

November 22, 2019

U.S. Environmental Protection Agency
EPA Docket Center
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1200 Pennsylvania Ave NW
Washington, DC 20460

By email: a-and-r-docket@epa.gov

Re: EPA's Proposed Revisions to the New Source Performance Standards for the Oil and Natural Gas Sector (Docket ID EPA-HQ-OAR-2017-0757)

To Whom It May Concern:

The Sabin Center for Climate Change Law submits these comments in response to the Environmental Protection Agency ("EPA")'s request for input on its proposed revisions¹ to the following rules:

- (1) the final rule titled "Oil and Natural Gas Sector: New Source Performance Standards and National Emissions Standards for Hazardous Air Pollutants" published on August 16, 2012 ("2012 Rule");² and
- (2) the final rule titled "Oil and Natural Gas Sector: Emissions Standards for New, Reconstructed, and Modified Sources" published on June 3, 2016 ("2016 Rule").³

The 2012 and 2016 Rules established New Source Performance Standards ("NSPS") for volatile organic compound ("VOC") and methane emissions from the oil and natural gas industry. At the time it adopted the rules, EPA determined that the NSPS should apply broadly to emissions sources in the production, processing, transmission, and storage segments of the industry.⁴ EPA is now proposing to redefine the source category to exclude natural gas transmission and storage facilities and rescind the VOC and methane NSPS applicable to those facilities.⁵ Additionally,

¹ Oil and Natural Gas Sector: Emission Standards for New, Reconstructed, and Modified Sources Review, 84 Fed. Reg. 50244 (Sep. 24, 2019) [hereinafter "2019 Proposed Rule"].

² Oil and Natural Gas Sector: New Source Performance Standards and National Emission Standards for Hazardous Air Pollutants Reviews, 77 Fed. Reg. 49490 (Aug. 16, 2012) [hereinafter "2012 Rule"].

³ Oil and Natural Gas Sector: Emission Standards for New, Reconstructed, and Modified Sources, 81 Fed. Reg. 35,824 (Jun. 3, 2016) [hereinafter "2016 Rule"].

⁴ 2012 Rule, *supra* note 2, at 49515; 2016 Rule, *supra* note 3, at 35832.

⁵ 2019 Proposed Rule, *supra* note 1, at 50254.

EPA is also proposing to rescind methane NSPS applicable to oil and natural gas production and processing facilities.⁶ For the reasons discussed below, the Sabin Center strongly opposes both proposals, and takes issue with EPA’s stated rationale for adopting them.

I. EPA Has Failed to Adequately Justify its Proposal to Rescind the VOC and Methane NSPS Applicable to Transmission and Storage Facilities

Section 111(b) of the Clean Air Act directs EPA to promulgate NSPS for categories of stationary sources that have been found to “cause[], or contribute[] significantly to, air pollution which may reasonably be anticipated to endanger public health or welfare.”⁷ EPA listed “Crude Oil and Natural Gas Production” as a source category under section 111(b) in August 1979 (the “1979 Listing Decision”).⁸ While the 1979 Listing Decision did not define the scope of that category, EPA subsequently determined that it was intended to capture “all operations in [the oil and natural gas] industry,” including “production, processing, transmission, storage, and distribution.”⁹ However, EPA has now changed its view, asserting that natural gas transmission and storage constitute a “separate source category,” not covered by the 1979 Listing Decision.¹⁰ EPA is, therefore, proposing to rescind the VOC and methane NSPS applicable to natural gas transmission and storage facilities. For the reasons discussed below, the Sabin Center considers that action to be arbitrary and capricious, in violation of the Administrative Procedure Act.

It is well established that agency actions must be based on a consideration of relevant evidence and accompanied by a clear statement of how that evidence supports the action taken. As the Supreme Court explained in *Motor Vehicle Manufacturers Association v. State Farm Mutual Automobile Insurance Company*, the agency must “articulate a satisfactory explanation for its action including a rational connection between the facts found and the choice made.”¹¹ Where the agency is rescinding a prior regulation, its explanation for doing so must be particularly strong.¹² This is because, according to the Supreme Court:

[Rescission] constitutes a reversal of the agency’s former views as to the proper course. A settled course of behavior embodies the agency’s informed judgment that, by pursuing that course, it will carry out the policies committed to it by Congress. There is, then, at least a presumption that those policies will be carried out best if the settled rule is adhered

⁶ *Id.* at 50259.

⁷ 42 U.S.C. § 7411(b).

⁸ Priority List and Additions to the List of Categories of Station Sources, 44 Fed. Reg. 49222 (Aug. 21, 1979) [hereinafter “1979 Listing Decision”].

⁹ 2012 Rule, *supra* note 2, at 52745. *See also* 2016 Rule, *supra* note 3, at 35832.

¹⁰ 2019 Proposed Rule, *supra* note 1, at 50246.

¹¹ *Motor Vehicle Mfrs. Ass’n. v. State Farm Mut. Auto Ins. Co.*, 463 U.S. 29, 43 (1983). *See also* *Fed. Comm’n Comm’n v. Fox Television Stations, Inc.*, 556 U.S. 502, 513 (2009) (declaring that an agency must “examine the relevant data and articulate a satisfactory explanation for its action”).

¹² *Motor Vehicle Mfrs. Ass’n.*, 463 U.S. at 41-42.

to. (Internal citations omitted.)¹³

In *Federal Commissions Commission v. Fox Television Stations, Inc.*, the Supreme Court held that an agency reversing course must supply “good reasons” for its new position.¹⁴ Those reasons must be especially compelling where, as here, the agency’s new position “rests on factual findings that contradict its prior policy.”¹⁵ In such cases, the agency must provide “a more detailed justification than what would suffice for a new policy created on a blank slate,” including a “reasoned explanation” for disregarding the facts and circumstances on which its prior policy was based.¹⁶

EPA has failed to articulate any good reasons for rescinding the NSPS applicable to natural gas transmission and storage facilities. While EPA claims that such facilities fall outside the source category covered by the NSPS, it has not provided any convincing evidence to justify that view. Contrary to EPA’s claims, the 1979 Listing Decision does not support limiting the source category to oil and natural gas production and processing, but rather suggests it also includes gas transmission and storage. In this regard, we note that the 1979 Decision promulgated a list of fifty-nine source categories, which had been found to significantly contribute to air emissions.¹⁷ A draft version of the list, published in 1978, had identified sixty-nine major emissions sources, which were grouped by industry sector.¹⁸ Under the heading “Petroleum Industry,” the draft list referenced four emissions sources, namely:

- (1) Crude oil and natural gas production;
- (2) Gasoline additives;
- (3) Petroleum refinery: fugitive sources; and
- (4) Transportation and marketing.¹⁹

The final list did not separately identify sources (2) through (4) above, but rather included them, along with source (1), in the Crude Oil and Natural Gas Production category. This is made clear in the 1979 Listing Decision, which states that the final list “aggregat[ed] . . . source categories

¹³ *Id.* (quoting *Atchison, T. & S.F.R. Co. v. Wichita Bd. Of Trade*, 412 U.S. 800, 807-808 (1973)).

¹⁴ *Fox Television Stations, Inc.*, 566 U.S. at 515.

¹⁵ *Id.*

¹⁶ *Id.* at 515-516. *See also* *U.S. Sugar Corp. v. Env'tl. Prot. Agency*, 830 F.3d 579, 626 (D.C. Cir. 2016) (holding that when an agency reverses a previous policy and “its new policy rests upon factual findings that contradict those which underlay its prior policy,” it must “provide a more substantial explanation or reason . . . than [would be required] for any other action”).

¹⁷ 1979 Listing Decision, *supra* note 8, at 49225-49226.

¹⁸ Standards of Performance for New Stationary Sources: Proposed Rule and Notice of Public Hearing, 43 Fed. Reg 38872.

¹⁹ *Id.* at 38877. It should be noted that, within the oil and natural gas industry, the term “transportation and marketing” is used generally to refer to activities associated with the delivery of product, including transmission and storage. Thus, given the inclusion of “transportation and marketing in the draft list, EPA’s assertion that “the record [for the 1979 action] does not address the transmission and storage segment.” *See* 2019 Proposed Rule, *supra* note 1, at 50256.

under a generic industry heading.”²⁰ Relying on that statement, in 2011 (when developing the 2012 Rule), EPA concluded that the “listed Oil and Natural Gas source category covers all operations in this industry (i.e., production, processing, transmission, storage, and distribution).”²¹ EPA reached the same conclusion in 2015 (when developing the 2016 Rule).²² Now, however, EPA has suddenly and inexplicably changed its view.

Nothing in the 1979 Listing Decision supports EPA’s new claim that, at the time of the decision, the agency viewed facilities used in natural gas transmission and storage (e.g., stationary pipeline compressor engines) as a separate source category.²³ EPA’s reference to background documents that separately report emissions from stationary pipeline compressor stations is unilluminating.²⁴ The 1979 Listing Decision indicates that the background documents “subdivided” sources for the purposes of analysis only.²⁵ Thus, as noted in the decision, there are important “differences” between the scope of the sources analyzed in the background documents and those included in the final list promulgated by EPA.²⁶ Given these differences, reliance on the background documents to define the scope of the listed source categories is inappropriate and unhelpful.

Documents issued in connection with the 1984-85 rulemaking establishing the first NSPS for the Crude Oil and Natural Gas Production source category also fail to prove that the category excludes natural gas transmission and storage. In particular, and contrary to EPA’s claims, the proposed rule dated January 20, 1984²⁷ (“1984 Proposed Rule”) does not support limiting the source category to production and processing. Seeking to justify such a limit, EPA points to a single sentence in the 1984 Proposed Rule, which describes the source category as “encompass[ing]” production and processing.²⁸ In the very next paragraph, however, the source

²⁰ 1979 Listing Decision, *supra* note 8, at 49224.

²¹ Oil and Natural Gas Sector: New Source Performance Standards and National Emission Standards for Hazardous Air Pollutant Reviews, 76 Fed. Reg. 52738, 52745 (Aug. 23, 2011). EPA maintained this position in final rule. *See* 2012 Rule, *supra* note 2, at 49515.

²² Oil and Natural Gas Sector: Emissions Standards for New and Modified Sources, 80 Fed. Reg. 56593, 56600 (Sep. 18, 2015) [hereinafter “2015 Proposed Rule”].

²³ 2019 Proposed Rule, *supra* note 1, at 50255-50256.

²⁴ *Id.*

²⁵ 1979 Listing Decision, *supra* note 8, at 49223 (indicating that the supporting reports “subdivided” source categories for the purposes of “size classification and priority ranking analysis”).

²⁶ *Id.* (recognizing that “[t]here are some differences between . . . the list in the background report, ‘Revised Prioritized list of Source Categories for NSPS Promulgation,’ and . . . the list which appears here”).

²⁷ Standards of Performance for New Stationary Sources; Onshore Natural Gas Processing Plants in the Natural Gas Production Industry; Equipment Leaks of VOC, 49 Fed. Reg. 2636 (Jan. 20, 1984) [hereinafter “1984 Proposed Rule”].

²⁸ 2019 Proposed Rule, *supra* note 1, at 50256. The 1984 Proposed Rule states: “The crude oil and natural gas production industry encompasses the operations of exploring for crude oil and natural gas products, drilling for these products, removing them from beneath the earth’s surface, and processing [them] . . . for distribution to petroleum refineries and gas pipelines.” *See* 1984 Proposed Rule, *supra* note 23, at 2637. EPA interprets “encompass” to mean “limited to” and, as such, concludes that the source category excludes activity not expressly listed in the quoted section of the 1984 Proposed Rule. *See* 2019 Proposed Rule, *supra* note 1, at 50256. However, in general parlance, the term “encompass” is typically used to mean “include” or “contain within” which leaves scope for other activities within the source category. *See* Collins, Definition of ‘encompass’, <https://perma.cc/GF2N-TBLA> (last visited Oct. 30, 2019).

category is defined more broadly to include (among other things) storage facilities such as “field storage tanks, condensate tanks, and cleaned oil tanks.”²⁹ That broader definition has been entirely ignored by EPA.

EPA has also failed to rebut other arguments supporting a broad definition of the Crude Oil and Natural Gas Production source category. Specifically, in developing the 2016 Rule, EPA concluded that the source category should be defined to include natural gas production, processing, transmission, and storage because those activities are “interrelated” components of a single system intended to provide gas for distribution.³⁰ Now, however, EPA claims that production and processing are actually separate from transmission and storage.³¹ To support that claim, EPA asserts that natural gas “undergo[es] changes in composition” during production and processing, but not transmission and storage.³² That is not the case, however. During transmission and storage, residual hydrocarbons are removed from natural gas at straddle extraction plants, located on major pipelines.³³ Additionally, at pipeline compressor stations and storage facilities, natural gas is dehydrated to remove water.³⁴ Thus, contrary to EPA’s claims, natural gas does change composition during transmission and storage.

II. EPA Has Failed to Adequately Justify its Proposal to Rescind the Methane NSPS Applicable to Production and Processing Facilities

EPA has also failed to articulate a reasoned basis for rescinding the methane NSPS applicable to oil and natural gas production and processing facilities.³⁵ EPA’s claim that the methane NSPS are “unnecessary” directly contracts its own previous findings.³⁶ Indeed, EPA rejected that very claim in the 2016 Rule.³⁷ There, EPA relied on industry-wide emissions data from its Greenhouse Gas Inventory, as well as more detailed analysis of facility-specific emissions, contained in a series of peer-reviewed white papers published by the agency in 2014.³⁸ Based on that data and analysis, EPA concluded that “[t]he oil and natural gas industry is one of the largest emitters of methane, a [greenhouse gas] with a global warming potential more than 25 times greater than that of carbon dioxide.”³⁹ EPA further determined that industry emissions could be

²⁹ The 1984 Proposed Rule describes these facilities as major “emission points” within the Crude Oil and Natural Gas Production Source Category. *See* 1984 Proposed Rule, *supra* note 23, at 2637.

³⁰ 2015 Proposed Rule, *supra* note 24, at 56600.

³¹ 2019 Proposed Rule, *supra* note 1, at 50257.

³² *Id.* at 50258.

³³ *See generally*, Natural Gas Supply Association, Processing Natural Gas, NaturalGas.Org, <https://perma.cc/28JC-AE39> (last visited Nov. 19, 2019).

³⁴ *Id.* EPA has itself noted that natural gas undergoes dehydration during transmission and storage. *See* 2019 Proposed Rule, *supra* note 1, at 50258.

³⁵ 2019 Proposed Rule, *supra* note 1, at 50259.

³⁶ *Id.* (asserting that the methane NSPS are “unnecessary” and “redundant” because steps taken to comply with other standards, targeting emissions of volatile organic compounds, also reduce methane emissions).

³⁷ 2016 Rule, *supra* note 3, at 35840 - 35841.

³⁸ *Id.* *See also* 2015 Proposed Rule, *supra* note 24, at 56599 – 56600.

³⁹ 2015 Proposed Rule, *supra* note 24, at 56599.

substantially reduced using existing control devices.⁴⁰ These factors, according to EPA, rendered adoption of the methane NSPS both necessary and appropriate.⁴¹

Just three years after reaching the above conclusion, EPA has now suddenly changed its view. EPA has offered no reasons for the change, merely stating: “[a]fter further consideration, the EPA proposes to come to a different conclusion.”⁴² That conclusory statement is wholly insufficient. As the Supreme Court held in *Federal Commissions Commission v. Fox Television Stations, Inc.*, an agency seeking to reverse a prior policy must provide “a reasoned explanation for . . . disregarding facts and circumstances that underlay or were engendered by the prior policy.”⁴³ Where, as here, no such explanation is provided, the agency’s action must be considered arbitrary and capricious in violation of the Administrative Procedure Act.

EPA’s failure to explain its change in position is especially problematic given the far-reaching consequences of rescinding the methane NSPS. As EPA notes, rescission would eliminate the need to develop emission guidelines for existing oil and natural gas facilities, pursuant to section 111(d) of the Clean Air Act.⁴⁴ EPA erroneously asserts that failing to regulate existing facilities will not result in “substantial . . . lost emissions reductions,” in part, because the number of such facilities will decline over time (i.e., due to decommissioning and replacement).⁴⁵ To support that assertion, EPA points to declines in the “component counts” used for the Greenhouse Gas Inventory,⁴⁶ but past research has found those counts to be unreliable.⁴⁷ EPA’s analysis, therefore, likely over-estimate facility decommissioning and replacement rates. Regardless, it will take many years for *all* existing facilities to be eliminated, with some expected to remain in operation until 2045 and possibly beyond.⁴⁸ Methane emissions from those facilities are not, as EPA claims, adequately controlled through voluntary programs and state regulations (see Part (III)(A) below).

⁴⁰ *Id.* at 56616.

⁴¹ *Id.* at 56599. This is consistent with EPA’s long-standing practice of determining whether to regulate a particular pollutant from a listed source based on “the amount such pollutant is being emitted from the source category, the availability of technically feasible control options and the costs of such control options.” *Id.* See also 2016 Rule, *supra* note 3, at 35840 - 35841.

⁴² 2016 Rule, *supra* note 3, at footnote 64.

⁴³ *Fox Television Stations, Inc.*, 566 U.S. at 516. See also *U.S. Sugar Corp.*, 830 F.3d at 626.

⁴⁴ 2019 Proposed Rule, *supra* note 1, at 50271.

⁴⁵ *Id.*

⁴⁶ *Id.* at 50273 - 50274.

⁴⁷ See e.g., A.R. Brandt et al., *Methane Leaks from North American Natural Gas Systems*, 343 SCI. 733, 734 (2014) (finding that the component counts are “contradictory” and “incomplete”). We note that EPA recently updated the component counts used for the Greenhouse Gas Inventory. While the updates are thought to have improved count accuracy, EPA’s own research indicates that, for at least some components, the counts are much too low. See e.g., *Oil and Natural Gas Sector: Emission Standards for New, Reconstructed, and Modified Sources Reconsideration*, 83 Fed. Reg. 52056, 52,062 (Oct. 15, 2018).

⁴⁸ The average life of an oil and gas well is twenty to thirty years, meaning that facilities installed prior to September 2015 could still be in operation in September 2045. Many of the largest-emitting facilities (e.g., field storage tanks) typically do not undergo modification or reconstruction during their useful life.

III. EPA has Underestimated the Climate Impacts of its Proposal

EPA asserts that its proposed revisions to the 2012 and 2016 Rules will result in only minimal foregone climate benefits. However, by EPA's own admission, the proposal will increase methane emissions from new natural gas facilities by 370,000 short tons from 2019 to 2025 (compared to retaining the 2012 and 2016 Rules in their current form).⁴⁹ That is equivalent to over five percent of current annual methane emissions from the entire U.S. natural gas industry.⁵⁰ EPA seeks to downplay the emissions increase in two ways. First, EPA erroneously claims that methane emissions are effectively controlled through voluntary programs and state regulations, which operate to mitigate the impact of its proposal.⁵¹ Second, EPA inappropriately devalues the foregone climate benefits associated with its proposal by using a domestic-only social cost of methane ("SC-CH₄").⁵² These issues are addressed further below.

A. EPA has Overstated the Effectiveness of Voluntary Programs and State Regulations

Voluntary emission reduction programs will do little to mitigate the impact of EPA's proposal. Contrary to EPA's claims, many industry participants lack market incentives to reduce natural gas losses and associated methane emissions. Transmission pipeline operators, for example, pass the cost of lost gas onto shippers and thus face no financial pressure to reduce losses.⁵³ Other operators who would benefit financially from reducing losses may be reluctant to invest in gas capture systems, including because of the high upfront cost of such systems and uncertainty regarding the payback period.⁵⁴ Partly for these reasons, participation in voluntary emission reduction programs has been limited. For example, EPA's Natural Gas STAR Program, currently has just ninety-two participating companies, out of more than 6,000.⁵⁵ Industry-run programs have proved just as unpopular, with the Environmental Partnership attracting a mere sixty-eight participants.⁵⁶ With such limited membership, the programs will deliver only modest emissions

⁴⁹ EPA, Regulatory Impact Analysis for the Proposed Oil and Natural Gas Sector: Emissions Standards for New, Reconstructed, and Modified Sources Review 1-9 (2019), <https://perma.cc/GA4Z-ZYS6> [hereinafter "RIA"]. This figure does not include emissions from existing facilities which, as a result of the proposal, will no longer be subject to regulation. *See id.* at 1-3.

⁵⁰ EPA, Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990-2017 3-2 – 3-3 (2018), <https://perma.cc/2BD4-DDVK>.

⁵¹ 2019 Proposed Rule, *supra* note 1, at 50274. EPA makes a similar argument with respect to existing facilities, asserting that failing to regulate those sources will have minimal impact on emissions because "existing sources already have market incentives to reduce methane emissions, participate in voluntary programs to do so, and in many cases are subject to state requirements to do so." *Id.* at 50271. *See also* RIA, *supra* note 37, at 5-11 – 5-12.

⁵² 2019 Proposed Rule, *supra* note 1, at 50279. *See also* RIA, *supra* note 37, at

⁵³ *See generally* Romany Webb, *Lost But Not Forgotten: The Hidden Environmental Costs of Compensating Pipelines for Natural Gas Losses*, KBH ENERGY CENTER RESEARCH PAPER (2015), <https://perma.cc/97LM-PP52>.

⁵⁴ Jayni Foley Hein, *Capturing Value: Science and Strategies to Curb Methane Emissions from the Oil and Natural Gas Sector*, INSTITUTE FOR POLICY INTEGRITY POLICY BRIEF (2014), <https://perma.cc/GT99-JW3B>.

⁵⁵ EPA, *Natural Gas Star Program Participants*, PARTNERS, <https://perma.cc/GN83-7UKT> (last visited Nov. 4, 2019).

⁵⁶ The Environmental Partnership, *Participants, WHO WE ARE*, <https://perma.cc/BO9C-HTSH> (last visited Nov. 4, 2019).

reductions, and thus do little to offset the impact of EPA’s proposal.

EPA’s claim that voluntary emission reduction programs may become more effective over time is not supported by the available evidence. In fact, EPA’s own experience suggests the opposite is true, with annual emissions reductions from its Natural Gas STAR Program declining over time.⁵⁷ Even if other programs prove more successful, federal regulations will remain important to ensure industry-wide action and prevent backsliding, for example if changing market conditions encourage cost-cutting.

State regulatory programs are not, by themselves, sufficient to reduce methane emissions as EPA claims. EPA’s own analysis shows that most large oil and natural gas producing states do not directly regulate methane emissions.⁵⁸ Where state regulations do exist, they are often less stringent than the 2016 Rule. For example, whereas the 2016 Rule mandates quarterly leak surveys of all new transmission compressor stations, some state regulations require only annual monitoring.⁵⁹ As such, the state regulations will result in less timely leak repair and thus deliver fewer emissions reductions, compared to the 2016 Rule.

B. EPA has Inappropriately Limited its Analysis to Domestic Climate Impacts

EPA has underestimated the foregone climate benefits resulting from its proposed revisions to the 2012 and 2016 Rule. To calculate foregone benefits, EPA has used a domestic-only SC-CH₄, which reflects “an approximation of the climate change impacts that occur within U.S. borders.”⁶⁰ However, as EPA has itself recognized, existing models do not support calculation of a domestic share of global climate damages.⁶¹ EPA has, therefore, been forced to “approximate” domestic impacts.⁶²

Even if domestic impacts could be accurately calculated, it would be inappropriate to use a domestic-only SC-CH₄. A domestic-only value will underestimate the cost of emissions because, as EPA itself recognized in the 2016 Rule, “[t]he impacts of climate change outside the United States . . . will also have relevant consequences on the United States and our citizens.”⁶³ According to EPA, the U.S. will likely be forced to increase humanitarian aid, deal with mass migrations, and manage changing security needs (e.g., in the Arctic) as a result of overseas

⁵⁷ Annual emissions reductions achieved through the program declined from 102.6 billion cubic feet in 2010 to 51.8 billion cubic feet in 2016. See EPA, *Natural Gas STAR Program Accomplishments*, <https://perma.cc/X24T-DJF3> (last visited Nov. 4, 2019).

⁵⁸ Of the ten states reviewed by EPA, only three – i.e., California, Colorado, and Pennsylvania – have regulations specifically addressing methane emissions. See 2019 Proposed Rule, *supra* note 1, at 50277.

⁵⁹ 5 COLO. CODE REGS. § 1001-9(XVII.F.3) (requiring annual surveys of certain transmission compressor stations).

⁶⁰ RIA, *supra* note 37, at A-1.

⁶¹ *Id.* (indicating that the Dynamic Integrated Climate and Economy (DICE) 2010 model “generates only global estimates” of climate damage).

⁶² *Id.* (stating that, due to the limitations of the DICE 2010 model, EPA has “approximate[d] U.S. damages as 10 percent of the global values”).

⁶³ 2016 Rule, *supra* note 3, at 35,836.

climate change impacts.⁶⁴ Overseas impacts could also affect the U.S. economy, disrupting international trade and undermining financial markets.⁶⁵

Given these spill-over effects, failing to account for overseas climate change impacts will lead to poor regulatory decisions, which fail to adequately protect public health and welfare.⁶⁶ Accordingly, many countries have based their climate policies on the global costs and benefits of reducing greenhouse gas emissions (e.g., the global social cost of carbon (“SCC”)).⁶⁷ Examples include Germany, which uses a global SCC of US\$167 per ton in 2030 and the U.K., which uses US\$115 per ton in 2030.⁶⁸ The U.K. also applies a global SC-CH₄, equal to approximately US\$400 in 2010, rising to US\$1200 by 2040.⁶⁹

Contrary to EPA’s assertion, switching from a global to domestic-only SC-CH₄ is not required to comply with OMB Circular A-4, which states that regulatory analyses “should focus on the benefits and costs that accrue to [U.S.] citizens and residents.”⁷⁰ Given that overseas climate change impacts will inevitably affect the U.S., accurately assessing costs and benefits to U.S. citizens and residents requires a global focus. Thus, a working group of twelve federal government agencies (including OMB) has repeatedly determined that global climate impacts should be considered, notwithstanding the references to domestic effects in Circular A-4.⁷¹ Consistent with this determination, EPA has long used global values in its regulatory analyses.⁷²

⁶⁴ *Id.* These impacts have also been highlighted by the Department of Defense. *See e.g.*, Department of Defense, Office of the Undersecretary of Defense for Acquisition and Sustainment, Report on Effects of a Changing Climate to the Department of Defense (2019), <https://perma.cc/M6GN-9YRS>.

⁶⁵ For a discussion of these effects, *see* Dr. Peter H. Howard & Jason A. Schwartz, *Think Global: International Reciprocity as Justification for a Global Social Cost of Carbon*, 42 COLUM. J. ENVTL. L. 203 (2017).

⁶⁶ *Id.* at 222 (“If all countries...set their greenhouse gas emissions levels based on only their domestic costs and benefits, ignoring the large global externalities, the collective result would be substantially sub-optimal climate protections”).

⁶⁷ *Id.* at 223.

⁶⁸ *Id.* at 285 – 286.

⁶⁹ U.K. Department for Environment, Food and Rural Affairs, The Social Cost of Carbon (SCC) Review – Methodological Approaches for Using SCC Estimates in Policy Assessment 58 (2005) (specifying an average SC-CH₄ of £317 in 2010 and £920 in 2040).

⁷⁰ OMB, Circular A-4 to the Heads of Executive Agencies and Establishments re: Regulatory Analysis 15 (2003), <https://perma.cc/9EFE-KTQB>.

⁷¹ Interagency Working Group on the Social Cost of Carbon, U.S. Government, Technical Support Document: Social Cost of Carbon for Regulatory Impact Analysis Under Executive Order 12866 10-11 (2010), <https://perma.cc/L8YG-R42D>; Interagency Working Group on the Social Cost of Carbon, U.S. Government, Technical Support Document: Social Cost of Carbon for Regulatory Impact Analysis Under Executive Order 12866 17 (2016), <https://perma.cc/H5G5-9SP6>.

⁷² *See e.g.*, Regulatory Impact Analysis: Standards of Performance for New Stationary Sources and Emission Guidelines for Existing Sources: Sewage Sludge Incineration Units (2010), <https://perma.cc/S4QR-2NWX>; Regulatory Impact Analysis: Petroleum Refineries New Source Performance Standards Ja (2010), <https://perma.cc/86QV-Z66G>; Regulatory Impact Analysis for the Final Standards of Performance for Greenhouse Gas Emissions from New, Modified, and Reconstructed Stationary Sources: Electric Utility Generating Units (2015), <https://perma.cc/W2CB-SXHH>; Regulatory Impact Analysis for the Clean Power Plan Final Rule (2015), <https://perma.cc/4FEC-4WXV>.

I. Conclusion

For the reasons explained above, EPA has failed to adequately justify its proposed revisions to the 2012 and 2016 Rules, relying on faulty analysis that does not support the conclusions reached. EPA has also substantially underestimated the climate impacts of the proposed revisions. The Sabin Center therefore urges EPA to retain the 2012 and 2016 Rules in their current form.

The scientific reports and other resources cited in this letter are attached for your reference. Please do not hesitate to contact me if you have any questions about the letter or attachments.

Sincerely,



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Attachments (3):

- (1) A. R. Brandt et al., *Methane Leaks from North American Natural Gas Systems*, 343 SCIENCE 733 (2014)
- (2) Jayni Foley Hein, *Capturing Value: Science and Strategies to Curb Methane Emissions from the Oil and Natural Gas Sector*, INSTITUTE FOR POLICY INTEGRITY POLICY BRIEF (2014)
- (3) Peter H. Howard & Jason A. Schwartz, *Think Global: International Reciprocity as Justification for a Global Social Cost of Carbon*, 42 COLUMBIA JOURNAL OF ENVIRONMENTAL LAW 203 (2017)
- (4) Romany Webb, *Lost But Not Forgotten: The Hidden Environmental Costs of Compensating Pipelines for Natural Gas Losses*, KBH ENERGY CENTER RESEARCH PAPER (2015)