [potential to emit] limitations, EPA assumed no potential for emissions increases due to the reclassification.”²⁷ Ultimately, EPA assumes that 30 of the 34 reclassified sources will not increase emissions because of permit conditions that require the control by which the source achieved MACT compliance.²⁸

But as EPA itself acknowledges, permitting restrictions are not permanent. A “permitted source must continue to comply with the terms of its title V permit” *only* “until the source follows the permitting authority’s procedures for facility changes and permit revisions,”²⁹ and MACT standards are not required in permits for non-major sources. In other words, once a source has reclassified, there is no guarantee that continued use of a technology that the source employed to achieve MACT compliance will remain a condition of its operation.

EPA suggests that state permitting authorities will not allow sources to alter permits in ways that facilitate emissions increases. The agency “anticipate[s]” that permitting authorities reviewing applications for reclassification “will consider the current and proposed HAP emissions levels and evaluate the potential for emissions increases due to reclassification and determine the

²⁴ In this analysis, EPA analyzes the emissions increase that could occur “if sources were to be allowed to change the operating parameters of adjustable add-on controls when reclassifying.” Emissions Impacts Memorandum, *supra* note 23, at 22. In other words, EPA assumes that only sources that currently meet major source NESHAP standards by using adjustable add-on emissions controls will increase emissions after reclassifying.

²⁵ See Larry Sorrels, Economist, Memorandum on Analysis of Illustrative 125% Scenario for MM2A Proposal – Potential Cost Impacts from HAP Major Sources Reducing Emissions as Part of Reclassifying to HAP Area Sources (ID: EPA-HQ-OAR-2019-0282-0141) (May 2019) [hereinafter 125% Scenario Memorandum].

²⁶ See Proposed Reclassification Rule, 84 Fed. Reg. at 36,312, 36,331.

²⁷ Emissions Impacts Memorandum, *supra* note 23, at 5.

²⁸ *Id.* at 7-8.

²⁹ Proposed Reclassification Rule, 84 Fed. Reg. at 36,322.

safeguards needed to prevent any emissions increases due to reclassification.”³⁰ But EPA provides no explanation as to why, for example, state authorities with deregulatory preferences would not permit higher emissions by sources receiving reclassification.

That the 34 reclassified sources examined in EPA’s analysis have not *already* sought permit revisions is not even a reliable indication of their own future behavior, much less the future behavior of other reclassified sources. First, the examined reclassifications occurred amidst legal uncertainty. If reclassified sources had subsequently revised their permits and increased their emissions in reliance on the January 2018 guidance change, these sources would have opened themselves up to citizen suits accusing them of violating MACT requirements.³¹ But if the Proposed Rule is finalized, the rule will permit sources to increase emissions without the same level of legal uncertainty. Second, the timeframe for evaluating source behavior is too short; EPA cannot draw reliable conclusions about how sources will respond to the Proposed Rule based on source behavior during the mere 16 months between the January 2018 policy change and the May 2019 finalization of the 34 Source Analysis.³²

Due to the problems identified above, the 34 Source Analysis cannot reasonably form the basis of any conclusions about the aggregate emissions impacts of the Proposed Rule.

B. EPA’s “Potential Emission Impacts Illustrative Analysis” Unreasonably Assumes that Reclassified Sources Will Emit No More than 75% of the Major-Source Threshold
(Comments C–25 & C–39)

EPA’s second illustrative analysis, the Potential Emission Impacts Illustrative Analysis, purports to assess the potential for emissions increases among a subset of sources in six sample source categories affected by the Proposed Rule. But the analysis unreasonably assumes that sources will opt to reclassify as area sources only if their emissions are below 75% of the major-source threshold and further that, following reclassification, the sources will not emit in excess of that percentage.³³ In other words, EPA assumes that reclassified facilities will “maintain at a 25% compliance margin below the major HAP emissions source thresholds.”³⁴ As an alternative, EPA evaluates increases under an even lower emissions cutoff of 50% of the major-source threshold.³⁵ Both assumptions are unreasonably conservative, particularly for sources able to reliably control their HAP emissions levels.

Interagency commenters appear to agree. In comments pushing EPA to quantify the Proposed Rule’s impacts, the commenters suggest that EPA assume that “major source facilities below the

³⁰ EPA, REGULATORY IMPACT ANALYSIS FOR THE PROPOSED RECLASSIFICATION OF MAJOR SOURCES AS AREA SOURCES UNDER SECTION 112 OF THE CLEAN AIR ACT, at 4-7 to 4-8 (2019) [hereinafter PROPOSED RECLASSIFICATION RULE RIA].

³¹ On March 26, 2018, environmental petitioners filed a lawsuit challenged the legality of the January 2018 policy change. *See* Opening Proof Brief for Petitioner State of California at i, Cal. Cmty. Against Toxics, et al. v. Environmental Protection Agency, et al., 934 F.3d 627 (D.C. Cir. 2019) (No. 18-1085). This case was dismissed on August 20, 2019. *See Cal. Cmty. Against Toxics*.

³² Emissions Impacts Memorandum, *supra* note 23, at 2.

³³ *See* Proposed Reclassification Rule, 84 Fed. Reg. at 36,332.

³⁴ PROPOSED RECLASSIFICATION RULE RIA at 4-4.

³⁵ *See* Proposed Reclassification Rule, 84 Fed. Reg. at 36,329.

threshold increase their emissions by X percent or up to 90 percent of the threshold.”³⁶ The commenters do not directly state a preferred margin of compliance, but their suggestions employ substantially lower margins of compliance than EPA’s analysis.

By adopting conservative estimates of the emissions level at which sources are likely to reclassify and of sources’ preferred margin of compliance, EPA underestimates both the number of sources that will be released from MACT compliance because of the Proposed Rule and the volume by which such reclassified sources might increase their emissions. As a result, the analysis does not accurately reflect the Proposed Rule’s potential to increase emissions even among the sample source categories, much less among all affected sources.

Finally, the Potential Emission Impacts Illustrative Analysis unreasonably assumes that only sources that comply with MACT standards using adjustable add-on emissions controls will increase emissions after reclassification.³⁷ Sources also comply with MACT standards through use of compliant materials, non-adjustable add-on controls, work practices, operational restrictions, and process changes.³⁸ Because changes to these practices will also increase source emissions, EPA underestimates the Proposed Rule’s emissions impacts.

C. EPA’s “125% Scenario Analysis” Unreasonably Relies on Average Costs of Emissions Reduction as a Proxy for Marginal Costs and Ignores Potential Monitoring, Recordkeeping, and Reporting Costs Resulting from Reclassification (Comment C–54)

EPA’s third illustrative analysis purports to elucidate the circumstances under which an affected source might find it economically advantageous to *reduce* its emissions in order to qualify for reclassification.³⁹ EPA refers to the analysis as the “125% Scenario,” because it assumes that sources emitting up to 125% of the major-source threshold will reduce emissions to 75% of the threshold when the costs of achieving those reductions are outweighed by the costs of continued compliance with monitoring, recordkeeping, and reporting (“MRR”) requirements for major sources.⁴⁰

As EPA itself acknowledges, the 125% Scenario Analysis is in no way “representative of impacts for all source categories.”⁴¹ Indeed, the analysis misrepresents the likelihood of emissions decreases for at least three reasons. First, it focuses on a non-representative sample of five source categories with unusually high cost-savings potential.⁴² Second, it uses the average cost of emissions control at the sampled sources as a proxy for the marginal cost of achieving *additional* reductions at these sources.⁴³ In reality, because sources will take the most cost-effective measures to reduce emissions first, remaining emissions control measures are likely to be more expensive. Accordingly, the marginal cost of achieving the additional reductions needed

³⁶ Interagency Comments, *supra* note 11, at 3.

³⁷ See Emissions Impacts Memorandum, *supra* note 23, at 22.

³⁸ See *id.* at 5-7.

³⁹ See 125% Scenario Memorandum, *supra* note 25, at 1.

⁴⁰ PROPOSED RECLASSIFICATION RULE RIA at 4-9.

⁴¹ *Id.*

⁴² See 125% Scenario Memorandum, *supra* note 25, at 2.

⁴³ See *id.* at 7.

to fall below the major-source threshold are likely to be higher than the source's average control costs, and EPA's analysis is, as a result, likely underestimating the cost of achieving the additional reductions.

Third, EPA's analysis calculates the administrative-cost savings associated with reclassification from major source to area source but fails to consider any offsetting increases in alternative MRR requirements imposed by states as a condition of reclassification—even though, elsewhere in the Proposed Rule, EPA expressly acknowledges the potential for states to impose such alternative MRR requirements.⁴⁴ Interagency reviewers recognized this tension, reminding EPA to consider that there “will be some additional recordkeeping requirements”⁴⁵ for reclassified sources and that additional costs “would significantly reduce the scope of the estimated cost savings.”⁴⁶

As a result of these unreasonable assumptions and omissions, EPA's 125% Scenario Analysis overstates the probability that the Proposed Rule will result in emissions decreases and thus cannot reasonably form the basis of any conclusions about the Proposed Rule's aggregate impacts.

IV. EPA Fails to Account for the Possibility that State Emissions Limits Will Not Be Enforced as Stringently as MACT Limits (Comments C-19, C-22, C-23, C-27 & C-57)

For all the reasons discussed above, the illustrative analyses performed by EPA are not adequate substitutes for an assessment of the Proposed Rule's aggregate emissions impacts. Assuming that EPA does prepare an assessment of aggregate impacts in the future, the agency must account for the impact of the Proposed Rule's provisions allowing sources to reclassify based on a commitment to emissions limits subject only to state or local enforcement (Comments C-22 and C-23). The Clean Air Act creates a compliance incentive that is unmatched by state and local enforcement structures. Accordingly, EPA must quantify, to the extent possible, the impact that decreasing federal enforcement will have on emissions levels.

State enforcement agencies are already underfunded and subject to localized political pressure, especially when the targets of enforcement activities are major economic actors with political influence.⁴⁷ Even where federal statutes delegate enforcement authority to states, federal backstops bolster enforcement and compliance.⁴⁸ Allowing *exclusive* state and/or local authority over the enforcement of emissions limits would permit deregulatory governments to create paper limitations on emissions without any intention of enforcement. In any future analysis, EPA must

⁴⁴ Proposed Reclassification Rule, 84 Fed. Reg. at 36,320-21 (regulatory authority reviewing a reclassification request “will determine what alternative MRR are needed . . . to continue ensuring the source will not exceed the major source thresholds”).

⁴⁵ EO12866 Review of Proposed Rule, *supra* note 8, at 88 cmt. A32.

⁴⁶ Interagency Comments, *supra* note 11, at 1.

⁴⁷ See INST. FOR POLICY INTEGRITY, IRREPLACEABLE: WHY STATES CAN'T AND WON'T MAKE UP FOR INADEQUATE FEDERAL ENFORCEMENT OF ENVIRONMENTAL LAWS (2017), *available at* https://policyintegrity.org/files/media/EPA_Enforcement_June2017.pdf.

⁴⁸ See *id.* at 3.

either account for the potential emissions impacts of such manipulation or explain how the Proposed Rule will prevent them.⁴⁹

V. EPA Fails to Monetize the Health and Environmental Harms of Emissions Impacts (C—other)

In addition to failing to quantify aggregate emissions impacts, EPA fails to monetize the health and environmental harms caused by a ton of each pollutant that will be emitted in higher quantities under the Proposed Rule: VOCs, SO₂, NO_x, methane, benzene, ethylbenzene, toluene, and vinyl chloride. Instead, EPA provides a purely qualitative analysis of harms caused by these pollutants.⁵⁰

As discussed above, however, Executive Order 12,866, Circular A-4, and EPA's own emissions guidelines require the agency to monetize impacts whenever feasible. And for at least four pollutants implicated by the Proposed Rule, EPA cannot reasonably contend that monetization is infeasible, because the agency has monetized their per-ton effects in past rulemaking. Refusing to do so here would thus be arbitrary and capricious.⁵¹

VOCs: EPA's economic analyses have used benefit-per-ton estimates for evaluating VOC emissions. In 2016, an RIA for amendments to the New Source Performance Standards for the Oil and Natural Gas Sector presented a range of epidemiology studies estimating the value of reducing a ton of VOC in 2012 dollars: \$300 to \$7,500.⁵² Further, the RIA's break-even analysis calculated that the value of a VOC ton reduced would have to be \$460 in 2020 and \$160 in 2025 for the rule to be cost-benefit justified, well within the range supported by studies.⁵³ Additional studies have been published that could further inform EPA's benefit-per-ton estimate.⁵⁴ EPA should review past practice and new academic work to select an updated benefit-per-ton estimate for VOC emissions reductions and then utilize the estimate in its analysis.

⁴⁹ EPA must also consider the cost burden imposed by increasing state Section 112 enforcement responsibilities, along with any expected federal savings. The Proposed Rule decreases federal compliance requirements by shifting responsibility to the states. While the Proposed Rule quantifies state permitting expenditures, EPA does not consider a parallel increase in enforcement expenditures. *See* PROPOSED RECLASSIFICATION RULE RIA at 1-11. If EPA does not expect enforcement expenditures to increase, EPA must address the emissions increase that will accompany decreased enforcement.

⁵⁰ Instead of quantifying the risks associated with increases in HAPs emissions, EPA devotes twelve pages to describing the generic "effects" of increases in HAP emissions for specific pollutants. *See* PROPOSED RECLASSIFICATION RULE RIA at 5-1 to 5-12.

⁵¹ *Bus. Roundtable v. SEC*, 647 F.3d 1144, 1148–49 (D.C. Cir. 2011) (vacating rule where agency "failed adequately to quantify the certain costs or to explain why those costs could not be quantified").

⁵² *See* EPA, Regulatory Impact Analysis of the Final Oil and Natural Gas Sector: Emission Standards for New, Reconstructed, and Modified Sources at 4-22 (2016), *available at* https://www3.epa.gov/ttnecas1/docs/ria/oilgas_ria_nsps_final_2016-05.pdf.

⁵³ *See id.* at 5-3 to 5-4.

⁵⁴ *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).

Sulfur Dioxide: Direct exposure to SO₂ is linked to adverse health effects, and SO₂ is also a precursor to PM_{2.5}. Past economic analyses by EPA have utilized benefit-per-ton estimates for SO₂ as a precursor to PM_{2.5}.⁵⁵

Nitrogen Oxides: Direct exposure to NO_x is linked to adverse health effects, and NO_x is also a precursor to PM_{2.5} and ozone. Past economic analysis by EPA has utilized benefit-per-ton estimates for NO_x as a precursor to both PM_{2.5} and ozone.⁵⁶

Methane: Methane is both a potent greenhouse gas and a precursor to ozone. In 2016, the U.S. Interagency Working Group (“IWG”) updated its central estimate for the social cost of methane at \$1440 per ton of methane (in 2017 dollars for year 2020 emissions).⁵⁷ The IWG’s estimates remain the best available estimates of the harm caused by each additional ton of methane emitted.⁵⁸ The “interim” estimates of the social cost of methane developed by the Trump Administration for more recent rulemakings rely on faulty economics and should not be used to monetize the methane impacts of the Proposed Rule or any other policy.⁵⁹

In any future analysis of the Proposed Rule’s emissions impacts, EPA should either use the past benefit-per-ton estimates described above as rough proxies for the environmental and health costs of emissions increases or provide a reasoned explanation for declining to do so.

Respectfully submitted,

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⁵⁵ See EPA, Regulatory Impact Analysis for the Clean Power Plan Final Rule at 4-20 to 4-24 (2015), available at https://www3.epa.gov/ttnecas1/docs/ria/utilities_ria_final-clean-power-plan-existing-units_2015-08.pdf; EPA, Regulatory Impact Analysis for the Final Mercury and Air Toxic Standards at 5C-8 (2011), available at <https://www3.epa.gov/ttn/ecas/regdata/RIAs/matsriafinal.pdf>.

⁵⁶ See EPA, Regulatory Impact Analysis for the Clean Power Plan Final Rule, *supra* note 55, at 4-20 to 4-24.

⁵⁷ See U.S. Interagency Working Group on the Social Cost of Greenhouse Gases, Technical Support Document: Technical Update of the Social Cost of Carbon for Regulatory Impact Analysis Under Executive Order 12866 & Addendum: Application of the Methodology to Estimate the Social Cost of Methane and the Social Cost of Nitrous Oxide (Aug. 2016), available at <https://obamawhitehouse.archives.gov/omb/oira/social-cost-of-carbon>.

⁵⁸ See Richard L. Revesz, Michael Greenstone et al., *Best Cost Estimate of Greenhouse Gases*, 357 SCIENCE 655 (2017); Richard L. Revesz et al., *Global Warming: Improve Economic Models of Climate Change*, 508 NATURE 173 (2014) (co-authored with Nobel Laureate Kenneth Arrow, among others).

⁵⁹ INST. FOR POLICY INTEGRITY, HOW THE TRUMP ADMINISTRATION IS OBSCURING THE COSTS OF CLIMATE CHANGE (2018), available at https://policyintegrity.org/files/publications/Obscuring_Costs_of_Climage_Change_Issue_Brief.pdf.