

ORAL ARGUMENT NOT YET SCHEDULED
No. 24-1050 (and consolidated cases)

UNITED STATES COURT OF APPEALS
FOR THE DISTRICT OF COLUMBIA CIRCUIT

COMMONWEALTH OF KENTUCKY, et al.,
Petitioners,

v.

U.S. ENVIRONMENTAL PROTECTION AGENCY, MICHAEL S. REGAN
Respondents.

On Petitions for Review of Final Agency Action
of the United States Environmental Protection Agency
89 Fed. Reg. 16,202 (Mar. 6, 2024)

OPENING BRIEF OF INDUSTRY
AND ARIZONA COALITION PETITIONERS

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CORPORATE DISCLOSURE STATEMENTS

Pursuant to Federal Rule of Appellate Procedure 26.1 and D.C. Circuit Rule

26.1, Industry and Arizona Coalition Petitioners state as follows:

The Chamber of Commerce of the United States of America (Chamber) is the world's largest business federation. It represents approximately 300,000 direct members and indirectly represents the interests of more than 3 million companies and professional organizations of every size, in every industry sector, and from every region of the country. An important function of the Chamber is to represent the interests of its members in matters before Congress, the Executive Branch, and the courts. The Chamber states that it is a non-profit, tax-exempt organization incorporated in the District of Columbia. The Chamber has no parent corporation, and no publicly held company has 10% or greater ownership in the Chamber.

The American Chemistry Council (ACC) represents the leading companies engaged in the business of chemistry. ACC members apply the science of chemistry to make innovative products and services that make people's lives better, healthier and safer. ACC is committed to improved environmental, health and safety performance through Responsible Care®; common sense advocacy designed to address major public policy issues; and health and environmental research and product testing. The business of chemistry is a \$639 billion enterprise and a key element of the nation's economy. It is among the largest exporters in the nation, accounting for fourteen percent of all U.S. goods exported. ACC states that it is a "trade association" for purposes of Circuit Rule 26.1(b). ACC has no parent corporation, and no publicly held company has 10% or greater ownership in ACC.

The American Forest & Paper Association (AF&PA) serves to advance U.S. paper and wood products manufacturers through fact-based public policy and marketplace advocacy. The forest products industry is circular by nature. AF&PA member companies make essential products from renewable and recyclable resources, generate renewable bioenergy and are committed to continuous improvement through the industry's sustainability initiative — *Better Practices, Better Planet 2030: Sustainable Products for a Sustainable Future*. The forest products industry accounts for approximately 5% of the total U.S. manufacturing GDP, manufactures about \$350 billion in products annually and employs about 925,000 people. The industry meets a payroll of about \$65 billion annually and is among the top 10 manufacturing sector employers in 43 states. No parent

corporation or publicly held company has a 10% or greater ownership interest in AF&PA.

American Petroleum Institute (API) represents all segments of America's natural gas and oil industry, which supports more than 11 million U.S. jobs and is backed by a growing grassroots movement of millions of Americans. API's nearly 600 members produce, process, and distribute the majority of the Nation's energy, and participate in API Energy Excellence, which is accelerating environmental and safety progress by fostering new technologies and transparent reporting. API certifies that it is incorporated under the laws of the District of Columbia. API has no parent entity, and no publicly held corporation or similarly situated legal entity has 10% or greater ownership of API.

The American Wood Council (AWC) represents 87% of the structural wood products industry and the more than 450,000 men and women working family-wage jobs in mills across the country. From dimension lumber to engineered wood products, AWC champions the development of data, technology, and standards to ensure the best use of wood products and recognition of their unique sustainability and carbon-reduction benefits. AWC is a leader in providing education to the design, code and fire official communities who view AWC as a trusted and credible resource. AWC has no parent corporation, and no publicly held company has 10% or greater ownership in AWC.

The Arizona Chamber of Commerce and Industry (Arizona Chamber) is Arizona's leading statewide business advocate. It exists to represent the interest of commerce and industry in a way that enhances Arizona's economy. The Arizona Chamber of Commerce and Industry is a non-profit, tax-exempt organization incorporated in the State of Arizona. It has no parent corporation, and no publicly held company has 10% or greater ownership in it.

The Essential Minerals Association (EMA) is an association that represents the interests of companies that mine or process minerals that are critical to manufacturing, energy, agriculture, infrastructure, and technology industries. Its membership also includes companies that provide equipment and services to the mineral industry. The products made possible by essential minerals are critical to the global economy. EMA ensures that the socio-economic benefits of essential minerals—from mining to end-use products—are understood, and that the voices of its member companies are heard by government leaders and the public. EMA has no parent company, and no publicly held company owns more than 10% ownership in EMA.

The National Association of Manufacturers (the NAM) is the largest manufacturing association in the United States, representing small and large manufacturers in all 50 states and in every industrial sector. Manufacturing employs nearly 13 million men and women, contributes \$2.89 trillion to the U.S. economy annually, has the largest economic impact of any major sector, and accounts for over half of all private sector research and development in the nation. The NAM is the voice of the manufacturing community and the leading advocate for a policy agenda that helps manufacturers compete in the global economy and create jobs across the United States. The NAM states that it is a non-profit, tax-exempt organization incorporated in New York. The NAM has no parent corporation, and no publicly held company has 10% or greater ownership in the NAM.

The National Mining Association (the NMA) is a nonprofit national trade association that represents the interests of the mining industry, including the producers of most of the nation's coal, metals, and agricultural and industrial minerals. The NMA has over 250 members, whose interests it represents before Congress, the administration, federal agencies, the courts, and the media. The NMA works to ensure America has secure and reliable supply chains, abundant and affordable energy, and the American-sourced materials necessary for U.S. manufacturing, national security, and economic security, all delivered under world-leading environmental, safety, and labor standards. The NMA is not a publicly held corporation and has no parent corporation. No publicly held company has 10% or greater ownership interest in NMA.

The Portland Cement Association (PCA), founded in 1916, is the premier policy, research, education, and market intelligence organization serving America's cement manufacturers. PCA represents a majority of U.S. cement production capacity. PCA promotes safety, sustainability, and innovation in all aspects of construction, fosters continuous improvement in cement manufacturing and distribution, and generally promotes economic growth and sound infrastructure investment. PCA is a trade association and has no parent corporation, and no publicly held company owns a 10% or greater interest in PCA.

CERTIFICATE AS TO PARTIES, RULINGS, AND RELATED CASES

Pursuant to Circuit Rule 28, Industry and Arizona Coalition Petitioners, through undersigned counsel, hereby certify the following as to parties, rulings, and related proceedings in this case:

I. Parties, Intervenors, and Amici Curiae

These cases involve the following parties:

A. Petitioners

No. 24-1050: The Commonwealth of Kentucky, State of West Virginia, State of Alabama, State of Alaska, State of Arkansas, State of Florida, State of Georgia, State of Idaho, State of Indiana, State of Iowa, State of Kansas, State of Louisiana, State of Mississippi, State of Missouri, State of Montana, State of Nebraska, State of North Dakota, State of Ohio, State of Oklahoma, State of South Carolina, State of South Dakota, State of Tennessee, State of Utah, and State of Wyoming.

No. 24-1051: The Chamber of Commerce of the United States of America, American Chemistry Council, American Forest & Paper Association, American Petroleum Institute, American Wood Council, National Association of Manufacturers, National Mining Association, and Portland Cement Association.

No. 24-1052: The State of Texas and the Texas Commission on Environmental Quality.

No. 24-1073: President of the Arizona State Senate Warren Petersen, Speaker of the Arizona House of Representatives Ben Toma, and the Arizona Chamber of Commerce and Industry.

No. 24-1091: The Essential Minerals Association.

B. Respondents

U.S. Environmental Protection Agency (EPA or Agency) and Michael S. Regan, in his official capacity as Administrator of EPA.

C. Intervenor for Respondents

There are four sets of Intervenor for Respondents in the consolidated cases:

1. The Sierra Club, Citizens for Pennsylvania's Future (PennFuture), Conservation Law Foundation, Northeast Ohio Black Health Coalition, the Rio Grande International Study Center, and the Natural Resources Defense Council;
2. The State of California, State of Arizona, State of Connecticut, District of Columbia, State of Illinois, State of Maryland, Commonwealth of Massachusetts, State of Michigan, State of Minnesota, State of New Jersey, State of New York, State of Oregon, Commonwealth of Pennsylvania, State of Rhode Island, State of Vermont, State of Washington, State of Wisconsin, and City of New York;
3. The Alliance of Nurses for Healthy Environments, American Lung Association, and Environmental Defense Fund; and
4. Harris County, Texas.

D. *Amici Curiae*

Government Accountability & Oversight was granted leave to participate as *amicus curiae* in support of Petitioners.

II. Rulings Under Review

These consolidated cases involve final agency action of EPA entitled “Reconsideration of the National Ambient Air Quality Standards for Particulate Matter,” 89 Fed. Reg. 16,202 (March 6, 2024).

III. Related Cases

These consolidated petitions—*Commonwealth of Kentucky, et al. v. EPA, et al.*, No. 24-1050; *Chamber of Commerce of the United States of America, et al. v. EPA, et al.*, No. 24-1051; *State of Texas, et al. v. EPA, et al.*, No. 24-1052; *Warren Petersen, et al. v. EPA, et al.*, No. 24-1073; and *Essential Minerals Association v. EPA, et al.*, No. 24-1091—have not previously been before this Court or any other court.

Petitions for review of the prior agency action that was reconsidered in the agency action at issue here are pending before this Court in: *State of California, et al. v. EPA, et al.*, No. 21-1014; *American Lung Association, et al. v. EPA, et al.*, No. 21-1027; *Center for Biological Diversity v. EPA, et al.*, No. 21-1054. As of the date of this filing, these consolidated cases remain in abeyance pending further order

from this Court. Dkt. No. 2057116, *State of California v. EPA, et al.*, No. 21-1014
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GLOSSARY OF TERMS

Act (or CAA)	Clean Air Act
CASAC	Clean Air Scientific Advisory Committee
EPA (or Agency)	United States Environmental Protection Agency
ISA	Integrated Science Assessment
JA	Joint Appendix
$\mu\text{g}/\text{m}^3$	Micrograms per cubic meter
NAAQS	National Ambient Air Quality Standard(s)
PA	Policy Assessment
PM _{2.5}	Particulate matter with a nominal mean aerodynamic diameter less than or equal to 2.5 micrometers (μm)
PSD	Prevention of Significant Deterioration
Rule	U.S. Environmental Protection Agency, Reconsideration of the National Ambient Air Quality Standards for Particulate Matter, Final Rule, 89 Fed. Reg. 16,202 (Mar. 6, 2024)
SIP	State Implementation Plan

JURISDICTIONAL STATEMENT

Industry and Arizona Coalition Petitioners (collectively, Industry Petitioners) seek review of the EPA final rule: “Reconsideration of the National Ambient Air Quality Standards for Particulate Matter,” 89 Fed. Reg. 16,202 (Mar. 6, 2024) (Rule). *See* Joint Appendix (JA) ___-___. Petitions for review were timely filed, and this Court has jurisdiction under Clean Air Act (CAA or Act) section 307(b)(1). 42 U.S.C. § 7607(b)(1).

STATEMENT OF ISSUES

1. Whether EPA improperly undertook a reconsideration of a National Ambient Air Quality Standard (NAAQS).
2. Whether EPA failed to consider all required factors in deciding whether to revise a NAAQS, including costs, attainability (i.e., ability to meet the NAAQS), and current air quality.
3. Whether EPA failed to provide an adequately reasoned explanation for its decision.

STATUTES AND REGULATIONS

Relevant statutes and regulations appear in the Addendum.

INTRODUCTION

National Ambient Air Quality Standards—limits set by EPA on the amounts of certain pollutants in a defined volume of air—are an important part of the Clean Air Act’s success. Since 1970, the combined emissions of the six covered pollutants have dropped by 78 percent.¹ While some success is attributable to industry efforts and advancement in technology, some is also undoubtedly due to the NAAQS program.

At the same time, the NAAQS program has vast economic implications. The NAAQS are key building blocks in the CAA’s scheme for addressing air pollution. They are the basis for, among other things, an array of air permitting requirements and emission control measures imposed on a vast range of facilities throughout the country. That means that the NAAQS are implicated when, for example, a cement plant looks to build new facilities to meet increased demand, a paper manufacturer plans to upgrade its operations, or a power plant seeks to make modifications to meet increased electricity demand.

Given the wide-ranging impacts of the NAAQS, it is unsurprising that Congress provided express instructions for promulgating and revising NAAQS.

¹ EPA, *Progress Cleaning the Air and Improving People’s Health*, <https://www.epa.gov/clean-air-act-overview/progress-cleaning-air-and-improving-peoples-health> (last visited June 6, 2024).

CAA section 109(d) commands EPA to periodically review and revise a NAAQS by undertaking a “thorough review” of the air quality criteria on which the NAAQS is based, and then determining whether and how the NAAQS should be revised. 42 U.S.C. § 7409(d).

In the Rule,² EPA ignored these statutory instructions by deciding to revise an existing NAAQS for fine particulate matter (PM_{2.5}) *without* the “thorough review” required by section 109(d). Specifically, EPA claimed it may bypass that and other requirements by simply “reconsidering” a previous decision *not* to revise that standard. But EPA does not have free-wheeling discretion that, by its own description, would effectively neuter the statutory requirements.

Just as egregious, EPA contended that in reconsidering the decision not to revise, it could not consider costs. Even if EPA did have discretionary authority to reconsider a decision not to revise, it was obligated to consider costs under background principles of reasoned decision-making. Indeed, the only other time EPA attempted a NAAQS “reconsideration,” EPA did not finalize it due to cost considerations.

² *Reconsideration of the National Ambient Air Quality Standards for Particulate Matter*, 89 Fed. Reg. 16,202 (Mar. 6, 2024), JA__-__.

Faced with these realities, EPA may now be tempted to urge this Court to uphold the Rule as a review and revision under section 109(d). But it is settled that this Court cannot save the Agency on grounds it opted to forgo. In any event, EPA failed to properly undertake the two-step revision process required by section 109(d). Step one requires the Agency to consider costs and other factors in deciding *whether* a NAAQS should be revised at all. EPA did not do so.

Finally, the Rule is also arbitrary and capricious, as EPA failed to provide a reasoned explanation for key aspects of its decision, including its response to uncertainties in the data and its decision to set the standard at 9.0 $\mu\text{g}/\text{m}^3$ when its own evidence and reasoning suggested a different standard.

STATEMENT OF THE CASE

I. The process for revising National Ambient Air Quality Standards

A. The air quality criteria and promulgation of NAAQS

Before promulgating NAAQS for an air pollutant, EPA must “list” the pollutant and issue “air quality criteria” for it. CAA section 108 requires that the criteria “accurately reflect the latest scientific knowledge useful in indicating the kind and extent of all identifiable effects on public health or welfare which may be expected from the presence of [the] pollutant in the ambient air, in varying quantities.” 42 U.S.C. § 7408(a)(2). In practice, EPA satisfies this statutory requirement by issuing a document, called an Integrated Science Assessment (ISA),

that describes the effects of a listed pollutant at certain quantities on various areas of public health, among other things. 89 Fed. Reg. at 16,211, JA__.

Sections 109(a) and (b) then govern the promulgation of initial NAAQS. Section 109(a) requires a notice and comment process for an initial NAAQS, and section 109(b) instructs how to set a NAAQS. EPA must set a “primary” NAAQS for a listed pollutant at the level that “in the judgment of the Administrator, based on [the air quality] criteria and allowing an adequate margin of safety, [is] requisite to protect the public health.” 42 U.S.C. § 7409(b)(1). Setting a NAAQS “at the level that is ‘requisite’” means “not lower or higher than is necessary.” *Whitman v. American Trucking Associations*, 531 U.S. 457, 475-76 (2001) (*American Trucking*).³

B. The review and two-step revision process for existing criteria and NAAQS

At least every five years, EPA must review and revise existing criteria and NAAQS, and then make any revisions, as mandated by section 109(d)(1). That provision dictates the timing and nature of this process:

[A]t five-year intervals . . . , the Administrator shall complete a thorough review of the criteria published under section 7408 of this title and the national ambient air quality standards promulgated under this section and shall make such revisions in such criteria and standards and

³ The statute separately requires that any secondary NAAQS, which are not at issue here, must be “requisite to protect the public welfare.” 42 U.S.C. § 7409(b)(2).

promulgate such new standards as may be appropriate in accordance with section 7408 of this title and subsection (b) of this section. The Administrator may review and revise criteria or promulgate new standards earlier or more frequently than required under this paragraph.

42 U.S.C. § 7409(d)(1).

EPA thus must “review and revise” criteria and standards “at five-year intervals,” though it may act “earlier or more frequently.” In doing so, the Agency must start by conducting a “thorough review” of the existing criteria and NAAQS. After that “thorough review” is “complete,” EPA turns to making revisions or promulgating new standards.

The text and structure of section 109(d)(1) necessarily require that any revision (or promulgation) must follow two distinct steps. First, at step one, EPA must determine *whether* to revise the criteria or NAAQS, as the statute permits only “mak[ing] such revisions ... as may be appropriate.” Second, at step two, EPA must determine *how* to revise the criteria or NAAQS “in accordance with section 7408 of this title and subsection (b) of this section,” *i.e.*, sections 108 and 109(b), which, as discussed above, provide the substantive standards for air quality criteria and NAAQS.

C. The Clean Air Scientific Advisory Committee (CASAC)

To assist EPA in this process, section 109(d) further provides for an independent, seven-member scientific review committee appointed by EPA’s Administrator. *Id.* § 7409(d)(2)(A). The committee is charged with reviewing the air

quality criteria and NAAQS and “recommend[ing] to the Administrator,” as appropriate, any new NAAQS or revisions of existing criteria and standards. *Id.* § 7409(d)(2)(B). The committee must also “advise the Administrator of any adverse public health, welfare, social, economic, or energy effects which may result from various strategies for attainment and maintenance of such [NAAQS].” *Id.* § 7409(d)(2)(C).

II. The 2020 review and decision to retain all particulate matter NAAQS

Particulate matter (PM) exists in the ambient air as a mixture of substances suspended as small liquid or solid particles. 89 Fed. Reg. at 16,213, JA___. It is emitted from both man-made sources (including power plants, cars, and agricultural operations) and natural sources (including wildland fires and sea spray). *Id.* at 16,214, JA___. PM from natural sources or from sources outside U.S. borders is often called “background PM.” 85 Fed. Reg. 82,684, 82,692 (Dec. 18, 2020), JA___.

EPA has regulated PM as a criteria pollutant since 1971. In so doing, EPA has divided PM into two categories by size. The category of concern here, PM_{2.5}, covers particles with diameters up to 2.5 micrometers (μm). *Id.* at 82,687, JA___. (The other category, PM₁₀, includes PM_{2.5} and particles with diameters up to 10 μm. *Id.*) EPA promulgated initial NAAQS for PM_{2.5} in 1997, and most recently revised the primary annual PM_{2.5} standard at issue here in 2012. *Id.* at 82,687-89, JA___-___. EPA set that

standard (which limits the annual average amount of PM_{2.5}) at 12.0 micrograms of PM_{2.5} per cubic meter of air ($\mu\text{g}/\text{m}^3$).

In December 2020, EPA completed a review of all PM NAAQS and decided to make no revisions to any, including the primary annual PM_{2.5} standard. *Id.* at 82,685, JA___. In that process, EPA conducted a thorough review of the air quality criteria and sought advice from CASAC, as required under section 109(d). The Agency also created two documents that informed its decision—an Integrated Science Assessment (the 2019 ISA) discussing the latest air quality science for PM and a Policy Assessment (the 2020 PA)—and provided notice and an opportunity for public comment. *Id.* at 82,689-690, JA___-___.

CASAC members provided differing views on whether to retain the primary annual PM_{2.5} standard. Despite agreeing that a long-standing body of health evidence supports associations between PM_{2.5} exposures and various health outcomes, members ““differ[ed] in their assessments of the causal and policy significance of these associations.”” *Id.* at 82,706, JA___ (citation omitted). Those who supported retaining the standard noted that such associations do not necessarily reflect causal effects and could reasonably be attributed to co-pollutant confounding and other

sources of error and bias.⁴ *Id.* Further, they said, recent epidemiological studies do not provide new information because they have the same limitations as prior studies.

Id.

As a result, EPA concluded that the scientific evidence since the last section 109(d) review did not call the standard into question. *Id.* at 82,708, JA___. Specifically, EPA found considerable uncertainty around whether public health improvements would result from further reducing PM_{2.5} concentrations. *Id.* at 82,718, JA___. The Agency emphasized that the epidemiologic studies had ambiguities and limitations, including measurement error, potential confounding by co-pollutants, uncertainties in associations at lower PM_{2.5} concentrations, and differences in effects across different cities or regions. *Id.* at 82,716, JA___.

III. The Rule

A. The proposed reconsideration

In June 2021, EPA announced it would “reconsider the previous administration’s” 2020 decision.⁵ As part of that reconsideration, career staff

⁴ Confounders are variables that distort the association between an exposure and a health outcome, and can include other pollutants, smoking, obesity, high cholesterol, inadequate access to health care, and physical inactivity.

⁵ Press Release, EPA, EPA to Reexamine Health Standards for Harmful Soot that Previous Administration Left Unchanged (June 10, 2021), <https://www.epa.gov/newsreleases/epa-reexamine-health-standards-harmful-soot-previous-administration-left-unchanged>.

prepared a supplement to the 2019 ISA (the ISA Supplement), EPA-HQ-OAR-2015-0072-1585, and a new Policy Assessment (the 2022 PA), EPA-HQ-OAR-2015-0072-1584. 89 Fed. Reg. at 16,203, JA___. The Administrator also replaced many CASAC members.⁶

Roughly eighteen months later, EPA published a Reconsideration Proposal announcing that it was considering reducing “the level of the primary annual PM_{2.5} standard from 12.0 µg/m³ to within the range of 9.0 to 10.0 µg/m³,” and retaining all other PM NAAQS. 88 Fed. Reg. 5558, 5629 (Jan. 27, 2023), JA___. EPA took the position that it could not consider costs, attainability, and technological feasibility. *Id.* at 5564, JA___.

Industry and Arizona Coalition Petitioners commented. EPA-HQ-OAR-2015-0072-2428 (Chamber comments), JA__-__; EPA-HQ-OAR-2015-0072-1989 (Arizona Chamber comments), JA__-__; EPA-HQ-OAR-2015-0072-2091 (EMA comments), JA__-__; EPA-HQ-OAR-2015-0072-2193 (NAM comments), JA__-__; EPA-HQ-OAR-2015-0072-2210 (NMA comments), JA__-__; EPA-HQ-OAR-2015-0072-2361 (NR3 comments), JA__-__; EPA-HQ-OAR-2015-0072-4525 (Ben

⁶ Press Release, EPA, EPA Announces Selections of Charter Members to the Clean Air Scientific Advisory Committee (June 17, 2021). <https://www.epa.gov/newsreleases/epa-announces-selections-charter-members-clean-air-scientific-advisory-committee>.

Toma comments), JA__–__. Noting that their members will be regulated and harmed by the Rule, Petitioners argued, among other things, that EPA was required to consider costs, attainment feasibility, and current air quality in determining whether to revise the NAAQS at all.

B. The revised PM_{2.5} standard

On March 6, 2024, EPA published the Rule, lowering the primary annual PM_{2.5} standard from 12 µg/m³ to 9.0 µg/m³, and retaining all other PM NAAQS. 89 Fed. Reg. 16,202, JA__.

EPA made clear it only “partially reopen[ed]” the air quality criteria, *id.* at 16,213, JA__, and thus had not conducted the “thorough review” of the criteria required under section 109(d), Response to Comments 121-22, EPA-HQ-OAR-2015-0072-6025 (RTC), JA__–__. Rather than an “in-depth critical review,” EPA conducted a “provisional consideration” of the scientific studies that had become available since the 2019 ISA. *Id.* at 5, JA__. On that abbreviated basis, it concluded that the studies “did not materially change any of the broad scientific conclusions regarding the health and welfare effects of PM in ambient air made in the air quality criteria, and therefore, reopening of the air quality criteria was not warranted.” 89 Fed. Reg. at 16,210, JA__. EPA further stated that it “will consider these ‘new’ studies for inclusion in the air quality criteria for the next PM NAAQS review,” at

which time the studies will be “fully assess[ed]” and subject to “a more rigorous review.” *Id.* at 16,213, JA__.

EPA then proceeded with a two-step revision process of its own making that applied the same test at both steps. The “initial issue” was *whether* to revise the standard, which EPA described as “whether ... the current standards are requisite to protect public health with an adequate margin of safety.” *Id.* at 16,273, JA__. Then it turned to “*how* to revise” the standard, which EPA likewise described as being guided by what is “requisite protection for public health, with an adequate margin of safety.” *Id.* at 16,277 (emphasis added), JA__.

At step one, EPA concluded that “it is necessary and appropriate to revise the primary annual PM_{2.5} NAAQS.” *Id.* at 16,276, JA__. To explain its about-face from the 2020 decision *not* to revise, EPA said that “the current Administrator both has information newly available in this reconsideration before him and is reaching different conclusions about how to weigh the evidence before him in reaching his final conclusions.” *Id.* EPA noted that all members of the reconstituted CASAC agreed the NAAQS was not sufficiently protective of public health. *Id.* at 16,253, JA__. But while a majority recommended a range of 8–10 $\mu\text{g}/\text{m}^3$, a minority recommended a range of 10–11 $\mu\text{g}/\text{m}^3$, noting that ““uncertainties related to copollutants and confounders make it difficult to justify”” a more stringent standard.

Id. (citation omitted). Indeed, CASAC “highlight[ed]” that a level of 10 $\mu\text{g}/\text{m}^3$ was within the range of acceptable for all members. *Id.*

At step two, in “reaching [the] decision on [the] level” at which to set the revised standard, EPA placed “the most weight on information from epidemiologic studies.” *Id.* at 16,278, JA___. Specifically, “the Administrator judge[d] that it is appropriate to set the level of the primary $\text{PM}_{2.5}$ standard at least as low as the lowest mean $\text{PM}_{2.5}$ concentration from these key U.S.-based epidemiologic studies, which is 9.3 $\mu\text{g}/\text{m}^3$.” *Id.* at 16,280, JA___. Nevertheless, EPA noted that “recent epidemiologic studies continue to support a no-threshold relationship, meaning that there is no ‘bright line’ below which no effects have been found.” *Id.* at 26,278, JA___. EPA also acknowledged that “there are a number of uncertainties and limitations associated with the available health effects evidence,” including “reported heterogeneity in associations between cities and geographic regions within the U.S.” and “potential confounders.” *Id.* at 16,248-49, JA__-__.

C. The Rule’s effects on air emission permitting and state plan requirements

A NAAQS revision triggers numerous requirements on regulated entities, as well as implementation activities. For example, the Rule immediately tightens the requirements for Prevention of Significant Deterioration (PSD) air emission permits. *Id.* at 16,369, JA___. By statute, a PSD permit is required for all new major emitting

facilities,⁷ or major emitting facilities making a major modification, in any area not designated nonattainment. 42 U.S.C. § 7475. To obtain a PSD permit, the applicant must show, among other things, that the construction or operation of the facility “will not cause, or contribute to, air pollution in excess of any ... [NAAQS].” *Id.* § 7475(a)(3). As of the Rule’s effective date, that “demonstration ... must include the revised primary annual PM_{2.5} NAAQS.” 89 Fed. Reg. at 16,370, JA___. In short, regulated entities already in the permitting process are now subject to a new, more stringent requirement.

EPA is also on the clock to designate areas as attainment or nonattainment. 42 U.S.C. § 7407(d)(1)(B). As part of that process, the States must first submit initial area designations to EPA. *Id.* § 7407(d)(1)(A). States must also submit a state implementation plan (SIP) that shows the State has the necessary air quality management infrastructure for the implementation and enforcement of the NAAQS. *Id.* § 7410(a)(1). Alternatively, the State can certify that its existing SIP meets these requirements.

After EPA’s designations, a State containing any nonattainment areas must submit within eighteen months another SIP that outlines strategies and emissions

⁷ “Major emitting facilities” are defined generally as “stationary sources of air pollutants which emit, or have the potential to emit, one hundred tons per year or more of any air pollutant.” 42 U.S.C. § 7479(1).

control measures to meet the NAAQS in those areas. *Id.* § 7513a(a)(2)(B) (setting SIP requirements for PM₁₀); *Nat. Res. Def. Council v. EPA*, 706 F.3d 428, 435 (D.C. Cir. 2013) (holding that CAA’s PM₁₀ implementation requirements also apply to PM_{2.5}). Each State’s nonattainment SIP must include, at minimum, a permit program for the construction and operation of new and modified major stationary sources of PM_{2.5} and “[p]rovisions to assure that reasonably available control measures for the control of [PM_{2.5}] shall be implemented no later than ... 4 years after designation.” 42 U.S.C. § 7513a(a)(1)(C).

A nonattainment designation also translates into industry obligations. Existing business operations in such areas must install reasonably available control technology and may be required to do more “as may be necessary or appropriate to provide for attainment.” *Id.* § 7502(c)(6); 81 Fed. Reg. 58,010, 58,035 n.72 (Aug. 24, 2016) (EPA interprets this provision to require “additional measures to those identified as [reasonably available control measures] for the area if needed to provide for timely attainment”). Companies building new facilities or performing major modifications that result in increased emissions must, as part of that construction, install emission reduction technology that produces the lowest achievable emission rate. 42 U.S.C. § 7503(a)(2). If an area was already in nonattainment under the prior NAAQS standard, these requirements will become even more stringent as the State works to meet the lower standard.

SUMMARY OF ARGUMENT

I. EPA conducted an unlawful reconsideration in two ways.

A. First, EPA does not have authority to undertake a free-standing NAAQS “reconsideration.” Congress provided in section 109(d) a specific process for deciding whether and how to revise a NAAQS, and that requires a “thorough review” of the air quality criteria that EPA admitted it did not complete. Instead, EPA claimed it has either inherent authority to reconsider or independent authority under section 109(d)’s provision that EPA may proceed “earlier or more frequently than required under this paragraph.” 42 U.S.C. § 7409(d)(1). Neither contention is correct. Assuming inherent authority existed, Congress displaced it with section 109(d). As for the sentence of section 109(d) that allows EPA discretion on the timing of its review and revision, that is all the sentence allows. It does not excuse EPA from the preceding requirements.

B. Second, even if EPA had free-standing “reconsideration” authority, EPA acted improperly by failing to consider costs in revisiting its 2020 decision. EPA admitted that its purported reconsideration must at least comport with principles of reasoned decision-making. Under *Michigan v. EPA*, 576 U.S. 743 (2015), those principles require consideration of costs unless there is a clear statutory instruction to the contrary. There is not.

II. The Rule cannot be upheld, in the alternative, as a thorough review and revision that comports with the requirements of section 109(d).

A. It is black-letter law that this Court cannot uphold the Rule on a ground EPA chose not to advance. By its own admissions, EPA is precluded from now treating the Rule as a review and revision under section 109(d), rather than an unlawful reconsideration.

B. Regardless, the Rule was still not a proper revision under section 109(d). The first sentence of that provision requires EPA to follow a two-step NAAQS process in which, at step one, the Agency must consider cost and other relevant factors in deciding whether a NAAQS should be revised. EPA did not do so.

In the Rule, EPA followed a different two-step revision process of its own making, applying the “public health standard” of section 109(b) to *both* steps. But settled principles of statutory construction make clear that section 109(d) sets forth *different* standards for each step. First, EPA must determine *whether* a revision “may be appropriate.” 42 U.S.C. § 7409(d)(1). Second, if EPA determines that revisions are appropriate, it decides *how* to revise “in accordance with [section 108] and [section 109(b)].” *Id.* Here, EPA bypassed the appropriateness standard and thus failed to comply with step one.

At step one, the word “appropriate” is a “classic broad and all-encompassing term that naturally and traditionally includes consideration of all the relevant

factors.” *Michigan*, 576 U.S. at 752 (citation omitted). EPA did not consider all such factors. For example, appropriateness “requires at least some attention to cost” in deciding, at step one, whether a NAAQS should be revised at all. *Id.* Appropriateness also requires considering whether any different standard from the status quo would be attainable, as well as what the benefits of a revision would be as compared to current air quality. EPA did not consider any of these factors. Indeed, EPA ignored the effect on attainability from the increasing contribution of wildfires to background PM, and also incorrectly assumed that no area of the country had better air quality than the prior NAAQS standard of 12 $\mu\text{g}/\text{m}^3$, which greatly overestimated the potential health benefits from lowering the standard. *American Trucking* and other cases pointed to by EPA are not to the contrary, as those cases are step-two cases about *how* to set a revised NAAQS, not step-one cases about *whether* to revise a NAAQS.

III. The Rule is also arbitrary and capricious. EPA acknowledges that the record contains many of the same methodological limitations and uncertainties in the evidence that it identified previously, but it fails to explain why those limitations and uncertainties do not continue to warrant *retaining* the 12.0 $\mu\text{g}/\text{m}^3$ standard. Further, though Petitioners do not think a 10.0 $\mu\text{g}/\text{m}^3$ standard is legally or scientifically justified, EPA fails to confront the fact that its own evidence and logic points more toward a 10.0 $\mu\text{g}/\text{m}^3$ standard than its chosen 9.0 $\mu\text{g}/\text{m}^3$.

STANDARD OF REVIEW

In reviewing a final EPA action under the Clean Air Act, this Court applies “the same standard of review [as] under the ... Administrative Procedure Act.” *Heating, Air Conditioning & Refrigeration Distribs. Int’l v. EPA*, 71 F.4th 59, 61–62 (D.C. Cir. 2023) (citation omitted). Thus, this Court must set aside agency action that is in “excess of statutory jurisdiction, authority, or limitations,” 42 U.S.C. § 7607(d)(9)(C), or “arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law,” *id.* § 7607(d)(9)(A). An agency is arbitrary and capricious if it, among other things, “entirely failed to consider an important aspect of the problem” or does not “examine the relevant data and articulate a satisfactory explanation for its action.” *Motor Vehicle Mfrs. Ass’n v. State Farm Mut. Auto. Ins. Co.*, 463 U.S. 29, 43 (1983). In all events, this Court “may not supply a reasoned basis for the agency’s action that the agency itself has not given.” *Id.* (citing *SEC v. Chenery Corp.*, 332 U.S. 194, 196 (1947)).

STANDING

Industry Petitioners have associational standing. For each association, “(1) at least one of its members would have standing to sue in his own right, (2) the interests the association seeks to protect are germane to its purpose, and (3) neither the claim asserted nor the relief requested requires that an individual member of the

association participate in the lawsuit.” *Sierra Club v. EPA*, 292 F.3d 895, 898 (D.C. Cir. 2002).⁸

The latter two requirements are plainly satisfied. By challenging the Rule, Petitioners serve their purposes of securing the economic stability of the various industries and businesses they represent. *See, e.g.*, Baer ¶3, Add-212; Bridgeford ¶4, Add-222; Greissing ¶5, Add-247-48; Hunt ¶8, Add-260; Hupman ¶4, Add-264; Noe ¶4, Add-280-81; Seiden ¶2, Add-288; Whiteman ¶4, Add-297. And because Petitioners advance only legal arguments and seek vacatur of the Rule, the participation of individual members is not necessary. *Comm. for Effective Cellular Rules v. F.C.C.*, 53 F.3d 1309, 1315 (D.C. Cir. 1995) (broad facial challenge to agency action seeking vacatur does not require individual participation).

The first requirement is also easily shown. To have standing, a member must show: (1) injury-in-fact, (2) causation, and (3) redressability. *Lujan v. Defenders of Wildlife*, 504 U.S. 555, 560-61 (1992). When that member “is himself an object of the [agency] action (or forgone action) at issue ... there is ordinarily little question that the action or inaction has caused him injury, and that a judgment preventing or

⁸ Because all Industry Petitioners (indeed, all State and Industry Petitioners) bring the same claim and seek the same remedy, this Court need only be satisfied that one petitioner has standing. *J.D. v. Azar*, 925 F.3d 1291, 1323 (D.C. Cir. 2019) (per curiam).

requiring the action will redress it.” *Id.* at 561-62. Indeed, “standing is ‘usually’ self-evident” in that situation. *Arizona v. EPA*, 77 F.4th 1126, 1131 (D.C. Cir. 2023).

The administrative record alone, *see* D.C. Cir. R. 29(a)(7), confirms that Petitioners’ members are the objects of the regulation. The very purpose of the NAAQS is to reduce air pollution from emissions sources, like those belonging to Petitioners’ members, through control requirements. 42 U.S.C. § 7410. It is Petitioners’ members who must alter their behavior if the NAAQS are to be met. *See, e.g.*, EMA comments 1–2, JA__-__; NR3 comments 1, Att. 2 at 1-3, JA __, __-__; Arizona Chamber comments 1, JA__. Unsurprisingly, therefore, Petitioners’ members have standing in multiple ways.

First, Petitioners’ members who submitted PSD permit applications or completed modeling before the Rule took effect are now faced with, or are already incurring, new costs traceable to the Rule. They must expend both time and money to complete new modeling, and possibly make changes to their projects, to demonstrate compliance with the Rule’s more stringent standard. Baker ¶9, Add-219-20; Champion ¶8, Add-232; Greissing ¶14, Add-251; Nielson ¶¶12-13, Add-277-78. But if the Rule is vacated, those members could return to modeling, and plans, completed under the prior standard. Nielson ¶10, Add-276 (company had passing model under previous standard); Baker ¶7, Add-218-19 (same).

This evidence of injury is far more than this Court found sufficient in *Coalition for Responsible Regulation, Inc. v. EPA*, 684 F.3d 102 (D.C. Cir. 2012) (per curiam), *aff'd in part and rev'd in part on other grounds by Utility Air Regulatory Group v. EPA*, 573 U.S. 302 (2014). There, two associations submitted declarations explaining that the rule being challenged would impact the PSD program, and it was therefore “now certain” that many of their members will have to obtain PSD permits sometime in the future.” 684 F.3d at 130. This Court concluded that the associations had shown the “substantial probability” of injury necessary for both standing and ripeness under Article III. *Id.* at 131.

Second, Petitioners’ members with emissions sources in current nonattainment areas will face more stringent control measures. *See, e.g.*, Greissing ¶¶17, Add-253; Hupman ¶¶8-10, Add-266-67; Whiteman ¶¶17, Add-302. An area currently in nonattainment will necessarily remain in nonattainment under the new, more stringent NAAQS, and will logically require even more rigorous control measures. *See* 42 U.S.C. § 7502(c)(6) (requiring, “as may be necessary or appropriate to provide for attainment,” measures beyond the reasonably available control measures required under 42 U.S.C. § 7502(c)(1)). The prospect of such new control measures is a harm traceable to the Rule that would be redressed if the Rule is vacated. And similarly, Petitioners’ members with emission sources in an attainment area that will likely become nonattainment under the new standard, *see*,

e.g., Bridgeford ¶13, Add-227; Cribb ¶11, Add-237; Duessel ¶17, Add-245; Hinck ¶¶5-7, Add-256; Seiden ¶8, Add-289, will also suffer harm.⁹ These members face the prospect of having to install reasonably available control measures for the first time.

Although specific control measures and nonattainment designations may not be adopted for some time, these injuries are substantially probable, too. What is more, the Supreme Court has made clear that the CAA’s “special judicial-review provision,” which governs this litigation and gives the Agency repose from challenges brought more than 60 days after publication, has a lower threshold for measuring the immediacy of harms. *American Trucking*, 531 U.S. at 479-80.

ARGUMENT

I. EPA conducted an unlawful “reconsideration.”

The Rule should be vacated as an unlawful “reconsideration” for at least two reasons. First, Congress set forth in section 109(d) a specific process for EPA to

⁹ EPA published a chart showing areas that will likely become nonattainment under the new standard, Fine Particle Concentrations for Counties With Monitors Based on Air Quality Data from 2020-2022 (Concentrations Chart), https://www.epa.gov/system/files/documents/2024-02/table_annual-pm25-county-design-values-2020-2022-for-web.pdf, and Petitioners made their own predictions, too, U.S. Chamber of Commerce, EPA’s Proposed Air Quality Standards Will Cause Permitting Gridlock Across Our Economy at 3 (2023), https://www.globalenergyinstitute.org/sites/default/files/2023-11/Chamber%20PM2.5%20Report%20_%2011.8.23%20Final%20Draft.pdf.

review and revise NAAQS. EPA admitted it did not follow that process, and the statute simply does not grant the Agency a separate reconsideration power. Any revision requires completion of the full process. Second, even if EPA had discretion to reconsider NAAQS, principles of reasoned decision-making would have required it to consider costs. Its failure to do so is an independent ground for vacatur.

A. EPA has no discretionary authority to reconsider whether to revise a NAAQS.

1. EPA did not follow section 109(d)'s process for deciding whether to revise a NAAQS.

CAA section 109(d) sets forth a specific process by which EPA must at certain intervals, and may on a more frequent basis, review and possibly revise a NAAQS. The first sentence of section 109(d) requires EPA, at five-year intervals, to “complete a thorough review” of the air quality criteria and NAAQS. 42 U.S.C. § 7409(d)(1). After such a review, EPA may determine that revisions to the criteria and NAAQS are “appropriate.” *Id.* If it chooses to make a revision, then it must do so “in accordance with” sections 108 and 109(b)—the provisions that govern *how* to define the air quality criteria and choose the proper level for NAAQS. *Id.*

Throughout this rulemaking, however, EPA made clear it was not conducting a “thorough review” under section 109(d) but rather a more streamlined “reconsideration” of its 2020 review decision. 89 Fed. Reg. at 16,203, JA___. EPA chose only “to partially reopen” the air quality criteria, and deferred consideration

of a number of available scientific studies to “the next PM NAAQS review.” *Id.* at 16,213, JA___. As such, it prepared only an “ISA Supplement” that “does not itself satisfy the EPA’s obligation to periodically complete a thorough review of the air quality criteria.” RTC 121, JA___.

2. EPA erroneously claimed separate authority for its novel reconsideration.

In its Response to Comments on its Reconsideration Proposal, EPA first suggested that it exercised “implicit, or inherent, authority to reconsider.” RTC 118, JA___ (citing *FCC v. Fox Television Stations, Inc.*, 556 U.S. 502, 515 (2009), and *Motor Vehicle Mfrs. Ass’n*, 463 U.S. at 42). But that is plainly wrong, and even EPA offered nothing more to defend this passing assertion.

While agencies often have inherent authority to reconsider their decisions, statutory design may alter or displace such authority. For example, Congress “can limit an agency’s discretion to reverse itself.” *New Jersey v. EPA*, 517 F.3d 574, 583 (D.C. Cir. 2008). As this Court has explained, “when Congress has provided a mechanism capable of rectifying mistaken actions ... it is not reasonable to infer authority to reconsider agency action.” *Am. Methyl Corp. v. EPA*, 749 F.2d 826, 835 (D.C. Cir. 1984). Thus, in *New Jersey*, this Court rejected EPA’s claim of inherent authority to reconsider the listing of a source category under CAA section 112(c)(1) because section 112(c)(9) specifically spoke to the deletion of source categories from that list. 517 F.3d at 583.

So too here. Congress expressly addressed the task of revising a NAAQS in section 109(d). In doing so, it eliminated any inherent authority to do the same thing through discretionary reconsideration.

EPA next claimed that the second sentence of section 109(d)(1) provides “additional” and “independent” authority to reconsider a NAAQS. RTC 121, JA __. The sentence states that “[t]he Administrator may review and revise criteria or promulgate new standards earlier or more frequently than required under this paragraph.” 42 U.S.C. § 7409(d)(1). According to EPA, this “authorizes the Administrator to review and revise *either* the air quality criteria or the NAAQS on a shorter schedule of the Administrator’s choosing,” and to do so without completing any of the preceding requirements in the first sentence of section 109(d). RTC 122, JA__.

EPA is partly right. The second sentence of section 109(d) does permit EPA to act on a shorter schedule. The phrase “earlier or more frequently than required *under this paragraph*” is a cross-reference to the five-year intervals mandated in the first sentence of section 109(d). EPA must review and revise as appropriate at least every five years but may do so more often.

The clear cross-reference, however, dooms the rest of the Agency’s theory. By explicitly referring back to the first sentence, the second sentence is *linked to*—not *independent of*—the power described in the first sentence. It effectively

incorporates the process in the first sentence, summarizing it as “review and revise criteria or promulgate new standards.” 42 U.S.C. § 7409(d)(1). And then it provides that EPA may, in its discretion, undertake that specific process “more frequently than required.”¹⁰ *Id.*

Beyond simply misreading the statutory text, EPA’s interpretation violates “the long-standing rule that a statute should not be construed to produce an absurd result.” *Mova Pharm. Corp. v. Shalala*, 140 F.3d 1060, 1068 (D.C. Cir. 1998). Under EPA’s reading, the first sentence merely establishes a “baseline requirement that the air quality criteria undergo a ‘thorough review’ at least every five years,” which, at the time, “may necessitate revisions to the NAAQS.” RTC 121-22, JA__-__. But then at any point in between, EPA can “review and revise *either* the air quality criteria or the NAAQS” *without any limitations or requirements whatsoever*. *Id.* at 122, JA__. That means the requirements of the first sentence are little more than a formality that EPA can immediately turn around and ignore. An otherwise unlawful, less-than-thorough review would pass muster so long as it was completed before the next five-year mark. That makes no sense.

¹⁰ This understanding is also consistent with the legislative history, which describes section 109(d) as requiring EPA “to review the technical criteria and national ambient air quality standards *at least* once every [five] years.” H.R. REP. NO. 95-294, at 10 (1977), *reprinted in* 1977 U.S.C.C.A.N. 1077, 1088 (emphasis added).

As a matter of statutory text and common sense, particularly in light of the wide-ranging impact of any change to a NAAQS, any such change must be based on a *thorough* review of the air quality criteria and NAAQS, regardless of when the process starts or how long it takes. Consistent with section 108, that thorough review ensures that the air quality criteria accurately reflect the “latest scientific knowledge.” 42 U.S.C. § 7408(a)(2). And that, in turn, ensures that the NAAQS, which must be “based on such criteria” if revised, are set according to the latest scientific information, as well. *Id.* § 7409(b).

B. Even if EPA had “reconsideration” authority, the Rule is still unlawful because EPA failed to consider costs.

If EPA had discretionary authority to reconsider the 2020 decision not to revise the NAAQS, it was required under principles of reasoned decision-making to consider costs. It did not.

In *Michigan*, the Supreme Court unanimously recognized that reasoned decision-making requires consideration of costs, unless Congress provides otherwise. As the Court explained, “[a]gencies have long treated cost as a centrally relevant factor” because “reasonable regulation ordinarily requires paying attention to the advantages and the disadvantages of agency decisions.” 576 U.S. at 752-53. The Court then decided that, in legislating “[a]gainst the backdrop of this established administrative practice,” Congress did not give EPA “an invitation to ignore cost.” *Id.* at 753. Though it parted with the majority in some respects, the dissent agreed

fully that “[c]ost is almost always a relevant—and usually, a highly important—factor in regulation.” *Id.* at 769 (Kagan, J., dissenting). It echoed that, “absent contrary indication from Congress[,] an agency must take costs into account in some manner before imposing significant regulatory burdens.” *Id.*

Those principles require consideration of cost here. EPA admitted that under its theories of discretionary authority to reconsider, it was “required to engage in reasoned decision-making.” RTC 118, JA___. Thus, cost should have been considered unless there is statutory instruction to the contrary. There is not. If EPA was acting under some inherent authority, there was, by definition, no statute at all. And if EPA was acting under independent authority granted by the second sentence of section 109(d), nothing in those twenty words can plausibly be understood as excusing EPA from considering costs.

Indeed, the only other time EPA attempted a NAAQS “reconsideration,” EPA did not finalize the reconsideration due to cost considerations. At the President’s “instruct[ion],” the Administrator of the White House Office of Information and Regulatory Affairs (OIRA) returned the draft rule to EPA, based in part on principles of reasoned agency decision-making, including the need to “minimize regulatory

costs and burdens.”¹¹ In his concurrent statement, President Obama pointed specifically to “the importance of reducing regulatory burdens and regulatory uncertainty, particularly as our economy continues to recover.”¹² This precedent not only supports the analysis above, but it also makes EPA’s current effort to ignore costs an unexplained departure from past practice. *See Encino Motorcars, LLC v. Navarro*, 579 U.S. 211, 221-22 (2016).¹³ EPA has incorrectly suggested that this prior rejection was not “made by the EPA,” RTC 120, JA ___, but the agency acceded to and incorporated this rejection into its next section 109(d) review, 80 Fed. Reg. 65,292, 65,297 (Oct. 26, 2015).

Unable to point to any statutory language, EPA claimed it was prohibited from considering costs by *American Trucking and Murray Energy Corp. v. EPA*, 936 F.3d 597 (D.C. Cir. 2019). 89 Fed. Reg. at 16,206-07, JA __-__; RTC 118, 120, JA __, __. But those cases say nothing about what EPA must (or must not) do in reconsidering

¹¹ Letter from Cass Sunstein, OIRA Administrator, to Lisa Jackson, EPA Administrator (Sept. 2, 2011), https://obamawhitehouse.archives.gov/sites/default/files/ozone_national_ambient_air_quality_standards_letter.pdf.

¹² Press Release, The White House, Statement by the President on the Ozone National Ambient Air Quality Standards (Sept. 2, 2011), <https://obamawhitehouse.archives.gov/the-press-office/2011/09/02/statement-president-ozone-national-ambient-air-quality-standards>.

¹³ In fact, as State Petitioners explain, finalizing a NAAQS reconsideration at all (whether considering costs or not) is itself an unexplained change from long-standing practice. *See* State Petitioners Br. Section II.A.

a decision not to revise a NAAQS. Rather, *American Trucking* and *Murray* concern EPA's selection of the level at which to set a NAAQS under section 109(b)—a different issue that arose here only *after* EPA's reconsideration of the decision not to revise. In *American Trucking*, the question before the Court was “[w]hether the Administrator may consider the costs of implementation in *setting* ... NAAQS under § 109(b)(1).” 531 U.S. at 462 (emphasis added). The Court then held that “EPA may not consider implementation costs in *setting* primary and secondary NAAQS under § 109(b).” *Id.* at 486 (emphasis added). *Murray* similarly concerned disputes over “*setting* the primary and secondary standards,” which this Court settled by pointing to the Supreme Court’s “NAAQS-setting” decision in *American Trucking*. 936 F.3d at 620-21 (emphasis added).

EPA also pointed to the statement in section 109(b) that NAAQS ““may be revised in the same manner as promulgated.”” RTC 120, JA___. But this argument fails for the same reasons as EPA’s reliance on *American Trucking* and *Murray*. Like the rest of section 109(b), the quoted language concerns the *setting* of a NAAQS. It makes clear that setting a NAAQS is to be done the same way, whether when promulgating an initial NAAQS or later revising a NAAQS. As explained above, that is different from what’s at issue here—the antecedent factors EPA must assess when *considering* whether to revise the NAAQS at all.

Finally, EPA suggested that the first sentence of 109(d) does not permit consideration of costs. *Id.* But as explained below, *see infra* Section II.B.2, that suggestion sweeps too broadly. Properly understood, the first sentence of section 109(d) requires EPA to consider costs (and other relevant factors) in one part of the process—namely, deciding whether, as a threshold matter, a NAAQS revision is even appropriate. In any event, EPA cannot have it both ways. It cannot claim to be free of the “thorough review” requirement in the first sentence of section 109(d) but, at the same time, purport to be bound by other parts of that sentence.

II. The Rule cannot be upheld as a “thorough review” and revision under section 109(d).

A. This Court cannot disregard EPA’s concession that it did not act under the first sentence of section 109(d).

To the extent EPA may now suggest that the Rule is nevertheless lawful under the first sentence of section 109(d), this Court cannot entertain that claim. EPA made clear that it was not acting under the first sentence of section 109(d) and, therefore, chose not to do the “thorough review.” RTC 121-22 (“the last sentence of section 109(d)(1) authorizes the Administrator to revise the NAAQS *without* revising the air quality criteria ... [and] revise the air quality criteria, without undertaking a ‘thorough review.’”), JA__-__. This Court cannot uphold the Rule on a ground EPA did not advance. *Chenery Corp.*, 332 U.S. at 196.

B. EPA did not follow the required two-step NAAQS revision process.

Even if this Court ignores EPA's affirmative disclaimer, the Rule was not a proper revision under section 109(d). The first sentence sets forth a two-step NAAQS revision process. Step one requires EPA to consider costs and other relevant factors in deciding whether a NAAQS should be revised. EPA did not.

1. The first sentence of section 109(d) sets forth a two-step revision process with different standards at each step.

In the Rule, EPA created its own two-step revision process, in which it applied the “public health standard” of section 109(b) to *both* steps. EPA framed the “initial issue” of whether to revise the NAAQS as “whether ... the current [NAAQS] are requisite to protect public health with an adequate margin of safety.” 89 Fed. Reg. at 16,273, JA___. So too for the second issue of “how to revise,” which EPA similarly described as seeking “to provide the requisite public health protection with an adequate margin of safety.” *Id.* at 16,278, JA___. Though EPA disclaimed that it was acting under the first sentence of section 109(d), the Response to Comments suggests that EPA believed this to be the required process under that provision, as well. RTC 118-20, JA__-__.

That is wrong. Settled principles of statutory construction make clear that the first sentence of section 109(d) sets forth a two-step revision process with *different* standards at each step. First, EPA must determine *whether* a revision “may be appropriate.” Second, if EPA determines that revisions are appropriate, then it

decides *how* to revise “in accordance with [section 108] and [section 109(b)],” which are the provisions that provide the substantive standards for the criteria and NAAQS, respectively. Only at step two, therefore, do the standards of section 109(b) apply. Thus, the cases on which EPA relies—and which are discussed below—are inapposite.¹⁴

Start with the text and the principle that “a ‘statute should be construed to give effect to all its provisions, so that no part will be inoperative or superfluous, void or insignificant.’” *Genus Med. Techs. LLC v. U.S. Food & Drug Admin.*, 994 F.3d 631, 638 (D.C. Cir. 2021) (citation omitted). Section 109(d) provides that after a “thorough review,” EPA “shall make such revisions in such criteria and standards and promulgate such new standards as may be appropriate in accordance with section [108] and [section 109(b)].” 42 U.S.C. §7409(d)(1). If Congress intended for EPA to consider only the requirements of sections 108 and 109(b) in determining both *whether* and *how* to revise criteria and NAAQS, it would have sufficed to say “as may be in accordance with [section 108] and [section 109(b)]” and omit “appropriate.” The only way to give each phrase independent meaning is to apply

¹⁴ To the extent these cases might be read as inconsistent with Petitioners’ understanding of the statute, they are wrong and should be overruled by an appropriate court.

them separately to the two questions (*whether* and *how*) that are, as even EPA recognizes, implicit in any decision to revise.

Next, look to “neighboring statutory provision[s].” *Pereira v. Sessions*, 585 U.S. 198, 210 (2018). Within section 109(d), subsection 109(d)(2)(C) charges the CASAC—the committee that helps with NAAQS review and revision—to “advise the Administrator of any adverse public health, welfare, social, *economic*, or energy effects which may result from various strategies for attainment and maintenance” of the NAAQS it reviews. 42 U.S.C. § 7409(d)(2)(C) (emphasis added). The location of this provision—in section 109(d)—suggests that this information should be considered somehow by EPA during the NAAQS revision process, even if it may also be relevant elsewhere. But since many of these factors cannot be considered in deciding *how* to revise “in accordance with” section 109(b)—in light of what the Supreme Court has said is the plain meaning of that provision—they support a reading of section 109(d) that instead accounts for them in deciding, as a threshold matter, *whether* a revision “may be appropriate.”¹⁵

¹⁵ This is consistent with the legislative history, which explains that CASAC’s advice was intended to assist EPA with “deciding whether revision or promulgation of new standards is necessary,” H.R. REP. NO. 95-294, at 10, *reprinted in* 1977 U.S.C.C.A.N. 1088, and to assist courts with review “of the Administrator’s failure or refusal to set or revise such a standard,” *id.* at 82, *reprinted in* 1977 U.S.C.C.A.N. 1261.

Finally, consult “the broader context of the statute as a whole.” *Robinson v. Shell Oil Co.*, 519 U.S. 337, 341 (1997). In *Michigan*, the Supreme Court took a similar approach to the word “appropriate” in a provision of the Act that required certain action “if the Administrator finds such regulation is appropriate and necessary after considering the results of the study required by this subparagraph.” 42 U.S.C. § 7412(n)(1)(A). EPA argued that appropriateness should be based on “only the study mandated by that provision.” 576 U.S. at 753. The Court disagreed, rejecting the notion that those neighboring words were meant to restrict the “capaciousness” of the phrase “appropriate and necessary.” *Id.* at 752. Likewise here, the phrase “in accordance with” should not be read to restrict the meaning of “as may be appropriate.”

2. EPA was required to consider costs at step one in deciding whether to revise the NAAQS.

At step one, the word “appropriate” is a ““classic broad and all-encompassing term that naturally and traditionally includes consideration of all the relevant factors,”” that “requires at least some attention to cost.” *Id.* (citation omitted). And that is particularly true where “appropriate” is used in instructing an agency to determine whether to regulate. *Id.* That is the context here. The statute uses “appropriate” as the benchmark for whether EPA should change the regulatory status quo.

EPA claimed that *American Trucking* forecloses consideration of costs. RTC 120, JA___. But *American Trucking* was not a step-one case about *whether* to revise a NAAQS. Rather, as explained earlier, it concerned *how* to set the revised NAAQS. *Supra* pp.30-31. Consistent with that, the Court based its holding solely on section 109(b)'s text, and never analyzed the phrase "as may be appropriate" in section 109(d).

Michigan confirms as much in distinguishing *American Trucking* as concerning the "discrete criterion" of "set[ting]" NAAQS "levels." *Michigan*, 576 U.S. at 755. It explained that the language of section 109(b) "does not encompass cost." *Id.* (citing and quoting 42 U.S.C. § 7409(b)). But that case "has no application" to phrases like "appropriate and necessary," which are "far more comprehensive criterion." *Id.* at 756; *see also Entergy Corp. v. Riverkeeper, Inc.*, 556 U.S. 208, 223 (2009) (describing *American Trucking* as about "setting air quality standards").

EPA also contended that *Murray* forecloses consideration of costs. RTC 120, JA___. But that case, too, was a step-two case about *how* EPA must "set[]" a revised NAAQS. 936 F.3d at 620; *see supra* pp.30-31. So while this Court addressed the word "appropriate," it was discussing only whether that word has any impact on step two of the process. That is why, when this Court went on to distinguish *Michigan*, it pointed out that the Supreme Court said that "the criteria for *setting* NAAQS

‘do[]not encompass cost.’” *Murray*, 936 F.3d at 622 (quoting *Michigan*, 576 U.S. at 755) (emphasis added).

Murray also observed that “[this Court has] already rejected the idea that ‘appropriate’ in section 109(d) requires consideration of economic costs.” 936 F.3d at 622. But again, that entire discussion was only about “the criteria for setting NAAQS.” *Id.* (noting that “economic costs could not be considered in setting NAAQS”). Though *Murray* cited *American Trucking Associations v. EPA*, 175 F.3d 1027, 1040-41 (D.C. Cir. 1999) (“*ATA I*”), it cannot be fairly read as importing the whole of *ATA I*’s explication of section 109(d), which is not consistent with *Michigan*. At various points, *ATA I* appears to conclude that “appropriate” is an insignificant word that should obviously be restricted by “the clause immediately following” it. *Id.* at 1040, 1047. But as explained above, *Michigan* has since made clear that “‘appropriate’” is a “‘broad and all-encompassing term’” that should not be treated so dismissively. 576 U.S. at 752.

3. EPA was required at step one to consider attainability in deciding whether to revise the NAAQS.

Appropriateness also requires considering, at step one, whether any new standard would be attainable. It is difficult to imagine a more “relevant factor[]” to whether a current NAAQS should be changed than whether some more stringent standard could be met. *Id.* Indeed, the Act requires all measures “as may be necessary or appropriate to provide for attainment.” 42 U.S.C. § 7502(c)(6). Moreover, it

would be unreasonable to impose impossible requirements on regulated parties. *All. for Cannabis Therapeutics v. Drug Enf't Admin.*, 930 F.2d 936, 940 (D.C. Cir. 1991).

Citing *Murray* and *American Petroleum Institute v. Costle*, 665 F.2d 1176 (D.C. Cir. 1981) (*API*), EPA contended that it was prohibited by this Court's precedent from considering attainability. RTC 119, JA___. But as EPA acknowledged, those cases hold that attainability is “not a relevant criterion in selecting a NAAQS.” *Id.* (emphasis added), JA___. They are step-two cases. In *Murray*, this Court considered whether EPA could consider background ozone in setting the ozone NAAQS and concluded that the Agency could not, because “[s]ection 109(b) directs EPA to set NAAQS ‘requisite to protect the public health’ and ‘the public welfare.’” 936 F.3d at 623 (quoting 42 U.S.C. § 7409(b)) (emphasis added). *API* similarly explained that EPA could not consider “‘economic and technological feasibility in setting air quality standards.’” 665 F.2d at 1185 (emphasis added) (citation omitted). Neither case addressed whether EPA must consider attainability in determining the appropriateness of revising the NAAQS.

As with costs, EPA's categorical refusal to consider attainability is sufficient to hold the Rule unlawful. But to the extent EPA purported also to conclude that the standards are attainable, RTC 119, JA___, that is wrong. The record reveals that the new standard may be unattainable for large swaths of the country, including the

western United States, due to existing background levels of PM_{2.5}. Even EPA acknowledged that wildland fires contribute significantly to PM_{2.5} pollution throughout the country, accounting for approximately 44% of all primary PM_{2.5} emissions, with most of the severe wildfire events occurring in the West. 89 Fed. Reg. at 16,214, JA___; 2022 PA at 2-68, JA___.

The frequency and magnitude of wildfires has only increased in recent years, 2022 PA at 2-68, JA___, but EPA failed to accurately assess the data and how it impacts background PM_{2.5} levels. First, EPA relied on the same information from its 2020 review, including background monitoring data not updated since 2016. *Id.* at 2-72, JA___ . Second, EPA’s assertion that PM_{2.5} background concentrations range from 1-3 µg/m³ is based on a very small sample of monitoring sites—only five throughout the West—that is not representative. *Id.* at 2-68, JA___ . And regardless, the fact is that the Rule’s 9.0 µg/m³ standard is very close to the background PM_{2.5} concentrations in many specific areas, particularly in the West. EMA Comments 3, JA___ . These areas are indisputably handicapped in their ability to reduce emissions to meet the new NAAQS.

EPA’s proposed solution—for states to discount certain PM monitoring data affected by fires under the “Exceptional Events” rule—is slow, expensive, and uncertain. *Id.* at 4, JA___ ; EPA-HQ-OAR-2015-0072-1964 (Arizona Department of Environmental Quality Comments 3, JA___ ; Chamber Comments 5, JA___ ; EPA-HQ-

OAR-2015-0072-1618-Attachment 1, OMB comments 15, JA___; NMA Comments 3, JA___. Moreover, because wildfire smoke affects “most of the contiguous U.S.” at some point in the year, the Exceptional Events rule should not be the primary answer. 2022 PA at 2-68, JA___. EPA should have considered and addressed wildfire smoke, and other contributors to background PM_{2.5}, in determining the appropriateness of revising the NAAQS.

4. EPA was required at step one to consider current air quality in deciding whether to revise the NAAQS.

Finally, section 109(d) also requires EPA to consider current air quality in determining whether to revise the NAAQS. Appropriateness includes an accurate assessment of the “advantages” of an agency action. *Michigan*, 576 U.S. at 753. “One would not say that it is even rational, never mind ‘appropriate,’ to impose billions of dollars in economic costs in return for a few dollars in health or environmental benefits.” *Id.* at 752; *see also Entergy Corp.*, 556 U.S. at 232-33 (Breyer, J., concurring in part) (noting it would be “irrational” to require “spend[ing] billions to save one more fish or plankton”).

In the Rule, EPA overstated the benefits of a NAAQS revision by assuming a fictional world in which no area of the country had better air quality than the NAAQS standard of 12 µg/m³. 2022 PA 3-140 to 3-141, JA___-___. In reality, the current air quality in most areas significantly out-performs that standard. Concentrations Chart. As one CASAC member explained, this assumption skews the modeling and could

have overestimated “by a factor of two, or more.” Letter from Dr. Elizabeth A. (Lianne) Sheppard, Chair, Clean Air Scientific Advisory Committee, to the Hon. Michael S. Regan, Administrator, EPA (Mar. 18, 2022), EPA-HQ-OAR-2015-0072-1593, Boylan Individual Comments A-22, JA__ (Boylan Comments).

American Petroleum Institute v. EPA, 684 F.3d 1342 (D.C. Cir. 2012), is not to the contrary. It is true that the Court observed “it was not unreasonable for the EPA to measure expected benefits from the new NAAQS in part upon the assumption that, if the new NAAQS were not adopted, then each area would in the future just meet the existing standard.” *Id.* at 1352. But again, that case was premised on section 109(b) and the context of *setting* a NAAQS. *See id.* In any event, the observation was dicta because EPA also found “a substantial improvement over current air quality.” *Id.* at 1353.¹⁶

III. EPA failed to offer a reasoned explanation for key aspects of its decision.

The Rule should also be vacated as arbitrary and capricious because EPA failed to reasonably explain its decision in at least two ways. First, EPA failed to explain its different response to remaining uncertainties and limitations identified in

¹⁶ As to the *setting* of NAAQS at step two, Industry Petitioners preserve for future review whether the Supreme Court correctly interpreted the text of 109(b). Industry Petitioners also agree with State Petitioners that section 109(b), as construed by *American Trucking*, may present a non-delegation problem. *See* State Petitioners Br. Section III.B.

2020. In the 2020 decision, EPA recognized uncertainties including “exposure measurement error; potential confounding by copollutants; increasing uncertainty of associations at lower PM_{2.5} concentrations; and heterogeneity of effects across different cities or regions.” 85 Fed. Reg. at 82,716, JA___. In this Rule, EPA conceded that “some evidence of potential copollutant confounding” remains, but it then says no more than that this evidence “is inconsistent with other recent studies.” 89 Fed. Reg. at 16,226, JA___. Similarly, EPA recognized that associations between PM_{2.5} exposure and mortality remain “uncertain at ... low concentrations” of PM_{2.5}, but it offers nothing to resolve that either. *Id.* at 16,228, JA ___.¹⁷

Second, EPA failed to reasonably explain its decision to set the standard at 9.0 µg/m³. Though Industry Petitioners do not believe a 10.0 µg/m³ standard is legally or scientifically proper, EPA never addressed the fact that its own evidence and reasoning pointed more toward 10.0 µg/m³ than 9.0 µg/m³. EPA explained that “[a]n annual standard level that is no more than 15-18% higher than the study-reported means would generally maintain air quality exposures to be below those associated with the study-reported mean PM_{2.5} concentrations, exposures for which we have the strongest support for adverse health effects occurring.” 89 Fed. Reg. at 16,241, JA___. EPA then identified 9.3 µg/m³ as the lowest study-reported mean

¹⁷ See also State Petitioners Br. 33-38.

concentration. *Id.* at 16,263, JA___. By this logic, it should at least have considered a level below 10.7 $\mu\text{g}/\text{m}^3$ (15% higher than 9.3 $\mu\text{g}/\text{m}^3$), as some CASAC members suggested.¹⁸ But EPA never explained why it bypassed 10.0 $\mu\text{g}/\text{m}^3$.

CONCLUSION

For the foregoing reasons, the petitions should be granted and the Rule vacated.

¹⁸ *See* Boylan Comments A-24, JA___.

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CERTIFICATE OF COMPLIANCE

As required by Fed. R. App. P. 32(f) and (g), I certify that this Opening Brief of Industry and Arizona Coalition Petitioners complies with this Court's May 14, 2024, Scheduling Order, because it contains 9,745 words, excluding the parts of the brief exempted by Fed. R. App. P. 32(f) and Circuit Rule 32(e)(1).

This brief complies with the typeface requirements of Fed. R. App. P. 32(a)(5) and the type-style requirements of Fed. R. App. P. 32(a)(6) because it has been prepared in 14-point Times New Roman font using Microsoft Word.

/s/ Elbert Lin

CERTIFICATE OF SERVICE

I certify that on June 6, 2024, I electronically filed the foregoing Opening Brief of Industry and Arizona Coalition Petitioners with the Clerk of Court for the United States Court of Appeals for the District of Columbia Circuit by using the CM/ECF system. I further certify that all participants in the case are registered CM/ECF users and that service will be accomplished by the CM/ECF system.

/s/ Elbert Lin