

Nos. 20-1530, 20-1531, 20-1778, 20-1780

---

---

In the  
Supreme Court of the United States

---

STATE OF WEST VIRGINIA, ET AL.,

*Petitioners,*

v.

UNITED STATES ENVIRONMENTAL PROTECTION  
AGENCY, ET AL.,

*Respondents.*

---

**On Writ of Certiorari to the  
United States Court of Appeals  
for the District of Columbia Circuit**

---

**BRIEF OF AMICUS CURIAE THOMAS C.  
JORLING IN SUPPORT OF RESPONDENTS**

---

SEAN B. HECHT

*Counsel of Record*

UCLA School of Law  
405 Hilgard Ave.  
Los Angeles, CA 90095  
(310) 794-5272  
hecht@law.ucla.edu

THEODORE E. LAMM

UC Berkeley School of Law  
215 Bancroft Way  
Berkeley, CA 94720  
(510) 642-6774  
tlamm@law.berkeley.edu

---

---

**TABLE OF CONTENTS**

TABLE OF AUTHORITIES .....ii

STATEMENT OF INTEREST ..... 1

SUMMARY OF ARGUMENT .....3

ARGUMENT.....5

    I.    Introduction.....5

    II.   Congress designed the Clean Air Act as a comprehensive federal framework to address the impacts of air pollution ..... 6

        A.   Congress developed the Act to remedy decades of inadequate federal pollution control authority and prevent air pollution from worsening in the future. ....6

        B.   Congress designed the Act to comprehensively address contemporaneous and future impacts to health and welfare.....8

        C.   Congress designed Section 111(d) as an integral gap-filling component of this comprehensive framework. .... 11

    III.  Congress granted EPA the authority to craft effective regulatory actions to implement the Clean Air Act’s public health and welfare protections ..... 13

        A.   Congress designed the Act to be technology-forcing where necessary to protect public health and welfare. .... 15

B. Congress designed the Act, including Section 111, to encompass a range of potential pollution control strategies based on EPA’s empirical, practical assessment of the best system of emission reduction adequately demonstrated in each case. .... 16

C. Congress appropriately granted EPA significant rulemaking authority to limit emissions of dangerous air pollution, including where doing so might have a significant social or economic impact. .... 21

CONCLUSION ..... 29

**TABLE OF AUTHORITIES**

**Cases**

*American Elec. Power Co., Inc. v. Connecticut*, 564 U.S. 410 (2011)..... 21, 24

*American Lung Ass’n v. EPA*, 985 F.3d 914 (D.C. Cir. 2021).....3, 13, 19

*Bostock v. Clayton County, Georgia*, 140 S.Ct. 1731 (2020).....3, 24, 27

*Chevron, U.S.A. Inc. v. NRDC, Inc.*, 467 U.S. 837 (1984).....3, 17, 20

*Gundy v. United States*, 139 S.Ct. 2116 (2019) ..... 26, 27

*EPA v. EME Homer City Generation, L.P.*, 572 U.S. 489 (2014) ..... 20

*Massachusetts v. EPA*, 549 U.S. 497 (2007)..... passim

*NRDC, Inc. v. EPA*, 489 F.2d 390 (5th Cir. 1974) ... 15

*Sierra Club v. Costle*, 657 F.2d 298 (D.C. Cir. 1981)  
 ..... 26

*Union Elec. Co. v. EPA*, 427 U.S. 246 (1976) ... passim

*Utility Air Regulatory Group v. EPA*, 573 U.S. 302  
 (2014)..... 23

*Whitman v. American Trucking Ass’ns*, 531 U.S. 457  
 (2001)..... passim

**Statutes**

42 U.S.C. § 7401(b) ..... 23, 27

42 U.S.C. § 7409(d) ..... 10

42 U.S.C. § 7410(a) ..... 16

42 U.S.C. § 7411 ..... passim

42 U.S.C. § 7411(a) ..... passim

42 U.S.C. § 7411(b) ..... 11

42 U.S.C. § 7411(d) ..... passim

42 U.S.C. § 7602(g) ..... 24, 27

42 U.S.C. § 7602(h) ..... 23, 27

42 U.S.C. § 1857 (1970) ..... 8, 10, 13

42 U.S.C. § 1857b (1970) ..... 10

42 U.S.C. § 1857c-3 (1970) ..... 9, 12

42 U.S.C. § 1857c-4 (1970) ..... passim

42 U.S.C. § 1857c-5 (1970) ..... 10, 12, 16

42 U.S.C. § 1857c-6 (1970) ..... passim

42 U.S.C. § 1857c-7 (1970) ..... 12, 23

42 U.S.C. § 1857f-1 (1970) ..... 10

42 U.S.C. § 1857h (1970) ..... 9

**Other Authorities**

P.L. 84-159 (1955).....	7
P.L. 88-206 (1963).....	7
P.L. 89-271 (1965).....	7
P.L. 90-148 (1967).....	7
P.L. 91-604 (1970).....	passim
46 Fed. Reg. 50,766 (Oct. 14, 1981) .....	17
70 Fed. Reg. 28,606 (May 18, 2005).....	17
76 Fed. Reg. 48,208 (Aug. 8, 2011).....	18
80 Fed. Reg. 64,662 (Oct. 23, 2015) .....	18
S. 4358 (1970) .....	12
H.R. 3826 (2014).....	25
S. Rept. 91-1196 (1970).....	passim
1 Env'tl. Policy Div., Library of Congress, A Legislative History of the Clean Air Act Amendments of 1970 (1974) .....	9, 25
Thomas C. Jorling, <i>The Federal Law of Air Pollution Control</i> , in Environmental Law Institute, FEDERAL ENVIRONMENTAL LAW 1061 (Erica L. Dolgin and Thomas G. P. Guilbert eds., 1974) (“Fed. Env. L.”) .....	passim
Richard L. Revesz, “ <i>Bostock</i> and the End of the Climate Change Double Standard,” 46 Columbia Env. L. J. 1 (2020).....	9, 18

**STATEMENT OF INTEREST<sup>1</sup>**

*Amicus* Thomas C. Jorling is a leading expert on the drafting, implementation, and evolution of the Clean Air Act. Mr. Jorling has developed renowned expertise in air quality and environmental policy in his leadership roles in government, industry, and the academy, including Assistant Administrator at the United States Environmental Protection Agency, Commissioner of the New York State Department of Environmental Conservation, Director of the Center for Environmental Studies at Williams College, Vice President of Environmental Affairs for International Paper Company, and leader together with fellow former Senate staff member Leon G. Billings of a university course series on the origins and structure of federal environmental law.

As Minority Counsel for the United States Senate Committee on Public Works from 1968 to 1972, Mr. Jorling was directly engaged in the drafting and deliberations that resulted in the 1970 Clean Air Act Amendments, gaining an unparalleled understanding of the Act's design and underlying principles. Based on this intimate knowledge, Mr. Jorling authored a contemporaneous, authoritative analysis of the 1970 Amendments as part of the Environmental Law Institute's effort to develop the first "comprehensive

---

<sup>1</sup> No counsel for a party authored this brief in whole or in part, and no person other than amici made a monetary contribution intended to fund the preparation or submission of this brief. The parties have all consented to the filing of this amicus brief. Counsel Sean B. Hecht and Theodore E. Lamm provide their institutional affiliations solely for purposes of identification and do not imply any institutional endorsement of the views expressed here.

and analytical description of this new body of federal law.” Fed. Env. L. at 4. In his subsequent roles at federal and state environmental agencies, Mr. Jorling was directly responsible for interpreting and implementing the Clean Air Act, and today he is widely recognized as an architect of and expert on the law. He has submitted this brief because he believes that Congress drafted the Clean Air Act, including Section 111(d), as a comprehensive and flexible framework to effectively regulate all air pollutants (including carbon dioxide) that may endanger public health and welfare including, where necessary, through the issuance of regulations with significant economic impacts and the implementation of emission reduction strategies that are not limited to application “to and at” individual sources.

## SUMMARY OF ARGUMENT

Section 111(d) of the Clean Air Act authorizes EPA to regulate emissions of non-criteria, non-hazardous air pollutants from stationary sources through identification of the “best system of emission reduction” that is “adequately demonstrated.” 42 U.S.C. §§ 7411(a), (d). As the D.C. Circuit panel noted, Congress “knew both the scope and importance of what it was doing” when it created this authority and crafted Section 111(d) to play a vital and deliberate role in ensuring no gaps among regulated sources. *American Lung Ass’n v. EPA*, 985 F.3d 914, 964 (D.C. Cir. 2021), *cert. granted*, 142 S.Ct. 420 (Oct. 29, 2021) (No. 20-1530).

Since the earliest days of the Act’s implementation, courts have understood its comprehensive regulatory regime to include a wide range of flexible, technology-forcing, and potentially industry-altering standards, subject to the considerations and limitations stated expressly in the statutory text. *See, e.g., Whitman v. American Trucking Ass’ns*, 531 U.S. 457, 466 (2001); *Chevron, U.S.A., Inc. v. NRDC, Inc.*, 467 U.S. 837, 865 (1984); *Union Elec. Co. v. EPA*, 427 U.S. 246, 256-257 (1976). And there is ample “evidence that ... Member[s] of Congress interpreted the statutory text that way,” *Bostock v. Clayton County, Georgia*, 140 S.Ct. 1731, 1757 (2020) (Alito, J., dissenting), when the 1970 Amendments were enacted.

Congress explicitly directed EPA to base Section 111 performance standards on the “best system of emission reduction” that is “adequately demonstrated” for a particular source category. 42

U.S.C. § 7411(a)(1). This Congressional command ensures that these standards will reflect what is realistically achievable in that source category. Application of this flexible but empirically driven regulatory mechanism to reduce harmful emissions from existing sources (as Section 111(d) requires) may have significant impacts to industry, where Section 111's statutory command supports that outcome. When such impacts occur, that is a result of Congress's decision assign EPA the responsibility to implement Congressionally specified standards in order to protect public health and welfare under the Act.

“The Clean Air Act authorizes a regulatory program of great significance, for the reach of the power extends to every activity and individual in our society. The implications of this are, of course, profound.” Fed. Env. L. at 1143. Congress was fully aware that this authorization was vital to prevent the Act from becoming “obsolete” and intentionally crafted the law to include a combination of far-reaching goals, comprehensive coverage of pollutants and sources, flexible regulatory authority, and technology-forcing capacity in order to “forestall such obsolescence.” *Massachusetts v. EPA*, 549 U.S. 497, 532 (2007). And as the intent, structure, and text of the Act make clear, Congress deliberately afforded EPA the discretion (within explicitly stated statutory limitations) to consider a wide range of practical emission reduction strategies—not just those applied “to and at” an individual source—when setting emission standards to achieve its statutory purpose.

## ARGUMENT

### I. Introduction

When Congress enacted the 1970 Clean Air Act Amendments, it crafted a comprehensive framework to serve a broad public health and welfare mandate and directed EPA to undertake a variety of regulatory actions to achieve air quality goals. This framework encompasses a range of potential measures, including technology-forcing and market-based approaches where appropriate, and is designed to ensure there are no gaps in either sources or types of air pollution. As a result, the Act authorizes EPA to take necessary steps—guided by the Act’s explicit guardrails—to address air pollution and promote public health and welfare, including steps that may have significant economic impacts.

As part of this framework, Congress crafted Section 111(d) to ensure control of non-criteria, non-hazardous pollutants from stationary sources. Congress both enabled EPA to develop flexible regulatory standards and required the agency to base those standards on an empirical analysis of adequately demonstrated emission reduction systems. To appropriately interpret the Act—as a statute designed to achieve its stated purpose—the Court should continue to afford EPA the flexibility that Congress originally authorized, within express boundaries, to implement achievable solutions that protect public health and welfare.

## **II. Congress designed the Clean Air Act as a comprehensive federal framework to address the impacts of air pollution**

The 1970 Amendments represented a transformative moment in the federal response to pressing threats to public health and the environment: “a drastic remedy to what was perceived as a serious and otherwise uncheckable problem of air pollution.” *Union Elec. Co. v. EPA*, 427 U.S. at 256. To succeed where past attempts had failed to achieve the statutory goal of promoting public health and welfare by protecting and enhancing air quality, Congress crafted a new regulatory approach involving broadly defined public protection goals, substantial federal standard-setting and enforcement authority, and comprehensive coverage of sources and pollutants. To implement this approach, Congress vested EPA with the duty and the legal tools needed to protect public health and welfare. Congress contemplated and required that EPA would continuously improve the understanding of air pollution, limit the allowable pollution in the ambient air, and control the emission of pollutants from a wide variety of pollution sources.

### **A. Congress developed the Act to remedy decades of inadequate federal pollution control authority and prevent air pollution from worsening in the future.**

While the 1970 Amendments established the Clean Air Act in its current form, these amendments were the fifth attempt by Congress to address an air pollution problem that had become pervasive with increasing industrialization and the growth of

vehicular travel. A review of prior efforts, which “operated effectively to sanction what industry—on its terms—was willing to do” and “with little regulatory significance,” Fed. Env. L. at 1061, shows that Congress designed the 1970 Amendments to empower EPA to regulate air pollutants comprehensively, at the federal level, for the first time. The enacting Congress sought nothing less than to “establish that the air is a public resource, and that those who would use that resource must protect it from abuse.” S. Rept. 91-1196 at 4.

Congress’s first major attempt to address air pollution at the federal level, the 1955 Air Pollution Control Act, P.L. 84-159, authorized the Surgeon General to conduct research on air pollution but established no emission limits or regulatory authority. With air pollution only having worsened, in 1963 Congress enacted the Clean Air Act, P.L. 88-206, which required the Public Health Service to publish air quality criteria documents for specific pollutants and encouraged the States to cooperate in pollution control efforts. The 1963 Act established Congress’s commitment to “promote the public health and welfare” through the “prevention and control” of air pollution.

In 1965, recognizing the inadequacy of non-regulatory strategies to address national conditions, Congress amended the Act, P.L. 89-271, establishing standards for automobile emissions of certain pollutants. Just two years later, having identified the need to control air pollution from all source categories, Congress amended the Act again, P.L. 90-148, directing air quality control regions in the states to adopt air quality standards for specific pollutants.

However, seeing that the “air pollution problem [was] more severe, more pervasive, and growing at a more rapid rate than was generally believed” and that the federal air quality program was “underfunded and undermanned,” Congress enacted the 1970 Amendments to “provide a much more intensive and comprehensive attack on air pollution” than the previous iterations of the Act. S. Rept. 91-1196 at 4. The aim of the Amendments was to “broaden[]” “the requirements for State action,” “greatly increase[]” “the obligation on polluters,” and create a program “truly national in scope,” Id. at 2.

The 1970 Amendments reflect “nearly total federal supervisory and approval authority” to set ambitious emission standards. Fed. Env. L. at 1063. The goal of the legislation was to “restructure the methods available” and “to authorize a massive attack on air pollution.” S. Rept. 91-1196 at 1.

**B. Congress designed the Act to comprehensively address contemporaneous and future impacts to health and welfare.**

Congress made clear in the 1970 Amendments that it had designed this federal authority to protect Americans from the negative impacts of air pollution. The primary purpose of the Act, as articulated in the text of the original 1963 Act and reiterated in the 1970 Amendments, was (and is) “to protect and enhance the quality of the Nation’s air resources so as to promote the public health and welfare.” P.L. 91-604 § 101(b)(1), 42 U.S.C. § 1857 (1970). Most of the 1970 Amendments’ stationary source provisions—regarding listing criteria pollutants, establishing

national ambient air quality standards, and regulating particular source categories through performance standards—focused (and still focus) on the harmful impacts of air pollutants on “public health and welfare.” P.L. 91-604 §§ 108(a)(1)-(2), 109(b)(1)-(2), 111(b)(1)(A), 42 U.S.C. §§ 1857c-3, 1857c-4, 1857c-6 (1970). The statute defined (and still defines) “welfare” to include “effects on ... climate,” P.L. 91-604, § 302(h), 42 U.S.C. § 1857h (1970), as well as impacts to the natural environment, property, and well-being.

This reference to “climate” was no stray addition; as the Court has recognized, the Act’s coverage of greenhouse gases as air pollutants is “unambiguous.” *Massachusetts v. EPA*, 549 U.S. at 529; *see also* Richard L. Revesz, “*Bostock* and the End of the Climate Change Double Standard,” 46 *Columbia Env. L. J.* 1, 32-44 (2020) (detailing a wide cohort of members of Congress, federal agency personnel, and scientific experts directly involved in the development and passage of the 1970 Amendments who were alert to and expressed concern about the potential for certain air pollutants to negatively impact the climate, and in particular for greenhouse gases to cause global warming). Indeed, Congress deliberately included climate impacts based on an early understanding of the potential effects of air pollution on climate. Authorization of national ambient air quality standards was premised on recognition “that man’s natural and man-made environment must be preserved and protected” from “any known or anticipated adverse effects of air pollution—including effects on soils, water, vegetation, man-made materials, animals, wildlife, visibility, climate, and

economic values.” S. Rept. 91-1196 at 11. Senators responsible for crafting the Act’s key provisions were acutely aware that air pollution could threaten “irreversible atmospheric and climatic changes.” 1 Env’tl. Policy Div., Library of Congress, A Legislative History of the Clean Air Act Amendments of 1970 (1974) at 224 (Sep. 21, 1970) (Statement of Sen. Muskie), 349 (Sep. 21, 1970) (Statement of Sen. Scott).

Moreover, Congress was aware that air pollution did not present a static threat, but rather would require iterative, fact-based regulatory approaches to address emergent problems. Thus, Congress also crafted the Act’s purpose “to initiate and accelerate a national research and development program to achieve the prevention and control of air pollution,” P.L. 91-604 § 101(b)(2), 42 U.S.C. § 1857 (1970), and established such a program including a focus on “long-term effects” of air pollution, P.L. 91-604 § 103(f), 42 U.S.C. § 1857b (1970).

To address scientific developments that might emerge from this or other programs, Congress designed the Act’s regulatory programs to require or allow regular revision of standards and emission limits as appropriate when knowledge of air pollution and its effects evolved. *See, e.g.*, P.L. 91-604 § 109(b)(1)-(2), 42 U.S.C. § 1857c-4 (1970) (“Such [primary or secondary] standards may be revised in the same manner as promulgated”), later amended, 42 U.S.C. § 7409(d) (requiring regular five-year review and revision for all ambient air quality standards); P.L. 91-604 § 110(a)(2)(H), 42 U.S.C. § 1857c-5 (1970) (requiring revisions to state implementation plans to achieve and maintain

compliance with air quality standards); P.L. 91-604 § 202(a)(1), 42 U.S.C. § 1857f-1 (1970) (directing EPA to “prescribe (and from time to time revise)” mobile source standards). In Section 111, Congress similarly permitted EPA to “revise” stationary source standards “from time to time,” P.L. 91-604 § 111(b)(1)(B), 42 U.S.C. § 1857c-6 (1970), and later amended the section to affirmatively require review and revision “at least every 8 years,” 42 U.S.C. § 7411(b)(1)(B).

In seeking to “assure the protection of the health of every American,” S. Rept. 91-1196 at 4, Congress was aware of—and crafted a regulatory program to address—both the full scope of air pollutants and their harmful impacts, and the full scope of air pollution sources, explicitly accounting for future changes in pollutants, impacts, and sources as technology and scientific knowledge continue to evolve. Correct interpretation of the Act, and in particular of the provisions that Congress added in the 1970 Amendments, thus requires a comprehensive and iterative understanding of the regulatory framework.<sup>2</sup>

**C. Congress designed Section 111(d) as an integral gap-filling component of this comprehensive framework.**

---

<sup>2</sup> As *amicus* commented at the time, “[N]one of the provisions of the Act can be read alone or understood without reference to other provisions of the Act. The Act is akin to an eco-system, with a network of relationships that are as important as the separate constituent authorizations to an understanding of its operation and impact.” Fed. Env. L. at 1066.

To enact this combination of expansive federal authority and a broad public health and welfare mandate, Congress developed a comprehensive framework to ensure all air pollution from existing stationary sources was subject to regulation under the Act. This framework relied on development of ambient air quality standards and state implementation plans for “criteria” pollutants, P.L. 91-604 §§ 108-110, 42 U.S.C. §§ 1857c-3 – 1857c-5 (1970); federal emission standards for “hazardous” pollutants, P.L. 91-604 § 112, 42 U.S.C. § 1857c-7 (1970); and a hybrid approach, consisting of both federal emission limitations and state performance standards and implementation plans to implement those limitations, for non-criteria, non-hazardous pollutants, P.L. 91-604 § 111(d)(1), 42 U.S.C. §§ 1857c-6 (1970).

This last provision—originally crafted as a stand-alone Section 114 in the Senate version of the 1970 Amendments, S. 4358, and incorporated as Section 111(d), using Section 111(a)’s performance standard process, to align the Senate and House bill structures—was “a mechanism to regulate those air pollutants which otherwise might not be subject to any regulation” under the Act. Fed. Env. L. at 1106. Congress specifically designed it to ensure that EPA had authority to appropriately regulate all air pollutants that endanger public health or welfare, including those, like carbon dioxide, that do not qualify as criteria pollutants or hazardous air pollutants.<sup>3</sup>

---

<sup>3</sup> Section 111(d)’s gap-filling role for existing source regulation is underscored by its location alongside the Section 111 provisions

Section 111(d) is far from an “ancillary provision,” Petition for Writ of Certiorari at 1, Brief of Westmoreland Mining Holdings LLC at 38; it is a core statutory component that ensures “no gaps in control activities pertaining to stationary source emissions that pose any significant danger to public health or welfare.” S. Rept. 91-1196 at 20. As the D.C. Circuit panel acknowledged, EPA’s obligation to regulate greenhouse gas emissions from stationary sources under Section 111 is “no doubt a significant task for the EPA .... It is the product of Congress’ charge that the EPA regulate air pollution nationwide.” *American Lung Ass’n v. EPA*, 985 F.3d at 961.

### **III. Congress granted EPA the authority to craft effective regulatory actions to implement the Clean Air Act’s public health and welfare protections**

As part of its overall design of comprehensive federal authority to address air pollution, Congress designed the 1970 Amendments to enable EPA to craft flexible and effective regulatory approaches to tackle novel or difficult challenges, such as the impacts of greenhouse gas emissions on climate. As the Court has noted, Congress understood “that without regulatory flexibility, changing circumstances and scientific developments would soon render the Clean Air Act obsolete.” *Massachusetts v. EPA*, 549 U.S. at 532. Congress prioritized protection of health and welfare in the text

---

for new source regulations, “[s]ince standards of performance governing new sources are comprehensive, regulating the emissions of *all* pollutants from such sources.” Fed. Env. L. at 1106 (emphasis in original).

of the Act, P.L. 91-604 § 101(b), 42 U.S.C. § 1857 (1970) (identifying protection of public health and welfare as primary statutory goals with no countervailing considerations), *see Whitman v. American Trucking Ass'ns, Inc.*, 531 U.S. at 468-469 (rejecting consideration of countervailing factors except where expressly stated), and its regulatory strategies reflected this priority, *see Union Elec. Co. v. EPA*, 427 U.S. at 257 (“[The 1970 Amendments] are expressly designed to force regulated sources to develop pollution control devices that might at the time appear to be economically or technically infeasible”).

Congress recognized that “the health of people is more important than the question of whether the early achievement of ambient air quality standards protective of health is technically feasible,” S. Rept. 91-1196 at 2, and designed the Act’s provisions accordingly. As a result, Congress made the choice, reflected in the statutory language, to design the Act to be technology-forcing, to allow regulatory flexibility, and to require actions from EPA to meet Congress’s policy goals, including actions with broad economic or social significance where appropriate to protect public health and welfare.<sup>4</sup>

---

<sup>4</sup> The significance of this new regime was clear at the time: “The Clean Air Act, coupled with the new 1972 Water Pollution Control Act Amendments, grants regulatory power to the administrator of EPA far beyond that possessed by other traditional federal regulatory commissions ... regulat[ing] not just one or another industry type or practice, but rather regulat[ing] nearly all industry....” Fed. Env. L. at 1066.

**A. Congress designed the Act to be technology-forcing where necessary to protect public health and welfare.**

Congress recognized that this new cooperative federal-state scheme to implement air quality standards in order to protect public health and welfare would have wide-ranging industrial and economic consequences: the Act would “require major action throughout the Nation” including “major investments in new technology and new processes” and “altered operating procedures or a change of fuels.” S. Rept. 91-1196 at 2. This understanding is reflected in the text of the Act, and has been recognized by courts, including this Court, consistently for decades.

The technology-forcing feature of the 1970 Amendments was intentionally designed to “repair” the failings of the prior iterations of the Act: “because [the pre-1970 Act] did not affirmatively press technology, the law, in a perverse turn, actually authorized restraint.” Fed. Env. L. at 1061.<sup>5</sup> “All of the procedural, programmatic, and other requirements” of the 1970 Amendments are “more meaningful if read in relationship to [that] repair.” Id. at 1062.

Federal courts immediately recognized that the “approach of the Amendments ... was to shift from the approach of earlier legislation of establishing air

---

<sup>5</sup> It was precisely the lack of clear instruction from Congress that led to ineffective air quality regulation prior to the 1970 Amendments: “With unbounded discretion as their only reed, federal agency officials engaged primarily in cajoling exercises, with little regulatory significance.” Fed. Env. L. at 1061.

pollution standards commensurate with existing technological feasibility to a bolder policy which forces technology to catch up with the newly promulgated standards.” *NRDC, Inc. v. EPA*, 489 F.2d 390, 401 (5th Cir. 1974), *rev’d on other grounds sub nom. Train v. NRDC*, 421 U.S. 60 (1975) (internal quotation marks omitted). The Court has similarly recognized that Congress was “unquestionably aware” of the potential industry-altering implications of stringent air quality protections. *Whitman v. American Trucking Ass’ns*, 531 U.S. at 466.

**B. Congress designed the Act, including Section 111, to encompass a range of potential pollution control strategies based on EPA’s empirical, practical assessment of the best system of emission reduction adequately demonstrated in each case.**

As part of this robust regulatory approach, Congress deliberately authorized varied strategies to control air pollution in different settings. Those strategies are diverse and designed to improve air quality comprehensively, even in situations where pollution sources may be complex and involve many sectors of the economy.

For criteria pollutants, for example, Congress required EPA to issue national ambient air quality standards that “in the judgment of the Administrator ... are requisite to protect” the public health and welfare. P.L. 91-604 § 109(b)(1)-(2), 42 U.S.C. § 1857c-4 (1970). To achieve and maintain these standards, Congress authorized a flexible planning exercise that could include “emission limitations, schedules, and

timetables for compliance with such limitations, and such other measures as may be necessary to insure [compliance], including, but not limited to, land-use and transportation controls.” P.L. 91-604 § 110(a)(2)(B), 42 U.S.C. § 1857c-5 (1970). Congress later added “economic incentives such as fees, marketable permits, and auctions of emissions rights” to the strategies that could be utilized to achieve these standards, 42 U.S.C. § 7410(a)(2)(A), in response to calls from environmental and industry advocates and academic experts to incorporate more cost-effective emission reduction strategies.

Congress focused Section 111 on new and existing stationary sources, with Section 111(d) compliance responsibilities expressly modeled on the Section 110 procedural model assigning tasks to EPA and the states. P.L. 91-604 § 111(d), 42 U.S.C. § 1857c-6 (1970) (calling for EPA to devise a “a procedure similar to that provided by section 110”). There is nothing in the text or history of Section 111(d) that suggests it was not designed to have similar breadth or flexibility. On the contrary, Section 111(d) was specifically designed to empower EPA to address emissions of non-criteria, non-hazardous pollutants from existing stationary sources, which were left inadequately regulated under other sections of the Act. At the same time, the flexible methods that Section 111 contemplates EPA might consider when setting emission standards, including under Section 111(d), are tailored to real-world assessments of the best way to regulate specific pollutants emitted from specific source categories: Congress directed EPA to establish performance standards against a benchmark of the particular characteristics of and

strategies available to each industry. *See* 42 U.S.C. § 7411(a)(1) (requiring the EPA Administrator to determine the “best system of emission reduction” that has been “adequately demonstrated” in order to set performance standards for a particular source category).

EPA and the Court have long recognized that Congress authorized EPA to take varied approaches in designing and approving emission reduction strategies across these Clean Air Act programs. Examples include emissions trading between sources within a conceptual “bubble” as part of State Implementation Plan compliance, 46 Fed. Reg. 50,766, *Chevron, U.S.A., Inc. v. NRDC, Inc.*, 467 U.S. at 863-865; cap-and-trade mechanisms as the “best system of emission reduction” for certain pollutants, 70 Fed. Reg. 28,606, 28,617; and implementation of emissions trading programs to limit interstate air pollution under Section 110, 76 Fed. Reg. 48,208, 48,210.

Similarly, the Clean Power Plan, which allowed (but did not mandate) emissions trading as one strategy for covered sources to achieve greenhouse gas emission performance standards under Section 111(d), 80 Fed. Reg. 64,662, 64,723-28, was built on what EPA found was actually being done by states and sources around the country, as required by Section 111’s benchmarking task. It was only the latest in a series of EPA rules adopting or incorporating “beyond-the-fenceline” strategies such as emissions trading and generation shifting as appropriate to achieve the Act’s mandate. *See Revesz, supra*, at 23-25.

Section 111(d) tasks EPA with developing and implementing emission reduction standards specific to various types of existing plants, such as electrical generating units powered with different energy sources. EPA must take industry-specific conditions into account in developing those standards; states, in turn, must implement strategies to achieve them using the state implementation plan procedure Congress borrowed from Section 110. Crucially, Congress linked the control of non-criteria, non-hazardous pollutants from each class of regulated pollution source to “standards of performance” reflecting the “best system of emission reduction” that is “adequately demonstrated,” accounting for cost, P.L. 91-604 § 111(a)(1), 42 U.S.C. § 1857c-6. As with the criteria pollutant provisions, the latitude and flexibility afforded in Section 111—including Section 111(d)—are commensurate with the scale of the Act’s public health and welfare mandate.

At the same time, Congress provided clear guidance to anchor EPA’s standard-setting. The requirement that any standard reflect an “adequately demonstrated” degree of emission limitation ensured that EPA would conduct a fact-driven analysis of available, viable emission reduction strategies for each class of pollution sources before issuing any rule under Section 111, including Section 111(d). While, as the court below noted, “Congress imposed no limits on the *types* of measures the EPA may consider beyond ... cost, any nonair quality health and environmental impacts, and energy requirements,” *American Lung Ass’n v. EPA*, 985 F.3d at 946 (emphasis added), it did require that EPA base its performance benchmarks

for the “best system of emission reduction” on demonstrated strategies.<sup>6</sup>

EPA’s authority to determine the appropriate degree of emission limitation for each source category is thus grounded in the practical test Congress wrote into Section 111: EPA must set standards that “reflect” limitations achievable with the “best system of emission reduction” that has been “adequately demonstrated” for that class of sources. These constraining criteria for EPA’s setting of a category-specific emission standard provide a real-world test to determine an effective, achievable pollution reduction strategy based on empirical assessment of what is actually done, and what is capable of being done at scale, in each regulated industry. As legislators recognized, the provision authorized EPA to “determine the achievable limits” based on practices including “process changes, operation changes, direct emission control, or other methods.” S. Rept. 91-1196 at 17.

Congress’s practical test constrains EPA’s determination by requiring the agency to consider real-world conditions in determining the best “system” that is “adequately demonstrated” to reduce emissions when setting standards under Section 111, including Section 111(d). In doing so, EPA cannot ignore actual market and technical conditions relevant to reducing pollution from a particular source category; on the contrary, EPA must craft its evaluation of the “best system” with those conditions in mind. In the

---

<sup>6</sup> Congress revised the definition of “standard of performance” to require consideration of cost “and any nonair quality health and environmental impact and energy requirements” in post-1970 Amendments. 42 U.S.C. § 111(a)(1).

electricity sector in particular, regulators and energy suppliers interact in complex ways that shape EPA's empirical standard-setting inquiry. EPA must consider flexible regulatory strategies that reflect sector best practices already demonstrated effective by industry. The Court has recognized in related contexts that Congress contemplated pollution control strategies that harness market mechanisms and build on business and state regulatory creativity. *See, e.g., EPA v. EME Homer City Generation, L.P.*, 572 U.S. 489, 519 (2014) (approving EPA's taking into account cost effectiveness in regulating interjurisdictional air pollution); *Chevron, U.S.A., Inc. v. NRDC, Inc.*, 467 U.S. at 865.

Here, if EPA is prevented from considering the demonstrated, cost-effective best practices of the electricity sector in making its determination of the best system to reduce emissions from electrical generating units, it will be precluded from fulfilling Congress's clear Section 111 mandate to consider all "adequately demonstrated" systems when setting standards.<sup>7</sup>

**C. Congress appropriately granted EPA significant rulemaking authority to limit emissions of dangerous air pollution,**

---

<sup>7</sup> Indeed, a general ruling on the level of regulatory flexibility authorized by Section 111, without a specific "best system of emission reduction" determination to evaluate, would disrupt not only the empirical, practical analysis that Congress directed EPA to undertake but also decades of precedent embracing flexible, cost-effective regulatory strategies. *See, e.g., American Elec. Power Co. v. Connecticut*, 564 U.S. 410, 426 (2011) (noting that Congress delegated the decision to regulate greenhouse gases under Section 111 to EPA's "expert determination").

**including where doing so might have a significant social or economic impact.**

Congress fully understood that the 1970 Amendments' new technology-forcing, flexible emission reduction mandates could have significant social and economic impacts, including potentially serious effects on particular facilities and industries. Congress expressed this understanding throughout the text of the Act.

Rather than base ambient air quality standards on technical feasibility, for example, Congress reflected the need for stringent standards by directing EPA to develop ambient air quality standards “requisite to protect” public health and welfare, P.L. 91-604 § 109(b)(1)-(2), 42 U.S.C. § 1857c-4 (1970), which this Court has acknowledged is an “absolute” mandate, *Whitman v. American Trucking Ass'ns*, 531 U.S. at 465 (internal citations and quotation marks omitted). In doing so, Congress understood the magnitude of the task it assigned EPA. It determined that “existing sources of pollutants either should meet the standard of the law or be closed down, and ... new sources should be controlled to the maximum extent possible to prevent atmospheric emissions.” S. Rept. 91-1196 at 3. Congress contemplated that the Clean Air Act's social and economic impact could—and likely would—be significant.

But these health-based ambient air quality standards would have been mere abstractions without specific requirements for action to limit emissions, and moreover, the standards cover only a subset of pollutants addressed by the Act. Understanding this, Congress also required EPA to take actions to implement emission standards for

particular pollutants and source categories. The Act articulates the extent to which EPA may regulate pollutants and sources; within the overall authority EPA is granted, EPA has broad latitude to issue rules to achieve the standards Congress requires the agency to set. And the Act confers broad authority on EPA to take actions—even those that might have profound economic or social impact—in service of meeting air quality goals. Among the emission standards Congress tasked EPA with developing was the set of standards embodied in Section 111 for both new and existing stationary sources: standards based on the “best system of emission reduction” that has been “adequately demonstrated” for specific pollutants in specific source categories. P.L. 91-604 § 111(a)(1), 42 U.S.C. § 1857c-6 (1970).

Moreover, where Congress intended to limit EPA’s regulatory flexibility—such as the requirement to “tak[e] into account the cost of achieving such reduction” in determining the “best system,” *id.*, or the requirement to provide an “ample margin of safety to protect the public health” in the case of hazardous air pollutant standards, P.L. 91-604 § 112(b)(1)(B), 42 U.S.C. § 1857c-7 (1970)—it did so explicitly. Where Congress intended for EPA to have flexibility in identifying regulatory measures to achieve statutory goals—such as the mandate to “establish a procedure” for states to develop plans that set emission standards for any existing source for “any air pollutant” that is not regulated as a criteria or hazardous pollutant, P.L. 91-604 § 111(d)(1), 42 U.S.C. § 1857c-6 (1970)—it declined to state limitations to the contrary. In these and other instances, the text of the Act invariably supports

flexible, and potentially significant, rulemaking authority on the part of EPA.

The Court has observed that Congress can be expected to “speak clearly if it wishes to assign to an agency decisions of vast economic and political significance.” *Utility Air Regulatory Group v. EPA*, 573 U.S. 302, 324 (2014) (internal quotation marks omitted). Congress spoke quite clearly when it instructed EPA to undertake air pollution control to protect “public welfare,” 42 U.S.C. § 7401(b)(1), defined “public welfare” to include “climate,” 42 U.S.C. § 7602(h), directed EPA to craft and enforce performance standards for non-criteria, non-hazardous air pollutants from existing stationary sources, 42 U.S.C. §§ 7411(a), (d), and defined “air pollutant” to include “any air pollution agent or combination of such agents, including any ... substance or matter which is emitted into or otherwise enters the ambient air,” 42 U.S.C. § 7602(g). As the Court has noted in the context of Section 111, “Congress delegated to EPA the decision whether and how to regulate carbon-dioxide emissions from powerplants.” *American Elec. Power Co. v. Connecticut*, 564 U.S. at 426. And as the Court has stated upon review of the Act’s regulatory structure, “there is nothing counterintuitive to the notion that EPA can curtail the emission of substances that are putting the global climate out of kilter.” *Massachusetts v. EPA*, 549 U.S. at 531. Nor is there anything counterintuitive or surprising about the idea that EPA can establish standards that will require aggressive actions by regulated parties and states, even if those actions have significant economic or social consequences and even if they may result in

actions not applied “to and at” an individual facility. Indeed, that is precisely what Congress intended, where necessary to address air quality.

As the Court has elucidated when assessing the full scope of a major Congressional initiative, “the express terms of a statute” take priority over any “extratextual considerations.” *Bostock v. Clayton County, Georgia*, 140 S.Ct. at 1737 (2020). Where the express terms of the statute considered “in accord with the ordinary public meaning ... at the time of its enactment”—here, “air pollutant,” “welfare,” “climate,” and “best system of emission reduction”—are clear, as they are here, other considerations play no role in narrowing the scope of application to avoid “situations not expressly anticipated by Congress.”<sup>8</sup> *Id.* at 1738, 1749 (internal quotation marks and citations omitted). Rather, the scope of application “simply demonstrates [the] breadth of a legislative command.” *Id.* at 1749 (internal quotation marks and citations omitted). Congress designed a statute capable of comprehensively addressing risks to public

---

<sup>8</sup> To the extent that post-enactment legislative efforts are relevant to interpreting the scope of the 1970 Amendments, the fact that “[i]n the time since, Congress has never amended the Act to require the EPA to set national carbon dioxide emission standards for the electric power sector,” Brief of 91 Members of Congress as *Amici Curiae* in Support of Petitioners at 19, considered together with the clear language of Section 111, is surely straightforward evidence that Congress did authorize EPA to set such standards in 1970. Subsequent efforts in Congress to eliminate or restrict EPA’s authority to regulate greenhouse gas emissions under the Act in general, and Section 111 in particular, similarly demonstrate that such authority already exists. *See, e.g.*, Electricity Security and Affordability Act, H.R. 3826, 113th Cong. (2014).

health and welfare from air pollution, not just in 1970 but for decades to come.<sup>9</sup>

Thus, Congress contemplated that effective regulation of any air pollutants, including greenhouse gases, may require some industry-altering actions to protect public health and welfare. Courts have consistently recognized this, upholding EPA's authority to implement the Act under conditions where impacts on industry were known to be significant. *See, e.g., Whitman v. American Trucking Ass'ns*, 531 U.S. at 466 (acknowledging that “the economic cost of implementing a very stringent standard might produce health losses sufficient to offset the health gains achieved in cleaning the air”); *Union Elec. Co. v. EPA*, 427 U.S. at 269 (“Technology forcing is a concept somewhat new to our national experience and it necessarily entails certain risks. But Congress considered those risks in passing the 1970 Amendments and decided that the dangers posed by uncontrolled air pollution made them worth taking”).

This is especially true of Section 111. Courts have long acknowledged that the “best system of emission reduction” standard has the potential to lead to significant industry impacts. *See Sierra Club v. Costle* 657 F.2d 298, 314 (D.C. Cir. 1981) (noting, regarding a Section 111 standard that would reduce coal-fired power plant emissions by 90 percent, that the “cost of

---

<sup>9</sup> As one Senator stated, “While the bill is far reaching, and sets a high challenge, we believe it necessary for life and health, and responsive to our duty in husbandry to future generations.” 1 Env'tl. Policy Div., Library of Congress, A Legislative History of the Clean Air Act Amendments of 1970 at 259 (Sep. 21, 1970) (Statement of Sen. Cooper).

the new controls ... is substantial,” that “utilities will have to spend tens of billions of dollars ... on pollution control,” and that “[c]onsumers will ultimately bear these costs, both directly in the form of residential utility bills, and indirectly in the form of higher consumer prices due to increased energy costs”).

This design makes clear that while the Act affords EPA broad authority in a reticulated statute that addresses a broad problem, it is unquestionable that “Congress, and not the Executive Branch, [made] the policy judgments” regarding protection of public health and welfare, control of air pollution, and the scope and structure of regulatory authority to achieve those goals. *Gundy v. United States*, 139 S.Ct. 2116, 2141 (Gorsuch, J., dissenting). Although Congress has left many important implementation judgments to EPA, it nonetheless decided all the relevant “major policy questions.” Congress deliberately directed EPA to implement the Act with the authority and flexibility necessary to achieve its explicit goal “to protect and enhance the quality of the Nation’s air resources so as to promote the public health and welfare and the productive capacity of its population.” 42 U.S.C. § 7401(b)(1).<sup>10</sup> This is no less true of Section 111(d) than of any other section of the Act.

---

<sup>10</sup> Moreover, the standards Congress crafted to direct EPA’s achievement of this goal—including definitions of “air pollutant” and “public welfare,” 42 U.S.C. §§ 7602(g)-(h), and a mandate to determine and require implementation of the “best system of emission reduction” for non-criteria, non-hazardous air pollutants from existing sources, 42 U.S.C. §§ 7411(a), (d)—clearly provide “an intelligible principle to guide the delegee’s use of discretion,” *Gundy v. United States*, 139 S.Ct. at 2123, that fits squarely within the Court’s precedent, *see id.* at 2129.

The Court has acknowledged that “major” legislation “written in starkly broad terms” can often produce “unexpected applications” over time. *Bostock v. Clayton County, Georgia*, 140 S.Ct. at 1753. The potential industry and economic effects of regulating air pollutants were manifestly not “unexpected” to the Congress that wrote the Act, even where the regulation addresses pollution with public welfare effects such as climate change—and Congress’s groundbreaking action in 1970 clearly created the tools to address it.

**CONCLUSION**

The judgment of the Court of Appeals should be affirmed.

Respectfully submitted,

SEAN B. HECHT

*Counsel of Record*

UCLA School of Law

405 Hilgard Ave.

Los Angeles, CA 90095

(310) 794-5272

hecht@law.ucla.edu

THEODORE E. LAMM

UC Berkeley School of Law

215 Bancroft Way

Berkeley, CA 94720

(510) 642-6774

tlamm@law.berkeley.edu