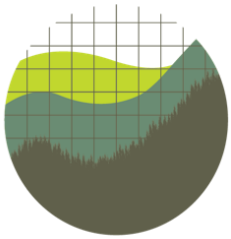

Institute *for*
Policy Integrity
NEW YORK UNIVERSITY SCHOOL OF LAW

November 2, 2026

To: Environmental Protection Agency

Re: Rescission of the Greenhouse Gas Findings for Fossil Fuel-Fired Power Plants and Repeal of Regulations for Power Plant Greenhouse Gas Emissions Under Clean Air Act Section 111, 91 Fed. Reg. 59002 (proposed Sep. 17, 2026) (EPA-HQ-OAR-2025-0124)

The Institute for Policy Integrity at New York University School of Law (Policy Integrity)[1] respectfully submits the following comments to the Environmental Protection Agency (EPA) regarding its supplemental proposal to repeal all greenhouse gas emission standards for fossil-fuel-fired electric generating units (2026 Proposal).[2] Policy Integrity is a nonpartisan think tank dedicated to improving the quality of government decisionmaking through advocacy and scholarship in the fields of administrative law, economics, and public policy.

If finalized, the 2026 Proposal would eliminate all greenhouse gas emission standards for fossil-fuel-fired power plants.[3] Specifically, EPA argues that Section 111 of the Clean Air Act does not authorize EPA to prescribe emission standards to address global climate change.[4] In doing so, EPA asserts that Section 111 may be used only to address local or regional air pollution problems, that regulating greenhouse gas emissions from power sector sources implicates the major questions doctrine, and that in any event, regulating these emissions is futile. Policy Integrity offers the following comments on the 2026 Proposal:

- **EPA's proposal relies on a novel and incorrect interpretation of the Clean Air Act.** Statutory text, legislative context, and regulatory history all affirm EPA's authority to use Section 111 to address global climate change and other air pollution problems that endanger public health or welfare through means other than local or regional exposure. Existing statutory constraints allow the agency to avoid regulating *de minimis* emissions without adopting EPA's new interpretation—as evidenced by the agency's longstanding practice.

[1] This document does not purport to present the views, if any, of New York University School of Law.
[2] Rescission of the Greenhouse Gas Findings for Fossil Fuel-Fired Power Plants and Repeal of Regulations for Power Plant Greenhouse Gas Emissions Under Clean Air Act Section 111, 91 Fed. Reg. 59002 (Sep. 17, 2026) [hereinafter 2026 Proposal].
[3] *Id.*
[4] *Id.*

- **Contrary to EPA's assertions, the major questions doctrine does not preclude EPA from regulating greenhouse gas emissions under Section 111.** The Supreme Court has effectively held that the major questions doctrine does not prohibit such regulation. And because such regulation was neither unprecedented nor transformed EPA's regulatory authority, it did not trigger the major questions doctrine when EPA began to regulate greenhouse gas emissions under Section 111.

- **EPA's finding that it is futile to regulate power plants' greenhouse gas emissions is arbitrary and erroneous.** EPA departs without adequate justification from its long-standing use of social cost of greenhouse gases (SC-GHG), a peer-reviewed, state-of-the-art tool to measure climate change damages. EPA proposes to measure welfare effects, but discusses only the physical effects of sea level rise and global temperature that would inform actual welfare effects. EPA also ignores other climate change impacts and relies on fundamentally flawed underestimates of sea level rise and temperature change effects from power sector emissions. EPA inappropriately trivializes the climate benefits of Section 111 regulations by comparing them to global baselines, but its own approach to assessing the 2026 Proposal's cost savings demonstrates the fallacy of that approach.

- **Power plant greenhouse gas emissions clearly contribute significantly to air pollution that endangers public health or welfare.** Using EPA's own models for estimating climate change damages and projections of power sector emissions, greenhouse gas emissions from the power sector will cause over $20 trillion in damages. The U.S. power sector's unregulated emissions could also cause over 100,000 additional U.S. mortalities by 2200. And even these substantial figures are likely underestimates because these models do not comprehensively capture all important effects of climate change. For over five decades, EPA has recognized much smaller shares of large pollution problems to merit regulation under Section 111.

- **EPA fails to consider important effects of its proposal.** EPA should analyze the effects of its proposed action under possible future scenarios, including the addition of new coal generation and the vacatur of EPA's partial repeal of the Carbon Pollution Standards. When doing so, EPA should quantify and monetize all significant impacts, including the climate costs and the costs of increased co-pollutant emissions that result.

- **EPA must disclose any use of artificial intelligence tools in this rulemaking.** EPA should disclose whether it used artificial intelligence (A.I.) tools to develop its proposed rule. If it did, it should provide relevant information, including what tasks it used A.I. tools for, what A.I. domains and models it used, what steps it took to ensure accuracy and minimize risk, and what specific prompts it provided to the A.I. tools, if such prompts are necessary for the public to understand and evaluate how A.I. tools were used.

Table of Contents

I. Statutory text, legislative design, and regulatory precedent demonstrate that EPA has the authority to regulate greenhouse gas emissions from power plants. 7

A. The text of the Clean Air Act does not support EPA's interpretation. 8

B. Congress designed the Clean Air Act to address climate change and other non-local or regional air pollution. 9

1. In developing the Clean Air Act of 1970, legislators extensively considered climate change and defined "welfare" to include effects on climate. 9

2. In the 1977 Clean Air Act Amendments, Congress confirmed that the endangerment framework reaches climate-altering pollutants. 12

3. Recent Congressional action re-affirms EPA's authority to regulate greenhouse gas emissions under Section 111. 15

4. Section 111's role to achieve comprehensive pollution control reaches beyond local and regional effects. 17

C. Regulatory history further confirms EPA's authority under Section 111 to regulate air pollution that endangers public health or welfare through climate and other non-local effects…. 19

1. EPA has previously regulated emissions under Section 111 and related provisions to address air pollution that endangers health and welfare as the result of a long causal chain…. 20

2. EPA has previously regulated emissions under Section 111 and related provisions to address global air pollution problems. 24

3. EPA has regulated pollutants that contribute to non-local or regional air pollution problems under its other Title I authorities. 27

4. EPA recognized its authority to regulate greenhouse gases as air pollutants under the Clean Air Act many years before issuing the 2015 NSPS. 28

D. Statutory text and past regulatory practice demonstrate that EPA has alternative ways to avoid regulating truly de minimis emissions. 29

II. Regulating greenhouse gas emissions from power plants does not implicate the major questions doctrine. 32

A. The major questions doctrine is concerned with transformative and unheralded assertions of power. 32

B. Regulating greenhouse gas emissions from power plants was neither unheralded nor transformative. 35

C. The Supreme Court rejected essentially the same argument in Massachusetts v. EPA. .. 36

D. Section 111 clearly authorizes the regulation of greenhouse gas emissions. 38

III. EPA's futility analysis is arbitrary, misleading, and unnecessary. 39

A. EPA's approach does not capture impacts on public health and welfare. 40

B. EPA unjustifiably abandons its long use of peer-reviewed, state-of-the-art tools to measure the health and welfare effects of specific greenhouse gas emissions. 41

C. EPA's myopic focus on temperature and sea-level rise fails to consider other important physical effects and reciprocity effects. 43

D. EPA underestimates the effects of power plant emissions on sea-level rise and global temperature changes by arbitrarily truncating the period of review. 45

E. The arbitrariness of EPA's futility methodology is further apparent when applied to the cost savings of the 2026 Proposal. 48

IV. Greenhouse gas emissions from power plants unquestionably contribute significantly to dangerous air pollution. 49

A. Greenhouse gas emissions from power plants cause massive health and economic damages 50

B. Under Section 111, EPA has recognized much smaller contributions to air pollution problems than those of greenhouse gases from the power sector to merit regulation. 58

V. EPA fails to consider the full effects of its proposal. 60

A. EPA should consider the potential effects of removing new source performance standards for power plants under different future market condition scenarios. 60

B. The 2026 Proposal would forestall regulation of greenhouse gas emissions from gas- and coal-fired power plants. 62

C. EPA ignores potential effects of ozone and particulate matter emissions. 64

VI. EPA should disclose whether it used artificial intelligence tools to develop its proposal, and provide relevant information about its use of any such tools 65

Background

Section 111 directs EPA to address dangerous air pollution emitted by stationary sources. The statute bifurcates regulation under Section 111 into a two-step process.[5]

First, the EPA Administrator must "list" a source category for regulation. Specifically, Section 111(b)(1)(A) requires the EPA Administrator to develop a list of source categories for regulation, and to "include a category of sources in such list if in his judgment it causes, or contributes significantly to, air pollution which may reasonably be anticipated to endanger public health or welfare."[6] This analysis is sometimes referred to as an "endangerment and contribution analysis." Second, once EPA has listed a source category under Section 111(b)(1)(A), EPA must set standards of performance for emissions from new and existing sources that reflect "the degree of emission limitation achievable through the application of the best system of emission reduction" (BSER), taking into account factors such as control costs and energy requirements.[7] This analysis is sometimes referred to as a BSER analysis.

EPA has used Section 111 to regulate emissions from fossil-fuel-fired power plants since the 1970s. Fossil-fuel-fired power plants include sources from two categories listed under Section 111—fossil-fuel-fired steam generating boilers (typically for coal-fired power plants) and stationary gas turbines. EPA first listed steam generating units in 1971,[8] and issued performance standards for sulfur dioxide (SO_2), nitrogen oxides (NO_x), and particulate matter (PM) emissions later that year.[9] EPA listed stationary gas turbines in 1977[10] and issued performance standards for SO_2 and NO_x two years later.[11] EPA periodically updated these performance standards over the following decades.

In 2007, the Supreme Court issued its landmark ruling in *Massachusetts v. EPA* that greenhouse gas emissions are "air pollutants" under the Clean Air Act, and that EPA must regulate those emissions from new motor vehicles if the agency finds that they contribute to air pollution that endangers public health or welfare.[12] Shortly thereafter, EPA made the requisite findings concerning endangerment and contribution,[13] and established greenhouse gas emission standards

[5] 2026 Proposal, 91 Fed. Reg. at 59027.
[6] 42 U.S.C. § 7411(b)(1)(A).
[7] *See id.* §§ 7411(a)(1), (b)(1)(B). For new and modified sources, EPA sets emission limits through New Source Performance Standards (NSPS) under Section 111(b)(1)(B). For existing sources, EPA sets them through emission guidelines under Section 111(d), and then states submit State Implementation Plans that include performance standards of equivalent stringency. *Id.* § 7411(d).
[8] Air Pollution Prevention and Control, List of Categories of Stationary Sources, 36 Fed. Reg. 5931 (Mar. 31, 1971) (listing fossil-fuel-fired steam generators of more than 250 million B.t.u. per hour heat input).
[9] Standards of Performance for New Stationary Sources, 36 Fed. Reg. 24,875, 24,878–79 (Dec. 23, 1971).
[10] Air Pollution Prevention and Control, Addition to the List of Categories of Stationary Sources, 42 Fed. Reg. 53,657 (Oct. 3, 1977) (listing stationary gas turbines).
[11] Standards of Performance for New Stationary Sources; Gas Turbines, 44 Fed. Reg. 52,792 (Sept. 10, 1979).
[12] 549 U.S. 497, 528–29 (2007) ("The Clean Air Act's sweeping definition of 'air pollutant' includes '*any* air pollution agent or combination of such agents,' . . . [t]he statute is unambiguous.").
[13] Endangerment and Cause or Contribute Findings for Greenhouse Gases Under Section 202(a) of the Clean Air Act, 74 Fed. Reg. 66,496, 66,538 (Dec. 15, 2009).

for new motor vehicles.[14] Several years later, in *American Electric Power Co. v. Connecticut* (*AEP)*, the Court clarified that Section 111 grants EPA the authority to regulate greenhouse gas emissions specifically from fossil-fuel-fired power plants.[15]

EPA issued its first greenhouse gas standards for power plants shortly after the *AEP* decision. In 2015, EPA first issued a rule under Sections 111(b) and (d) establishing greenhouse gas emission limits from new, modified, and reconstructed fossil-fuel-fired power plants (2015 NSPS).[16] EPA concurrently established emission guidelines for existing power plants, commonly known as the Clean Power Plan,[17] though they were never implemented due to a stay from the Supreme Court[18] followed by a subsequent repeal.[19] In 2018, under the first Trump Administration, EPA issued weaker emission limits for existing power plants (the Affordable Clean Energy Rule or ACE).[20] In 2024, using its Section 111 authority, EPA repealed ACE and finalized stronger greenhouse gas limits for new gas-fired power plants and existing coal-fired power plants (2024 CPS).[21]

EPA, under the second Trump Administration, has initiated two rulemaking actions that attempt to eliminate greenhouse gas emission standards for fossil-fuel-fired power plants. In September 2026, EPA finalized a rule repealing most of the 2024 CPS based on a reevaluation of the best system of emission reduction for the relevant sources.[22] Concurrently, EPA issued this proposed rule disavowing its authority under Section 111 to regulate greenhouse gas emissions from fossil-fuel-fired power plants and rescinding all remaining power sector greenhouse gas emission standards.[23]

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[14] Light-Duty Vehicle Greenhouse Gas Emission Standards and Corporate Average Fuel Economy Standards; Final Rule, 75 Fed. Reg. 25324 (May 7, 2010).
[15] 564 U.S. 410, 424 (2011) ("We hold that the Clean Air Act and the EPA actions it authorizes displace any federal common-law right to seek abatement of carbon-dioxide emissions from fossil-fuel-fired powerplants. *Massachusetts* made plain that emissions of carbon dioxide qualify as air pollution subject to regulation under the Act. And we think it equally plain that the Act 'speaks directly' to emissions of carbon dioxide from the defendants' plants.").
[16] Standards of Performance for Greenhouse Gas Emissions From New, Modified, and Reconstructed Stationary Sources: Electric Utility Generating Units, 80 Fed. Reg. 64510, 64531 (Oct. 23, 2015) [hereinafter 2015 NSPS].
[17] Carbon Pollution Emission Guidelines for Existing Stationary Sources: Electric Utility Generating Units, 80 Fed. Reg. 64662 (Oct. 23, 2015) [hereinafter Clean Power Plan].
[18] *See* West Virginia v. EPA, 577 U.S. 1126 (2016).
[19] Repeal of the Clean Power Plan; Emission Guidelines for Greenhouse Gas Emissions From Existing Electric Utility Generating Units; Revisions to Emission Guidelines Implementing Regulations, 84 Fed. Reg. 32520 (July 8, 2019) [hereinafter ACE].
[20] *Id.*
[21] New Source Performance Standards for Greenhouse Gas Emissions From New, Modified, and Reconstructed Fossil Fuel-Fired Electric Generating Units; Emission Guidelines for Greenhouse Gas Emissions From Existing Fossil Fuel-Fired Electric Generating Units; and Repeal of the Affordable Clean Energy Rule, 89 Fed. Reg. 39798 (May 9, 2024) [hereinafter 2024 CPS].
[22] Partial Repeal of the Carbon Pollution Standards for Fossil Fuel-Fired Electric Generating Units, 91 Fed. Reg. 58954 (Sep. 17, 2024) [hereinafter 2026 Partial Repeal]. Specifically, the final rule repealed all emission guidelines for existing fossil-fuel-fired steam generating units, the carbon capture and sequestration (CCS) requirements for coal-fired units undergoing large modifications and the CCS-based standards for new base load stationary combustion turbines. *Id.*
[23] 2026 Proposal, 91 Fed. Reg. at 59002.

The 2026 Proposal rests on the conclusion that regulating greenhouse gas emissions from fossil-fuel-fired power plants is inconsistent with the best reading of Section 111. Among its primary arguments, EPA asserts that (1) Section 111 is meant only to regulate air pollution which endangers public health or welfare through local or regional exposures; (2) regulating greenhouse gas emissions from power sector sources implicates the major questions doctrine; and (3) regulating these emissions would be futile.[24]

Part I of these comments explains how legislative history, regulatory history, and statutory context affirm that greenhouse gases are subject to EPA's regulatory authority under Section 111. Part II explains that regulating greenhouse gas emissions from power plants does not implicate the major questions doctrine. Part III explains flaws in EPA's argument that regulating these emissions would be futile, its related futility analysis, and its logic for conducting the analysis. Part IV explains the extensive damages resulting from power plant greenhouse gas emissions and how EPA has long used Section 111 to address small shares of large pollution problems. Finally, Part V identifies important effects of the 2026 Proposal that EPA fails to consider.

I. Statutory text, legislative design, and regulatory precedent demonstrate that EPA has the authority to regulate greenhouse gas emissions from power plants.

In the 2026 Proposal, EPA introduces a novel and incorrect interpretation of Section 111(b)(1)(A) that would significantly limit EPA's regulatory authority. Specifically, it would limit regulation under Section 111 to pollutants that "contribute significantly to air pollution that itself endangers public health or welfare through *local or regional exposure*."[25] In doing so, EPA attempts to distinguish greenhouse gases from other pollutants which the agency claims "directly affect[] public health or welfare through exposure," or "through the reaction of those emissions with other airborne chemicals or conditions, at the local or regional scale."[26] Under this interpretation, EPA finds that Section 111 does not authorize regulation to address climate change.

EPA's new interpretation—that Section 111 is limited to pollution that endangers public health or welfare through local or regional exposures—is inconsistent with statutory text, legislative history, and regulatory precedent. First, EPA reads words into the statute that are not part of the text and relies on cherry-picked evidence from select dictionary definitions while dismissing statutory definitions and other important statutory and legislative context. Second, statutory text and legislative history demonstrate that in developing the Clean Air Act of 1970, legislators considered climate change and defined "welfare" to include effects on climate. In amending the Act in 1977 and in more recent legislative actions, Congress has confirmed that the Act reaches climate-altering pollutants. Third, EPA has long regulated pollutants that endanger public health

[24] *Id.* at 59020–41.
[25] *Id.* at 59021.
[26] *Id.* at 59024.

or welfare through means other than local or regional exposure under Section 111 and analogous provisions of the Act. Fourth, the existing statutory requirements constrain EPA's authority and prevent the agency from obligations to regulate *de minimis* emissions without adopting EPA's new interpretation.

A. The text of the Clean Air Act does not support EPA's interpretation.

EPA proposes to adopt a "best reading of [Clean Air Act] [S]ection 111, fixed at the time of enactment and informed by ordinary principles of statutory interpretation and relevant history,"[27] but then proposes a definition that contradicts these principles. EPA interprets the statute to regulate only local and regional air pollution, despite no such specification in the statutory text. EPA reads words into the statute on the basis of cherry-picked evidence, namely definitions of "pollution" from a contemporaneous dictionary and two unrelated lower court decisions, while dismissing existing statutory definitions and other pertinent statutory and legislative context.

As EPA recognizes, Section 111(b)(1)(A) calls on the Administrator to list a category of stationary sources "if in his judgment it causes, or contributes significantly to, air pollution which may reasonably be anticipated to endanger public health or welfare."[28] Despite EPA's insistence that Congress intended to regulate only local or regional air pollution, no such specification is included in the statutory text. The statutory text lists the broad term "air pollution" without narrowing its scope.

EPA relies heavily on the definition of "pollution" contained within a contemporaneous dictionary and two lower court decisions, unrelated to this provision of the Clean Air Act,[29] but dismisses stronger statutory and historical evidence that contradicts its new interpretation. For example, EPA discounts that the Clean Air Act explicitly defines "effects on welfare" to include "effects on . . . weather, visibility, and *climate*."[30] EPA argues that "climate" should be read to have a different common meaning in 1970 despite evidence that Congress intended this term to mean effects on global climate.[31] And EPA fails to consider broader definitions of pollution contemporaneous to the enactment of the Clean Air Act, such as "[t]he presence in the environment, or the introduction into it, of products of human activity which have harmful or objectionable effects"[32]—definitions that lack any of the limiting principles that EPA claims Congress meant to impart. EPA's selective consideration of evidence disregards ordinary principles of statutory interpretation and relevant history.

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[27] *Id*. at 59021.
[28] 42 U.S.C. § 7411(b)(1)(A).
[29] *See* 2026 Proposal, 91 Fed. Reg. at 59022.
[30] 42 U.S.C. § 7602(h) (emphasis added).
[31] *See infra* Part I.B.1.
[32] *Pollution*, 2 Oxford English Dictionary (1989) (explaining that the origins of term date back to 1420 and noting a number of illustrative, contemporaneous uses of the term "pollution" that speak to this broader understanding of pollution including in 1955 in *Scientific American* to reference air pollution from volatile organic compounds, in 1969 in the *Financial Times* to reference thermal pollution, and in the 1970's to reference noise pollution).

To understand what pollution Congress intended EPA to regulate, EPA should consider the definition of "climate" within the Clean Air Act and the evidence from the origins and drafting of this term (discussed later in this comment). EPA should also further consider clarification from the 1977 amendments regarding the scope of regulated air pollution,[33] subsequent legislative amendments recognizing greenhouse gas emissions,[34] and decades of agency practice regulating pollutants with indirect and far-reaching effects.[35] If EPA is looking beyond the text to inform its interpretation, it must consider this additional evidence rather than relying solely on cherry-picked definitions. To do otherwise would violate the traditional principles of statutory interpretation that EPA seeks to espouse.

B. Congress designed the Clean Air Act to address climate change and other non-local or regional air pollution.

EPA's novel interpretation of Section 111 runs contrary to the legislative history of the Clean Air Act. In both enacting the Clean Air Act and subsequent legislation, Congress has repeatedly emphasized its concern for climate change and indicated its approval of its regulation under the Clean Air Act. Similarly, in amending the Clean Air Act in 1977, Congress strongly indicated that EPA may, under Section 111, regulate pollutants that endanger human health and welfare through means other than local or regional exposure.

1. In developing the Clean Air Act of 1970, legislators extensively considered climate change and defined "welfare" to include effects on climate.

The text of the 1970 Clean Air Act and legislative history from the past 55 years affirms EPA's authority to regulate greenhouse gas emissions under Section 111 and related Clean Air Act provisions. This affirmation is clear from the history of the 1970 passage of the Clean Air Act, in which "awareness of and concern about climate change appear extensively in the legislative history accompanying the statute's enactment."[36] Professor Richard L. Revesz, Policy Integrity's faculty director, reviews the relevant statutory text and legislative history in a law review article[37] attached to this letter as Exhibit A and summarized in this section.

As Professor Revesz recounts in his article, there is an "abundance of legislative materials accompanying the enactment of the Clean Air Act of 1970 that manifest Congress'[s] substantial understanding of climate change and the adverse climatic effects of carbon dioxide and other greenhouse gases."[38] These materials, accompanying the legislation that enacted Section 111,

[33] *See infra* Part I.B.2.
[34] *See infra* Part I.B.3.
[35] *See infra* Part I.C.
[36] Richard L. Revesz, Bostock *and the End of the Climate Change Double Standard*, 45 COLUM. J. ENV'T L. 1, 28 (2020).
[37] *Id.* at 28–44.
[38] *Id.* at 32.

evince that Congress was concerned with climate change when implementing that section into law and intended for the Clean Air Act to address climate change.

To start, Professor Revesz explains that the statute expressly contemplates regulation of pollutants that adversely affect the climate, as demonstrated by Congress's reference to "climate" as an element of "welfare."[39] Specifically, the Clean Air Act's definition of "effects on welfare" includes "effects on . . . weather, visibility, and *climate*."[40] Because Section 111's "welfare" analysis must account for climate impacts, the provision necessarily covers pollutants that affect the climate.[41]

Further, as Professor Revesz recounts, "statements from bill sponsors, committee members, and scientific experts prior to the passage of the Clean Air Act of 1970 demonstrate not only that Congress was aware that certain air pollutants could negatively affect the climate on a global scale, but that they were concerned about this prospect."[42] This includes floor statements and record entries from Sen. Edmund Muskie (D-ME), who was the manager of the bill and chair of the Public Works Subcommittee on Air and Water Pollution that considered the bill;[43] floor statements and record entries from Sen. Caleb Boggs (R-DE), ranking minority member of that subcommittee; [44] and floor statements from Rep. Paul Rogers (D-FL), the bill's sponsor in the House of Representatives.[45] Similarly, testimony from 1970 hearings held by the Senate Public Works Subcommittee on Air and Water Pollution "indicated a significant scientific understanding of the potential for pollutants to modify global climate" and senators submitted reports into the record discussing climate change.[46] This included an article discussing the climate-altering effects of combustion products, which explained that "'fine particulates tend to remain in suspension in the upper atmosphere,' where their continued buildup could reduce visibility, inhibit global solar radiation, and 'produce unacceptable worldwide climate changes.'"[47]

Professor Revesz further recounts how Congress was not only aware of pollution's effects on the global climate generally, "but it was also exposed to significant testimony that specifically described how greenhouse gases, including carbon dioxide, could cause global warming."[48] For instance, testimony from the U.S. Department of Health, Education, and Welfare (the government agency that carried out functions later assigned to EPA) expressed that the agency

[39] *Id.* at 3–4.
[40] 42 U.S.C. § 7602(h) (emphasis added).
[41] *See generally* Colleen Lanier-Christensen, et al., *Congressional Knowledge of Climate Change Before the Clean Air Act of 1970*, 37 DUKE ENV'TL L. & POL'Y FORUM (forthcoming 2027) [attached to this letter as Exhibit B].
[42] Revesz, *supra* note 36, at 32.
[43] *Id.* at 32, 34.
[44] *Id.* at 32–35.
[45] *Id.* at 35.
[46] *Id.* at 33 (citing Hearing Before the Subcomm. on Air and Water Pollution of the S. Comm. on Pub. Works on S. 3229, S. 3466, S. 3546, 91st Cong. 1 (1970) (statement of Sen. Randolph)).
[47] *Id.* (citing Hearing Before the Subcomm. on Air and Water Pollution of the S. Comm. on Pub. Works on S. 3229, S. 3466, S. 3546, 91st Cong. 1 (1970) (statement of Sen. Randolph)).
[48] *Id.* at 37.

"was aware of—and concerned about—the potential for carbon dioxide emission to result in rising atmospheric temperatures."[49] Numerous senators including Sen. Boggs submitted articles into the record that detailed the greenhouse effect and discussed how greenhouse gas emissions may result in global climatic changes, including an authoritative report from the Council on Environmental Quality (CEQ).[50]

The CEQ report, which was drafted around the same time as the 1970 Act,[51] provides further evidence that Congress meant for EPA to consider effects on global climate when considering effects on welfare. As a recent article explains, the CEQ report detailed the effects of air pollution in a manner that "almost perfectly mirror[s] the definition of 'welfare' as it appears in the 1970 Clean Air Act."[52] Specifically, the relevant section of the report details air pollution's impacts on things like "vegetation," "materials," "visibility," and "climate,"[53] all of which appear in the Act-wide definition of public welfare.[54] And in discussing air pollution's impacts on climate, the report specifies that "[a]ir pollution alters climate and may produce global changes in temperature."[55]

Finally, legislative materials from the drafting of the 1970 Act demonstrate that "climate" as used in the definition of welfare originated from a draft bill provision that would have provided funding for research on "climatic modification," or climate change.[56] Specifically, a draft provision of the Act concerning "Research Relating to Air Pollution Effects" directed the establishment of a research program to address the effects of air pollution on "climatic modification and ecosystem structure and stability."[57] Drafters later clarified that this included things like effects on soil, water, vegetation, man-made materials, and animals, as well as effects

[49] *Id.* at 37–38 (citing Air Pollution Control and Solid Waste Recycling: Hearing on H.R. 12934 and H.R. 14960 Before H. Subcomm. On Pub. Health & Welfare of the H. Comm. on Interstate and Foreign Commerce, 91st Cong. 1 (1969) (statement of Charles Johnson, Administrator of the Environmental Health Service, Department of Health, Education, and Welfare)).
[50] *Id.* at 38–44 (citing Council on Env't Quality, First Annual Report (1970) [hereinafter CEQ Report] and other sources).
[51] Lanier-Christensen, et al., *supra* note 41, at 6 ("In the summer of 1970 . . . [t]he newly formed Council on Environmental Quality (CEQ) toiled on its First Annual Report. . . . In the midst of this, Congress drafted, deliberated, and voted on the Clean Air Act amendments that would become law on December 31, 1970).
[52] *Id.* at 6–9.
[53] CEQ Report, *supra* note 50, at 66–71.
[54] *See* 42 U.S.C. § 7602(h) ("All language referring to effects on welfare includes, but is not limited to, effects on soils, water, crops, vegetation, manmade materials, animals, wildlife, weather, visibility, and climate . . . .").
[55] CEQ Report, *supra* note 50, at 71. Elsewhere, in a section titled "Man's Inadvertent Modification of Weather and Climate," the report notes that increased carbon dioxide emissions, "if not counteracted by other effects, could in a period of a few decades, lead to the start of substantial melting of ice caps and flooding of coastal regions." *Id.* at 93, 97.
[56] Lanier-Christensen, et al., *supra* note 41, at 69–74.
[57] *Id.* at 70 (citing Committee Print No. 13, BILLS-PLUTO, 10-11 (June 24, 1970) (on file with NARA-Senate, EPWEPS, 12E3/20/30/2, box 13)).

on "weather[] and climate."[58] This text was later adopted into Section 302's Act-wide definition of effects on welfare.[59]

As these voluminous materials demonstrate, Congress was well aware of and concerned by climate change when it passed the Clean Air Act in 1970. The extensive attention that Congress paid to climate change in passing the legislation provides strong evidence that the legislation's provisions, including Section 111, apply to greenhouse gas emissions.

2. In the 1977 Clean Air Act Amendments, Congress confirmed that the endangerment framework reaches climate-altering pollutants.

As discussed above, EPA newly claims that Section 111 extends only to "local or regional" air pollution.[60] In explaining what differentiates greenhouse gases from local or regional pollutants, EPA highlights that greenhouse gases contribute to a global pollution problem that harms human health and welfare through "an attenuated causal chain."[61]

The 1977 Clean Air Act Amendments and their associated legislative context rebut EPA's claim that it cannot use Section 111 to address a global pollutant that indirectly harms public health and welfare. First, in 1977 Congress added Section 157 to the Act, which directed EPA to protect stratospheric ozone by regulating emissions involved in a similarly attenuated causal chain. Second, Congress amended Section 111 and numerous other provisions of the Act, including the Section 157 stratospheric ozone program, to establish a common framework for defining endangerment to public health and welfare. This strongly indicates that EPA must consider indirect impacts to public health and welfare under Section 111, including greenhouse gas emissions.

The statutory and legislative history from the 1977 Clean Air Act Amendments shows that Congress authorized EPA to regulate pollution with such indirect health and welfare impacts[62] to the global stratosphere, and that Congress intended EPA to consider endangerment to health and welfare when regulating stationary sources the same as when regulating harms to stratospheric ozone. When Congress amended the Clean Air Act in 1977 it added Title I Part B, "Ozone Protection."[63] According to a May 1977 House report (House Report), Section 157 of the Act was added to "respond[] to the threat that release of certain materials . . . into the environment may indirectly endanger public health and welfare by causing or contributing to significant

[58] Lanier-Christensen, et al., *supra* note 41, at 71 (citing Committee Print No. 13, BILLS-PLUTO, 10-11 (June 24, 1970) (on file with NARA-Senate, EPWEPS, 12E3/20/30/2, box 13)).
[59] Lanier-Christensen, et al., *supra* note 41, at 72–74.
[60] 2026 Proposal, 91 Fed. Reg. at 59022.
[61] *Id.* at 59023.
[62] In this document, we adopt EPA's use of "indirect" effects to refer to effects on public health or welfare through a causal chain rather than direct human exposure. This is a different from the more common use of the term "indirect effects" to refer to effects from co-pollutant reductions. *See* 2026 Proposal, 91 Fed. Reg. at 59025 ("For purposes of this proposed rule, we use the phrase "local or regional exposure" to distinguish air pollution that impacts public health or welfare by its presence in the ambient air from "air pollution" that "impacts public health and welfare only indirectly and not by exposure to its presence in the ambient air.").
[63] *See* Pub. L. 95-95, 91 Stat. 791 (1977) (adding Sections 150 through 159).

depletion of the stratospheric ozone layer."[64] Specifically, Section 157(b) directed the EPA administrator to issue "regulations for the control of any substance, practice, process, or activity (or any combination thereof) which in his judgment may reasonably be anticipated to affect the stratosphere . . . if such effect in the stratosphere may reasonably be anticipated to endanger public health or welfare."[65]

As the House Report explained, Congress was particularly concerned with the depletion of the stratospheric ozone layer because of the indirect health consequences associated with increased sun exposure. Specifically, it stated that "halocarbon compounds, when released into the atmosphere, eventually find their way into the stratosphere where, by a complicated series of chemical reactions, the ozone layer is depleted."[66] Stratospheric ozone (or the "ozone layer") blocks harmful UV-B sunlight from reaching the lower atmosphere. As it thins, more sunlight is let through, causing increased risk of skin cancer to those exposed.[67] As the House Report demonstrates, Congress was particularly concerned that these effects may occur "a decade or two" after the pollution's release and that the effects "may persist many decades after termination" of the emissions.[68] Furthermore, Congress was concerned that there "may also be effects of increased UV-B on agriculture, directly, or through changes in climate, and effects on such organisms as plankton in the sea."[69] In a nutshell, Congress was concerned that pollution released in the United States would enter the stratosphere, deplete the ozone layer, and cause indirect effects on health and welfare through increased sun exposure—the types of impacts that, like those from greenhouse gases, are the product of a long causal chain, and not produced through "local or regional exposure" to pollution in the ambient air.[70]

These types of concerns were not unique to Section 157. As EPA itself highlights in its proposed rule,[71] in the same amendment Congress also adopted a "standardized basis" for regulation addressing impacts to public health under numerous provisions, including Sections 157 and 111.[72] Specifically, the amendment standardized the language in those provisions authorizing EPA to regulate to address "air pollution which may reasonably be anticipated to endanger public health or welfare."[73] According to the House Report, this endangerment framework was adopted with the purposes of "emphasiz[ing] the predominant value of protection of public health," and "provid[ing] the same standard of proof for regulation of any air pollutant, whether

[64] H.R. Rep. No. 95-294, at 94 (May 1977).
[65] Pub. L. 95-95 § 126 (1977).
[66] H.R. Rep. No. 95-294, at 94.
[67] *Id.*
[68] *Id.*
[69] *Id.* at 95.
[70] *Contra* 2026 Proposal, 91 Fed. Reg. at 59006.
[71] *Id.* at 59011 ("Congress further amended the endangerment and contribution language in CAA section 111, CAA section 202(a)(1), and additional regulatory provisions to provide a comparable standard for invoking each regulatory authority.").
[72] H.R. Rep. No. 95-294, at 50. Previously, Section 111 directed the Administrator to regulate source categories which "may contribute significantly to air pollution which causes or contributes to the endangerment of public health or welfare." Pub. L. 91-604 § 111(b)(1)(A) (1970).
[73] H.R. Rep. No. 95-294, at 50.

that pollutant comes from stationary or mobile sources, or both[.]"[74] This framework was adopted for the regulation of stationary sources under Section 111[75], as well as Sections 108 (criteria for national ambient air quality standards), 112 (hazardous air pollutants), 202 (motor vehicles), 211 (fuels and fuel additives), 213 (nonroad vehicles),[76] 231 (aircraft), and 157 (ozone and stratospheric protection).

As the House Report clearly explains, Congress intended EPA to consider endangerment to public health or welfare under Section 111 the same as it would under the other provisions with the similar endangerment framework, including Section 157. Specifically, the House Report notes that "[b]y using the same phrase" in Section 157 as it did in the other sections containing similar endangerment language, including Section 111, "the committee intends to convey the same concerns and objectives in the context of stratospheric threats to health or welfare as it did in the context of atmospheric threats."[77]

Under Section 157, EPA was charged with considering indirect public health and welfare harms caused by effects on the stratosphere. Congress was not concerned with the health and welfare impacts of ozone-depleting substances in the ambient air, but rather with their effect on atmospheric conditions and the increased incidence of skin cancer and effects on climate and agriculture that would result from increased sun exposure. [78] Emissions of greenhouse gases harm public health and welfare in an analogous way—though carbon dioxide (CO_2) does not cause harm through direct exposure, its effect on atmospheric conditions results in serious harm to public health and welfare. And because Section 157 used the exact same endangerment framework as Section 111, this indicates that Section 111 similarly authorizes EPA to consider non-localized effects.

Further, in adding Section 157, Congress explained that it did not intend to alter EPA's *existing* authority to regulate stratospheric threats from other relevant Clean Air Act provisions, including, for example, Section 231, which authorizes EPA to set standards for aircraft emissions which endanger public health or welfare.[79] Specifically, the House Report explains it "disagree[d]" with a memorandum finding the Act only applicable to air pollution problems in

[74] *Id.* at 49–50.
[75] Under Sections 111 and 213, EPA must find that a source category "significantly" contributes to dangerous air pollution problem. Sections 202, 211, 231, and 157 do not have such a qualifier.
[76] Congress again used the same endangerment and contribution framework discussed in the 1977 House Report when it added Section 213 as part of the 1990 Clean Air Act Amendments. *See* Pub. L. No. 101-549 § 222, 104 Stat. 2399, 2501 (1990).
[77] H.R. Rep. No. 95-294, at 100.
[78] The House Report further clarifies that though Section 157 was drafted with stratospheric ozone in mind, it is "sufficiently broad and flexible to prevent or abate any stratospheric threat," and that "any such threat to elements of the stratosphere could be dealt with under the research and regulatory authorities" of the section. Thus, Congress did not intend to cabin consideration of indirect impacts on public health and welfare to those merely caused by stratospheric ozone depletion. H.R. Rep. No. 95-294, at 108.
[79] *Id.* at 102.

the lower atmosphere,[80] and clarified that EPA retained authority to regulate pollutants like NO_x that affect the stratospheric ozone layer.[81] In other words, contrary to EPA's assertion that Congress never intended for Title I to be used to regulate "effects . . . on elevated global concentrations in the upper atmosphere,"[82] Congress in 1977 explicitly stated EPA already had authority to regulate stratospheric threats using existing Clean Air Act provisions that use a similar endangerment framework to Section 111.[83]

This statutory history also rebuts EPA's related charge that "when Congress sought to address global problems—for example, stratospheric ozone depletion—it did so explicitly by enacting a new title" of the Clean Air Act.[84] Though Congress ultimately transferred authority for regulation of stratospheric ozone protection to Title VI,[85] it was for years located within Title I, refuting EPA's claim that Congress has "not include[d] in Title I any other substances that harm public health or welfare based only on indirect effects."[86]

3. Recent Congressional action re-affirms EPA's authority to regulate greenhouse gas emissions under Section 111.

In the years since EPA began regulating greenhouse gas emissions from power plants, Congress has also recognized and reaffirmed EPA's authority to regulate greenhouse gas emissions under Section 111 on numerous occasions. Congress effectively reaffirmed EPA's authority to regulate greenhouse gas emissions under Section 111 when it passed a resolution of disapproval under the Congressional Review Act that restored regulations of greenhouse gas emissions from the oil and gas sector. And in passing the Inflation Reduction Act, Congress dedicated funding to EPA to achieve greenhouse gas emission reductions using its existing authorities, repeatedly defined greenhouse gas emissions as air pollutants under the Clean Air Act, and based a key program on EPA's regulation of greenhouse gas emissions under Section 111, further recognizing that this authority was already embedded in the Clean Air Act.

Turning first to the disapproval resolution, in 2021, Congress passed and the President signed a resolution undoing an EPA rule from the prior year that had rescinded methane emission standards for the oil and gas sector.[87] As a result, the affected methane emission standards, issued under Section 111 of the Clean Air Act, sprung back to life. In other words, this legislation

[80] *Id.* at 102 n.4. Specifically, the Committee noted its disagreement with a 1975 Department of Justice memorandum finding the Clean Air Act "intended to regulate only that portion of the lower atmosphere that is associated with the earth's surface." Memorandum of Wallace H. Johnson to Mr. Warren Muir, et. al., reprinted in Report of the Federal Task Force on Inadvertent Modification of the Stratosphere (MOS), "Fluorocarbons and the Environment" 103–09 (1975).
[81] H.R. Rep. No. 95-294, at 103
[82] 2026 Proposal, 91 Fed. Reg. at 59026.
[83] H.R. Rep. No. 95-294, at 102–03
[84] 2026 Proposal, 91 Fed. Reg. at 59026; *see also id.* at 59024–25.
[85] In the 1990 Clean Air Act amendments, Congress transferred the authority for stratospheric ozone protection from Section 157 to the newly created Title VI. *See* CONG. RSCH. SERV., CLEAN AIR ACT: A SUMMARY OF THE ACT AND ITS MAJOR REQUIREMENTS 17 (2022).
[86] *See* 2026 Proposal, 91 Fed. Reg. 59026.
[87] Pub. L. 117-23, 135 Stat. 295 (2021).

directly provided for greenhouse gas emission standards under Section 111, indicating recent congressional reaffirmation of EPA's authority to regulate greenhouse gases from stationary sources.

The House report accompanying the 2021 resolution specifically "reaffirm[ed] the EPA's authority and obligation to protect the public from harmful climate pollution like methane."[88] Using the language from Section 111(b)(1)(A), the House report emphasized that regulating methane emissions provides "critical health and welfare protections" and "is critical to avoiding the worst climate endangerment, and to protecting human health and welfare."[89] Both the congressional resolution itself and the accompanying legislative report thus indicate Congress's view that EPA has authority to regulate greenhouse gas emissions under Section 111's analogous endangerment framework.

Numerous amendments made by the 2022 Inflation Reduction Act further reaffirm EPA's authority to regulate greenhouse gas emissions.[90] Among these changes, the Inflation Reduction Act added Section 135 to the Clean Air Act, which appropriated EPA money for a "low emissions electricity program."[91] Among its provisions, the section directed $18 million "to ensure that reductions in greenhouse gas emissions are achieved through use of the existing authorities" of the Clean Air Act.[92] The statutory language directs EPA to use its "existing authorities" to ensure greenhouse gas reductions, effectively directing that EPA use its regulatory authorities, such as Section 111, to reduce greenhouse gas emissions from the power sector.[93] Though the One Big Beautiful Bill Act rescinded the balance of funding for the program, that Act did nothing to rescind the provision or disclaim EPA's ability to use Section 111 to reduce greenhouse gas emissions.[94] Section 135 rebuts EPA's suggestion that Congress has only provided for "non-regulatory" mechanisms to address climate change.[95]

Further, in at least ten Inflation Reduction Act provisions, including four that amended the Clean Air Act, Congress defined "greenhouse gas" as "the *air pollutants* carbon dioxide, hydrofluorocarbons, methane, nitrous oxide, perfluorocarbons, and sulfur hexafluoride."[96]

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[88] H.R. Rep. No. 117-64, at 6.
[89] *Id.* at 3.
[90] *See generally* Greg Dotson & Dustin J. Maghamfar, *The Clean Air Act Amendments of 2022: Clean Air, Climate Change, and the Inflation Reduction Act,* 53 ENV'T L. REP. 10017 (2023).
[91] 42 U.S.C. § 7435. In 2025, the One Big Beautiful Bill Act rescinded the balance of funding for this program, though it did not rescind the provision. One Big Beautiful Bill Act, Pub. L. No. 119-21,139 Stat. 155 (2025).
[92] 42 U.S.C. § 7435(a)(6).
[93] *See* Dotson & Maghamfar, *supra* note 90, at 10033 ("By requiring a "reduction" that incorporates EPA's assessment, Congress is directing the Agency to use the authorities of the [Clean Air Act] to achieve greater reductions than would otherwise be achieved."); *id.* (highlighting Congressional statement that "[Clean Air Act] Section 111 is one of the 'existing authorities' funded by [Section 135]").
[94] One Big Beautiful Bill Act, Pub. L. No. 119-21,139 Stat. 155 (2025).
[95] 2026 Proposal, 91 Fed. Reg. at 59026 (suggesting that greenhouse gases are not "collectively or individually, addressed in any of the regulatory provisions of title I"); *see also id.* at 59026 n.174.
[96] H.R. 5376 § 60103(c)(2), 117th Cong. (2022) (emphasis added for all) (creating the since-rescinded Section 134 of the Clean Air Act); *id.* § 60105(h) (codified at 42 U.S.C. § 7403); *id.* § 60106(c); *id.* § 60107(c) (creating Section 135 of the Clean Air Act, codified at 42 U.S.C. § 7435); *id.* § 60108(c); *id.* § 60111(b); *id.* § 60113(i) (creating

Similarly, the Inflation Reduction Act referred on different occasions to "greenhouse gas emissions and other air pollutants"[97] and "greenhouse gas emissions and other air pollution."[98] Collectively, these twelve references provide strong evidence that greenhouse gases are subject to regulation under the Clean Air Act. While Congress has since repealed one of these twelve provisions,[99] the other eleven remain.[100]

Finally, the Inflation Reduction Act also enacted a program, known as the waste emission charge, for EPA to "collect a charge on methane emissions that exceed an applicable waste emissions threshold."[101] Under the statute, that threshold was defined in relation to EPA's then-proposed increases in stringency to the methane-emission limits for the oil and gas sector under Section 111.[102] In other words, methane emitters were exempt from the waste emission charge if they met EPA's methane regulations. While Congress delayed implementation for the waste emission charge program as part of the 2025 One Big Beautiful Bill Act, it did not eliminate the program, nor remove its reliance on EPA's methane regulations.[103] By tying the waste emissions charge to EPA's methane standards, Congress acknowledged EPA's authority to regulate greenhouse gases like methane under Section 111.

4. Section 111's role to achieve comprehensive pollution control reaches beyond local and regional effects.

Legislative history shows that Congress intended the Clean Air Act as a check against national and international pollution threats, and Section 111 as a key tool as part of that broader effort. It further rebuts EPA's claims that Title I is limited to regulating local and regional pollutants and that Section 111 can address only the same pollution as other Title I authorities.[104]

Even from its earliest origins, the drafters of the Clean Air Act and its relevant amendments indicated their intent that EPA address national and global pollution problems. The Senate report from the 1963 Clean Air Act, a precursor to the 1970 Act, reflects the view that air pollution is a "nation-wide" problem requiring appropriately broad solutions.[105] The report also suggested that regulators should consider "the international aspect of air pollution."[106] Similarly, the House report described air pollution as a "serious national problem" and cited President Kennedy's

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Section 136 of the Clean Air Act, codified at 42 U.S.C. § 7436); *id.* § 60116(b) (codified at 42 U.S.C. § 4321 note); *id.* § 60201(d) (creating Section 138 of the Clean Air Act, codified at 42 U.S.C. § 7438); *id.* § 60503.

[97] *Id.* § 60106(a).

[98] *Id.* § 60501(a) (codified at 23 U.S.C. § 177).

[99] H.R. 1 § 60001, 119th Cong. (2025) (repealing Section 134 of the Clean Air Act).

[100] *See supra* note 96.

[101] H.R. 5376 § 60113 (enacting 42 U.S.C. § 7436(c)).

[102] *Id.* (enacting 42 U.S.C. § 7436(f)).

[103] EPA suggests that Congressional changes to the waste emission charge program "reinforce the understanding that Congress intends to reserve" authority to respond to climate change itself. 2026 Proposal, 91 Fed. Reg. at 59034. The agency does not address how this interpretation squares with the program's explicit reliance on EPA's authority to regulate methane emissions from oil and gas sources under Section 111.

[104] *Id.* at 59026.

[105] S. Rep. No. 88-638, at 5 (1963).

[106] *Id.*

speech emphasizing the importance of federal air pollution regulation.[107] And as discussed elsewhere in this comment, in developing the 1970 Clean Air Act and then subsequently refining the Clean Air Act, Congress has continued to acknowledge the global nature of air pollution and its effects and indicate its intent that EPA address these effects under the Clean Air Act.[108]

Changes between the 1963 and 1970 Acts indicate further Congressional intent to design a federal program capable of controlling air pollution at the national level. While the Congress that passed the 1963 Act sought to address air pollution nationwide, it delegated this responsibility to state and local governments which were intended to collaborate to set ambient air quality standards.[109] Subsequently, multiple "killer smog" events led Congress to grow concerned by the failure of state and local governments to adequately address this pollution, which became "the most important factor in creating a federal program."[110] The Senate report observed that the previous "program focused on uniquely critical areas" became "truly national in scope" through the 1970 Act.[111] This is further reflected in the national focus of the 1970 Clean Air Act's stated purpose to "[t]o amend the Clean Air Act to provide for a more effective program to improve the quality of the Nation's air."[112] Such a goal requires addressing pollution that crosses physical state lines, but also to regulate the nation's air in a comprehensive way that avoids emitters moving to the least regulated area. Section 111 helped achieve that national perspective by ensuring stationary sources in all states would be subject to the same minimum standards. The Clean Air Act of 1970 implemented Congress's correction for a comprehensive federal regime to regulate increasingly dangerous air pollution.

Congress intended Section 111 to be used to shore up any gaps in pollution control and be an integral part of securing clean air throughout the country. Section 111 was designed to leave "no gaps in control activities pertaining to stationary source emissions that pose any significant danger to public health or welfare;"[113] in other words, it was "intended to ensure that the [Clean Air] Act achieves comprehensive pollution control."[114] The House report stressed that Section 111 was enacted to "prevent the occurrence anywhere in the United States of significant new air pollution problems."[115] Section 111 is a critical component of the Clean Air Act's approach centered around controlling effects at the national level by preventing pollution sources from moving to the least regulated areas.

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[107] H. Rep. No. 88-508, at 2, 13 (1963).
[108] *See supra* Part I.B.3.
[109] Arnold W. Reitze, Jr., *The Legislative History of U.S. Air Pollution Control*, 36 HOU. L. REV. 679, 700–02 (1999).
[110] *Id.* at 698.
[111] S. Rep. No. 91-1196, at 2 (1970).
[112] Clean Air Act of 1970, Pub. L. No. 91-604, 84 Stat. 1676, 1676 (1970).
[113] S. Rep. No. 91-1196 at 20.
[114] Am. Lung Ass'n v. EPA, 985 F.3d 914, 951 (D.C. Cir. 2021), *rev'd and remanded sub nom.* West Virginia v. EPA, 597 U.S. 697 (2022).
[115] H. Rep. No. 91-1146, 91st Cong., 2d Sess. 3, at 5356 (1970).

EPA argues that Section 111 applies only to the same types of pollutants covered under Sections 107–110 or 112, pollutants which have local and regional effects.[116] As a preliminary matter, EPA's argument that Title I provides authority to regulate only pollutants with local and regional effects is inconsistent with decades of past practice, as explained in Section I.B.3. But more broadly, Congress did not presume that the gaps filled by Section 111 would be unimportant or purely local and regional in scope. No text in the Act supports this interpretation, and Congress in fact designed Section 111 to address "significant danger[s] to public health and welfare" not covered elsewhere in the Act.[117] The lead drafters of the 1970 legislation affirmed that the inclusion of Section 111 reflected a desire to give EPA flexibility to limit pollutants that do not neatly fit into other regulated categories.[118] In fact, the House report for the 1977 amendments noted that not all harmful air pollutants were then being regulated, let alone adequately, and cited Section 111 when stating that "[a]dditional control measures will be needed."[119]

C. Regulatory history further confirms EPA's authority under Section 111 to regulate air pollution that endangers public health or welfare through climate and other non-local effects.

Contrary to what EPA now asserts, regulating greenhouse gas emissions under Section 111 is also consistent with EPA's own regulatory history.

In the 2026 Proposal, EPA argues that in 2015, it adopted a "novel" basis for regulating greenhouse gas emissions under Section 111 directed at global climate change.[120] In doing so, EPA distinguishes greenhouse gas emissions from other pollutants that EPA had previously regulated in two different respects. First, EPA highlights that greenhouse gases are "global" rather than local or regional pollutants.[121] Second, EPA suggests that power sector greenhouse gas emissions "do not have a sufficiently close connection" to the public health and welfare harms associated with climate change to fall within EPA's regulatory ambit.[122] In doing so, EPA contrasts greenhouse gases with pollutants like PM, NO_x, and SO_2 that are regulated under other provisions of Title I.[123]

As an initial matter, contrary to some of EPA's suggestions, the science and economics of how greenhouse gases affect public health and welfare is well settled. Dr. William Nordhaus even won the 2018 Nobel Prize in Economic Sciences for integrating models that trace the contribution of each additional ton of greenhouse gases to climate change and to economic

[116] 2026 Proposal, 91 Fed. Reg. at 59009.
[117] S. Rep. No 91-1196 at 20.
[118] Brief of Leon G. Billings and Thomas C. Jorling as Amici Curiae in Support of Respondents at 22–23, West Virginia v. EPA, No. 15-1363 (D.C. Cir. dismissed Sept. 17, 2019).
[119] H. Rep. No. 95-294, at 36 (1977).
[120] 2026 Proposal, 91 Fed. Reg. at 59014.
[121] *Id.* at 59021–23.
[122] *Id.* at 59023.
[123] *Id.* at 59026.

damages.[124] Thus, EPA is incorrect to suggest that greenhouse gases do not have a "sufficiently close connection" to the harms they cause to "reasonably" anticipate dangers to public health and welfare.[125]

In any event, for decades, EPA has considered indirect impacts to public health and welfare when making endangerment findings under Section 111 and related Clean Air Act provisions. First, EPA has justified the regulation of air pollutants based on indirect impacts that endanger public health or welfare as a result of a long causal chain. Second, EPA has justified the regulation of air pollutants based on effects that are global in nature. Third, EPA's own scientific assessments demonstrate that pollutants regulated for decades under other provisions of Title I—including the National Ambient Air Quality Standards—contribute to indirect and non-local air pollution problems. And finally, long before it established greenhouse gas emission standards for power sector sources, EPA concluded that it has authority to regulate greenhouse gas emissions as air pollutants under the Clean Air Act.

Thus, contrary to what it now asserts, EPA did not "deviate[]" from its own practice when it considered the indirect public health and welfare effects associated with greenhouse gas emissions in the 2015 NSPS.[126]

1. EPA has previously regulated emissions under Section 111 and related provisions to address air pollution that endangers health and welfare as the result of a long causal chain.

In the 2026 Proposal, EPA argues that "air pollution" within the context of Section 111 encompasses only that which "itself endangers public health or welfare through local or regional exposure."[127] EPA seeks to distinguish this pollution from that caused by greenhouse gases, which EPA argues affect public health and welfare through "a very different and much longer causal chain."[128] In regulating under Section 111, however, EPA has long targeted air pollution problems that endanger public health or welfare through an attenuated causal chain.

In 2006, for instance, EPA first listed and developed standards of performance for stationary compression ignition combustion turbines under Section 111.[129] In assessing the health and welfare impacts associated with SO_2 and NO_x emissions from these sources, EPA's proposed rule highlighted their contribution to "eutrophication," the increased growth of algae and other plant matter in water bodies.[130] Like climate change, eutrophication harms health and welfare

[124] For further discussion of the economic damages associated with the contribution of greenhouse gases to climate change, see Parts III.B, IV.B.
[125] 2026 Proposal, 91 Fed. Reg. at 59023.
[126] *Id.*
[127] *Id.* at 59022.
[128] *Id.*
[129] Standards of Performance for Stationary Compression Ignition Internal Combustion Engines, 71 Fed. Reg. 39154 (July 11, 2006).
[130] Standards of Performance for Stationary Compression Ignition Internal Combustion Engines, 70 Fed. Reg. 39870, 39882 (proposed July 11, 2005).

through an attenuated causal chain. It begins with the emission of NO_x, which travels through the air and is eventually deposited in water bodies. Once deposited, these pollutants drive an "accelerated production of organic matter, particularly algae." This overgrowth of algae sets off a continued chain of "adverse ecological effects," including "reduced light and oxygen levels" that "affect fish, plants, and other organisms."[131]

EPA has also cited eutrophication effects when making findings under other Clean Air Act provisions that use the common endangerment framework.[132] In 2000, for instance, EPA issued a regulation under Section 202 to control NO_x emissions from motor vehicles. Among other impacts that endanger public health or welfare, EPA highlighted the role NO_x emissions play in eutrophication, as they produce "a substantial rise of nitrogen levels in surface waters," which in turn "result[s] in excess algae and plant growth . . . [that] can cause numerous adverse ecological effects and economic impacts."[133] EPA noted they can "adversely affect fish and shellfish populations" and "in extreme cases caus[e] dramatic fish kills."[134] EPA recognized that these impacts would indirectly harm human welfare and noted that its regulation would result in "economic benefits of reduced eutrophication."[135] EPA has also emphasized the indirect effects of eutrophication in its rules restricting NO_x emissions from heavy-duty vehicles,[136] highway motorcycles,[137] marine engines,[138] and aircraft.[139]

Similarly, EPA has regulated numerous precursors to ozone under Section 111 and repeatedly highlighted those pollutants' role in ozone formation. Despite the long causal chain underlying ozone formation, EPA has addressed ozone through Section 111 standards of performance for synthetic plastics production plants (VOCs),[140] steam generation units (NO_x),[141] and stationary

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[131] *Id.*
[132] *See supra* Part I.B.2.
[133] Control of Air Pollution from New Motor Vehicles: Tier 2 Motor Vehicle Emissions Standards and Gasoline Sulfur Control Requirements, 65 Fed. Reg. 6698, 6723 (Feb. 10, 2000).
[134] *Id.*
[135] *Id.* at 6724.
[136] Control of Air Pollution from New Motor Vehicles: Heavy-Duty Engine and Vehicle Standards and Highway Diesel Fuel Sulfur Control Requirements, 66 Fed. Reg. 5002, 5026 (Jan. 18, 2001).
[137] Control of Emissions from Highway Motorcycles, 69 Fed. Reg. 2398, 2405–06 (Jan. 15, 2004).
[138] Control of Emissions from New Marine Compression-Ignition Engines at or Above 30 Liters Per Cylinder, 68 Fed. Reg. 9746, 9753–54 (Feb. 28, 2003) (citing EPA, FINAL REGULATORY SUPPORT DOCUMENT: CONTROL OF EMISSIONS FROM NEW MARINE COMPRESSION-IGNITION ENGINES AT OR ABOVE 30 LITERS PER CYLINDER 2-19 (2003)).
[139] Control of Air Pollution from Aircraft and Aircraft Engines; Emission Standards and Test Procedures, 70 Fed. Reg. 69,664, 69,673 (Nov. 17, 2005).
[140] *See* Standards of Performance for New Stationary Sources; Polypropylene, Polyethylene, Polystyrene, and Poly(ethylene terephthalate) Manufacturing Industry, 52 Fed. Reg. 36678, 36682 (proposed Sep. 30, 1987) ("Emissions of VOC contribute to the formation of ozone in the atmosphere.")
[141] *See* Revision of Standards of Performance for Nitrogen Oxide Emissions from New Fossil-Fuel Fired Steam Generating Units, 63 Fed. Reg. 49442, 49443 (Sep. 16, 1998) ("Nitrogen oxides . . . are a primary contribute to acid rain and ground level ozone formation.")

compression ignition internal combustion engines (NO_x).[142] Ozone formation, like climate change, is an indirect and sometimes lengthy process. Tropospheric ozone is not emitted directly into the air—rather, it is formed when NO_x and VOCs react in the presence of heat and sunlight.[143] EPA has regulated volatile organic compounds (VOCs) to address their role in ozone formation since the 1980s.[144] When amending its standards for VOC emissions from bulk gasoline terminals, EPA noted that its standards "limit and control emissions of [VOCs] that react with other pollutants to form ozone (or smog)," citing the resulting effects on human and ecosystem health.[145] EPA has also recognized the contribution of methane to ozone formation globally, a process that sometimes occurs after methane has persisted in the air for long time periods.[146] As EPA has noted, ozone has serious effects on human health, being associated with tens of thousands of premature deaths each year as well as negative impacts on lung function.[147] Ozone has numerous effects on ecosystems as well: it reduces photosynthesis, slows plant growth, and renders plants more vulnerable to disease and the effects of other pollutants.[148]

Ozone has also been the target of EPA action under other sections of the Clean Air Act that, like Section 111, require EPA to make a finding of endangerment. When regulating NO_x from aircraft,[149] heavy-duty vehicles,[150] and highway motorcycles,[151] EPA has described the serious effects of ozone pollution addressed by these regulations. The agency has observed that ground-level ozone is "linked to potentially serious respiratory health problems [including reduced lung function, asthma, and premature mortality] . . . and environmental degradation."[152] It has also noted that ozone reduces crop yields and productivity in forest ecosystems, causing significant

[142] *See* Standards of Performance for Stationary Compression Ignition Internal Combustion Engines, 70 Fed. Reg. 39870, 39871 (proposed July 11, 2005) ("Nitrogen oxides . . . are regulated due to their contribution to the formation of ozone . . . [which] has been linked to health and welfare impacts.").
[143] EPA, *Ground-level Ozone Basics*, https://perma.cc/8USR-NCNU (Feb. 18, 2026).
[144] Standards of Performance for Bulk Gasoline Terminals, 48 Fed. Reg. 37590 (Aug. 18, 1983).
[145] Standards of Performance for Bulk Gasoline Terminals and National Emission Standards for Gasoline Distribution Facilities (Bulk Gasoline Terminals and Pipeline Breakout Stations), 68 Fed. Reg. 70960, 70960 (Dec. 19, 2003).
[146] *See* Emission Guidelines and Compliance Times for Municipal Solid Waste Landfills, 80 Fed. Reg. 52100, 52109 (Aug. 27, 2015) (regulating methane in part because it affects "ozone concentrations globally and on decadal time scales").
[147] EPA, *Health Risk and Exposure Assessment for Ozone Final Report Executive Summary* at ES-10, No. R-14-004f, https://perma.cc/DJ2K-ZGSZ (2014); *see* Proposed Revision of Standards of Performance for Nitrogen Oxide Emissions From New Fossil-Fuel Fired Steam Generating Units, 62 Fed. Reg. 36948, 36961 tbl.5 (July 9, 1997) (acknowledging the scientific evidence associating ambient ozone levels with acute morbidity, terrestrial ecosystem effects, and effects on agriculture).
[148] EPA, *Ecosystem Effects of Ozone Pollution*, https://perma.cc/ZTY8-V3EN (Sep. 9, 2026).
[149] Control of Air Pollution from Aircraft and Aircraft Engines; Emission Standards and Test Procedures, 70 Fed. Reg. 69664 (Nov. 17, 2005).
[150] Control of Air Pollution from New Motor Vehicles: Heavy-Duty Engine and Vehicle Standards and Highway Diesel Fuel Sulfur Control Requirements, 66 Fed. Reg. 5002, 5006 (Jan. 18, 2001).
[151] Control of Emissions from Highway Motorcycles, 69 Fed. Reg. 2398, 2399 (Jan. 15, 2004).
[152] *Id.* at 2399, 2405.

economic damages.[153] EPA has a long history of regulating ozone and its precursors with the intent of reducing their negative impacts while acknowledging the indirect manner in which ozone is formed.

Finally, since before Congress directed EPA to address acid rain in the 1990 Clean Air Act Amendments,[154] EPA has often used its Section 111 authority to address air pollution problems associated with the formation of acid rain. EPA has regulated acid rain under Section 111 since the 1980s through standards targeting municipal waste combustors (SO_2),[155] stationary compression ignition internal combustion engines (SO_2 and NO_x),[156] and steam generating units (NO_x).[157] In the 2026 Proposal, EPA erroneously cites SO_2 and NO_x regulations under the acid rain program in support of its claim that Congress viewed Section 111 as focused on air pollutants that affect health directly through local or regional exposure.[158] But as EPA itself has acknowledged, acid rain is produced through an attenuated causal chain. As EPA has observed, "acid rain occurs when SO_2 and NO_x are released into the atmosphere and react with water, oxygen, and oxidants. Acid rain contributes to damage of the environment including damage to trees, lakes, and streams, in addition to affecting building materials, accelerating the delay of structures."[159] Furthermore, the precursors to acid rain can travel hundreds or thousands of miles in the air, making the acid rain problem a global one—EPA even facilitated an agreement with Canada in 1991 to address acid rain as transboundary pollution.[160]

EPA has also regulated acid rain precursors under other Clean Air Act authorities with similar endangerment frameworks as Section 111, while explicitly describing its intent to address acid

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[153] Control of Air Pollution from New Motor Vehicles: Heavy-Duty Engine and Vehicle Standards and Highway Diesel Fuel Sulfur Control Requirements, 66 Fed. Reg. at 5012; Control of Air Pollution from Aircraft and Aircraft Engines; Emission Standards and Test Procedures, 62 Fed. Reg. 25356, 25358 (May 8, 1997).
[154] 2026 Proposal, 91 Fed. Reg. at 59011.
[155] Standards of Performance for New Stationary Sources; Municipal Waste Combustors, 54 Fed. Reg. 52251, 52261 (proposed Dec. 20, 1989).
[156] Standards of Performance for Stationary Compression Ignition Internal Combustion Engines, 70 Fed. Reg. at 39870.
[157] *See* Revision of Standards of Performance for Nitrogen Oxide Emissions From New Fossil-Fuel Fired Steam Generating Units, 63 Fed. Reg. 49442, 49443 (Sep. 16, 1998) (describing how the acid rain program requires EPA to revise Section 111 standards of performance for NO_x emissions from fossil-fuel-fired steam generating units and noting that the program was meant "to reduce the adverse effects of acidic deposition on natural resources, ecosystems, materials, visibility, and public health").
[158] 2026 Proposal, 91 Fed. Reg. at 59026.
[159] Standards of Performance for Stationary Compression Ignition Internal Combustion Engines, 70 Fed. Reg. 39870, 39882 (proposed July 11, 2005).
[160] EPA, *U.S.-Canada Air Quality Agreement*, https://perma.cc/RB33-8B54 (Nov. 5, 2005); *see* David R. Wooley & John Wappett, *Cumulative Impacts and the Clean Air Act: An Acid Rain Strategy*, 47 ALB. L. REV. 37, 37 (1983) ("It is now known that subtle disturbances in atmospheric chemistry, resulting in acidic precipitation, can destroy essential life patterns in lakes, streams, and soils thousands of miles from the source of pollution."); Sivamana Sivalingam, G. Vishal, & B. Anush, *Environmental and Health Effects of Acid Rain* 94, *in* HEALTH AND ENVIRONMENTAL EFFECTS OF AMBIENT AIR POLLUTION (Academic Press 2024) (describing acid rain as "a global issue that requires collective efforts to address" because its precursors can travel far distances before precipitating); *see generally* RACHEL ROTHSCHILD, POISONOUS SKIES: ACID RAIN AND THE GLOBALIZATION OF POLLUTION (Univ. of Chicago Press 2019).

rain's indirect and widespread effects. Regulations targeting NO_x from aircraft,[161] heavy-duty vehicles,[162] and highway motorcycles[163] have discussed the formation of acid rain and its effects. For instance, EPA has quantified the damages incurred by acid rain impacts on automotive paint, forcing manufacturers to use acid-resistant paints at a cost of $80-85 million per year in 2004.[164] When regulating NO_x emissions from aircraft, EPA has observed the effects of acid rain on forests, acidification in lakes and other bodies of water, and on the preservation of historic monuments and buildings.[165]

In the 2026 Proposal, EPA newly argues that greenhouse gases cannot be regulated because the causal chain is too attenuated.[166] But EPA's past Section 111 actions that discuss public health and welfare impacts of ozone formation, acid rain, and eutrophication reflect EPA's practice of using Section 111 to target pollutants that sometimes travel long distances in the air and undergo chemical reactions or other changes before producing the damaging phenomenon.[167]

2. EPA has previously regulated emissions under Section 111 and related provisions to address global air pollution problems.

Noting that Section 111 "includes no references to global impacts or concerns," EPA claims that the Section does not authorize the agency to regulate pollutants based upon concerns about global climate change.[168] Yet prior regulations under Section 111 and related provisions reflect explicit efforts to regulate pollutants based on their global impacts. There is a robust history of EPA using provisions with the common endangerment framework to regulate pollutants that circulate across borders and contribute to national and global pollution problems.

First, EPA considered specifically climate change impacts when, in 1996, it listed municipal solid waste landfills for regulation under Section 111 and concluded that these sources "cause, or contribute significantly to, air pollution that may reasonably be anticipated to endanger public health or welfare."[169] EPA made this finding based on emissions of methane and non-methane organic compounds from landfills. In discussing the effects of methane emissions and the purpose of the regulation, the agency highlighted that "[m]ethane emissions . . . contribute to

[161] Control of Air Pollution from Aircraft and Aircraft Engines; Emission Standards and Test Procedures, 70 Fed. Reg. 69664, 69670 (Nov. 17, 2005).
[162] Control of Air Pollution from New Motor Vehicles: Heavy-Duty Engine and Vehicle Standards and Highway Diesel Fuel Sulfur Control Requirements, 66 Fed. Reg. 5002, 5025–26 (Jan. 18, 2001).
[163] Control of Emissions from Highway Motorcycles, 69 Fed. Reg. 2398, 2405–06 (Jan. 15, 2004).
[164] *Id.*
[165] *Id.*; Control of Air Pollution from Aircraft and Aircraft Engines; Emission Standards and Test Procedures, 70 Fed. Reg. at 69672–73.
[166] 2026 Proposal, 91 Fed. Reg. at 59023.
[167] *See, e.g.*, Phase 2 Emission Standards for New Nonroad Spark-Ignition Nonhandheld Engines at or Below 19 Kilowatts, 64 Fed. Reg. 15208, 15226 (Mar. 30, 1999) ("[O]zone and its precursors can travel hundreds of miles"); Control of Air Pollution from New Motor Vehicles: Tier 2 Motor Vehicle Emissions Standards and Gasoline Sulfur Control Requirements, 65 Fed. Reg. 6698, 6723 (Feb. 10, 2000) ("Emissions from U.S. sources contribute to acidic deposition in eastern Canada, where the Canadian government has estimated that 14,000 lakes are acidic.").
[168] 2026 Proposal, 91 Fed. Reg. at 59024.
[169] Standards of Performance for New Stationary Sources and Guidelines for Control of Existing Sources: Municipal Solid Waste Landfills, 61 Fed. Reg. 9905, 9905 (Mar. 12, 1996).

global climate change as a major greenhouse gas,"[170] and that reductions of methane were "necessary to 'achieve the objectives' of Section 111."[171] Though the 2026 Proposal tries to suggest that this listing was based purely on local and regional effects,[172] the 1996 final rule identifies methane's contribution to "global climate change" as one of the "specific health and welfare effects from [landfill gas] emissions."[173]

EPA's consideration under an analogous Clean Air Act provision also demonstrates EPA's history of regulating to address global pollution problems. As discussed at length above, Congress amended the Clean Air Act in 1977 to authorize EPA to regulate pollutants with effects on the stratosphere that "may reasonably be anticipated to endanger public health or welfare."[174] In doing so, it expressed its intention that "endanger" be interpreted the same in the stratospheric provision (Section 157) as in Section 111.[175] Pursuant to this authority, in 1988 EPA finalized a rule restricting production and consumption of certain chlorofluorocarbons (CFCs) and halons.[176] In that rule, EPA stressed that "the problem of stratospheric ozone depletion is global in nature," because "[o]ver their long atmospheric lifetimes, CFCs and halons become widely dispersed, and the release of these chemicals in one country adversely affects the stratosphere above, and therefore the health and welfare of, other countries."[177]

Similarly, in 1997, EPA highlighted climate-change and other global pollution impacts when denying a petition for reconsideration of its rule establishing NO_x standards for reformulated gasoline emissions.[178] The final rule was developed under Section 211(c), which contains endangerment language similar to that of Section 111.[179] In its petition denial, the agency detailed the health and welfare effects of NO_x emissions, including contributions to global warming through the greenhouse effect along with stratospheric ozone depletion.[180] As discussed above, a reduction in stratospheric ozone can result in increased incidences of skin cancer across the globe as people are exposed to additional UV-B radiation.[181]

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[170] *Id.* at 9906; *accord id.* at 9905.
[171] *Id.* at 9914.
[172] 2026 Proposal, 91 Fed. Reg. at 59012.
[173] Standards of Performance for New Stationary Sources and Guidelines for Control of Existing Sources: Municipal Solid Waste Landfills, 61 Fed. Reg. at 9906.
[174] Clean Air Act Amendments of 1977, Pub. L. 95-95 § 157(a), 91 Stat. 729-30 (1977); *see supra* Part I.C.
[175] Clean Air Act Amendments of 1977 § 157(a); *see supra* Part I.B.2.
[176] Protection of Stratospheric Ozone, 53 Fed. Reg. 30566 (Aug. 12, 1988). This rule constituted the United States' implementation of the "Montreal Protocol on Substances that Deplete the Ozone Layer," an international agreement to protect the stratospheric ozone layer. *Id.*
[177] *Id.*
[178] Regulation of Fuels and Fuel Additives; Standards for Reformulated Gasoline, Notice of Denial of Petition for Reconsideration, 62 Fed. Reg. 11346, 11358 (Mar. 12, 1997).
[179] Section 211(c)(1)(A) grants the Administrator the authority to regulate, control, or prohibit fuel or fuel additives if "any fuel or fuel additive or any emission product of such fuel or fuel additive causes, or contributes, to air pollution . . . that may reasonably be anticipated to endanger the public health or welfare[.]" 42 U.S.C. § 7545(c)(1)(A).
[180] 62 Fed. Reg. at 11358.
[181] *See supra* Part I.B.2.

Moreover, EPA has used Section 111 for decades to regulate pollutants—like NO_x, SO_2, PM, and fluorides—that have demonstrated effects on global air pollution problems.[182] Fluorides, which EPA has regulated from phosphate fertilizer industry and primary aluminum reduction plants since 1975, are also transported far distances through atmospheric circulation, with serious impacts on vegetation and human health.[183] NO_x, SO_2, and PM contribute to ozone pollution, eutrophication, and acid rain—which, as explained above, have effects with wide geographic scales.[184] For instance, EPA notes that excess nitrogen, a key cause of eutrophication, can "travel thousands of miles to coastal areas."[185] Additionally, EPA's website highlights a 2010 report it co-sponsored on transboundary pollution[186] that states: "It is clear that distant pollution does contribute to increased concentrations of O_3 over populated regions and that such increases may

[182] Standards of Performance for New Stationary Sources, 36 Fed. Reg. 24876, 24876 (Dec. 23, 1971) (nitric acid plants, sulfuric acid plants, and fossil-fuel fired steam generators); Standards of Performance for New Stationary Sources, 39 Fed. Reg. 20790, 20790 (June 14, 1974) (same); Standards of Performance for New Stationary Sources, 40 Fed. Reg. 33152, 33152 (Aug. 6, 1975) (phosphate fertilizer industry plants [fluorides]); Standards of Performance for New Stationary Sources, 40 Fed. Reg. 43850, 43850 (Sept. 23, 1975) (electric arc furnaces [PM]); Standards of Performance for New Stationary Sources, 41 Fed. Reg. 3826, 3826 (Jan. 26, 1976) (primary aluminum reduction plants [fluorides]); New Stationary Sources Performance Standards; Electric Utility Steam Generating Units, 44 Fed. Reg. 33580, 33580 (June 11, 1979) (fossil-fuel-fired steam generators) [NOx, SO_2, and PM]; Standards of Performance for New Stationary Sources; Gas Turbines, 44 Fed. Reg. 52792, 52792 (Sept. 10, 1979) (gas turbines [NOx and SO_2]); Standards of Performance for New Stationary Sources; Stationary Gas Turbines, 47 Fed. Reg. 3767, 3767 (Jan. 27, 1982) (same [NOx]); Standards of Performance for New Stationary Sources: Electric Arc Furnaces and Argon-Oxygen Decarbonization Vessels in Steel Plants, 49 Fed. Reg. 43838, 43838 (Oct. 31, 1984) (electric arc furnaces [PM]); Standards of Performance for New Stationary Sources; Onshore Natural Gas Processing SO_2 Emissions, 50 Fed. Reg. 40158, 40158 (Oct. 1, 1985) (Onshore natural gas processing plants [SO_2]); Revision of Standards of Performance for Nitrogen Oxide Emissions From New Fossil-Fuel Steam Generating Units; Revisions to Reporting Requirements for New Fossil-Fuel Fired Steam Generating Units, 63 Fed. Reg. 49442, 49442 (Sep. 16, 1998) (fossil-fuel-fired steam generators [NOx, SO_2, and PM]); Standards of Performance for Steel Plants: Electric Arc Furnaces Constructed After October 21, 1974, and on or Before August 17, 1983; and Standards of Performance for Steel Plants: Electric Arc Furnaces and Argon-Oxygen Decarbonization Vessels Constructed After August 17, 1983, 70 Fed. Reg. 8523, 8523-24 (Feb. 22, 2005) (electric arc furnaces [PM]); Standards of Performance for Stationary Combustion Turbines, 71 Fed. Reg. 38482, 38482 (July 6, 2006) (gas turbines [NOx and SO_2]); National Emission Standards for Hazardous Air Pollutants From Coal- and Oil-Fired Electric Utility Steam Generating Units and Standards of Performance for Fossil-Fuel-Fired Electric Utility, Industrial-Commercial-Institutional, and Small Industrial-Commercial-Institutional Steam Generating Units, 77 Fed. Reg. 9304, 9304-05, 9371 (Feb. 16, 2012) (fossil-fuel-fired steam generators) [NOx, SO_2, and PM]).

[183] Barbara Walna et al., *Fluoride Pollution of Atmospheric Precipitation and Its Relationship with Air Circulation and Weather Patterns*, 185 ENV'T MONITORING & ASSESSMENT 5497, 5497–98 (2012); *see* Standards of Performance for New Stationary Sources: Five Categories of Sources in the Phosphate Fertilizer Industry, 40 Fed. Reg. 33152, 33152 (Aug. 6, 1975); Standards of Performance for New Stationary Sources: Primary Aluminum Industry, 41 Fed. Reg. 3826, 3826 (Jan. 26, 1976).

[184] Yuan Wang, Renyi Zhang, & R. Saravanan, *Asian Pollution Climatically Modulates Mid-Latitude Cyclones Following Hierarchical Modeling and Observational Analysis*, 5:3098 NATURE COMM'CNS 1, 5 (2014); *see* EPA, *What is Particle Pollution?*, https://perma.cc/LHE2-UMH3 (June 10, 2026) ("Consequently, particle pollution generated in one area can travel hundreds or thousands of miles and influence the air quality of regions far from the original source."); Reza Bashiri Khuzestani, Ahmad Taheri, & Bijan Yeganeh, *Long-Range Transport of Sulfur Dioxide Emissions from External Sources to Tehran*, 49 URBAN CLIMATE 101445, at 10 (noting the high frequency of long-distance sulfur dioxide transport); *see also* New Source Performance Standards Review for Nitric Acid Plants, 77 Fed. Reg. 48433, 48444–45 (Aug. 14, 2012) (excluding NO_x from the category of pollutants "with localized effects").

[185] EPA, *Where Nutrient Pollution Occurs*, https://perma.cc/TZY2-NMTR (July 29, 2026).

[186] EPA, *Transboundary Air Pollution*, https://perma.cc/NJ7F-J85Z (May 11, 2026).

have detrimental impacts on human health, agriculture, and natural ecosystems."[187] The report also discusses long-range transport of PM and NO_x.[188] Many of EPA's regulations under Section 111 target pollutants that produce global impacts, further undermining EPA's claim that this Section 111 is meant to address only local and regional pollution.

3. EPA has regulated pollutants that contribute to non-local or regional air pollution problems under its other Title I authorities.

EPA claims that Section 111 limits the agency to regulating pollutants like those regulated under its other Title I authorities, namely the National Ambient Air Quality Standards (NAAQS) and Hazardous Air Pollutant programs. EPA further asserts these programs regulate only local and regional air pollution problems.[189] But as demonstrated above, many of the pollutants addressed under the NAAQS—including NO_x, SO_2, and PM—contribute to non-local or regional air pollution problems. Even if Section 111 is limited to regulating pollutants like those controlled under other Title I authorities, which is not supported by statutory text and is contradicted by legislative history[190], these examples demonstrate that Title I is not limited to pollutants with local and regional effects.

EPA has long regulated pollutants like NO_x, SO_2, and PM—that have national and global effects—through its Title I authorities. All three of these pollutants, as well as ozone (to which they are precursors), are regulated under the NAAQS program.[191] And many hazardous air pollutants subject to EPA standards, including mercury, lead, and dioxin, have global effects.[192] Mercury is a "truly global pollutant" for which "intercontinental transport is an important process that clearly affects U.S. exposures;"[193] it causes severe health effects wherever it settles, including memory loss, insomnia, speech and hearing impairment, and premature death.[194] Lead

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[187] NATIONAL RESEARCH COUNCIL, GLOBAL SOURCES OF LOCAL POLLUTION: AN ASSESSMENT OF LONG-RANGE TRANSPORT OF KEY AIR POLLUTANTS TO AND FROM THE UNITED STATES 6 (The National Academies Press 2010, https://doi.org/10.17226/12743) [hereinafter GLOBAL SOURCES OF LOCAL POLLUTION].
[188] *Id.* at 1, 7.
[189] 2026 Proposal, 91 Fed. Reg. at 59025.
[190] *See supra* Parts I.A.3 and I.A.4.
[191] Primary National Ambient Air Quality Standards for Nitrogen Dioxide, 75 Fed. Reg. 6474, 6474 (Feb. 9, 2010); Review of the Primary National Ambient Air Quality Standards for Sulfur Oxides, 84 Fed. Reg. 9866, 9866 (Mar. 18, 2019); Reconsideration of the National Ambient Air Quality Standards for Particulate Matter, 89 Fed. Reg. 16202, 16202 (Mar. 6, 2024); National Ambient Air Quality Standards for Ozone, 80 Fed. Reg. 65292, 65292 (Oct. 26, 2015).
[192] National Emission Standards for Hazardous Air Pollutant Emissions for Primary Lead Processing, 76 Fed. Reg. 70834, 70834 (Nov. 15, 2011); Review of the National Ambient Air Quality Standards for Lead, 81 Fed. Reg. 71908, 71908 (Oct. 18, 2016); NESHAPS: Final Standards for Hazardous Air Pollutants for Hazardous Waste Combustors, 64 Fed. Reg. 52828, 52828 (Sep. 30, 1999); *see* National Emission Standards for HAPs for the Portland Cement Manufacturing Industry and Standards of Performance for Portland Cement Plants, 78 Fed. Reg. 10006, 10028 (Feb. 12, 2013) (discussing the far-reaching impacts of mercury due to its ability, after transforming into methylmercury, to travel long distances and bioaccumulate); Stephanie A. Ewing et al., *Pb Isotopes as an Indicator of the Asian Contribution to Particulate Air Pollution in Urban California*, 44 ENV'T SCI. TECH. 8911, 8915 (2010) (finding that a significant amount of lead in California air originates from China).
[193] GLOBAL SOURCES OF LOCAL POLLUTION, *supra* note 187, at 7.
[194] EPA, *Health Effects of Exposures to Mercury*, https://perma.cc/9DAP-PZZR (Nov. 21, 2025).

is also transported globally and causes mental impairment, reproductive issues, seizures, and death.[195] Dioxin persists in the air, where it undergoes long-range atmospheric transport across the globe; as EPA noted when regulating hazardous waste combustors, dioxin "cause[s] substantial harm to human health and the environmental via indirect exposure pathways" and bioaccumulates pervasively.[196] In sum, EPA has long regulated pollutants with global effects under Title I authorities.

4. EPA recognized its authority to regulate greenhouse gases as air pollutants under the Clean Air Act many years before issuing the 2015 NSPS.

As detailed above, EPA took several actions under the Clean Air Act during the 1990s in which it found that global climate impacts cause or contribute to endangering public health and welfare. In 1998, EPA affirmed its authority to regulate greenhouse gases from power plants under the Clean Air Act through a memo from its general counsel Jonathan Z. Cannon.[197] Specifically, the memo broadly concluded that CO_2 and other greenhouse gases each qualify "as an air pollutant within the meaning of the Clean Air Act"[198]

Cannon developed the memo in response to Congressional interest in EPA's authority to establish pollution control requirements for certain "pollutants of concern" from electric power generation, including CO_2.[199] In addressing this question, Cannon concluded that "a number of specific provisions of the Act" were potentially available to control greenhouse gases from electric power generation.[200] He further emphasized the legislative purpose in enacting Section 111 and other Clean Air Act provisions "to emphasize the preventative or precautionary nature of the act . . . [and] to emphasize the predominant value of protection of public health."[201]

In *Massachusetts*, in which the Supreme Court found that the Clean Air Act "unambiguously" extends to greenhouse gases, the Court highlighted this memorandum and emphasized EPA's prior position that "it *had* . . . authority" to regulate greenhouse gas emissions under the Clean Air Act.[202] The Court further emphasized that "Cannon's successor, Gary S. Guzy, reiterated that opinion before a congressional committee" in 1999.[203] As the history discussed above details, Cannon's memorandum was consistent with a long line of EPA regulatory history in which the

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[195] EPA, *What Are Some of the Health Effects of Lead?*, https://perma.cc/XYH6-BLH9 (Feb. 4, 2026); *see* Mengli Chen et al., *Environmental Lead Risk in the 21st Century*, 6:776 COMM'CNS EARTH & ENV'T at 2 (2025) ("Long-range atmospheric transport leads to significant transboundary lead pollution.").
[196] Shawn Booth et al., *Global Deposition of Airborne Dioxin*, 75 MARINE POLLUTION BULLETIN 182, 182 (2013); Revised Standards for Hazardous Waste Combustors, 61 Fed. Reg. 17358, 17366 (Apr. 19, 1996).
[197] Jonathan Z. Cannon, Memo to Carol M. Browner Re: EPA's Authority to Regulate Pollutants Emitted by Electric Power Generation Sources (Apr. 10, 1998) [hereinafter Cannon Memo].
[198] *Id.* at 2.
[199] *Id.* at 1.
[200] *Id.* at 2.
[201] *Id.* at 3 (quoting H.R. Rep. No. 95294 95th Cong., 1st Sess., at 49 (Report of the Committee on Interstate and Foreign Commerce)).
[202] *Massachusetts*, 549 U.S. at 531 (citing Cannon Memo).
[203] *Id.* at 510–11.

agency found that indirect, causally remote, and global impacts satisfy the endangerment framework of Section 111 and other Clean Air Act provisions.

D. Statutory text and past regulatory practice demonstrate that EPA has alternative ways to avoid regulating truly *de minimis* emissions.

EPA further attempts to justify its novel interpretation that "the 'air pollution' addressed in Section 111(b)(1)(A) must be limited to that which endangers public health or welfare through local or regional exposure," as a necessary constraint on EPA's regulatory authority.[204] More specifically, EPA argues that its new interpretation is necessary to prevent EPA from promulgating emission standards "for any reason so long as the standards also reduce emissions, even if those standards would do nothing to meaningfully address" the harm identified at the listing stage.[205] This argument blatantly ignores existing statutory limits on EPA's authority and EPA's past practice of considering the effects of a standard as part of its Section 111(b)(1)(B) analysis. Additionally, judicial requirements for reasonable decisionmaking and best practices for regulatory analysis reinforce EPA's authority to decline to regulate emissions in the absence of sufficient net benefits.

As discussed above, Section 111(b)(1)(B) specifies a series of factors that EPA must consider when determining whether to issue emission standards for a listed source category. Under Section 111(b)(1)(B), EPA must set standards of performance for emissions from new and existing sources that reflect:

> the degree of emission limitation achievable through the application of the best system of emission reduction (taking into account the cost of achieving such reduction and any nonair quality health and environmental impact and energy requirements) the Administrator determines has been adequately demonstrated.[206]

This is also known as the BSER analysis. The explicitly identified factors of the BSER analysis make clear that EPA does not have the unlimited authority straw-manned in the 2026 Proposal. The D.C. Circuit has stated that in determining the best, adequately demonstrated system, EPA must "incorporate the amount of air pollution as a relevant factor."[207] Accordingly, EPA must already consider potential effects on air pollution when deciding whether and how to set specific emission standards under Section 111. The other BSER factors, such as cost and technological availability, further relieve EPA from an obligation to regulate emissions when such regulation would be unreasonable.

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[204] 2026 Proposal, 91 Fed. Reg. at 59027.
[205] *Id.*
[206] *See* 42 U.S.C. §§ 7411(a)(1), (b)(1)(B). For new and modified sources, EPA sets emission limits through New Source Performance Standards under Section 111(b)(1)(B). For existing sources, EPA sets them through emission guidelines under Section 111(d), and then states submit State Implementation Plans that include performance standards of equivalent stringency. *Id.* § 7411(d).
[207] Sierra Club v. Costle, 657 F.2d 298, 326 (D.C. Cir. 1981).

EPA dealt with this issue in prior proceedings contemporaneous with the passage of the statute by exercising its discretion not to regulate contributions of *de minimis* emissions. This was precisely what stopped EPA from regulating emissions of NO_x, SO_2, and carbon monoxide in its 1977 proposed rule to establish emission standards for lime manufacturing plants.[208] EPA explained its decision not propose standards for these pollutants by considering the BSER factors, emission levels, and the availability of cost-effective control technology.[209] In the 1977 proposal, the agency declined to regulate based on an assessment of the BSER factors—not by applying an endangerment framework where it does not apply.

EPA exercised similar discretion not to regulate emissions of PM, hydrocarbons, and carbon monoxide in its 1979 rule establishing emission standards for stationary gas turbines. In the rule, EPA noted that emissions of these pollutants were "relatively low" from gas turbines, and so those pollutants "were not selected for control by standards of performance."[210] In other words, in the early years of implementing the Clean Air Act, EPA understood that the way to address *de minimis* emissions from listed source categories was to "not select" those pollutants for development of standards of performance, consistent with the criteria for BSER.

EPA has continued to exercise its discretion under the BSER analysis to not regulate, illustrating the continued adequacy of these statutory constraints. This discretion can take several forms. For example, in 2012, when issuing performance standards for the oil and gas sector, EPA made a finding of no BSER for certain pneumatic controllers during a specified "adjustment period."[211] Adopting a BSER based on what the industry is already achieving is another way EPA can avoid setting new regulatory burdens when faced with *de minimis* emissions. EPA can accomplish this goal by setting a BSER of routine or business-as-usual practice when appropriate. For example, in the 2024 CPS, EPA set a BSER of routine methods of operation and maintenance for certain natural gas- and oil-fired steam generating units[212] and a BSER of using lower-emitting fuels for others.[213] Under the statutory framework, EPA has also used its discretion to defer setting a BSER and regulating selected sources as it did in 2019 for oil- and gas-fired boilers and fossil-

[208] Standards of Performance for New Stationary Sources, Lime Manufacturing Plants, 42 Fed. Reg. 22506, 22507 (proposed May 3, 1977).
[209] *Id.*
[210] *Id.*
[211] Oil and Natural Gas Sector: New Source Performance Standards and National Emission Standards for Hazardous Air Pollutants Reviews, 77 Fed. Reg. 49490, 49521 (Aug. 16, 2012).
[212] 2024 CPS, 89 Fed. Reg. at 39841–42.
[213] *Id*.

fuel-fired turbines.[214] More recently, in the 2024 CPS, EPS deferred finding a BSER and regulating existing gas-fired turbines.[215]

In the 2015 NSPS, EPA acknowledged that it did not have unbounded authority to establish new emission standards for already-listed sources—directly contradicting EPA's claims in the 2026 Proposal that it must reinterpret Section 111(b)(1)(A) to limit EPA from regulating "for any reason."[216] In the 2015 NSPS, the agency exercised its judgment in determining which air pollutants to regulate, concluding that it had a rational basis for establishing performance standards for greenhouse gas emissions from power plants.[217] EPA's BSER analysis remains subject to administrative law requirements to engage in reasoned decisionmaking.[218]

Conducting the regulatory analysis required by Executive Order also serves to further ensure the reasonability of EPA's decisionmaking. Since 1993, Executive Order 12,866 has required agencies to assess and, to the extent feasible, quantify costs and benefits of any "significant" proposed or final regulation.[219] Executive Order 12,866 directs agencies to "adopt a regulation only upon a reasoned determination that the benefits . . . justify its costs."[220] Even when a statute prescribes a specific regulatory approach, like the BSER analysis, the agency must still conduct a cost-benefit analysis for significant regulations and that analysis may be relevant to assess the reasonableness of the agency's action.[221] This mandated regulatory analysis can help EPA better weigh the cost and degree of emission reduction prongs of the BSER analysis and do so properly because "a serious flaw undermining [the cost-benefit] analysis can render the rule unreasonable."[222]

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[214] ACE, 84 Fed. Reg. at 32533 ("In the ACE proposal, the EPA did not identify a BSER for IGCC units, oil- or natural gas-fired utility boilers, or fossil fuel-fired stationary combustion turbines and, thus, such units are not designated facilities for purposes of this action . . . . The EPA currently does not have adequate information to determine a BSER for these EGUs and, if appropriate, the EPA will address GHG emissions from these EGUs in a future rulemaking.").

[215] New Source Performance Standards for Greenhouse Gas Emissions from New, Modified, and Reconstructed Fossil Fuel-Fired Electric Generating Units; Emission Guidelines for Greenhouse Gas Emissions from Existing Fossil Fuel-Fired Electric Generating Units; and Repeal of the Affordable Clean Energy Rule, 88 Fed. Reg. 33240, 33369-70 (proposed May 23, 2023); 2024 CPS, 89 Fed. Reg. at 39798.

[216] 2026 Proposal, 91 Fed. Reg. at 59027.

[217] 2015 NSPS, 80 Fed. Reg. at 64530.

[218] *See, e.g.*, Motor Vehicle Mfrs. Ass'n v. State Farm Mut. Auto. Ins. Co., 463 U.S. 29, 43 (1983); 5 U.S.C. § 706(2)(A) (requiring courts to hold unlawful and set aside agency actions that are "arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law.").

[219] Exec. Order No. 12,866 § 6(a)(3)(B), 58 Fed. Reg. 51735, 51741 (Oct. 4, 1993). A "significant regulatory action" includes any rule likely to result in an "annual effect on the economy of $100 million or more," among other criteria. *Id.* § 3(f)(1).

[220] *Id.* §§ 1(a), (b)(6).

[221] *See, e.g.*, Brief for Inst. for Pol'y Integrity at 6–10, North Dakota v. EPA, No. 24-1119 (D.C. Cir. filed Nov. 19, 2024), https://policyintegrity.org/documents/ND_v_EPA_Policy_Integrity_Amicus_Brief.pdf (explaining that the agency's RIA provided useful information about the costs and benefits of the rule even though the agency's decisionmaking was constrained by statutory factors).

[222] Nat'l Ass'n of Home Builders v. EPA, 682 F.3d 1032, 1036, 1040 (D.C. Cir. 2012); *see also* Advocs. for Highway & Auto. Safety v. Fed. Motor Carrier Safety Admin., 429 F.3d 1136, 1146–47 (D.C. Cir. 2005).

II. Regulating greenhouse gas emissions from power plants does not implicate the major questions doctrine.

In furtherance of its statutory argument, EPA claims that regulating greenhouse gas emissions from power plants under Section 111 violates the major questions doctrine.[223] Under the doctrine, "clear congressional authorization" is required when the "history and the breadth of the authority that the agency has asserted, and the economic and political significance of that assertion, provide a reason to hesitate before concluding that Congress meant to confer such authority."[224] In practice, the Supreme Court applies the doctrine in "extraordinary" cases where the government's action is unheralded, transforms the government actor's role, and has great economic and political significance.[225]

EPA's major questions argument fails for at least three reasons. First, the major questions doctrine is not implicated because regulating greenhouse gas emissions under Section 111 is neither unheralded nor transformative. Second, although the Supreme Court did not use the label "major questions doctrine" until *West Virginia v. EPA*, its analysis in *Massachusetts v. EPA* rejected essentially the same argument that EPA makes here. And third, even if clear congressional authorization were needed, the Court's holding in *American Electric Power v. Connecticut* finds that Section 111 provides such clear authorization for EPA to regulate greenhouse gas emissions from power plants.

A. The major questions doctrine is concerned with transformative and unheralded assertions of power.

Litigants and lower federal courts sometimes invoke the major questions doctrine without properly describing its contours. To provide context, this section describes how the Supreme Court has articulated the doctrine.

The Supreme Court has stressed that only "extraordinary cases" trigger the major questions doctrine.[226] The bulk of *West Virginia*'s legal analysis of the doctrine's triggers examined whether EPA had "'claim[ed] to discover in a long-extant statute [1] an unheralded power' [2] representing a 'transformative expansion in [its] regulatory authority.'"[227] In other words, the Supreme Court focused on (1) regulatory history and (2) the transformative nature of the agency's asserted authority. In *Biden v. Nebraska*, the Supreme Court again reiterated the importance of "the 'history and the breadth of the authority that the agency had asserted,'" in addition to "the 'economic and political significance' of that assertion."[228] Most recently, in *Learning Resources v. Trump*, the majority emphasized that affording the President unilateral

[223] 2026 Proposal, 91 Fed. Reg. at 59032.
[224] West Virginia v. EPA, 597 U.S. 697, 721 (2022).
[225] Natasha Brunstein & Donald L. R. Goodson, *Unheralded and Transformative: The Test for Major Questions After West Virginia*, 47 WM. & MARY ENV'T L. & POL'Y REV. 47 (2022).
[226] *West Virginia*, 597 U.S. at 721 (quoting FDA v. Brown & Williamson Tobacco Corp., 529 U.S. 120, 159–60 (2000)) (alteration omitted).
[227] *Id.* at 724 (quoting Utility Air Resources Group, 573 U.S. 302, 324 (2014) (UARG)).
[228] Biden v. Nebraska, 600 U.S. 477, 501 (2023) (quoting *West Virginia*, 597 U.S. at 721) (alterations omitted).

tariff authority would reflect a "'transformative expansion' of the President's authority over tariff policy," with no historical precedent.[229] These cases thus reveal that an agency action does not trigger the major questions doctrine unless its history *and* breadth *and* economic and political significance provide a reason for a court to be skeptical of the agency's action.

To trigger the major questions doctrine, regulatory history must reveal that an agency action is unlike anything the agency has ever done. Of course, the agency need not identify an identical regulatory antecedent, because new regulations will rarely, if ever, be identical to previous ones as they would then be unnecessary. Rather, the Supreme Court's major questions analyses suggest that the relevant regulatory antecedent must be an analogous exercise of authority. For instance, in *Biden v. Missouri*, the Supreme Court found that the Department of Health and Human Services' COVID-19 vaccine mandate for certain healthcare beneficiaries was lawful because the agency "routinely imposes conditions of participation that relate to the qualifications and duties of healthcare workers themselves."[230]

In contrast, in *National Federation of Independent Businesses v. Department of Labor*—a challenge to the Occupational Health and Safety Administration's (OSHA) economy-wide COVID-19 vaccine mandate—the Supreme Court highlighted that "OSHA, its half century of existence, has never before adopted a broad public health regulation of this kind— addressing a threat that is untethered, in any causal sense, from the workplace."[231] And in *Learning Resources*, the Supreme Court stressed that, in the fifty years of the relevant statute's existence, "no President ha[d] invoked the statute to impose *any* tariffs," let alone those of similar magnitude and scope.[232] As these cases illustrate, the major questions analysis looks to analogous authority—not a historical twin.[233]

To trigger the major questions doctrine, the breadth of the agency action must also suggest the agency is dramatically changing its authority. In *West Virginia*, the Supreme Court explained that the challenged Clean Power Plan represented a "transformative expansion [of EPA's] regulatory authority."[234] In other words, the Supreme Court concluded that it "effected a 'fundamental revision of the statute, changing it from [one sort of] scheme of . . . regulation' into an entirely different kind."[235] In discussing this factor, the Court focused on whether the

[229] Learning Resources v. Trump, 607 U.S. 229, 244–45 (2026) (quoting *West Virginia*, 597 U.S. at 724). *See also*, Max Sarinsky, Notice & Comment, Yale J. on Reg. *Tallying the Votes from* Learning Resources, *the Major Questions Doctrine Remains Relatively Confined* (Feb. 24, 2026), https://www.yalejreg.com/nc/tallying-the-votes-from-learning-resources-the-major-questions-doctrine-remains-relatively-confined.
[230] 595 U.S. 87, 94 (2022).
[231] 595 U.S. 109, 119 (2022).
[232] *Learning Resources*, 607 U.S. at 245.
[233] *Cf.* United States v. Rahimi, 602 U.S. 680, 699–700 (2024) (discussing what qualifies as a relevant "historical analogue" for the Second Amendment).
[234] *West Virginia*, 597 U.S. at 724.
[235] *Id.* at 728 (citation omitted).

challenged action transformed the role of the regulator (i.e., EPA), not the regulated sector.[236] *Nebraska*[237] and the major questions cases cited in *West Virginia*[238] contain similar analyses of whether the agency action represented a transformation of the agency's authority.

The economic and political significance of an agency's action is necessary but insufficient to trigger the major questions doctrine. Although the Supreme Court often references economic and political significance in its major questions cases, these indicators alone have never sufficed to trigger the doctrine. For example, *West Virginia*'s legal analysis omits any references to economic significance, such as regulatory costs or the number of persons or entities affected. And although *Nebraska* discusses economic and political significance, it does so only after reviewing regulatory antecedents and the transformation of the regulatory scheme.[239] Much of *Nebraska*'s economic discussion also focused on the relative costs of the challenged action compared to prior agency actions under the same statute, highlighting how this aspect of the regulatory history demonstrated the action was unlike anything the Secretary of Education had done before.[240]

The major questions doctrine does not operate as a clear statement rule. Only when the doctrine is triggered must the agency point to "clear congressional authorization" for the agency's approach.[241] But this is not the same as a "clear statement rule"—a phrase found nowhere in the majority opinions in either *West Virginia*, *Nebraska*, or *Learning Resources* (or any of the Court's other major question precedents).[242] Or, as Justice Barrett explained in her concurrence in *Nebraska*, the necessary clear congressional authorization should not be equated with "'an "unequivocal declaration"' from Congress authorizing the *precise* agency action under review, as [the Court's] clear-statement cases do in their respective domains."[243] This explanation of "clear Congressional authorization" reflects the Court's interpretive approach in *West Virginia*.[244]

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[236] *See id.*; *see also* Mayes v. Biden, 67 F.4th 921, 934–35 (9th Cir. 2023) (focusing not on whether the government sought "to regulate a significant portion of the American economy," but on whether its action "*represent[ed]* an 'enormous and transformative expansion in [its] regulatory authority'" (quoting *UARG*, 573 U.S. at 324)).

[237] *Nebraska*, 600 U.S. at 502 ("[T]he Government's reading of the [statute] . . . would 'effect a "fundamental revision of the statute, changing it from one sort of scheme of regulation" into an entirely different kind . . . .'" (quoting *West Virginia*, 597 U.S. at 728) (alterations omitted)).

[238] *See, e.g., UARG*, 573 U.S. at 312, 325 (noting that EPA's action "would radically expand" the programs at issue, "making them both unadministrable and 'unrecognizable to the Congress that designed' them" (citation omitted)); MCI Telecom. Corp. v. Am. Tel. & Tel. Co., 512 U.S. 218, 225, 229, 234 (1994) (finding that the agency action had effected a "basic and fundamental" change that went to the "heart" of the statute and constituted "effectively the introduction of a whole new regime of regulation").

[239] *Nebraska*, 600 U.S. at 502–04.

[240] *Id.* at 501 (noting that "past waivers and modifications issued under the Act have been extremely modest and narrow in scope").

[241] *West Virginia*, 597 U.S. at 732 (quoting *UARG*, 573 U.S. at 324); *Learning Resources*, 607 U.S. at 248.

[242] Brunstein & Goodson, *supra* note 225, at 95–100.

[243] *Nebraska*, 600 U.S. at 511 (Barrett, J., concurring) (quoting Financial Oversight and Management Bd. for P. R. v. Centro De Periodismo Investigativo, Inc., 143 S. Ct. 1176, 1183 (2023)).

[244] Brunstein & Goodson, *supra* note 225, at 99–100 ("[A]lthough a court must approach an agency's assertion of authority with 'skepticism' after having determined it is 'unheralded' and represents a 'transformative' change, if

B. Regulating greenhouse gas emissions from power plants was neither unheralded nor transformative.

Applying this framework, regulating greenhouse gas emissions under Section 111 does not trigger the major questions doctrine because such use is neither unheralded nor transformative. Such regulation was not unheralded in 2015 because, as detailed above, EPA had previously found that non-local or regional air pollution problems satisfy the endangerment framework under Section 111 and similar Clean Air Act provisions (see Part I.C). Such regulation is also not transformative because, as detailed above in Part I.B, Congress has repeatedly indicated that greenhouse gases and other pollutants that harm health or welfare through a long causal chain are subject to regulation under Section 111 and related provisions. Thus, the major questions doctrine is not triggered.

The finding that greenhouse gas emissions endanger public health or welfare under Section 111 was not "unheralded." As detailed above, EPA has long considered indirect impacts to public health and welfare when making endangerment findings under Section 111 and related Clean Air Act provisions.[245] This includes numerous regulations in which EPA justified regulation of emissions based on air pollution problems that endanger public health or welfare through non-local or regional exposure or as a result of a long causal chain.[246] It also includes numerous times in which EPA justified regulation of air pollutants based on effects that are global in nature, including effects on global climate change.[247] Moreover, EPA concluded that it has authority to regulate power sector greenhouse gas emissions under the Clean Air Act long before issuing the 2015 NSPS.[248] These analogous exercises of authority clearly evince that there was nothing unprecedented about EPA finding that greenhouse gas emissions satisfy Section 111's endangerment framework.[249]

Regulating greenhouse gas emissions under Section 111 has not transformed EPA's regulatory authority. Regulating greenhouse gas emissions under Section 111 has also not transformed EPA's authority. As detailed above, Congress was concerned with climate change and sought to authorize EPA to mitigate it when it enacting the Clean Air Act in 1970.[250] Moreover, when amending the Clean Air Act in 1977, EPA adopted a uniform endangerment framework in Section 111 and other provisions to help clarify the agency's broad authority to regulate air pollutants that cause indirect harms to health and welfare.[251] And since *Massachusetts* and *AEP*

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the most natural reading of the statute would permit the agency action, the agency has 'clear congressional authorization' for the action.").

[245] *See supra* Part I.C.

[246] *See supra* Part I.C.1.

[247] *See supra* Part I.C.2.

[248] *See supra* Part I.C.4.

[249] *Cf.* Biden v. Missouri, 595 U.S. at 94 (rejecting argument that Department of Health and Human Services COVID-19 vaccine mandate for certain healthcare beneficiaries was unlawful as the agency "routinely imposes conditions of participation that relate to the qualifications and duties of healthcare workers themselves").

[250] *See supra* Part I.B.1.

[251] *See supra* Part I.B.2.

were decided, Congress has continually recognized EPA's authority to regulate greenhouse gas emissions under Section 111 and related provisions. As discussed above, two prime examples include the 2021 resolution of disapproval that sought to "reaffirm the EPA's authority and obligation to protect the public from harmful climate pollution" and the Inflation Reduction Act's recognition that EPA may regulate methane and other greenhouse gases as air pollutants under the Clean Air Act.[252]

C. The Supreme Court rejected essentially the same argument in *Massachusetts v. EPA*.

In *Massachusetts*, the Supreme Court rejected the argument that EPA lacks the authority to regulate greenhouse gas emissions under Section 202 of the Clean Air Act.[253] As noted above, the Court did not invoke the major questions doctrine by name in that opinion because the Court did not adopt the label "major questions doctrine" until 2022. But the Court rejected essentially the same major questions argument that EPA now tries to apply to Section 111, and did so by distinguishing this argument from a key case forming the doctrine's foundational precedent.

Specifically, the Supreme Court concluded that the principles of statutory interpretation applied in *Food and Drug Administration v. Brown & Williamson Tobacco Corp.*[254] did not curtail EPA's authority to regulate greenhouse gas emissions under Section 202.[255] In *Brown & Williamson*—issued seven years before *Massachusetts*—the Supreme Court concluded that, given the unprecedented nature of regulating tobacco under the Food Drug and Cosmetic Act, Congress's repeated indication that the Food and Drug Administration lacked such authority, and the "economic and political significance" of such regulation, "Congress could not have intended to delegate a decision . . . in so cryptic a fashion."[256] Outlining its interpretive principle, the Court recognized that "[i]n extraordinary cases . . . there may be reason to hesitate before concluding that Congress has intended such an implicit delegation" to the agency, thus requiring clear authority in such cases.[257] This formulation largely tracks the Supreme Court's more recent formulations of the major questions doctrine.[258]

Although the Supreme Court did not use the term "major questions doctrine" in *Brown & Williamson*, it has since recognized the decision as foundational to that canon. *West Virginia* was the first time the Court named the "major questions doctrine." In that case, the Court cited

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[252] *See supra* Part I.B.3 (quoting H.R. Rep. No. 116-74, at 7).
[253] *Massachusetts*, 549 U.S. at 532. Policy Integrity explains these arguments in further detail in a report attached to this comment (attached to this letter as Exhibit C). DENA ADLER, MAX SARINSKY, & KATE WELTY, INST. FOR POL'Y INTEGRITY, MISSING THE MARK (2026), https://policyintegrity.org/publications/detail/missing-the-mark.
[254] 529 U.S. 120 (2000).
[255] *Massachusetts*, 549 U.S. at 512.
[256] *Brown & Williamson*, 529 U.S. at 160.
[257] *Id.* at 159.
[258] *E.g. West Virginia*, 597 U.S. at 721 ("[O]ur precedent teaches that there are 'extraordinary cases' that call for a different approach—cases in which the 'history and the breadth of the authority that [the agency] has asserted,' and the 'economic and political significance' of that assertion, provide a 'reason to hesitate before concluding that Congress' meant to confer such authority.") (quoting *Brown & Williamson*, 529 U.S. at 159–60) (alteration in original)); *Learning Resources*, 607 U.S. at 242-43 (describing its major questions cases as those in which ".

Brown & Williamson repeatedly and recognized it as one of "a series of significant cases all addressing a particular and recurring problem: agencies asserting highly consequential power beyond what Congress could reasonably be understood to have granted."[259] Given the "common threads" between *Brown & Williamson* and like cases that established "an identifiable body of law," the Supreme Court developed "the major questions doctrine label."[260] In other words, the Supreme Court recognized *Brown & Williamson* as a "major questions case," even highlighting it as perhaps "the 'key case' in this area."[261]

Moreover, *Massachusetts*'s analysis of *Brown & Williamson* largely tracked the requirements for the major questions doctrine that the Supreme Court has since articulated more clearly. Effectively rejecting the unheralded prong, the Court highlighted that EPA had previously "affirmed that it *had* . . . authority" to regulate greenhouse gas emissions as air pollutants under the Clean Air Act.[262] Effectively rejecting the transformative prong, the Court highlighted that EPA regulation over greenhouse gas emissions would be consistent with its regulation of other pollutants under the Clean Air Act and subject to Section 202's numerous limitations.[263]

The Court's reasoning in *Massachusetts* is easily applied to the major questions argument EPA makes in the 2026 Proposal. In the proposed rule, EPA claims that it "departed from decades of established practice" when it first regulated greenhouse gas emissions from power plants in 2015.[264] But as highlighted by the Court in *Massachusetts*, EPA affirmed its authority to regulate greenhouse gas emissions from the power sector almost two decades prior to establishing its first emission standards.[265] And as discussed above, regulating greenhouse gas emissions was consistent with a long line of EPA regulatory history in which the agency found that indirect and non-local or regional air pollution problems satisfy the Clean Air Act's endangerment framework.[266] Regulating greenhouse gas emissions from power plants was not "extreme" or contrary to "common sense"[267]—EPA has been setting emission standards for power sector sources for nearly five decades. And as with Section 202, EPA's authority to set emission standards for listed sources is subject to other statutory constraints, including considerations of cost, energy and environmental impacts, and technological feasibility.[268]

This interpretation is only reinforced by *Utility Air Regulatory Group v. EPA* (*UARG*). In *UARG*, the Court relied once again on *Brown & Williamson* in concluding that EPA lacks authority to

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[259] *Id*. at 724.
[260] *Id.* (internal quotation marks omitted).
[261] *Id.* (quoting *id.* at 767 (Kagan, J., dissenting)); *see also* Brunstein & Goodson, *supra* note 225, at 51–57 (tracing the roots of the major questions doctrine).
[262] *Massachusetts*, 549 U.S. at 531.
[263] *Id.* (contrasting with the "extreme measures" that would inevitably result from FDA jurisdiction over cigarettes—namely, a nationwide ban on cigarettes).
[264] 2026 Proposal, 91 Fed. Reg. at 59033.
[265] Cannon Memo, *supra* note 197, at 2.
[266] *See supra* Part I.
[267] *Massachusetts*, 549 U.S. at 531.
[268] *See* 42 U.S.C. § 7411(a)(1) (describing what factors EPA must consider when establishing standards of performance for listed sources).

require stationary sources to obtain prevention of significant deterioration and Title V permits based solely on their emissions of greenhouse gases.[269] Specifically, invoking major questions principles, the Supreme Court explained that such regulation "would bring about an enormous and transformative expansion in EPA's regulatory authority."[270] Yet in the same case, the Court also held that EPA has the authority to require sources already subject to PSD and Title V requirements—known as "anyway sources"—to comply with certain greenhouse gas standards.[271]

As with regulating greenhouse gas emissions from motor vehicles, the Court found that regulating greenhouse gases from anyway sources would amount to only a "moderate[] increas[e]" in demands on regulated entities that "need not result in such a dramatic expansion of agency authority, as to convince us that EPA's interpretation is unreasonable."[272] Through this comparison, the Court clearly signaled, once again, that the major questions doctrine only applies where an action reflects unheralded and transformative authority. Regulating greenhouse gas emissions from power plants—which, like anyway sources and motor vehicles, have long been subject to emission standards—does not violate the principles underlying the major questions doctrine.

Massachusetts and *UARG* thus reject EPA's argument in the 2026 Proposal that regulating greenhouse gas emissions under Section 111 triggers the major questions doctrine.

D. Section 111 clearly authorizes the regulation of greenhouse gas emissions.

Because the major questions doctrine is not triggered, clear congressional authorization is not required to support EPA's authority to regulate greenhouse gases under Section 111. Regardless, the Clean Air Act provides that clear authorization.

Under Section 111, EPA is authorized to list a source category for regulation if, in the Administrator's judgment, the category "causes, or contributes significantly to, air pollution which may reasonably be anticipated to endanger public health or welfare."[273] Once listed, EPA must set air pollution limits for new and existing sources in the category.[274] In 2011, in *AEP*, the Supreme Court clarified that Section 111 grants EPA authority to reduce greenhouse gas emissions specifically from fossil-fuel-fired power plants.[275] In considering whether the Act displaced federal nuisance claims for greenhouse gas pollution, the Court reiterated its holding from *Massachusetts* that "emissions of carbon dioxide qualify as air pollution subject to

[269] 573 U.S. at 324.
[270] *Id*.
[271] *Id.* at 329.
[272] *Id.* at 332.
[273] 42 U.S.C. § 7411(b)(1)(A).
[274] *Id.* § 7411(b)(1)(B).
[275] 564 U.S. 410, 424 (2011).

regulation under the Act," and found it "equally plain that the Act 'speaks directly' to emissions of carbon dioxide from [power] plants."[276]

Contrary to what EPA now suggests, the Supreme Court in *West Virginia* left the broad holding of *AEP* undisturbed.[277] In its decision, the Court did not question EPA's authority under Section 111 to regulate greenhouse emissions from power plants, but rather held that EPA's particular generation-shifting approach in the Clean Power Plan was unlawful.[278] In discussing *AEP*, the Court clarified that its decision "said nothing about the *ways* in which Congress intended EPA to exercise its power under [Section 111(d)]."[279] *West Virginia* focused plainly on EPA's specific regulatory scheme, and left the agency with authority to regulate power sector greenhouse gas emissions using traditional pollution-control techniques.[280]

Other Clean Air Act provisions further emphasize Section 111's application to greenhouse gases. As discussed above, this most notably includes the Clean Air Act's definition of "welfare," which includes "effects on soils, water, crops, vegetation, manmade materials, animals, wildlife, weather, visibility, and *climate*."[281] The fact that the term "welfare," as used in Section 111, was expressly intended by Congress to include climate impacts indicates that Section 111 can be used to address air pollution that alters the climate. The fact that Congress was well aware that greenhouse gas emissions cause climate change when it enacted Section 111, as discussed above, only further emphasizes that Section 111 encompasses climate pollutants.[282]

III. EPA's futility analysis is arbitrary, misleading, and unnecessary.

In the 2026 Proposal, EPA suggests that, "the appropriate indicator of impact is not emissions or concentrations, but public health and welfare impacts." EPA then finds that "regulating fossil fuel-fired power plant CO_2 emissions under [Section 111] would have no more than a trivial effect on the key global climate change indicators that relate to adverse public health and welfare impacts." EPA both arbitrarily departs from its long-established, statutorily-prescribed approach and bases its finding on a fundamentally flawed analysis.

EPA proposes to measure the welfare effects of power plant greenhouse gas emissions by estimating what fraction of global sea level rise or global temperature rise would be prevented through elimination of these emissions. EPA's myopic focus on temperature increase and sea level rise ignores the fact that even seemingly small temperature and sea-level increases can have massive impacts on public health and welfare, as EPA has previously recognized. With its new approach, EPA arbitrarily departs from its long-standing use of social cost of greenhouse gases

[276] *Id.* (quoting Mobil Oil. Corp. v. Higginbotham, 436 U.S. 618, 625 (1978)).
[277] *See* 2026 Proposal, 91 Fed. Reg. at 59029.
[278] *West Virginia v. EPA*, 597 U.S. 697 (2022); *see also* DENA ADLER & ANDREW STAWASZ, INST. FOR POL'Y INTEGRITY, WITHIN ITS WHEELHOUSE 3 (2024).
[279] *West Virginia*, 597 U.S. at 730 (emphasis added).
[280] ADLER & STAWASZ, *supra* note 278, at 11.
[281] 42 U.S.C. § 7602(h) (emphasis added).
[282] *See supra* Part I.B.1.

(SC-GHG), a peer-reviewed, state-of-the-art tool to measure incremental climate change damages. EPA also ignores other climate change effects and presents fundamentally flawed estimates of sea level rise and temperature change that arbitrarily truncates the review period, leading to an underestimation of the physical effects from power sector emissions. The irrationality of EPA's approach is made more obvious by applying the same framework to the cost savings of the rule and comparing them to power sector revenue and global GDP—an approach that EPA notably declines to apply.

A. EPA's approach does not capture impacts on public health and welfare.

In the 2026 Proposal, EPA measures the welfare effects of power plant greenhouse gas emissions by estimating what fraction of global sea level rise or global temperature rise would be prevented through elimination of these emissions.[283] But measuring the physical impacts of climate change—and the source category's contribution to it—does not capture actual impacts on public health and welfare.

Estimating temperature and sea-level rise from a quantity of emissions is not the same as considering their impacts of those emissions on public health and welfare. Rather, those temperature and sea-level increases will *cause* the effects on public health and welfare. For instance, as EPA previously acknowledged in the 2024 CPS and many other rulemaking dockets, climate change-induced physical impacts result in extensive damage to public health and welfare including: "increas[ing] the likelihood of heat waves, which are associated with increased deaths and illnesses;" "more intense hurricanes and more frequent and intense storms of other types and heavy precipitation, with impacts on other areas of public health, such as the potential for increased deaths, injuries, infectious and waterborne diseases, and stress-related disorders;" "changes in water supply and quality due to changes in drought and extreme rainfall events; increased risk of storm surge and flooding in coastal areas and land loss due to inundation; increases in peak electricity demand and risks to electricity infrastructure; and the potential for significant agricultural disruptions and crop failures."[284] EPA's narrow focus on a subset of physical climate effects does not capture the many different impacts on public health and welfare that EPA claims it must consider under Section 111.

EPA's approach in the 2026 Proposal is particularly misleading, as EPA presents the impacts of the power sector's greenhouse gas emissions as small percentages of the total increases expected from climate change.[285] But any individual contribution to a global phenomenon can be made to appear trivial if the denominator is large enough. For instance, the roughly 3 million deaths that occur annually in the United States represent less than 5% of the total global deaths each year,[286] but that does not make those deaths trivial or insignificant. In particular, estimates of temperature

[283] 2026 Proposal, 91 Fed. Reg. at 59036–41.
[284] 2024 CPS, 89 Fed. Reg. at 39807.
[285] 2026 Proposal, 91 Fed. Reg. at 59040.
[286] Total Deaths (thousands). United Nations Dep't of Econ. & Soc. Affs., https://perma.cc/5LGU-54MK (last accessed Oct. 26, 2026).

and sea-level rise may misleadingly appear small without proper context. Because climate change is a global phenomenon with individually subtle yet collectively colossal impacts, even seemingly small geophysical effects can have massive reverberations on a global scale. The use of the SC-GHG here demonstrates that: It reveals that each year of greenhouse gas emissions from the U.S. power sector causes nearly $370 billion in total damages,[287] despite comprising only a relatively small percentage of total temperature and sea-level rise from climate change.

B. EPA unjustifiably abandons its long use of peer-reviewed, state-of-the-art tools to measure the health and welfare effects of specific greenhouse gas emissions.

In conducting its new futility analysis, EPA turns its back on more than 15 years of agency practice of using state-of-the-art modeling, including the social cost of greenhouse gases (SC-GHG), to estimate the mortality and economic effects associated with specific greenhouse gas emissions.[288] The damage estimates below in Part IV.A indicate the substantial health and economic effects of U.S. power sector emissions using peer-reviewed, best practices long-espoused by EPA.[289] Its abandonment of the SC-GHG—and failure to replace the tool with any meaningful approach to assess the actual impacts of the power sector's greenhouse gas emissions on public health and welfare—is arbitrary and espouses a fundamental misunderstanding of the SC-GHG. In sum, EPA fails to justify its change in methodology for assessing climate damages and their significance.

Contrary to EPA's assertion that its past power sector rules never "squarely consider[ed]" the degree to which its standards addressed the adverse public health and welfare effects attributed to global climate change,[290] the SC-GHG captures the factors that actually affect public welfare and assesses the degree of impact to each factor.[291] The SC-GHG calculates how the emission of an additional unit of greenhouse gases affects atmospheric greenhouse gas concentrations, how that change in atmospheric concentrations affects temperature, and how that change in temperature incrementally contributes to health and economic damages.[292]

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[287] PETER H. HOWARD & JASON A. SCHWARTZ, INST. FOR POL'Y INTEGRITY, THE SCALE OF SIGNIFICANCE: POWER PLANTS 6 (2025) [hereinafter Scale of Significance], https://policyintegrity.org/files/publications/Power_Sector_GHG_Contribution_Issue_Brief_vF.pdf.

[288] Policy Integrity explains these and related arguments in its comment filed jointly with 10 other groups on EPA's 2025 Proposal to rescind all power sector greenhouse gas emission standards. That comment is attached here as Exhibit D. Inst. for Pol'y Integrity et al., Comments on Failure to Monetize Greenhouse Gas Emissions in "Repeal of Greenhouse Gas Emissions Standards for Fossil Fuel-Fired Electric Generating Units" (Aug. 7, 2025) [hereinafter 2025 Joint Comment].

[289] *See supra* Section V.A.5.

[290] 2026 Proposal, 91 Fed. Reg. at 59041.

[291] If anything, EPA's 2023 SC-GHG models likely *underestimate* public health and welfare effects because they omit numerous key damage categories. For example, the damage models that EPA used do not include numerous mortality impacts including impacts from wildfire and smoke and "other categories of temperature driven climate impacts (e.g., morbidity, conflict, migration, biodiversity loss)," and account for "only a limited subset of damages from changes in precipitation." *See* 2025 Joint Comment, *supra* note 288, at 10–11.

[292] INTERAGENCY WORKING GRP. ON SOC. COST OF CARBON, TECHNICAL SUPPORT DOCUMENT: SOCIAL COST OF CARBON FOR REGULATORY IMPACT ANALYSIS 5 (2010) [hereinafter 2010 TSD].

Part IV.A illustrates how use of the SC-GHG unequivocally demonstrates that U.S. power sector emissions significantly contribute to air pollution that endangers public health or welfare. Using EPA's 2023 central SC-GHG estimates, we find that annual emissions from the U.S. power sector produce total net damages of "nearly $370 billion, including about $225 billion in global health damages, and about $75 billion in lost labor productivity."[293] This monetary damage estimate is comparable to the total gross domestic product for all U.S. utilities.[294] Thus, using EPA's own framework—that what matters is not "emissions or concentrations," but actual "public health and welfare impacts"—standards that reduce power-sector emissions will mitigate these billions of dollars in damages and thus clearly have a "material impact" on the "public health and welfare effects stemming from global climate change."[295]

Further, the 2026 Proposal offers inadequate justification for EPA's decision to abandon more than 15 years of past agency practice using SC-GHG values to estimate the incremental climate-change impacts from a unit of emissions. EPA has long relied on peer-reviewed, analytically sound SC-GHG values when estimating the climate impacts of its actions, including, as EPA acknowledges, in its prior power sector rules.[296]

To understand the irrationality of EPA's about-face, a review of the history behind the SC-GHG is helpful to illustrate its well-established status as a peer-reviewed, best practice. Experts have been using social cost of carbon models to estimate the marginal damages per ton of carbon dioxide for decades.[297] Federal agencies, including EPA, began to regularly use these values after the U.S. Court of Appeals for the Ninth Circuit found a rule to be arbitrary and capricious because the agency's cost-benefit analysis failed to value the rule's climate impacts.[298] Following this decision, the Obama Administration convened an interagency working group that reviewed the frontier economics literature and published climate-damage estimates in 2010, 2013, and 2016.[299] EPA actively participated in the working group, which updated its damage estimates regularly to include the latest technical literature and inputs.[300]

In 2023, EPA published updated SC-GHG estimates that implemented recommendations from the National Academies of Sciences, Engineering, and Medicine and incorporated developments in the economic and scientific literature since the metric's last substantive update.[301] These

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[293] Scale of Significance, *supra* note 287, at 6.
[294] *See id.* (reporting that "total GDP for all U.S. utilities (of which coal and gas electric plants are only a subset) in 2022 was nearly $444 billion").
[295] 2026 Proposal, 91 Fed. Reg. at 59040.
[296] *Id.* at 59041.
[297] In fact, in the mid-1990s Dr. William Nordhaus produced one of the first models to calculate the marginal damages from a ton of carbon dioxide emissions and received the Nobel Prize in Economics for that work. The Nobel Prize, *William D. Nordhaus: Facts*, https://perma.cc/EH5U-BU9P.
[298] Ctr. for Biological Diversity v. Nat'l Highway Traffic Safety Admin., 538 F.3d 1172, 1198–1203 (9th Cir. 2008); 2010 TSD, *supra* note 292, at 3.
[299] *See* 2025 Joint Comment, *supra* note 288, at 1.
[300] *Id.* at 2.
[301] EPA, REPORT ON THE SOCIAL COST OF GREENHOUSE GASES: ESTIMATES INCORPORATING RECENT SCIENTIFIC ADVANCES (2023) [hereinafter 2023 SC-GHG Report].

estimates underwent public comment and expert peer review, with expert reviewers offering extensive praise for EPA's estimates.[302]

Estimates of the SC-GHG, including EPA's 2023 values we rely on in this letter, have been used repeatedly by federal agencies to estimate the climate impacts of their actions.[303] In fact, as EPA acknowledges, EPA has used SC-GHG values to estimate the effects of its emission standards for numerous power sector regulations, including the 2015 NSPS and the 2024 CPS.[304] Notably, even throughout the first Trump Administration, EPA recognized the importance of SC-GHG estimates and continued to use them in regulatory analyses, including in ACE.[305]

Despite this long history and the metric's rigorous scientific underpinning, EPA offers barely any reason in the 2026 Proposal for its decision not to use the SC-GHG to evaluate the climate damages associated with greenhouse gas emissions from fossil-fuel-fired power plants. Instead, in some recent rules, EPA has quickly listed a few uncertainties in the SC-GHG estimates, yet failed to recognize that its own SC-GHG estimates rigorously accounted for these sources of uncertainty.[306] Moreover, as discussed further in Parts III.A and III.C, EPA's focus on global mean surface temperature and sea level rise present an incomplete picture of the effects of climate change, and as discussed in Part III.D, EPA's analysis of global mean surface temperature and sea-level rise changes is incomplete. EPA's failure to meaningfully evaluate the climate damages caused by the U.S. power sector—punctuated by its abandoning its own rigorous SC-GHG estimates—is arbitrary and capricious and not supported by the law or the facts.

For further discussion of these arguments, see attached Exhibit D (Inst. for Pol'y Integrity et al., Comments on Failure to Monetize Greenhouse Gas Emissions in "Repeal of Greenhouse Gas Emissions Standards for Fossil Fuel-Fired Electric Generating Units" (Aug. 7, 2025).

C. EPA's myopic focus on temperature and sea-level rise fails to consider other important physical effects and reciprocity effects.

EPA's focus on temperature and sea-level rise not only ignores the ultimate impacts of those physical impacts on public health and welfare; it also presents an incomplete picture of the physical impacts and other effects of climate change.

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[302] 2025 Joint Comment, *supra* note 288, at 2.

[303] *See* OFFICE OF MGMT. & BUDGET, REPORT TO CONGRESS ON THE BENEFITS AND COSTS OF FEDERAL REGULATIONS AND AGENCY COMPLIANCE WITH THE UNFUNDED MANDATES REFORM ACT: FISCAL YEAR 2023 at 21–22 & n.52 (2024) (discussing uses by EPA, the Department of Transportation, Department of Energy, and Department of the Treasury).

[304] 2026 Proposal, 91 Fed. Reg. at 59041.

[305] *See e.g.*, EPA, REGULATORY IMPACT ANALYSIS FOR THE REPEAL OF THE CLEAN POWER PLAN, AND THE EMISSION GUIDELINES FOR GREENHOUSE GAS EMISSIONS FROM EXISTING ELECTRIC UTILITY GENERATING UNITS 7-1 to 7-8 (2019).

[306] *See, e.g.*, The Safer Affordable Fuel-Efficient (SAFE) Vehicles Rule III for Model Years 2022 to 2031 Passenger Cars and Light Trucks, 90 Fed. Reg. 56438, 56515 (proposed Dec. 5, 2025); EPA, ECONOMIC IMPACT ANALYSIS FOR THE EXTENSION OF DEADLINES IN THE NSPS OOOOB AND EG OOOOC at 10 (July 23, 2025).

For example, EPA has previously recognized that carbon dioxide emissions contribute to ocean acidification, which negatively impacts the growth and survival of shellfish and coral reefs.[307] Those costs impacts and the resultant loss in ecosystem services are not captured by the 2026 Proposal's focus on temperature and sea-level rise. Moreover, EPA in the 2026 Proposal even recognizes that "[greenhouse gas] emissions produced from human activities" can cause "extreme weather events such as heat waves, wildfires, or connective storms."[308] Yet, EPA does not directly consider these effects when assessing whether the emissions from U.S. power plants have more than a *de minimis* impact. Additionally, "elevated CO_2 concentrations can also lead to reductions in the nutrient content (such as protein, iron, and zinc) of some crops, with potential negative effects on diets."[309] The reduction in nutrient content of food is also not considered in this proposal.

EPA also fails to consider the international reciprocity benefits to the United States of domestic greenhouse gas mitigation. EPA has previously recognized that when an agency promulgates a rule that reduces greenhouse gas emissions, the rule can have an impact internationally through "policy diffusion and technology diffusion."[310] Other countries may consider, copy, or even expand upon U.S. policy, creating further beneficial impacts to the United States beyond direct mitigation.[311] Further, U.S. regulations limiting greenhouse gas emissions, like many other regulations, spur new technologies which then spread internationally and thus further expand reductions in greenhouse gas emissions.[312] In other words, the benefits of cleaner power plants in the United States can have far-reaching impacts because U.S. policy and technology to achieve these standards could spread beyond U.S. borders.

U.S. regulatory actions can also lead additional international actions beyond reciprocity, and even beneficial competition.[313] Beneficial competition occurs when countries that compete with the United States to be seen as an international leader, like China, compete in ways that are mutually beneficial, such as reducing transboundary pollution quicker or more thoroughly.[314] All told, EPA has previously recognized that greenhouse gas reductions "attributable to international reciprocity may exceed domestic emission reductions from [a specific] policy."[315] And notably, "international GHG mitigation activities taken in response to U.S. policies that reduce emissions will also provide a benefit to U.S. citizens and residents."[316] In the 2026 Proposal, EPA failed to

[307] 2023 SC-GHG Report, *supra* note 301, at 43.
[308] 2026 Proposal, 91 Fed. Reg. at 59019.
[309] 2023 SC-GHG Report, *supra* note 301, at 94.
[310] *Id.* at 16.
[311] *Id.*
[312] *Id.*; EPA, *Progress Cleaning the Air and Improving People's Health*, https://perma.cc/PRR9-499J (Feb. 19, 2026).
[313] 2023 SC-GHG Report, *supra* note 301, at 17.
[314] *See id.* at 14 ("Competitors such as China may try to take advantage of climate change impacts to gain influence." (quoting Department of Defense report)).
[315] *Id.* at 16.
[316] *Id*.

account for these likely benefits to public health and welfare from Section 111 greenhouse gas regulations.

In the 2026 Proposal, EPA focuses solely on global temperature and sea level rise, arbitrarily failing to consider the wide variety of benefits and costs of reducing greenhouse gas emissions from power plants. This narrow focus is insufficient to weigh whether the impacts of regulation would have more than a *de minimis* impact, "fail[s] to consider an important aspect of the problem," and "runs counter to the evidence before the agency."[317]

D. EPA underestimates the effects of power plant emissions on sea-level rise and global temperature changes by arbitrarily truncating the period of review.

In the 2026 Proposal, EPA estimates that by the year 2100, global mean temperature will increase 1.3ºC and global sea level will rise by 73.3 cm compared to 2026 levels.[318] Under these assumptions, EPA then estimates that the entire fleet of U.S. power plants will be responsible for only 0.035ºC (3%) temperature increase and 1.37 cm (2%) sea level rise in 2100.[319] EPA finds that U.S. power plants have a "de minimis" impact on global temperature and sea levels based on these estimates.[320]

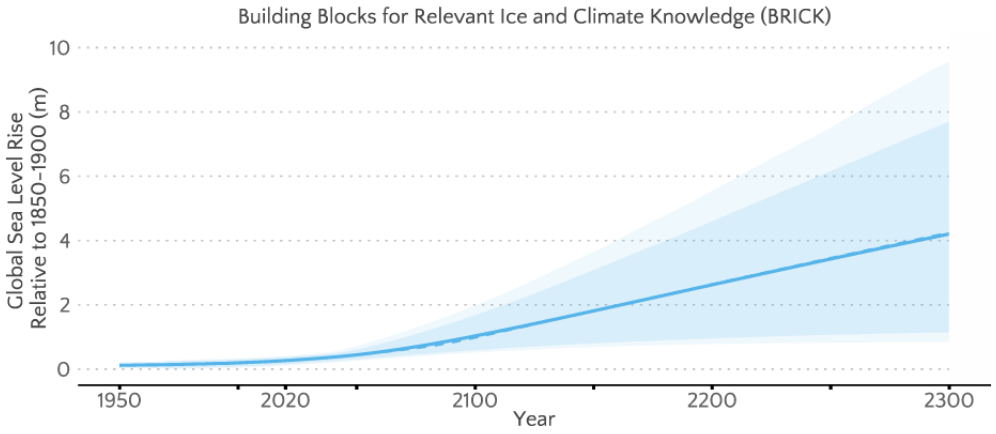
Setting aside for the moment that global sea level rise and global mean temperature change are not themselves appropriate measurements of welfare effects,[321] and that EPA has failed to justify not using the SC-GHG to measure welfare,[322] EPA's estimation of sea level rise and temperature change are additionally flawed. EPA arbitrarily underestimates the U.S. power sector's effects on global sea level rise and global mean temperature by ending its analysis in 2100, diverging from EPA's prior practice of analyzing climate impacts until 2300.[323] EPA's unexplained change in modeling benchmarks runs counter to past practice by the EPA, evidence before the EPA, and expert recommendations. To demonstrate these issues, this section reviews EPA's past analysis using the benchmark 2300 and why this is an important aspect of the problem.

In the 2023 Social Cost of Greenhouse Gas Report, EPA uses the benchmark of the year 2300 so as to more comprehensively capture the effects of these emissions over their lifetime.[324] As previously recognized by EPA, CO_2 can impact global temperatures and sea level for "thousands of years."[325] Thus, shortening the analysis to the year 2100 truncates the vast majority of cumulative physical climate damages caused by a pulse of emissions today (see Figures 1 and 2 below). This is illustrated by EPA's own analysis in 2023, which used the same sea level model

[317] *See* Motor Vehicle Mfrs. Ass'n v. State Farm Mut. Auto. Ins. Co., 463 U.S. 29, 43 (1983).
[318] EPA, TEMPERATURE, CO_2 CONCENTRATION, AND SEA LEVEL RISE IMPACTS OF CO_2 EMISSIONS FROM U.S. ELECTRICITY GENERATING UNITS 5 (2026).
[319] *Id.*
[320] 2026 Proposal, 91 Fed. Reg. at 59035.
[321] *See supra* Part III.A.
[322] *See supra* Part III.B.
[323] *See* 2023 SC-GHG Report, *supra* note 301, at 39.
[324] *See id.* at 41.
[325] EPA, *Atmospheric Lifetime and Global Warming Potential Defined*, https://perma.cc/59AD-CJFA (Jan. 21, 2021).

that EPA is using in this 2026 Proposal. In 2023, EPA estimated that while the global sea level rise would increase by an estimated one meter in 2100, it would rise by over four meters in 2300 (see Figure 1 below).[326] Similarly, EPA's analysis in 2023, which used a variant of the same climate emulator that EPA is using in this 2026 Proposal, estimated a significant increase in the global surface temperature between 2100 and 2300 (see Figure 2 below).[327]

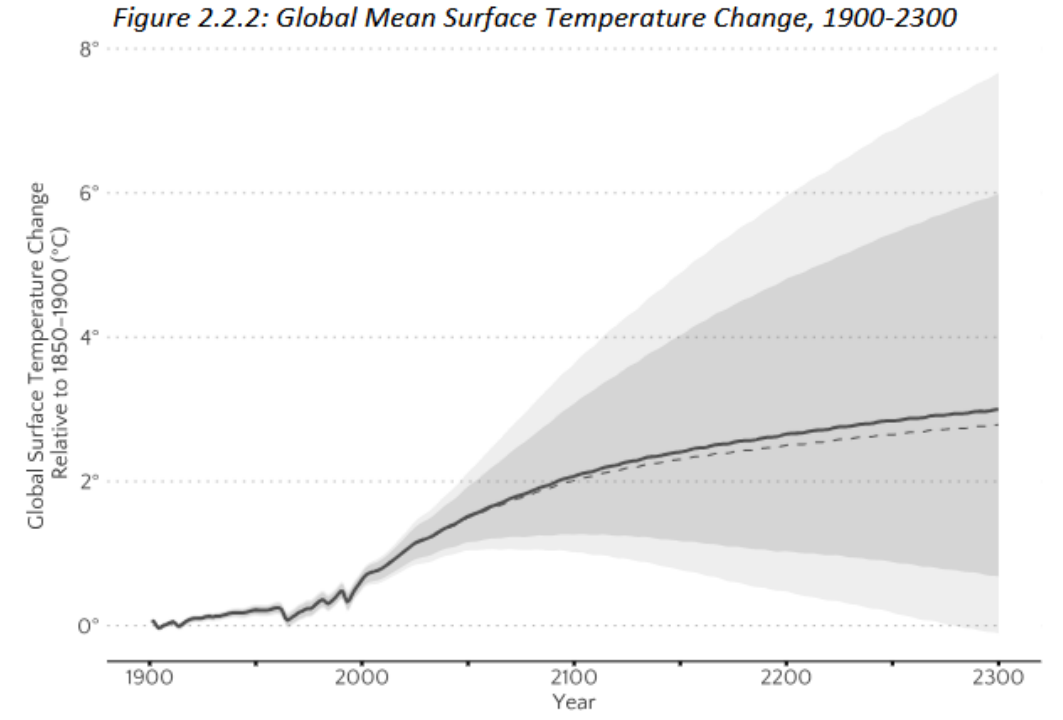
Figure 1: EPA's Global Mean Sea Level Rise Estimation in the 2023 Social Cost of Greenhouse Gas Report[328]



The range of global mean sea level rise relative to pre-industrial (1850-1900) as calculated by Framework for Assessing Changes To Sea-level (FACTS) (top) and Building Blocks for Relevant Ice and Climate Knowledge (BRICK) (bottom). Uncertainty comes from emissions uncertainty from the RFF-SP projections, physical climate uncertainty from FaIR, and parameter uncertainty underlying each SLR module. Mean (solid) and median (dashed) lines are shown along with the 5th to 95th (dark shade) and 1st to 99th (light shade) percentile ranges.

[326] 2023 SC-GHG Report, *supra* note 301, at 44.
[327] *Id.* at 39.
[328] *Id.* at 44.

Figure 2: EPA's Global Mean Surface Temperature Change in the 2023 Social Cost of Greenhouse Gas Report[329]



By cutting off its review in the year 2100, EPA not only departs from its own past, best practice,[330] but also contravenes the recommendations of other technical experts. For example, the National Academies of Sciences, Engineering, and Medicine's recommends analysis "extend far enough in the future to provide inputs for estimation of the vast majority of discounted climate damages."[331]

EPA's arbitrary decision to halt its analysis at the year 2100, and consequent failure to consider significant effects of greenhouse gas emissions beyond 2100, renders its estimates of the effects of the power sector's greenhouse gas emissions similarly flawed. Had EPA examined the effects of the power sector's greenhouse gas emission through 2300, it would have found the effects to be notably larger.

[329] *Id.* at 39.
[330] *See e.g.*, Standards of Performance for New, Reconstructed, and Modified Sources and Emissions Guidelines for Existing Sources: Oil and Natural Gas Sector Climate Review, 89 Fed. Reg. 16820, 17019 (Mar. 8, 2024) (using EPA's 2023 SC-GHG values); 2024 CPS, 89 Fed. Reg. at 40007 (same); Multi-Pollutant Emissions Standards for Model Years 2027 and Later Light-Duty and Medium-Duty Vehicles, 89 Fed. Reg. 27842, 28115 (Apr. 18, 2024) (same).
[331] 2023 SC-GHG Report, *supra* note 301, at 22.

EPA's decision to truncate its period of analysis excludes key effects of the rule from EPA's analysis. As a result, EPA ignores an important aspect of the problem,[332] and has provided no good reason for its change in methodology.[333]

E. The arbitrariness of EPA's futility methodology is further apparent when applied to the cost savings of the 2026 Proposal.

The arbitrariness of EPA's new approach to measuring climate damages is particularly apparent when compared to how EPA assesses the cost savings of the rule for regulated entities. EPA assesses the cost savings for regulated entities in the aggregate—rather than in reference to larger metrics such as total power sector revenue, U.S. GDP, or some other larger economic effect. Had EPA applied its futility framework to the cost side of the ledger, it may have mistakenly concluded that they too are *de minimis*. The better approach is simply to look at the impacts in the aggregate, not misleadingly compare them to global baselines.

EPA projects that the 2026 Proposal would result in national power sector cost savings of approximately $23 million EAV (3% discount rate).[334] EPA acknowledges that the 2026 Proposal has "small cost savings" "relative to cost impacts of many other EPA power sector rules,"[335] but EPA does not proclaim these costs savings are *de minimis* because they are roughly 0.004471% of the U.S. power sector's annual revenue of over $500 billion.[336] Nor does EPA minimize these cost savings as 0.000071% of annual U.S. GDP[337] or 0.000019% of global GDP.[338] Such an approach is clearly misleading, but it is precisely what EPA does for measuring climate change damages in the futility analysis when it argues regulating such emissions is pointless because all power sector emissions would reduce global sea level rise by only 1% by 2050 or 2% by 2100.[339] Similarly, EPA points to its estimates that power sector emissions

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[332] *See* Motor Vehicle Mfrs. Ass'n v. State Farm Mut. Auto. Ins. Co., 463 U.S. 29, 43 (1983).

[333] "One of the basic procedural requirements of administrative rulemaking is that an agency must give adequate reasons for its decisions . . . [i]t follows that an '[u]nexplained inconsistency' in agency policy is 'a reason for holding an interpretation to be an arbitrary and capricious change from agency practice.'" Encino Motorcars, LLC v. Navarro, 579 U.S. 211, 221–22 (2016) (quoting Nat'l Cable & Telecomm. Ass'n v. Brand X Internet Servs., 545 U.S. 967, 981 (2005)).

[334] EPA, ECONOMIC IMPACT ANALYSIS FOR THE SUPPLEMENTAL PROPOSED RULE, RESCISSION OF THE GREENHOUSE GAS FINDINGS FOR FOSSIL FUEL-FIRED POWER PLANTS AND REPEAL OF REGULATIONS FOR POWER PLANT GREENHOUSE GAS EMISSIONS UNDER CLEAN AIR ACT SECTION 111 at 8 (2026) [hereinafter Economic Analysis].

[335] *Id.* at 14.

[336] U.S. ENERGY INFO. ADMIN, ELECTRIC POWER ANNUAL 2024 at 9 (2025), https://www.eia.gov/electricity/annual/pdf/epa.pdf (23 million/514 billion = 0.00004474708; convert to percent and rounds to 0.004%).

[337] The nominal gross domestic product (GDP) of the United States is approximately $32.56 trillion for Q2 2026, according to data from the U.S. Bureau of Economic Analysis (23 million/32.56 trillion = 0.000000706388206; convert to percent and rounds to 0.00007%). *See* U.S. Bureau of Econ. Analysis, *Gross Domestic Product* (Oct. 27, 2026) (retrieved from FRED, Fed. Reserve Bank of St. Louis), https://fred.stlouisfed.org/series/GDP.

[338] $118.35 trillion in 2025 according to World Bank. GDP (current US$), https://perma.cc/533E-XN96 (Oct. 27, 2026).

[339] 2026 Proposal, 91 Fed. Reg. at 59037.

contribute only 2% of global temperature increase by 2050 or 3% by 2100.[340] A small percentage contribution to a very large phenomenon can itself be quite large.

That the agency would find $340 million in total cost savings (3% discount rate)[341] from the 2026 Proposal sufficient to justify regulation, but would find hundreds of billions of dollars in annual climate damages from the power sector[342] to be *de minimis,* and undeserving of addressing through regulation, reveals the arbitrary and unworkable nature of EPA's futility analysis. EPA's futility analysis fails to meet the bar for reasoned decision-making.

IV. Greenhouse gas emissions from power plants unquestionably contribute significantly to dangerous air pollution.

In the 2026 Proposal, EPA finds that regulating greenhouse gas emissions from the power sector "would have no meaningful impact on ... public health and welfare."[343] Specifically, EPA finds that "regulating fossil fuel-fired power plant CO_2 emissions under [Section 111] would have no more than a trivial effect on the key global climate change indicators that relate to adverse public health and welfare impacts."[344] As discussed in Part III, EPA's approach to its futility analysis is deeply flawed, unnecessary, and inconsistent with past agency practice. EPA's specific finding that regulating power sector emissions would be futile, and accordingly that these emissions do not merit regulation, is also arbitrary and erroneous. To demonstrate why, this section reviews the significant effects of greenhouse gas emissions from U.S. power plants on public welfare and EPA's decades-long practice under Section 111 of regulating emissions that represent a small percentage of a large pollution problem.

As noted above, EPA does not need to make a pollutant-specific finding to issue greenhouse gas emission standards for power plants. But if it did, EPA would be required to exercise "reasoned decisionmaking" when assessing whether greenhouse gas emissions from the power sector significantly contribute to dangerous air pollution.[345] U.S. power sector greenhouse emissions are responsible for sizeable health and welfare damages, both in the United States and globally. Any conclusion that power plant emissions do not contribute significantly to air pollution that endangers public health or welfare effects would "run counter to the evidence before the agency."[346]

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[340] *Id*.
[341] Economic Analysis, *supra* note 334, at 15.
[342] *See infra* Part IV.A.
[343] 2026 Proposal, 91 Fed. Reg. at 59035.
[344] *Id.*
[345] *See, e.g,,* Loper Bright Enters. v. Raimondo, 603 U.S. 369, 395 (2024) (confirming that "[w]hen the best reading of a statute is that it delegates discretionary authority to an agency, the role of the reviewing court under the APA" includes "fixing the boundaries of the delegated authority, and ensuring the agency has engaged in 'reasoned decisionmaking' within those boundaries.").
[346] Under the framework of *Motor Vehicle Manufacturers Association v. State Farm Mutual Automobile Insurance Co.*, an agency decision may be arbitrary and capricious if it "relied on factors which Congress has not intended it to consider, entirely failed to consider an important aspect of the problem, offered an explanation for its decision that

To explain why power plants contribute to air pollution causing significant health and welfare damages, the following section first provides modeling of these damages using EPA's own models and projections of power sector emissions. Second, , it reviews how, for over five decades, EPA has recognized much smaller shares of large pollution problems to merit regulation under Section 111. In sum, whether EPA directly assesses the health and welfare impacts from power sector emissions or the contribution of U.S. power plants to dangerous air pollution, regulation is merited under Section 111.

Policy Integrity explains these arguments in further detail in two appendices attached to this comment.

- *Significant by Any Measure: Reviewing Power Plant Emissions Under Section 111 of the Clean Air Act* (attached to this letter as Exhibit E) details the legal basis for making a significant contribution finding for power sector emissions.
- *The Scale of Significance: The U.S. Power Sector's Annual Climate Pollution Causes Thousands of Deaths and Massive Economic Damages* (attached to this letter as Exhibit F) outlines the factual basis for making such a finding. The primary findings of these reports, and updated damage estimates based on EPA's latest scenarios, are summarized below.

A. Greenhouse gas emissions from power plants cause massive health and economic damages.

EPA argues that "even the complete elimination of [greenhouse] emissions from the U.S. power sector . . . would have no more than *de minimis* impacts on the key indicators of adverse impacts attributed to global climate change,"[347] and "this futility demonstrates that [Clean Air Act] [S]ection 111(b)(1)(A) does not, as a matter of text and structure, authorize or require the EPA to prescribe standards for [greenhouse gas] emissions from fossil fuel-fired power plants."[348] For example, EPA analyzes a potential 50 percent reduction in U.S. power plant emissions through the year 2100 (even though achieving only a 50% cut seventy-five years in the future is a rather tepid goal). EPA claims such regulation would only forestall 0.018°C of warming and 0.44cm of global sea-level rise,[349] and so result in "no material impact (*i.e.*, beyond a *de minimis* level) on key indicators of public health and welfare effects stemming from global climate change concerns."[350]

EPA's analysis is gravely misleading. The relevant impacts to "public health [and] welfare"[351] from global climate change are not measured by degrees of temperature or centimeters of sea-

runs counter to the evidence before the agency, or is so implausible that it could not be ascribed to a difference in view or the product of agency expertise." 463 U.S. 29, 43 (1983).

[347] 2026 Proposal, 91 Fed. Reg. at 59006.

[348] *Id.* at 59035–36.

[349] *Id.* at 59038–39 tbls. 5 & 7.

[350] *Id.* at 59040.

[351] 42 U.S.C. § 7411(b)(1)(A).

level rise, but instead by the effects that temperature and other physical changes will ultimately have social welfare and the environment: for example, property damage from sea-level rise, agricultural crops ruined by extreme weather changes, and human health losses from heat waves, storms, and wildfires.[352] When these losses are translated into dollar figures and mortality estimates using the best available science and models,[353] it becomes apparent that even modest regulation of climate pollution from U.S. power plants could forestall trillions of dollars in climate damages and save tens of thousands of lives from temperature extremes in the United States alone.

To assess the actual impacts to health and welfare at stake minimally requires estimating (1) how many tons of greenhouse gases could be reduced from the U.S. power sector in every year through at least 2100,[354] and (2) how much total damage each individual ton of climate pollution emitted in a given year through at least 2100 will cause over its atmospheric lifetime. Discount rates can then be applied to translate damages caused in the future into present value, allowing us to calculate the total net present value of damages from emissions.[355]

First, it is necessary to estimate the emissions from the U.S. power sector in each year. EPA's *Technical Memo: Temperature, CO_2 Concentration, and Sea Level Rise Impacts of CO_2 Emissions from U.S. Electricity Generating Units* provides two reduction scenarios (EPA's Scenarios #2a and #2b) relative to a baseline projection (EPA's Scenario #1) of emissions from 2026 to 2100. Scenario #2a assumes a 100% reduction of all power plant CO_2 emissions beginning immediately in the year 2026: what EPA calls "an overly conservative proxy for the potential impacts of [greenhouse gas] emissions restrictions under [Section 111]."[356] Scenario #2b assumes a 50% reduction instead, in what EPA asserts is "a proxy for a more likely, real-world scenario."[357]

In Scenarios #2a and #2b, "[e]missions after 2050 are held constant through the year 2100." That simplifying assumption is highly unrealistic. EPA bases its scenarios on U.S. EIA's Annual Energy Outlook (AEO 2026), yet fails to account for the AEO 2026's prediction that "electricity consumption will continue growing through 2025 at a rate of 0.9% to 1.6%, with data center

[352] *See* Part III.A.
[353] For details on why SC-GHG estimates and the underlying models, such as the GIVE model, represent the best available science *see* 2025 Joint Comment, *supra* note 288.
[354] A more reasonable and appropriate analysis would project emissions beyond 2100 to the extent feasible, given the timescale of climate change. We look at emissions through the year 2100 only to be consistent with EPA's analysis, not to endorse that choice of timescale or any other of EPA's methodological assumptions as reasonable. *See infra* Part III.C.
[355] We use a 2% discount rate, consistent with the discount rate used to estimate the SC-GHG, as well as with the best available evidence. Peter H. Howard et al., *U.S. Benefit-Cost Analysis Requires Revision*, 380 SCIENCE 803 (2023); Inst. for Policy Integrity et al., Comments on Failure to Quantify or Value Greenhouse Gas Emissions in "Reconsideration of 2009 Endangerment Finding" at 26–30 (Sep. 22, 2025), https://policyintegrity.org/documents/Joint_Comments_on_Endangerment_and_Vehicles_Repeal_.pdf.
[356] 2026 Proposal, 91 Fed. Reg. at 59006.
[357] *Id.* at 59039. Though an immediate 50% reduction would be ambitious to achieve within a few years, given the recent pace of technological development, a 50% reduction is an achievable goal in the relative near term, and an overly conservative goal to achieve by the end of the century.

server energy use a major factor."[358] AEO 2026 also assumes that "the absolute amount of natural gas generation increases" over that period as well, and that if greenhouse gas regulations are not in place, coal's share of U.S. generation will remain over 5% through 2050.[359]

EPA fails to explain why it is reasonable to assume that emissions growth will suddenly drop to 0% in 2050 despite increasing at a steady annual rate of around 1% for the next 24 years. Therefore, we will also model two additional scenarios, labeled here as Scenarios #3a and #3b, which respectively account for a 100% reduction or 50% reduction of emissions from a baseline that assumes continued growth of emissions after 2050 at a rate of about 0.9% per year.

Table 1: Description of Scenarios

	EPA's Scenario #2a	EPA's Scenario #2b	Scenario #3a (adjusted for growth)	Scenario #3b (adjusted for growth)
Emissions Assumptions	EPA's assumption of no growth after 2050	EPA's assumption of no growth after 2050	Estimate growth of ~0.9%/year after 2050, consistent with AEO2026	Estimate growth of ~0.9%/year after 2050, consistent with AEO2026
Reduction Scenario	100% cut starting in 2026	50% cut starting in 2026	100% cut starting in 2026	50% cut starting in 2026
Years of Emissions Included	2026–2100	2026–2100	2026–2100	2026–2100

To capture the actual harms to health and welfare caused by these emissions, we first apply the SC-GHG. The SC-GHG quantifies, in dollars, the climate damages from each additional ton of greenhouse gas. This metric, which was calibrated by experts over the decades, quantifies emissions impacts on health, sea-level rise, agricultural losses, and other categories of damages.

[358] U.S. ENERGY INFO. ADMIN, ANNUAL ENERGY OUTLOOK 2026 14 (2026), https://perma.cc/P9X7-YC49.
[359] *Id.* at 16.

In 2023,[360] EPA updated its SC-GHG estimates through a rigorous, transparent process.[361] These current figures estimate that one ton of carbon dioxide emitted in the year 2026 causes about $260 in global climate damages.[362] EPA's estimates extend only through year 2080 emissions.[363] To allow estimations through the year 2100, we calculated an average growth rate over years 2020–2080 from EPA's data and used that factor to extend estimates out to 2100.[364]

Applying EPA's estimates of climate damages (i.e., the 2023 SC-GHG values) to EPA's estimates of emissions, reducing 100% of carbon dioxide from the U.S. power sector (i.e., Scenario #2a), would ***reduce over $21 trillion in total global climate damages***. EPA's alternative regulatory scenario, Scenario #2b, which the agency calls a "likely, real-world scenario" (though in fact is likely still conservative) would still reduce climate damages by about half that amount. Projecting continued growth in emissions after the year 2050 in the absence of regulation, consistent with AEO2026, the climate damages at stake rise to $24 trillion. For context, that total is similar to the U.S. annual GDP ($28 trillion in 2024).[365]

[360] Note that the Trump administration has backed away from these calculations, on the grounds that the social cost of greenhouse gases is too uncertain to value. Off. of Mgmt. & Budget, Memorandum M-25-27, *Memorandum for Regulatory Policy Officers at Departments and Agencies and Managing and Executive Directors of Commissions and Boards Re: Guidance Implementing Section 6 of Executive Order 14154, Entitled "Unleashing American Energy"* (May 5, 2025), https://perma.cc/AZN4-VQGH. But uncertainty is not a valid excuse for failing to estimate this key value, and if anything uncertainty points toward higher values. *See* PETER HOWARD ET AL., INSTITUTE FOR POLICY INTEGRITY, ZERO RATIONALITY: WHAT OIRA'S NEW MEMORANDUM GETS WRONG ON MONETIZING CLIMATE IMPACTS 4–5 (May 2025), https://policyintegrity.org/files/publications/Zero_Rationality_Issue_Brief_vf.pdf.

[361] *See* 2023 SC-GHG Report, *supra* note 301; *see also* EPA, FINAL COMMENTS SUMMARY REPORT, EXTERNAL LETTER PEER REVIEW OF TECHNICAL SUPPORT DOCUMENT: SOCIAL COST OF GREENHOUSE GAS (2023), https://perma.cc/SJ3X-EB6G.

[362] 2023 SC-GHG Report, *supra* note 301, at 154 tbl. A.5 (in 2020$, using a 2% discount rate). Figures are adjusted for inflation to 2025$ using the U.S Bureau of Economic Analysis's GDP implicit price deflators. U.S. Bureau of Econ. Analysis, *Gross Domestic Product (Implicit Price Deflator)* (Mar. 30, 2026) (retrieved from FRED, Fed. Reserve Bank of St. Louis), https://perma.cc/P2Y2-P5LD.

[363] 2023 SC-GHG Report, *supra* note 301, at 155.

[364] This is consistent with past U.S. government agency practices, including the U.S. Department of Energy. E.g., DEPT. OF ENERGY, TECHNICAL SUPPORT DOCUMENT: FINAL RULE ENERGY CONSERVATION STANDARDS FOR MANUFACTURED HOUSING 14A-1 (2022), https://downloads.regulations.gov/EERE-2009-BT-BC-0021-1999/content.pdf. Ultimately, extending the estimates from 2080 through 2100 versus holding them constant after 2080 does not affect the net present value figures much.

[365] World Bank, GDP (Current US$), https://data.worldbank.org/indicator/NY.GDP.MKTP.CD?most_recent_value_desc=true.

Table 2: Climate Effects from the U.S. Power Sector (2025$; 2% discount rate)

	Scenario #2a *(100% reduction)*	Scenario #2b *(50% reduction)*	Scenario #3a *(100% reduction; growth-adjusted)*	Scenario #3b *(50% reduction; growth-adjusted)*
Net Present Value of Emissions 2026–2100	**$21 Trillion**	**$10.5 Trillion**	**$24 Trillion**	**$12 Trillion**

These figures are almost certainly *underestimating* the true extent of damages.[366] For instance, EPA's SC-GHG values do not include impacts to ocean acidification or migration,[367] or mounting evidence of long-run negative impacts to economic growth.[368] They also do not reflect the growing evidence that countries may reciprocally reduce their own emissions in response to U.S. emissions-cutting policies and goals, meaning that every ton of emissions reduced in the United States may be worth several additional tons of reductions abroad.[369] Furthermore, the models underlying the SC-GHG estimates assume baseline emissions with certain U.S. regulatory standards in place; without those regulations, higher baseline emissions would result in higher damage estimates per ton of greenhouse gases, as each additional ton builds on already stressed climate and economic systems.

We are also able to estimate certain specific public health impacts, like premature mortality caused by climate-induced temperature extremes. Greenhouse gases have both short- and long-term mortality impacts, because greenhouse gases are long-lived pollutants that, once emitted, can contribute to climate change for decades and even centuries to come. The GIVE model—one of the damage modules used by EPA to calculate SC-GHG—calculates how each ton of greenhouse gases emitted in a given year contributes to the marginal risk of premature mortality in every subsequent year that the pollutant remains in the atmosphere.[370]

Considering Scenario #2a, GIVE predicts that climate pollution from U.S. power plants emitted in the years 2026 to 2050 will cause over 59,000 global deaths by the year 2050 just from contributions to temperature extremes. In Scenario #2b, a 50% reduction in U.S. power plant

[366] For example, EPA's updated values do not reflect how methane emissions contribute to tropospheric ozone pollution: the resulting increase in respiratory-related human mortality risks may cause as much as another $1,800 per ton of methane in global damages. 2023 SC-GHG Report, *supra* note 301, at 93 (citing McDuffie et al (2023)).
[367] *Id.* at 87, tbl 3.2.1.
[368] Elizabeth Kopits et. al, *Economic Damages from Climate Change to U.S. Populations: Integrating Evidence from Recent Studies* 16-22 (EPA Nat'l Center for Env't Econ. Working Paper No. 25-01, 2025), https://perma.cc/V5ZC-9Q6B (discussing temporary, persistent, and permanent impacts to GDP growth).
[369] *See* HOWARD & SCHWARTZ, *supra* note 293, at 5–6.
[370] Mortality estimates are based on running the GIVE model, *see* Resources for the Future, The Social Cost of Carbon Initiative, *Greenhouse Gas Impact Value Estimator*, GITHUB (Mar. 20, 2025), https://github.com/rffscghg/MimiGIVE.jl, with a pulse of one metric ton of greenhouse gases. Though GIVE estimates climate damages through the year 2300, our analysis cuts off cumulative mortalities after year 2200, and thus our estimates are underestimates.

emissions would therefore avert over 29,000 premature global mortalities by the year 2050. Notably, these figures reflect only deaths from climate-induced temperature extremes and so do not include other climate-related deaths from wildfire smoke, extreme weather events, infectious disease spread, or other causes, let alone any deaths caused by vehicles' co-pollutants like soot and smog.

In fact, emissions from the years 2026 through 2100 will still be contributing to temperature extremes in the year 2200 and beyond. By the year 2200, Scenario #2a would avert over 2.5 million cumulative global deaths. Scenario #2b would avert over 1.2 million cumulative global deaths by 2200. Because of how quickly these cumulative mortality impacts scale up, two graphs are included below: one showing deaths through 2050, and another showing the exponential growth in mortalities through 2200.

Figure 3: Cumulative Global Deaths Through 2025

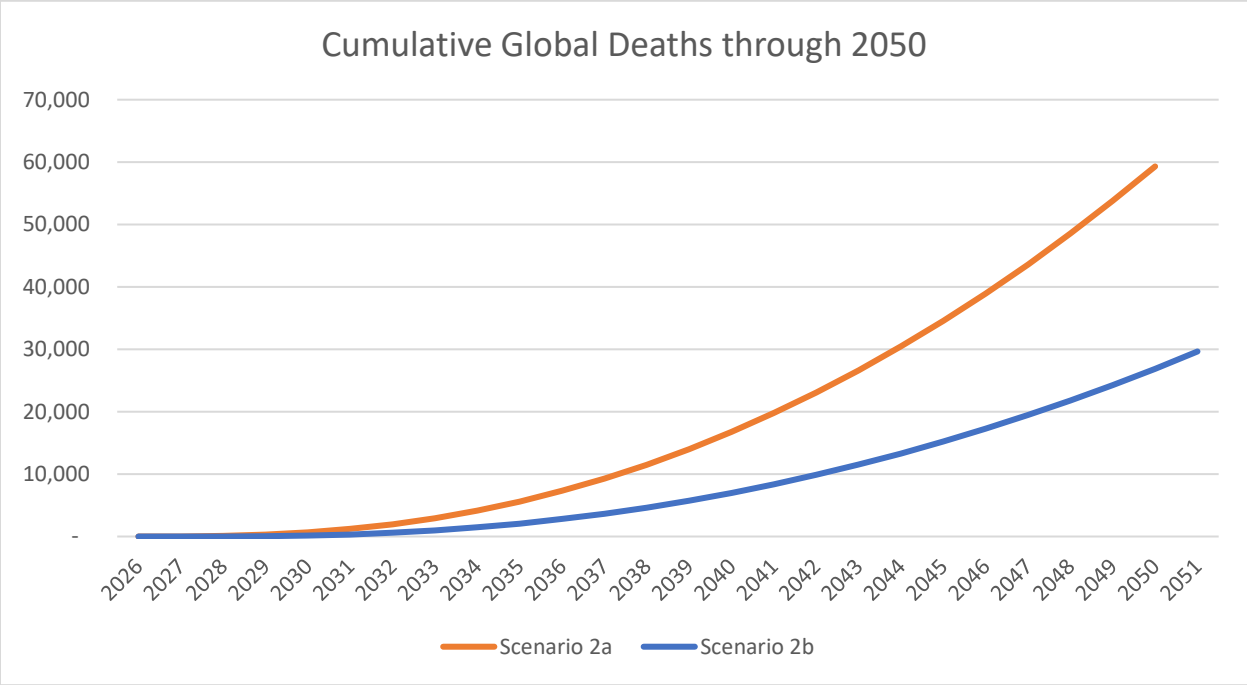
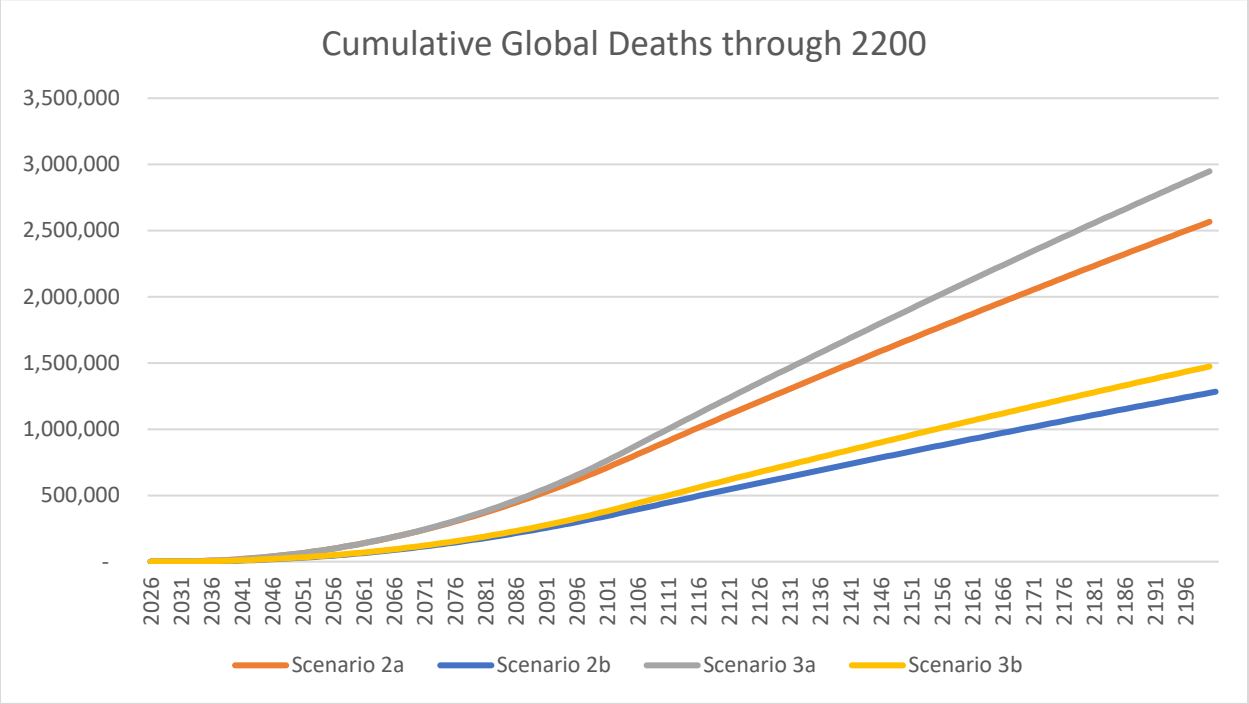


Figure 4: Cumulative Global Deaths Through 2200



These figures include significant deaths from temperature extremes that will occur within the United States. Scenario #2a would avert over 30,000 cumulative U.S. mortalities by the end of the century, just from temperature-related deaths. The U.S. power sector's emissions through the year 2100 will continue contributing to climate change and mortalities for many decades after they are emitted, with cumulative U.S. mortalities at stake rising to over 100,000 by 2200.

Table 3: Cumulative Mortalities from U.S. Power Plants' Contributions to Temperature Extremes from Emissions from 2026–2100

	Scenario #2a *(100% reduction)*	Scenario #2b *(50% reduction)*	Scenario #3a *(100% reduction; growth-adjusted)*	Scenario #3b *(50% reduction; growth-adjusted)*
Global Deaths through 2050	**59,303**	**29,652**	**59,303**	**29,652**
U.S. Deaths through 2050	*3,088*	*1,544*	*3,088*	*1,544*
Global Deaths through 2100	**690,807**	**345,403**	**739,830**	**369,915**
U.S. Deaths through 2100	*30,869*	*15,434*	*33,003*	*16,502*
Global Deaths through 2200	**2,566,746**	**1,283,373**	**2,948,062**	**1,474,031**
U.S. Deaths through 2200	*108,911*	*54,456*	*124,869*	*62,435*

Again, these figures reflect only deaths from climate-induced temperature extremes and so do not include other climate-related deaths from wildfire smoke, extreme weather events, infectious disease spread, or other causes, let alone any deaths caused by vehicles' co-pollutants like soot and smog. There is good evidence that each ton of greenhouse gas emissions increases the risk of mortality from inhalation of wildfire smoke by as much if not more than the risk of temperature-related deaths.[371]

It is impossible to look at the trillions of dollars and hundreds of thousands of lives at stake and conclude, as EPA suggests, that regulating greenhouse emissions from the U.S. power sector would be "futile."

[371] Minghao Qui et al., *Wildfire Smoke Exposure and Mortality Burden in the USA under Climate Change*, NATURE, Sept. 18, 2025.

B. Under Section 111, EPA has recognized much smaller contributions to air pollution problems than those of greenhouse gases from the power sector to merit regulation.

In 2022, fossil-fuel-fired power plants emitted 3% of total global greenhouse gas emissions.[372] The power sector continues to be the largest stationary source of greenhouse gas emissions in the United States, emitting 25% of overall domestic emissions.[373] Greenhouse gas emissions from the power sector are higher than greenhouse gas emissions from all other industrial sectors combined and are the second largest source of greenhouse gas emissions in the country, exceeded only by the transportation sector.[374] But in the 2026 Proposal, EPA paints these contributions as "de minimis," and suggests that they have limited effect on global greenhouse gas concentrations and so do not meet the requirements of Section 111.[375] In doing so, the 2026 Proposal ignores decades of past agency practice in which EPA has found source categories with much smaller contributions to air pollution than the power sector to meet Section 111's requirements. EPA has also embraced the same approach in regulating emissions under similar provisions of the Clean Air Act for decades.

In its over fifty years assessing significant contributions under Section 111(b)(1)(A), EPA has repeatedly found that source-category emissions merit regulation even when their contribution to national or sector-wide emissions were lower than that of greenhouse gas emissions from the power sector. For example, EPA has considered the following contributions and characteristics of expected emissions when determining that source categories should be listed under Section 111(b)(1)(A). And in each case, EPA found there to be a significant contribution to air pollution that required listing:

- Storage vessels for petroleum liquids: approximately 3% of the total national hydrocarbon emissions and about 7% of total hydrocarbon emissions from all stationary sources;[376]
- Lime manufacturing: no information provided on the percentage of national or sectoral emissions, but ranked twenty-fifth on a list of 112 domestic stationary source categories that emit particulate matter;[377]

[372] Repeal of Greenhouse Gas Emissions Standards for Fossil Fuel-Fired Electric Generating Units, 90 Fed. Reg. 25752, 25767–68 (proposed June 17, 2025).
[373] EPA, *Sources of Greenhouse Gas Emissions*, https://perma.cc/6ZH5-PG5W (June 9, 2026).
[374] *See* Dep't of Energy, Alternative Fuels Data Center, *Maps and Data: Greenhouse Gas Emissions by Economic Sector* (May 2024), https://perma.cc/G5W4-FGXE.
[375] 2026 Proposal, 91 Fed. Reg. at 59035–41.
[376] Standards of Performance for New Stationary Sources, Proposed Standards for Seven Source Categories, 38 Fed. Reg. 15406, 15406 (June 11, 1973) ("As explained in technical report 9, emissions of hydrocarbons from storage vessels for petroleum liquids are significant.") (citing EPA, BACKGROUND INFORMATION FOR PROPOSED NEW SOURCE PERFORMANCE STANDARDS, vol. 1 at 34 (June 1973)).
[377] Standards of Performance for New Stationary Sources, Lime Manufacturing Plants, 42 Fed. Reg. 22506, 22507 (proposed May 3, 1977).

- Stationary gas turbines: approximately 2.5% of the total NO_x emissions from stationary sources, with the same study ranking gas-fired turbines as sixteenth and oil-fired turbines as twenty-third in a listing of over 100 sources of controllable stationary sources of NO_x emissions;[378]
- Organic solvent cleaners: approximately 5% of stationary source volatile organic compound (VOC) emissions in a typical air quality region, with an individual facility typically emitting less than 100 tons per year of volatile organic compounds;[379]
- Lead-acid battery manufacturing: approximately 0.32% of industrial lead emissions or 0.014% of total nationwide lead emissions. While EPA acknowledged this "account[ed] for a relatively small share of total nationwide atmospheric lead emissions," it found the source category a significant contributor given that individual sources were typically sited in urban areas where ambient lead levels were already high;[380] and
- Municipal solid waste landfills: approximately 1% of the non-methane organic compounds emissions from stationary sources, totaling approximately 283,000 tons per year.[381]

EPA has also made similar significant contribution findings under Section 213 of the Clean Air Act, which authorizes EPA to regulate emissions from new nonroad vehicles that "significantly contribute" to air pollution.[382] There too, EPA has found source categories responsible for smaller contributions than greenhouse gas emissions from the power sector to meet the significant contribution standard.[383] For example, when making its 1994 significance determination for nonroad vehicles, the agency considered sources "significant" for the purposes of Section 213 that contributed 3.7% of carbon monoxide nationwide, 4% of NO_x nationwide, and 1.3% of hydrocarbons nationwide.[384]

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[378] 42 Fed. Reg. at 53,783.
[379] Priority List and Additions to the List of Categories of Stationary Sources, 44 Fed. Reg. 49222, 49223–24 (Aug. 21, 1979).
[380] Standards of Performance for New Stationary Sources; Lead-Acid Battery Manufacture, 47 Fed. Reg. 16564, 16570 (April 16, 1982).
[381] Standards of Performance for New Stationary Sources and Guidelines for Control of Existing Sources: Municipal Solid Waste Landfills, 56 Fed. Reg. 24468, 24473 (proposed May 30, 1991).
[382] 42 U.S.C. § 7547(a).
[383] For further discussion of regulatory precedents under Section 213, see KATE WELTY & DENA ADLER, INST. FOR POL'Y INTEGRITY, SIGNIFICANT BY ANY MEASURE: REVIEWING POWER PLANT EMISSIONS UNDER SECTION 111 OF THE CLEAN AIR ACT (May 2025), https://policyintegrity.org/files/publications/Significant_Contribution_Issue_Brief_vF.pdf.
[384] EPA relied on the legislative history behind Section 213 in drawing this conclusion. Specifically, the agency cited a Senate report from the 1990 Clean Air Act amendments which stated that nonroad sources made up a "significant portion of pollution," and noted "[e]missions inventories from EPA estimate that farm and construction equipment emit 3.7% of [carbon monoxide] nationwide, 4% of nationwide NO_x, and 1.3% of total hydrocarbons[.]" Control of Air Pollution; Emissions of Oxides of Nitrogen and Smoke From New Nonroad Compression Ignition Engines at or Above 50 Horsepower; Notice of proposed rulemaking, 58 Fed. Reg. 28809, 28811 (proposed May 17, 1993) (citing Sen. Rep. no. 101–228, at 104 (1989)). Accordingly, the agency found it "reasonable to conclude that comparable or greater emissions contributions from a class or category of nonroad engines or vehicles in any area, particularly a nonattainment area, would also be significant." 58 Fed. Reg. at 28812.

EPA's practice of regulating relatively small sources of a larger pollution problem acknowledges that a seemingly small percentage contribution can have harmful impacts on human health and welfare. As the U.S. Court of Appeals for the Fifth Circuit noted in the Clean Water Act-context, even a "very small portion" of the total pollution problem may "constitute[] a gargantuan source of . . . pollution on its own terms" when the overall pollution problem is very large.[385] Similarly, in 1976, the U.S. Court of Appeals for the D.C. Circuit affirmed EPA's finding under Section 211 of the Clean Air Act that leaded gasoline contributed to elevated blood-lead levels for a "small, but significant, portion of the general population" and so presented a "significant risk of harm," noting that "public health may properly be found endangered both by a lesser risk of a greater harm and by a greater risk of a lesser harm."[386]

Compared to prior contributions assessed under Sections 111, 211 and 213, greenhouse gas emissions from the power sector are far larger contributors to air pollution, and are an important part of the global greenhouse gas pollution problem. This was the conclusion of EPA under the first Trump Administration, which found it "readily apparent" that power plants emit a "uniquely large amount' of greenhouse cases, and that "if domestic [power plants] no longer emitted any [greenhouse gas] emissions, there would be a measurable impact on worldwide [greenhouse gas] emissions."[387] Thus, "under any reasonable threshold or definition"[388] these emissions contribute significantly to air pollution that endangers public health or welfare.

V. EPA fails to consider the full effects of its proposal.

In the Economic Analysis accompanying the 2026 Proposal, EPA projects that its proposal will have "no resulting change in generation, fuel use, fuel prices, nor emissions."[389] But EPA fails to consider the full effects of its proposed rescission, including increased emissions from new coal-fired generation, increased emissions from forestalling replacement regulation of existing gas turbines and coal-fired power plants per obligations under Section 111(d), and the resulting health and welfare damages associated with increased co-pollutant emissions. As a result, EPA "failed to consider an important aspect of the problem."[390]

A. EPA should consider the potential effects of removing new source performance standards for power plants under different future market condition scenarios.

EPA's Economic Analysis for the proposal is based on a modeling scenario that projects no construction of new coal-fired power plants. For this reason, the agency does not estimate any

[385] Sw. Elec. Power Co. v. EPA, 920 F.3d 999, 1032 (5th Cir. 2019) (internal quotation marks omitted) (discussing leachate water pollution).
[386] Ethyl Corp. v. EPA, 541 F.2d 1, 7, 18, 41 (D.C. Cir. 1976).
[387] *See* Pollutant-Specific Significant Contribution Finding for Greenhouse Gas Emissions from New, Modified, and Reconstructed Stationary Sources: Electric Generating Units, and Process for Determining Significance of Other New Source Performance Standards Source Categories, 86 Fed. Reg. 2542, 2556 (Jan. 13, 2021).
[388] American Lung Ass'n v. EPA, 985 F.3d 914, 976 (D.C. Cir. 2021) (concluding that CO_2 from fossil-fuel-fired power plants represents a "significant contribution" to air pollution).
[389] Economic Analysis, *supra* note 334, at 18.
[390] Motor Vehicle Mfrs. Ass'n v. State Farm Mut. Auto. Ins. Co., 463 U.S. 29, 43 (1983).

costs or benefits associated with rescinding the 2015 NSPS for new fossil fuel-fired steam generating units.[391] At the same time, EPA acknowledges that "new coal additions could potentially occur under certain circumstances."[392] Specifically, EPA indicates awareness of "companies that are pursuing new coal-fired generation, including two new coal-fired steam generating facilities" located in West Virginia and Alaska.[393]

Given the identified interest in developing new coal-fired generating sources, EPA should follow both guidance on performing regulatory impact analysis and the agency's own past practice and more fully consider the effects of its proposed repeal of the 2015 NSPS for steam generating units.[394] EPA acknowledges the repeal could have some "cost savings" associated with new coal generators not having to comply with the rule's carbon capture and storage requirements.[395] But glaringly, EPA makes no mention of the emissions effects expected in this scenario, or the resulting climate and health damages. EPA should expand its discussion of the potential effects associated with rescinding its performance standards for new coal-fired power plants, and in doing so, must evenhandedly weigh the costs and benefits of its rescission.[396]

Specifically, EPA should follow its own past practice and use a sensitivity analysis to estimate the potential costs and benefits of the 2026 Proposal under different future market scenarios. This is precisely what EPA did in the regulatory analysis accompanying the 2015 NSPS. There, EPA conducted sensitivity analyses on a range of possible future natural gas prices, analyzing the likelihood of various prices, the effects of these prices on the private costs and benefits of building new natural gas plants, and the rule's impacts under each scenario.[397] This allowed EPA to assess the costs and benefits of its rule under different market conditions, including those that incentivized new coal generation.[398] This approach is consistent with guidance on performing regulatory impact analysis, which advises agencies to assess the rule's impact under different future scenarios in which key assumptions are adjusted.[399]

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[391] Economic Analysis, *supra* note 334, at 6.
[392] *Id.*
[393] *Id.* at 14.
[394] If other commenters flag additional future market conditions that may affect the consequences of the 2026 Proposal, EPA should also consider their effects.
[395] Economic Analysis, *supra* note 334, at 14.
[396] To engage in reasoned decisionmaking, an agency must even-handedly weigh all of the important costs and benefits of its actions. Because following best analytical practice is intrinsically intertwined with legal requirements for sound decisionmaking, an agency's failure to show its work, use even-handed assumptions, or fully consider all important effects of a rule makes for substandard rules that are vulnerable to legal challenge. *See* Entergy Corp. v. Riverkeeper, Inc., 556 U.S. 208, 225–26 (2009); *see also* Pub. Citizen, Inc. v. Mineta, 340 F.3d 39, 58 (2d Cir. 2003) (holding that a rule "that does not explain why the costs saved were worth the benefits sacrificed" is arbitrary and capricious).
[397] EPA, REGULATORY IMPACT ANALYSIS FOR THE FINAL STANDARDS OF PERFORMANCE FOR GREENHOUSE GAS EMISSIONS FROM NEW, MODIFIED, AND RECONSTRUCTED STATIONARY SOURCES: ELECTRIC UTILITY GENERATING UNITS at 5-13 (2015).
[398] *See* 2015 NSPS, 80 Fed. Reg. at 64645.
[399] OFF. OF MGMT. & BUDGET, CIRCULAR A-4: REGULATORY ANALYSIS 3 (2003) ("It is usually necessary to provide a sensitivity analysis to reveal whether, and to what extent, the results of the analysis are sensitive to plausible changes in the main assumptions and numeric inputs.").

B. The 2026 Proposal would forestall regulation of greenhouse gas emissions from gas- and coal-fired power plants.

EPA asserts that the 2026 Proposal would rescind three distinct regulatory requirements: (1) the "Phase I" requirements of the 2024 CPS; (2) the 2015 NSPS for greenhouse gas emissions from steam generating units and integrated gas combined cycle facilities; and (3) the 2015 NSPS for greenhouse gas emissions from combustion turbines.[400] In the Economic Analysis accompanying the 2026 Proposal, EPA projects this rescission will have no impact on generation or emissions.[401] As discussed in the above section, this may foundationally underestimate the effects of repealing these three actions under different market scenarios, but EPA additionally does not assess the increased emissions from other affected actions. Aside from rescinding these specific emission standards for new sources, EPA's proposal would remove its obligation to regulate greenhouse gases from *existing* fossil-fuel-fired power plants and would also significantly increase emissions under different legal baseline scenarios.

A review of the relationship between Section 111(b) and 111(d) clarifies how the repeal of the standards for new power plants will have corresponding emissions effects for the regulation of existing power plants. Section 111 divides EPA's stationary-source authority into Section 111(b) standards to govern new or modified sources[402] and 111(d) standards governing existing sources.[403] Once EPA sets "standards of performance" for new or modified sources within a covered source category under Section 111(b), Section 111(d) triggers a corresponding obligation for EPA to develop "emission guidelines" for those sources which, were they built anew, would be subject to new source performance standards.[404] Under Section 111(d), EPA determines the minimum stringency of emission limits for existing sources and then states develop standards to implement EPA's "emission guidelines."[405] The Section 111(d) requirements apply specifically for emissions that are not otherwise regulated under the corresponding sections of the Clean Air Act for criteria or hazardous pollutants.[406]

In the past, EPA has followed the Clean Air Act's requirements to regulate new and existing sources in a paired manner. EPA was first required to regulate greenhouse gas emissions from existing power sector sources in 2015, after it promulgated the 2015 NSPS for new fossil fuel-

[400] Economic Analysis, *supra* note 334, at 2.
[401] *Id.* at 3.
[402] 42 U.S.C. § 7411(b)(1)(B) (establishing a timeline for EPA to "publish proposed regulations[] establishing Federal standards of performance for new sources within" identified stationary-source categories); id. § 7411(a)(2) (defining "new source" to include both newly built sources and sources for which "modification . . . is commenced after the publication of regulations").
[403] *Id.* § 7411(d)(1) (creating a procedure to "establish[] standards of performance for any existing source" that would be regulated under Section 111(b) if it were a new source, and for pollutants that are not otherwise covered under Sections 108(a) or 112).
[404] *Id.* EPA is only required to develop guidelines that address pollutants that are not otherwise regulated under the Clean Air Act's hazardous air pollutant or national ambient air quality standards provisions.
[405] *Id.* § 7411(d)(1).
[406] *Id.*

fired steam generating units and for natural gas-fired stationary combustion turbines.[407] Accordingly, at the same time as the 2015 NSPS, EPA also issued emission limits for existing power plants—commonly known as the Clean Power Plan[408]—though these emission guidelines were subsequently repealed.[409] Recognizing its obligation to issue replacement standards for existing coal-fired power plants, EPA issued new emission guidelines for some existing sources in 2019, though they too were later repealed.[410]

In 2023, EPA proposed new emission guidelines for existing coal- and other steam-generating plants and existing gas turbines. Though emission guidelines for gas turbines were left out of the final 2024 CPS, EPA recognized that its standards for new combustion turbines triggered a corresponding obligation to regulate under Section 111. As EPA explained, "it is vital to promulgate emission guidelines to address [greenhouse gas] emissions from [existing stationary combustion turbines], and . . . EPA has a responsibility to do so under [S]ection 111(d) of the Clean Air Act."[411] Acknowledging this obligation, a coalition of state attorneys general recently submitted a notice of an intent to sue EPA for failing to issue obligatory standards for existing sources.[412] Similarly, because EPA rescinded its guidelines for emissions of greenhouse gases from steam generating units concurrently with the 2026 Proposal, EPA now also has an obligation to issue regulations for existing coal-fired power plants.[413]

The 2026 Proposal rescinds both the 2015 NSPS for coal-fired power plants and the remaining new source standards for new gas turbines under the 2024 CPS. It thus also eliminates the corresponding obligations to issue replacement standards for existing power plants under Section 111(d). But EPA gives no consideration to the emissions from existing sources that will result without replacement regulations. Past rules limiting power sector greenhouse gas emissions illustrate the meaningful benefits that come from regulating these emissions. For example, the 2024 CPS, which tightened greenhouse gas standards for both new and existing sources, were projected to generate almost $400 billion in benefits, including $270 billion dollars in climate benefits and $120 billion dollars in health benefits from reduced emissions of particulate matter and ozone.[414] The 2026 Proposal leaves such benefits unrealized.

Further, given the uncertainty surrounding the legal status of the remaining provisions of the 2024 CPS, EPA should expand its economic analysis to consider a scenario that attributes the

[407] *See generally* 2015 NSPS, 80 Fed. Reg. at 64510.
[408] Clean Power Plan, 80 Fed. Reg. at 64662.
[409] ACE, 84 Fed. Reg. at 32520.
[410] *See* 2024 CPS, 89 Fed. Reg. at 39798.
[411] *Id.* at 39806.
[412] Notice of Intent to Sue for Failure to Regulate Greenhouse Gas Emissions from Existing Fossil Fuel-Fired Stationary Combustion Turbines Under Clean Air Act Section 111(d) (Oct. 1, 2026), https://perma.cc/Q8G4-PJWE.
[413] 2026 Partial Repeal, 91 Fed. Reg. at 58954.
[414] EPA, REGULATORY IMPACT ANALYSIS FOR THE NEW SOURCE PERFORMANCE STANDARDS FOR GREENHOUSE GAS EMISSIONS FROM NEW, MODIFIED, AND RECONSTRUCTED FOSSIL FUEL-FIRED ELECTRIC GENERATING UNITS; EMISSION GUIDELINES FOR GREENHOUSE GAS EMISSIONS FROM EXISTING FOSSIL FUEL-FIRED ELECTRIC GENERATING UNITS; AND REPEAL OF THE AFFORDABLE CLEAN ENERGY RULE ES-11 tbl. ES-3 (2024) [hereinafter CPS RIA].

effects of repealing the full 2024 CPS to the 2026 Proposal. As discussed previously, EPA finalized a rule in September 2026 repealing the majority of the 2024 CPS.[415] As a result, EPA only considers repealing the remaining Phase I standards in its economic analysis.[416] However, EPA's final rescission is currently being challenged in the D.C. Circuit, and its future legal status is uncertain.[417] If that challenge were successful, the emission effects of repealing the 2024 CPS would be attributable to the 2026 Proposal.

Given this uncertainty, best practices dictate that the whole of the 2024 CPS should be considered as a potential legal baseline. As Circular A-4—the Office of Budget and Management's guide for best regulatory practices—explains:[418]

> When more than one baseline is reasonable and the choice of baseline will significantly affect estimated benefits and costs, you should consider measuring benefits and costs against alternative baselines. In doing so you can analyze the effects on benefits and costs of making different assumptions about other agencies' regulations, or the degree of compliance with your own existing rules.

The uncertainty about judicial review is akin to uncertainty about other agencies' regulations or compliance with an existing rule. Because the choice of legal baseline will "significantly affect estimates of benefits and costs," EPA should expand its analysis to consider the effects of the 2026 Proposal under both legal baselines.

Reasoned decisionmaking counsels that an agency should consider all important effects of its actions.[419] EPA should acknowledge in its analysis that its proposed interpretation of Section 111(b)(1)(A) and rescission of the 2015 NSPS and Phase I of the CPS are likely to have broader emission consequences beyond the narrow effects identified in the agency's Economic Analysis.

C. EPA ignores potential effects of ozone and particulate matter emissions.

As discussed above, the 2026 Proposal fails to consider increased emissions associated with new coal generation and the broader limitations on EPA's issuance of replacement standards for existing fossil-fuel-fired power plants. As EPA considers these and other consequences of its proposal, it should consider the potentially sizeable increases in emissions of co-pollutants that will result under these scenarios.[420]

As explained further in a report attached to this comment (attached as Exhibit G), particulate matter and ozone are the most significant known causes of serious health harms and early deaths

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[415] 2026 Partial Repeal, 91 Fed. Reg. at 58954.
[416] Economic Analysis, *supra* note 334, at 2.
[417] *See, e.g.* Petition for Review, *New York v. EPA*, No. 26-1259 (D.C. Cir. Oct. 1, 2026).
[418] OFF. OF MGMT. & BUDGET, CIRCULAR A-4: REGULATORY ANALYSIS 15 (2003).
[419] *See, e.g.*, Motor Vehicle Mfrs. Ass'n v. State Farm Mut. Auto. Ins. Co., 463 U.S. 29, 43 (1983); DENA ADLER, BRIDGET PALS, & KATE WELTY, INST FOR POL'Y INTEGRITY, FLAWED FOUNDATIONS 6 (2025).
[420] Caselaw affirms that agencies must consider indirect regulatory consequences, "including, for instance, harms that regulation might do to human health or the environment." Michigan v. EPA, 576 U.S. 743, 752 (2016); *see also* Bloomberg L.P. v. Sec. & Exch. Comm'n, 45 F.4th 462, 477 (D.C. Cir. 2022) (remanding rule for failure to consider both direct and indirect costs); U.S. Telecomm. Ass'n v. FCC, 290 F.3d 415, 424–25, 429 (D.C. Cir. 2002) (same).

due to air pollution exposure in the United States, with several studies estimating that thousands or tens of thousands of early deaths each year are related to ozone exposure and tens of thousands or hundreds of thousands of early deaths are due to particulate matter exposure.[421] Regulating greenhouse gas emissions from fossil-fuel-fired power plants can also have the effect of limiting emissions of these pollutants: As prior rules demonstrate, standards that restrict emissions of greenhouse gases also tend to reduce emissions of particulate matter and ozone.[422]

Consistent with the best available science, EPA has quantified and monetized the co-pollutant benefits of its rules for decades.[423] Accordingly, EPA should identify the effects its proposal is likely to have on emissions of particulate matter and ozone, quantify and monetize those effects, and consider them as part of the regulatory analysis accompanying the proposed rule.

VI. EPA should disclose whether it used artificial intelligence tools to develop its proposal, and provide relevant information about its use of any such tools.

Artificial intelligence (A.I.) has the potential to bring greater efficiency to the complex world of federal rulemaking, but it also raises concerns about transparency and integrity in agencies' decisionmaking processes. To address these concerns and to develop best practices for using A.I. in federal rulemaking, agencies should make efforts to inform the public about what role A.I. plays in their decisions. By disclosing when and how they use A.I. in the regulatory process, agencies can offer an opportunity for public input on the design and application of A.I. tools that will lead to better-informed and more transparent decisions by government and facilitate knowledge-sharing that can inform future rulemakings across agencies. For further recommendations on how agencies can responsibly and transparently use A.I., see Policy Integrity's report discussing challenges and opportunities for A.I. use in rulemaking.[424]

In accordance with Executive Order 13,960, issued during President Trump's first administration, federal agencies should seek to "foster public trust and confidence" in their use of A.I. tools. To achieve this goal, agencies must ensure that the "operations and outcomes" of their use of A.I. are "sufficiently understandable by subject matter experts, users, and others." Agencies should ensure that A.I. use is "well documented and traceable," including the "design, development, acquisition, and use of AI, as well as relevant inputs and outputs of particular AI applications." And agencies must be "transparent in disclosing relevant information regarding their use of AI to appropriate stakeholders, including the Congress and the public."[425] If A.I. was used to inform scientific or technological assessments, agencies are further subject to the

[421] BRIDGET PALS & MARTHA ROBERTS, INST. FOR POL'Y INTEGRITY, A THUMB ON THE SCALE 5 (2026), https://policyintegrity.org/files/publications/Particulate_Matter_and_Ozone_Valuation_2026.11.2.pdf. Appendices to this report are attached to this comment as Exhibits H through L.
[422] *See, e.g.*, CPS RIA, *supra* note 414, at 4-1.
[423] PALS & ROBERTS, *supra* note 421, at 14–18.
[424] JACK JONES, MAX SARINSKY & BURÇIN ÜNEL, PH.D., INST. FOR POL'Y INTEGRITY, ARTIFICIAL INTELLIGENCE AND FEDERAL RULEMAKING: OPPORTUNITIES AND CHALLENGES (2026), https://policyintegrity.org/publications/detail/artificial-intelligence-and-federal-rulemaking.
[425] Exec. Order No. 13,960, 85 Fed. Reg. 78939, 78940 (Dec. 8, 2020).

requirement in a separate executive order that they make publicly available the "models and analyses" used, including the "source code for such models."[426]

Per the Office of Management and Budget (OMB), agencies must "implement minimum risk management practices" for any A.I. use that could have "significant impacts when deployed," and must further "prioritize the use of AI that is safe, secure, and resilient." Where "proper risk mitigation is not possible, agencies must cease the use of the AI."[427] And OMB directs agencies to "provide an option for end users and the public to submit feedback on the use case" for A.I. tools, including the "design, development, and use of the AI," and to "use such feedback to inform agency decision-making regarding the AI."[428]

Accordingly, EPA should disclose whether it used A.I. tools in the development of the 2026 Proposal. If EPA did use A.I. tools, it should identify:

- (1) what task(s) the agency used A.I. tool(s) for (e.g., conducting research, reviewing public comments, or assisting with regulatory design);
- (2) the A.I. domain(s) used (e.g., machine learning, reinforcement learning, transfer learning, or generative A.I.);
- (3) the entity responsible for the tool(s) (e.g., developer, provider, or vendor), and the exact model and its corresponding version;
- (4) the steps taken to ensure that data inputs on which the A.I. tool(s) relied were accurate and traceable, including the results of any A.I. impact or risk assessments;
- (5) the steps taken to review the output of the A.I. tool(s) for hallucination, bias, or otherwise inaccurate or misleading representations;
- (6) the specific prompts and/or system instructions provided to the A.I. tool(s), to the extent that such prompts or instructions are necessary to understand and evaluate A.I. outputs that constitute "critical factual material" on which the agency relied;[429] and
- (7) if A.I. was used for a "high-impact" use,[430] how the agency implemented each of the minimum risk management practices for "high-impact" A.I. use required by OMB.[431]

Conclusion

As discussed in these comments, EPA's proposal to rescind all greenhouse gas emission standards for power plants is not supported by law or facts. EPA misinterprets its authority under Section 111 and fails to recognize the immense contributions that power plants make to climate change. EPA should withdraw the 2026 Proposal in its entirety. Should EPA move forward with

[426] Exec. Order No. 14,303, 90 Fed. Reg. 22601, 22603 (May 29, 2025).
[427] Off. of Mgmt. & Budget, Memorandum M-25-21: *Accelerating Federal Use of AI through Innovation, Governance, and Public Trust* 3 (Apr. 3, 2025), https://perma.cc/M69E-SCXR.
[428] *Id.* at 17.
[429] Air Transport Ass'n of Am. v. Fed. Aviation Admin., 169 F.3d 1, 7 (D.C. Cir. 1999).
[430] *See* Off. of Mgmt. & Budget, *supra* note 427, at 3.
[431] *Id.* at 15–17.

a final action, it must correct its legal and analytical failures and provide an opportunity for comment on its new analysis.

Sincerely,

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Jason Schwartz, Regulatory Policy Director
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Attachments:

A. Richard L. Revesz, Bostock *and the End of the Climate Change Double Standard*, 45 COLUM. J. ENV'T L. 1 (2020).

B. Colleen Lanier-Christensen, et al., *Congressional Knowledge of Climate Change Before the Clean Air Act of 1970*, 37 DUKE ENV'T L. & POL'Y FORUM (forthcoming 2027).

C. DENA ADLER, MAX SARINSKY, & KATE WELTY, INST. FOR POL'Y INTEGRITY, MISSING THE MARK: THE FLAWS IN EPA'S MAJOR QUESTIONS ARGUMENT TO WITHDRAW THE ENDANGERMENT FINDING (2026).

D. Inst. for Pol'y Integrity et al., Comments on Failure to Monetize Greenhouse Gas Emissions in "Repeal of Greenhouse Gas Emissions Standards for Fossil Fuel-Fired Electric Generating Units" (Aug. 7, 2025).

E. KATE WELTY & DENA ADLER, INST. FOR POL'Y INTEGRITY, SIGNIFICANT BY ANY MEASURE: REVIEWING POWER PLANT EMISSIONS UNDER SECTION 111 OF THE CLEAN AIR ACT (2025).

F. PETER H. HOWARD & JASON A. SCHWARTZ, INST. FOR POL'Y INTEGRITY, THE SCALE OF SIGNIFICANCE: POWER PLANTS (2025).

G. BRIDGET PALS & MARTHA ROBERTS, INST. FOR POL'Y INTEGRITY, A THUMB ON THE SCALE: EPA'S ARBITRARY DECISION TO STOP VALUING POLLUTION HEALTH COSTS (2026).

H. Thumb on the Scale Report Appendix A

I. Thumb on the Scale Report Appendix B

J. Thumb on the Scale Report Appendix C

K. Thumb on the Scale Report Appendix D

L. Thumb on the Scale Report Appendix E