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Cracks in the Clean Air Act

FIXING THE FOUNDATION OF US CLIMATE POLICY

*“We are the first generation to feel the impact of climate change and the last generation that can do something about it.”*¹

INTRODUCTION

On June 30, 2022, in *West Virginia v. EPA*, the Supreme Court’s conservative supermajority delivered a damning blow to US climate goals.² The detrimental decision has been looming since 2015, when twenty-seven red states and an army of fossil fuel companies rushed to stay the Obama administration’s Clean Power Plan (CPP).³ Despite the plan being rendered obsolete in 2019, the Court granted certiorari and seized its opportunity to wield the amorphous “major questions” doctrine and severely curtail administrative authority.⁴ The Court left the dangerous

¹ *Remarks by the President at U.N. Climate Change Summit*, WHITE HOUSE: PRESIDENT BARACK OBAMA (Sept. 23, 2014) (internal quotation marks omitted), <https://obamawhitehouse.archives.gov/the-press-office/2014/09/23/remarks-president-un-climate-change-summit> [<https://perma.cc/J5NF-MXHQ>].

² See *West Virginia v. EPA*, 142 S. Ct. 2587 (2022); see also Jeff Tollefson, *US Supreme Court Hobbles the EPA’s Authority over Climate Emissions*, NATURE (Jun. 30, 2022), <https://www.nature.com/articles/d41586-022-01796-8> [<https://perma.cc/RUJ2-Z9RD>]; Lisa Heinzerling, *The Supreme Court Is Making America Ungovernable*, ATLANTIC (July 26, 2022), <https://www.theatlantic.com/ideas/archive/2022/07/supreme-court-major-questions-doctrine-congress/670618/> [<https://perma.cc/QJT6-84ZX>].

³ See State Petitioners’ Motion for Stay and for Expedited Consideration of Petition of Review at i, 32, *West Virginia v. EPA*, No. 15-1363 (D.C. Cir. Oct. 23, 2015); Certificate as to Parties, Rulings, and Related Cases at 1–4, *Miss. Dep’t of Env’t Quality v. EPA*, No. 15-1409 (D.C. Cir. Nov. 5, 2015) (*West Virginia*, Alabama, Alaska, Arkansas, Georgia, Indiana, Kansas, Louisiana, Missouri, Montana, Nebraska, Ohio, Oklahoma, South Carolina, South Dakota, Texas, Utah, Wyoming, Michigan, New Jersey, Kentucky, North Carolina, Arizona, Colorado, Florida, North Dakota, and Mississippi).

⁴ See Brief for the Federal Respondents at 47, *West Virginia v. EPA*, 142 S. Ct. 2587 (2022) (No. 20-1530); see also *West Virginia*, 142 S. Ct. at 2634, 2638, 2641 (Kagan, J., dissenting). The major questions doctrine can be traced back to the Supreme Court’s decision in *Food & Drug Admin. v. Brown & Williamson Tobacco Corp.*, 529 U.S. 120 (2000). It was first mentioned in an environmental context in *Utility Air Regulatory Group v. EPA*, where Justice Scalia wrote, “We expect Congress to speak clearly if it wishes to assign to an agency a decision of vast ‘economic and political significance.’” *Util. Air Regul. Grp. v. EPA*, 573 U.S. 302, 324 (2014). For support that conservative justices have been waiting for the opportunity to cut administrative authority, see *Gundy v. United States*, 139 S. Ct. 2116, 2141–42, 2145 (2019) (Gorsuch, J., dissenting); *Dep’t of Transp. v. Assoc. of Am. R.R.s*, 575 U.S. 43, 68–69, 85 (2015) (Thomas, J., concurring);

doctrine ambiguous enough to serve as a catch-all defense against any future environmental regulation—ensuring the inevitable barrage of challenges traps the agency in a decades-long judicial dance.⁵

Congress wisely delegated to fifteen thousand scientists, economists, and engineers the task of protecting human health and the environment—how can taking steps necessary to do just that be answering too major a question?⁶ Nevertheless, with executive agencies stripped of their regulatory power, implementing effective climate policy falls to Congress, and less than two months after the *West Virginia* setback, President Biden’s budget reconciliation bill was finally signed into law.⁷ Despite being the largest investment in climate action in US history, after eighteen months of fierce debate, the bill retained one-tenth of the funding originally proposed, includes death knell provisions for new oil and gas drilling, and contains not one emissions reduction requirement.⁸ Acrimony on the Hill (and echoed throughout the nation) makes passing legislation a Sisyphean struggle, but it must continue because compromise, credits, and market hopes without mandated limits on pollution could cost humanity a sustainable future.⁹

In the mid-twentieth century many American cities were covered in a blanket of smog so thick you could not see the sun.¹⁰

Paul v. United States, 140 S. Ct. 342, 343 (2019) (Kavanaugh, J., statement respecting the denial of certiorari).

⁵ See *West Virginia*, 142 S. Ct. at 2608–09; *id.* at 2634 (Kagan, J., dissenting); see also Earthjustice & Evergreen Action, *What Does West Virginia v. EPA Mean for Climate Action?*, EARTHJUSTICE (Jul. 6, 2022) <https://earthjustice.org/blog/2022-july/what-does-west-virginia-v-epa-mean-for-climate-action> [<https://perma.cc/BJ7J-63DT>].

⁶ *What Kind of People Work at EPA?*, EPA (last updated Feb. 22, 2022), <https://www.epa.gov/careers/what-kind-people-work-epa> [<https://perma.cc/46TG-3H47>]; *Our Mission and What We Do*, EPA (last updated June 13, 2022), www.epa.gov/aboutepa/our-mission-and-what-we-do [<https://perma.cc/VK6A-3EAK>].

⁷ See *West Virginia*, 142 S. Ct. at 2626 (Kagan, J., dissenting); Benjamin Storrow, *Senate Passes Historic Climate Bill—Here’s What Comes Next*, SCI. AM. (Aug. 8, 2022) <https://www.scientificamerican.com/article/senate-passes-historic-climate-bill-heres-what-comes-next/> [<https://perma.cc/F6YG-N5VQ>].

⁸ See Storrow, *supra* note 7; see also Alan Fram & Farnoush Amiri, *Dems’ Climate, Energy, Tax Bill Clears Initial Senate Hurdle*, ASSOCIATED PRESS (Aug. 7, 2022) <https://apnews.com/article/health-seniors-medicare-congress-8577c6c0a9e6384612155a36eff4852a> [<https://perma.cc/4PRF-3EK8>].

⁹ See Lisa Friedman & Coral Davenport, *As Historic Climate Bill Heads to Biden’s Desk, Young Activists Demand More*, N.Y. TIMES (Aug. 12, 2022), <https://www.nytimes.com/2022/08/12/climate/biden-climate-bill-young-activists.html> [<https://perma.cc/D98V-JEUP>]; see also Josh Gabbatiss et al., *Media Reaction: What Joe Biden’s Landmark Climate Bill Means for Climate Change*, CARBON BRIEF (Aug. 17, 2022 5:00 PM).

¹⁰ See Stephan Benzkofer, *For Much of Its History, Chicago Covered by Smoke, Soot*, CHI. TRIB. (June 5, 2015, 2:00 AM), <https://www.chicagotribune.com/history/ct-dirty-air-pollution-environment-chicago-flashback-per-0607-jm-20150605-story.html>; Mike McPhate, *Photos: When L.A. Smog Was So Bad People Suspected a Gas Attack*,

This desperate state of affairs helped hasten the passage of the Clean Air Act (CAA) in 1970—and it worked.¹¹ The smog cleared; premature deaths due to particulate matter decreased by the hundreds of thousands; instances of chronic bronchitis, heart disease, and asthma similarly plunged; as did lost school and work days.¹² In 1990, major amendments to the CAA aimed at curbing acid rain and ozone depletion were similarly successful.¹³ Now, amidst unprecedented flash floods, wildfires ravaging forestland around the globe, droughts, sinking island nations, and deadlier, costlier hurricanes, the climate crisis is at the forefront of the global psyche.¹⁴ Despite these devastating and rapidly worsening conditions, Congress has made no indication that it will amend the CAA, which has remained unchanged for over thirty years.¹⁵ This is not because the CAA has run its course, nor has it fulfilled its potential to protect human health and the environment. There are feasible, readily apparent revisions that have long been poised to adapt to the twenty-first century's climate catastrophe.¹⁶

CAL. SUN (July 9, 2018), <https://www.californiasun.co/stories/photos-when-l-a-smog-was-so-bad-people-suspected-a-gas-attack/> [<https://perma.cc/D6ZG-A5SN>]; Jim Dwyer, *Remembering a City Where the Smog Could Kill*, N.Y. TIMES (Feb. 28, 2017), <https://www.nytimes.com/2017/02/28/nyregion/new-york-city-smog.html> [<https://perma.cc/9C2F-H8HG>].

¹¹ Lorraine Boissoneault, *The Deadly Donora Smog of 1948 Spurred Environmental Protection—But Have We Forgotten the Lesson?*, SMITHSONIAN MAG. (Oct. 26, 2018), <https://www.smithsonianmag.com/history/deadly-donora-smog-1948-spurred-environmental-protection-have-we-forgotten-lesson-180970533/> [<https://perma.cc/HV97-A7NY>]; *Policy Impact: United States: Clean Air Act (1970)*, AIR QUALITY LIFE INDEX (2021) <https://aqli.epic.uchicago.edu/policy-impacts/united-states-clean-air-act/> [<https://perma.cc/6Q34-LZN3>].

¹² *Progress Cleaning the Air and Improving People's Health*, EPA (last updated Sept. 23, 2021), <https://www.epa.gov/clean-air-act-overview/progress-cleaning-air-and-improving-peoples-health#pollution> [<https://perma.cc/EJA3-4Y5R>]; EPA, *THE BENEFITS AND COSTS OF THE CLEAN AIR ACT, 1970 TO 1990* (1997), <https://www.epa.gov/sites/default/files/2015-06/documents/contsetc.pdf> [<https://perma.cc/Q88S-Y54K>].

¹³ *Benefits and Costs of the Clean Air Act 1990-2020, the Second Prospective Study*, EPA (last updated Mar. 9, 2022), <https://www.epa.gov/clean-air-act-overview/benefits-and-costs-clean-air-act-1990-2020-second-prospective-study> [<https://perma.cc/WV2J-FD4V>].

¹⁴ See Christopher Flavelle et al., *Overlapping Disasters Expose Harsh Climate Reality: The U.S. Is Not Ready*, N.Y. TIMES (last updated Sept. 20, 2021) <https://www.nytimes.com/2021/09/02/climate/new-york-rain-floods-climate-change.html> [<https://perma.cc/NDQ5-L953>]; *Damage from Climate Change Will Be Widespread and Sometimes Surprising*, ECONOMIST (May 16, 2020), <https://www.economist.com/schools-brief/2020/05/16/damage-from-climate-change-will-be-widespread-and-sometimes-surprising> [<https://perma.cc/UC8Q-ENXF>]; Emel Oz, *Wildfires Ravaging Forestlands in Many Parts of the World*, ANADOLU AGENCY (June 8, 2021), <https://www.aa.com.tr/en/world/wildfires-ravaging-forestlands-in-many-parts-of-world/2327146> [<https://perma.cc/2N8F-FZ96>].

¹⁵ See Jennifer Hijazi, *Supreme Court Rebuke Weighs Against Clean Air Act as Climate Law*, BLOOMBERG L. (Jul. 26, 2022, 5:30 AM), https://www.bloomberglaw.com/bloomberglawnews/environment-and-energy/X2MKB2L4000000?bna_news_filter=environment-and-energy#cite.

¹⁶ See *infra* Part IV.

Climate change is caused by gases emitted into the air by the burning of fossil fuels for transportation and energy.¹⁷ These gases—carbon dioxide (CO₂), methane, nitrous oxide, and fluorinated gases—are collectively known as greenhouse gases (GHGs) because they trap heat in the lower atmosphere, warming the oceans and the earth.¹⁸ In 1859, scientist John Tyndall first predicted a link between greenhouse gases and increased atmospheric temperature.¹⁹ Climatologists have been able to measure annual increases in atmospheric CO₂ for over sixty years, and they have been urging nations to take steps to reduce and report carbon emissions since the first Intergovernmental Panel on Climate Change (IPCC) was released in 1990.²⁰ In spite of this longstanding knowledge that transparent reporting is an essential first step in reducing GHG emissions, it was not until 2009 that the US required facilities emitting twenty-five thousand metric tons or more of carbon dioxide annually to report their greenhouse gas emissions.²¹ The United States emits more greenhouse gases per capita than any nation in the world and has the second highest emissions overall after China.²² Reporting stationary sources²³ of pollution emitted approximately three billion metric tons of CO₂ equivalent in 2019, and together with

¹⁷ *Sources of Greenhouse Gas Emissions*, EPA (last updated July 27, 2021), <https://www.epa.gov/ghgemissions/sources-greenhouse-gas-emissions> [https://perma.cc/ERY9-46TX].

¹⁸ *The Causes of Climate Change*, NASA (last updated June 15, 2022), <https://climate.nasa.gov/causes/> [https://perma.cc/RW42-68GU]; *Climate Change Indicators: U.S. and Global Temperature*, EPA (last updated July 21, 2021), <https://www.epa.gov/climate-indicators/climate-change-indicators-us-and-global-temperature> [https://perma.cc/6792-8YLU]; *Climate Change Indicators: Ocean Heat*, EPA (last updated July 18, 2021), <https://www.epa.gov/climate-indicators/climate-change-indicators-ocean-heat> [https://perma.cc/G34M-FC9W].

¹⁹ HERVÉ LE TREUT & RICHARD SOMERVILLE ET AL., HISTORICAL OVERVIEW OF CLIMATE CHANGE SCIENCE, 93, 103 (2007), <https://www.ipcc.ch/site/assets/uploads/2018/03/ar4-wg1-chapter1.pdf> [https://perma.cc/7FZJ-SFBV].

²⁰ *Id.* at 100; INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE, CLIMATE CHANGE: THE IPCC RESPONSE STRATEGIES xxvii, lxi, (1990), https://www.ipcc.ch/site/assets/uploads/2018/03/ipcc_far_wg_III_full_report.pdf [https://perma.cc/JC2N-TZS2].

²¹ *See Greenhouse Gas Reporting Program (GHGRP) Historical Rulemakings*, EPA (last updated May 12, 2022), <https://www.epa.gov/ghgreporting/historical-rulemakings> [https://perma.cc/9RTX-HU83]; *Mandatory Emissions Reporting Around the Globe*, UL SOLS. LLC (Aug. 25, 2020), <https://www.ul.com/news/mandatory-emissions-reporting-around-globe> [https://perma.cc/B2TS-YVPB]; *see also* Elena Fagotto & Mary Graham, *Full Disclosure: Using Transparency to Fight Climate Change*, 23 ISSUES SCI. & TECH. (Summer 2007), <https://issues.org/fagotto-2/> [https://perma.cc/8X4Y-H86X].

²² *Global Emissions*, CTR. FOR CLIMATE & ENERGY SOLS. (2021), <https://www.c2es.org/content/international-emissions/> [https://perma.cc/PF9X-7G9Z].

²³ The term “stationary sources” refers to any source of air pollution that is not a mobile source including factories, refineries, boilers, and power plants. *See Stationary Sources of Air Pollution*, EPA (last updated Aug. 12, 2021), <https://www.epa.gov/stationary-sources-air-pollution> [https://perma.cc/7FWN-CMFU].

the 1.8 billion metric tons emitted by the transportation sector, account for almost 79 percent of all US emissions.²⁴

There remains a glaring lack of congressional legislation that directly addresses greenhouse gas emissions.²⁵ In fact, the only explicit regulation of GHGs comes from courts and federal agencies.²⁶ It happens like this: the incumbent administration sets environmental goals, then agencies set new standards based on scientific research to support those goals.²⁷ Then, depending on the party in power, either energy giants or environmental groups go to court to oppose the new rules, and judges and justices redraw the bounds of the CAA.²⁸ Agencies must then adapt and create new regulations based on the judicial interpretation, and the cycle repeats as agencies change control and court dynamics shift.²⁹ Given the natural fluctuation of factors contributing to air pollution,³⁰ as well as our growing knowledge of how best to combat it, it makes little sense for Congress to dictate numerical standards that will quickly become outdated. The legislature weighs policy concerns and constructs broad statutory terms designed to effectuate the desired change.³¹ No statute could possibly account for every

²⁴ *Greenhouse Gas Inventory Data Explorer*, EPA (last updated Mar. 15, 2022), <https://cfpub.epa.gov/ghgdata/inventoryexplorer/#allsectors/allsectors/select/select/all> [<https://perma.cc/45U8-M9VU>].

²⁵ GHGs are not mentioned in operative provisions of the CAA or Amendments. See Air Pollution Control Act of 1955, Pub. L. No. 159, 69 Stat. 322; Clean Air Act of 1963, Pub. L. No. 88-206, 77 Stat. 392; Clean Air Amendments of 1970, Pub. L. No. 91-604, 84 Stat. 1676; Clean Air Act Amendments of 1977, Pub. L. No. 95-95, 91 Stat. 685; Clean Air Act of 1990, Pub. L. No. 101-549, 104 Stat. 2399 (codified at 42 U.S.C. §§ 7407(d)–7671).

²⁶ See *Massachusetts v. EPA*, 549 U.S. 497 (2007); *Am. Elec. Power Co. v. Connecticut*, 564 U.S. 410 (2011); *Util. Air Regul. Grp. v. EPA*, 573 U.S. 302 (2014).

²⁷ See EPA, WORKING TOGETHER: FY 2018-2022 U.S. EPA STRATEGIC PLAN, (2018), <https://www.epa.gov/sites/default/files/2018-02/documents/fy-2018-2022-epa-strategic-plan.pdf> [<https://perma.cc/VQ2U-4E3S>].

²⁸ See Anne Joseph O'Connell, *Agency Rulemaking and Political Transitions*, 105 NW. UNIV. L. REV. 471, 474 (2011), <https://scholarlycommons.law.northwestern.edu/cgi/viewcontent.cgi?article=1166&context=nulr> [<https://perma.cc/XE5H-4JFC>]; see also *Notices of Intent to Sue the U.S. Environmental Protection Agency (EPA)*, EPA (last updated Aug. 1, 2022), <https://www.epa.gov/ogc/notices-intent-sue-us-environmental-protection-agency-epa> [<https://perma.cc/BMD7-AFEV>].

²⁹ See *infra* Part II.

³⁰ See Rebecca Lindsey & LuAnn Dahlman, *Climate Change: Global Temperature*, NAT'L OCEANIC & ATMOSPHERIC ADMIN. (June 28, 2022), <https://www.climate.gov/news-features/understanding-climate/climate-change-global-temperature> [<https://perma.cc/QHY6-H7PE>].

³¹ See generally VALERIE C. BRANNON, CONG. RSCH. SERV., R45153, STATUTORY INTERPRETATION: THEORIES, TOOLS, AND TRENDS (2018), https://www.everycrsreport.com/reports/R45153.html#_Ref510611069 [<https://perma.cc/8785-KAFH>] (“Statutes are usually written in general terms . . . The enacting legislature may have sought to ensure that the statute would be general enough to capture the situations it could not foresee, or may have intended to delegate interpretive authority to the agency responsible for enforcing the statute.”).

eventuality, nor should it attempt such a mammoth task beyond the policy purpose of the legislation. Administrative agencies with diverse scientific expertise are far better suited to conduct and fund research and accordingly create “regulations that explain the technical, operational, and legal details necessary to implement laws.”³² Enter the Environmental Protection Agency (EPA). The primary function of the EPA is to implement the CAA by developing and enforcing regulations that incorporate the vast amounts of scientific research needed to continually monitor conditions.³³

The problem is that, although climate change should be (and historically was) a bipartisan issue, egged on by fossil fuel lobbyists, it has become a divisive and politicized topic.³⁴ This polarization kneecaps the authority of the EPA and increasingly funnels more disputes into the courts, and ultimately to the Supreme Court, which is itself starkly divided.³⁵ Once inside the courtroom, any text within the statute that leaves even the slightest room for interpretation will be seized upon and dissected by courts that will debate congressional intent, propound the most accurate meaning of a word, and when all else fails call upon major questions to serve an “anti-administrative-state stance.”³⁶

Following amendments to the CAA in 1977, the EPA promulgated regulations in 1981 that spurred a dispute from which one of the key principles of administrative law originates: “Chevron deference.”³⁷ In the landmark 1984 case, *Chevron*

³² *Regulations*, U.S. ENV'T PROT. AGENCY (last updated Sept. 2, 2021), <https://www.epa.gov/laws-regulations/regulations> [https://perma.cc/SD5P-CMLF]; see *What Kind of People Work at EPA?*, *supra* note 6.

³³ See generally *Our Mission and What We Do*, *supra* note 6.

³⁴ See Robinson Meyer, *How the U.S. Protects the Environment, from Nixon to Trump*, ATLANTIC (Mar. 29, 2017), <https://www.theatlantic.com/science/archive/2017/03/how-the-epa-and-us-environmental-law-works-a-civics-guide-pruitt-trump/521001/> [https://perma.cc/M3L4-FQYN]; Tom Steyer, *Op-Ed: Fossil Fuel Lobbyists Keep Stoking the West's Wildfires*, L.A. TIMES (Jul. 16, 2021, 3:00 AM) <https://www.latimes.com/opinion/story/2021-07-16/tom-steyer-fossil-fuel-lobbyists-keep-stoking-the-wests-wildfires>.

³⁵ *Supreme Court Strips Federal Government of Crucial Tool to Control Pollution*, N.Y. TIMES (July 1, 2022) <https://www.nytimes.com/live/2022/06/30/us/supreme-court-epa>.

³⁶ See *infra* Sections II.B and II.C; see also *West Virginia*, 142 S. Ct. at 2641 (Kagan, J., dissenting) (“The current Court is textualist only when being so suits it. When that method would frustrate broader goals, special canons like the ‘major questions doctrine’ magically appear as get-out-of-text-free cards. Today, one of those broader goals makes itself clear: Prevent agencies from doing important work, even though that is what Congress directed. That anti-administrative-state stance shows up in the majority opinion, and it suffuses the concurrence.”).

³⁷ See *Chevron Deference*, LEGAL INFO. INST. (last edited Dec. 2017), https://www.law.cornell.edu/wex/chevron_deference [https://perma.cc/98ER-EG44]; *Chevron U.S.A., Inc. v. Nat. Res. Def. Counsel, Inc.*, 467 U.S. 837 (1984).

U.S.A., Inc. v. Natural Resources Defense Council, Inc., Justice Stevens delivered the Supreme Court's unanimous opinion:

When a court reviews an agency's construction of the statute . . . the court does not simply impose its own construction on the statute, as would be necessary in the absence of an administrative interpretation. Rather, if the statute is silent or ambiguous with respect to the specific issue, the question for the court is whether the agency's answer is based on a permissible construction of the statute.³⁸

Meaning that so long as the agency's regulation is reasonable under the statute, deference should be given to the agency's rule rather than the court enforcing its own interpretation. In the years since *Chevron*, courts have strayed so far from this standard of deference, it would take a surrealist's creativity, a contortionist's flexibility, and a magician's slight-of-hand to create the illusion that the rule has not been effectively overturned.³⁹ The Court's recent expansion of the major questions doctrine—from the exception to a shiny new litigation tactic—eviscerated *Chevron*'s effectiveness as a legal standard.

This note argues that, despite the steep political obstacles, congressional amendment to the CAA is necessary to achieve the drastic changes required to curb the devastating effects of climate change. Without a change in the law, the political tug-of-war between partisan administrative agencies and an ever more partisan Supreme Court will continue to erode the integrity of the CAA.

Part I chronicles the bipartisan history of clean air legislation in the United States then briefly summarizes global and national climate policies introduced since the CAA was last amended. Part II analyzes twenty-first century environmental decisions from the Supreme Court and circuit courts to identify points of contention or ambiguity that enable the current conservative majority to rule against the EPA. This note then offers a two-pronged solution to help reach necessary climate goals. First, based on trends evident in the court decisions, Part III proposes amendments to the CAA that would lower carbon emissions by allowing environmental regulations to come to fruition instead of remaining stalled in a cycle of legal disputes. Second, Part IV attempts to dismantle the blockade to amendment—the exasperating political impasse. This part examines current environmental efforts by the US government, environmental groups, corporations, and concerned citizens to

³⁸ *Chevron*, 467 U.S. at 842–43.

³⁹ See *infra* Part II.

demonstrate that further congressional action is necessary to meet rapidly approaching climate deadlines. Finally, this Part scours the political landscape to find new ways to reach across the aisle. Climate change already causes greater economic hardship to people in red states. Using sustainable solutions to support those suffering most is the government's only hope to mobilize support for climate action. This canvassing solution will not heal the political divide or return climate policy to its bipartisan roots, but with enough votes in enough Republican states it could carry amendment out of the realm of fiction into reality.

I. BACKGROUND: A BRIEF HISTORY OF AIR POLLUTION POLICY

This Part gives a brief overview of clean air policy in the United States, starting with the CAA's passage and bipartisan roots, through its key amendments. It then examines national and international climate actions since the last amendment to the CAA in 1990.

A. *The Clean Air Act and its Bipartisan Roots*

In 1955, Republican President Eisenhower signed the Air Pollution Control Act, the United States' first piece of federal legislation addressing air pollution, and in 1963, President Johnson signed Congress's first Clean Air Act into law.⁴⁰ Then, in 1970, in a bipartisan effort between the Nixon administration and a Democratic Congress, substantive amendments to the earlier Act created the Clean Air Act of 1970, which provides the framework for the laws still in place today.⁴¹ These amendments established two initiatives central to the CAA. First, the National Ambient Air Quality Standards (NAAQS) that set federally mandated limits on the amount of six pollutants in the air: carbon monoxide, lead, ozone, particulate matter, sulfur

⁴⁰ Arthur C. Stern, *History of Air Pollution Legislation in the United States*, 32 J. AIR POLLUTION CONTROL ASSOC. 44, 49, 50–52 (1982); *Evolution of the Clean Air Act*, EPA (last updated Oct. 8, 2020), <https://www.epa.gov/clean-air-act-overview/evolution-clean-air-act> [<https://perma.cc/ZY8W-2CCD>]; RICHARD K. LATTANIZO, CONG. RSCH. SERV. RL 30853, CLEAN AIR ACT: A SUMMARY OF THE ACT AND ITS MAJOR REQUIREMENTS 2 (2022), <https://sgp.fas.org/crs/misc/RL30853.pdf> [<https://perma.cc/NW8B-DJMF>]. The first ever environmentally conscious piece of legislation in the United States was the Rivers and Harbors Act of 1899. James Griffin, *Pre-EPA: US Environmental Laws Before 1970*, LION TECH., INC. (Nov. 8, 2016), <https://www.lion.com/Lion-News/November-2016/Pre-EPA-US-Environmental-Laws-Before-1970> [<https://perma.cc/5565-TSZF>].

⁴¹ See Meyer, *supra* note 34; *40th Anniversary of the Clean Air Act*, EPA (last updated Aug. 1, 2022), <https://www.epa.gov/clean-air-act-overview/40th-anniversary-clean-air-act> [<https://perma.cc/8EG4-EHRT>].

dioxide, and nitrogen dioxide.⁴² Second, the New Source Performance Standards (NSPS), a program that sets guidelines and standards of performance for new or modified industrial facilities.⁴³ Together these programs significantly expanded federal authority to regulate air pollution from both mobile and stationary sources.⁴⁴ At the same time, the EPA was created to consolidate and organize the many new environmental responsibilities under a single agency. The EPA is tasked with protecting human health and the environment by promoting consistent regulation through national standards.⁴⁵

Since the formation of the EPA, the modern Clean Air Act has undergone two substantive amendments.⁴⁶ First, in 1977, the Prevention of Significant Deterioration (PSD) and Nonattainment programs were created.⁴⁷ The former to prevent air quality deterioration in areas that had achieved the NAAQS, and the latter to impose further restrictions on areas that had not.⁴⁸ Then, in 1990, President Bush, with the support of a supermajority of Congress, made further substantial amendments to the CAA in an effort to combat four major threats to air quality: ozone depletion, acid rain, toxic air pollution, and city smog.⁴⁹ These amendments also aimed to improve compliance and introduced a new permitting program requiring any “major source” of “hazardous air pollutants” (HAPs) to obtain an operating permit.⁵⁰ Despite the deluge of research over the past three decades conclusively confirming the causes of climate change, the CAA has not undergone any

⁴² NAAQS Table, EPA (last updated Feb. 10, 2021), <https://www.epa.gov/criteria-air-pollutants/naaqs-table> [<https://perma.cc/QLT9-85B8>]; *Reviewing Nat'l Ambient Air Quality Standards (NAAQS): Scientific and Technical Information*, EPA (last updated July 28, 2022), <https://www.epa.gov/naaqs> [<https://perma.cc/JN7Y-3KVK>].

⁴³ 42 U.S.C. § 7411; *Demonstrating Compliance with New Source Performance Standards and State Implementation Plans*, EPA (last updated Feb. 2, 2022), <https://www.epa.gov/compliance/demonstrating-compliance-new-source-performance-standards-and-state-implementation-plans> [<https://perma.cc/N3UL-79MK>].

⁴⁴ *Evolution of the Clean Air Act*, *supra* note 40.

⁴⁵ *The Origins of EPA*, U.S. ENV'T PROT. AGENCY (last updated Jul. 9, 2021), <https://www.epa.gov/history/origins-epa> [<https://perma.cc/XJ5R-2KHX>].

⁴⁶ LATTANIZO, *supra* note 40, at 2.

⁴⁷ *Evolution of the Clean Air Act*, *supra* note 40.

⁴⁸ *Id.*

⁴⁹ *Lessons in Bipartisanship: The 1990 Clean Air Act Amendments*, ENV'T AM. (Nov. 15, 2017), <https://environmentamerica.org/blogs/environment-america-blog/ame/lessons-bipartisanship-1990-clean-air-act-amendments> [<https://perma.cc/G8EE-5ZG2>].

⁵⁰ *Basic Information About Operating Permits*, EPA (last updated Dec. 28, 2020), <https://www.epa.gov/title-v-operating-permits/basic-information-about-operating-permits> [<https://perma.cc/WV47-R993>]; *Who Has to Obtain a Title V Permit?*, EPA (last updated Mar. 26, 2021), <https://www.epa.gov/title-v-operating-permits/who-has-obtain-title-v-permit> [<https://perma.cc/2AW2-PRY6>].

further amendments.⁵¹ Carbon dioxide and other greenhouse gases—pollutants known to cause climate change—have not been added to the NAAQS. This means that there is still no national limit on the amount of warming gases that can be permissibly released into the air. In fact, GHGs remain inexplicably absent from any of the operative provisions of the CAA governing existing stationary sources of pollution such as power plants, refineries, boilers, and factories.⁵²

B. Air Pollution Policy Since the 1990 Amendments to the CAA

In 2015, in a global effort to combat climate change, 192 parties adopted the Paris Agreement, an international treaty binding parties to limit global warming “to well below 2°C above pre-industrial levels” and to report their implementation progress every five years.⁵³ In advance of the Agreement’s first global stocktake set for 2023, countries and companies began pledging to reduce their carbon footprint.⁵⁴ By the 2021 United Nations Climate Change Conference in Glasgow, 120 countries had either pledged to reach, or were discussing how to reach, net zero carbon emissions by midcentury.⁵⁵ Thirty-nine countries pledged to reduce their greenhouse gas emissions to net zero by the year 2050, nine countries set earlier goals, and another eight, including China and Russia, set goals of 2060.⁵⁶ The problem with pledges is they are merely promises without legal enforcement, so there are no consequences if the countries or corporations renege. Of the countries with targets pledged, only seventeen of these commitments are now in law, thirty-two (including the United States) recorded their pledge in a policy document, eighteen made declarations, and the rest remain in discussions.⁵⁷ Unfortunately, the outlook is bleak. Current pledges are nowhere near enough to reach net zero emissions globally, and net zero is no longer enough

⁵¹ See *Reports*, INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE, <https://www.ipcc.ch/reports/> [<https://perma.cc/AAQ7-S89T>].

⁵² See *Evolution of the Clean Air Act*, *supra* note 40; *NAAQS Table*, *supra* note 42.

⁵³ *Paris Agreement to the United Nations Framework Convention on Climate Change*, Dec. 12, 2015, T.I.A.S. No. 16-1104, Art. 2 Sec. 1(a), Art.14 Sec. 2.

⁵⁴ See *Net Zero Coal.*, U.N. (Sept. 2021), <https://www.un.org/en/climatechange/net-zero-coalition> [<https://perma.cc/8BPH-UFPV>]; *315 Signatories*, CLIMATE PLEDGE (Sept. 2021), <https://www.theclimatepledge.com/us/en/Signatories> [<https://perma.cc/8GHT-AHU3>].

⁵⁵ See *Updated Climate Commitments Ahead of COP26 Summit Fall Far Short, but Net-Zero Pledges Provide Hope*, UNFCCC (Oct. 26, 2021), <https://unfccc.int/news/updated-climate-commitments-ahead-of-cop26-summit-fall-far-short-but-net-zero-pledges-provide-hope> [<https://perma.cc/36HU-68NW>]; see also *Net Zero Tracker*, ENERGY & CLIMATE INTEL. UNIT (2021), <https://eci.net/netzerotracker> [<https://perma.cc/CNG7-2TST>].

⁵⁶ *Net Zero Tracker*, *supra* note 55.

⁵⁷ *Id.*

of a reduction in global emissions to reach the temperature goals of the Paris Agreement.⁵⁸

In the United States, the most promising piece of environmental policy to be introduced in recent years was the Obama administration's Clean Power Plan (CPP).⁵⁹ Proposed in 2015 as a federal rule under the CAA, the CPP would have decreased GHGs in the atmosphere by imposing—for the first time in US history—gradual emissions reductions on stationary sources.⁶⁰ The CPP allowed states to submit their own plans to reduce emissions, offered credits for emissions reductions prior to the plan rollout set for 2022, and worked in stages to make fossil fuel plants more efficient, use lower emitting natural gases, and increase renewable energy sources.⁶¹ The final version of the painstakingly constructed and decidedly moderate CPP was published on October 23, 2015. On the very same day, two dozen states governed by Republicans and funded by energy lobbyists rushed into court petitioning to quash it.⁶² This petition to prevent the implementation of President Obama's CPP led to the Supreme Court's first ever "emergency stay" of a regulation still pending review by a circuit court.⁶³ Unfortunately, it was

⁵⁸ INT'L ENERGY AGENCY, NET ZERO BY 2050: A ROADMAP FOR THE GLOBAL ENERGY SECTOR, 13, 49 (2021), https://iea.blob.core.windows.net/assets/beceb956-0dcf-4d73-89fe-1310e3046d68/NetZeroBy2050-ARoadmapfortheGlobalEnergySector_CORR.pdf [<https://perma.cc/2E9N-JCGE>]; *Net Zero by 2050 is "Too Little Too Late": World-Leading Scientists Urge Global Leaders to Focus on Net Negative Strategies*, CLIMATE CRISIS ADVISORY GRP. (CCAG) (Aug. 26, 2021), <https://www.ccag.earth/newsroom/net-zero-by-2050-is-too-little-too-late-world-leading-scientists-urge-global-leaders-to-focus-on-net-negative-strategies> [<https://perma.cc/BJ9U-CCXF>] (arguing that it is clear to leading scientists that we now need to focus on "net negative" strategies to reach the goal of limiting temperature rise to 1.5° above pre-industrial levels, which means utilizing carbon capture technologies to remove carbon from the air in addition to industry reaching carbon neutrality).

⁵⁹ EPA, OVERVIEW OF THE CLEAN POWER PLAN, (2015), <https://archive.epa.gov/epa/sites/production/files/2015-08/documents/fs-cpp-overview.pdf> [<https://perma.cc/8A4U-3VJJ>].

⁶⁰ *What is the Clean Power Plan?*, NAT. RES. DEF. COUNS. (Sept. 29, 2017), <https://www.nrdc.org/stories/how-clean-power-plan-works-and-why-it-matters> [<https://perma.cc/U3F5-8NGN>].

⁶¹ EPA, COMPONENTS OF THE CLEAN POWER PLAN, <https://archive.epa.gov/epa/sites/production/files/2015-08/documents/fs-cpp-state-goals.pdf> [<https://perma.cc/W66H-8NS2>].

⁶² See 80 Fed. Reg. 64509; see also 80 Fed. Reg. 64661 (Oct. 23, 2015); Petition for Review, *West Virginia v. EPA*, (D.C. Cir. 2015) (No. 15-1363); *Big Oil and the Obstruction of Climate Regulations*, INFLUENCEMAP (Oct. 2015), <https://influencemap.org/report/Big-Oil-the-Price-of-Carbon-and-Obstruction-of-Climate-Regulations> [<https://perma.cc/YPP6-PDH6>]; Jocelyn Timperley, *How Big Oil's Efforts to Obstruct Climate Policy May Have Hit \$114M in 2015*, BUSINESSGREEN (Apr. 11, 2016), <https://www.businessgreen.com/analysis/2454013/how-big-oils-efforts-to-obstruct-climate-policy-may-have-hit-usd114m-in-2015> [<https://perma.cc/NN44-Z75M>].

⁶³ See Courtney Scobie, *Supreme Court Stays EPA's Clean Power Plan*, A.B.A. (Feb. 17, 2016), <https://www.americanbar.org/groups/litigation/committees/environmental-energy/practice/2016/021716-energy-supreme-court-stays-epas-clean-power-plan/> [<https://perma.cc/Q93E-VVZJ>].

not the last. Under the Trump Administration, emergency rulings were more frequent than ever before.⁶⁴ These orders are especially controversial because they are entered on the Court's so-called "shadow docket," where the Court does not provide any opinion or reasoning, without which distinguishing future cases and establishing precedent is exceedingly difficult.⁶⁵

The petitions from the energy sector were eventually dismissed as moot when the Trump-era-EPA repealed the CPP and replaced it with the Affordable Clean Energy (ACE) rule, a proindustry rule limiting emissions control measures to the confines of the plant.⁶⁶ This rule not only abandoned any shift towards renewable energy sources, but it merely *suggested* a range of emissions levels, ultimately leaving it to the states to decide what climate measures they would actually take.⁶⁷ By the Trump-EPA's own projections, the ACE rule would result in less than 1 percent emissions reductions, and this estimate did not even account for probable emissions increases from the rebound effect.⁶⁸ The initial report also stated that this plan would actually lead to an *increase* in premature deaths estimating between 470–1,400 annually by 2030 and 48,000 additional cases of asthma.⁶⁹ By comparison, the CPP projected a decrease in premature deaths of approximately 3,600 and 90,000 fewer asthma attacks each year.⁷⁰ The Trump-era-EPA also severed the United States from the Paris Agreement and underwent major administrative deregulation efforts with measurable effects on air pollution.⁷¹ From 2009–16, particulate matter in the air decreased by 24.2 percent, but from 2016–18 it increased by 5.5 percent, causing 9,700 additional premature deaths.⁷² In terms of economic impact, using the Value of a Statistical Life

⁶⁴ See Robert Percival, *The Shadow Docket*, ENV'T FORUM, 28 (Jan./Feb. 2022) (noting that in four years "the Trump administration filed 41 emergency applications with the Court, compared with only eight . . . in the 16 previous years" under Obama and Bush).

⁶⁵ *Id.* at 27–28.

⁶⁶ See *West Virginia v. EPA Climate Case Chart*, SABIN CTR. FOR CLIMATE CHANGE L. (2021), <http://climatecasechart.com/case/west-virginia-v-epa/> [<https://perma.cc/GJ5M-57XS>].

⁶⁷ *Am. Lung Ass'n v. EPA*, 985 F.3d 914, 940 (D.C. Cir. 2021).

⁶⁸ *Id.*

⁶⁹ See S. Benish & M. Fiffer, *Affordable Clean Energy Rule Threatens Progress of Clean Air Act*, EOS SCI. NEWS BY AGU (Nov. 18, 2020), <https://eos.org/opinions/affordable-clean-energy-rule-threatens-progress-of-clean-air-act> [<https://perma.cc/S7H2-J4F6>].

⁷⁰ *Id.*

⁷¹ See Jacob Elkin, *Climate Deregulation Tracker*, COLUM. L. SCH. SABIN CTR. FOR CLIMATE CHANGE L. (2021), <https://climate.law.columbia.edu/climate-deregulation-tracker> [<https://perma.cc/LHP2-KGQ6>].

⁷² Karen Clay & Nicholas Z. Muller, *Recent Increases in Air Pollution: Evidence and Implications for Mortality*, 3 (Nat'l Bureau of Econ. Rsch., Working Paper No. 26381, 2019).

(VSL) approach, this translates to \$89 billion in damages.⁷³ This anti-agency Administration even took advantage of the COVID-19 pandemic to allow further rollbacks to regulation by exempting industry from compliance and reporting during the pandemic.⁷⁴ Predictably, climate progress was substantially set back by these drastic and deadly decisions.⁷⁵

On Trump's last day in office, January 19, 2021, the DC Circuit vacated the ACE rule and remanded to the incoming Biden-Harris administration EPA for the construction of a new rule.⁷⁶ This decision was appealed to the Supreme Court who granted certiorari on October 29, 2021, heard oral arguments on February 28, 2022, and released its *West Virginia v. EPA* decision on June 30, 2022.⁷⁷ In his first week in office, President Biden issued an executive order rejoining the Paris Agreement; the policy document currently holding the United States to its net zero emissions pledge.⁷⁸ However, Biden's ability to follow through on this international commitment is incumbent upon the success of his domestic climate policy.⁷⁹ He cannot promise emissions reductions without the regulations in place to reduce them. Now that the Supreme Court has redefined the permissible parameters of a new rule, Biden's ambitious climate goals face another devastating setback.⁸⁰

⁷³ *Id.*

⁷⁴ See Naveena Sadasivam, *Law and Disorder: The EPA Cut Back Enforcement During COVID. These Researchers are Assessing the Damage*, GRIST (Sep. 17, 2020), <https://grist.org/justice/the-epa-cut-back-enforcement-during-covid-these-researchers-are-assessing-the-damage/> [https://perma.cc/GYP2-EKHS].

⁷⁵ See Nadja Popovich et al., *The Trump Administration Rolled Back More Than 100 Environmental Rules. Here's the Full List*, N.Y. TIMES (Jan. 21, 2021), <https://www.nytimes.com/interactive/2020/climate/trump-environment-rollbacks-list.html>.

⁷⁶ *Am. Lung Ass'n v. EPA*, 985 F.3d 914, 915 (D.C. Cir. 2021).

⁷⁷ See Supreme Court Docket Consolidated Case No. 20-1530, <https://www.supremecourt.gov/docket/docketfiles/html/public/20-1530.html> [https://perma.cc/ZU84-P9PN].

⁷⁸ *Tackling the Climate Crisis at Home and Abroad*, Exec. Order No. 14008, 86 Fed. Reg. 7619 (Feb. 1, 2021).

⁷⁹ See EPA, FY 2022-2026 EPA STRATEGIC PLAN DRAFT 8, 17–18 (Oct. 1, 2021) [hereinafter EPA STRATEGIC PLAN DRAFT], <https://www.epa.gov/system/files/documents/2021-10/fy-2022-2026-epa-draft-strategic-plan.pdf> [https://perma.cc/P7DY-AT6Q]; see also Mike Krancer, *Biden's Version of Green New Deal Moves Forward, But Executive Action Has Its Limits*, HILL (Feb. 1, 2021, 1:00 PM) <https://thehill.com/opinion/energy-environment/536753-bidens-version-of-green-new-deal-moves-forward-but-executive> [https://perma.cc/A29V-G43L].

⁸⁰ See Marianne Lavelle, *Supreme Court's Unusual Decision to Hear a Coal Case Could Deal President Biden's Climate Plans Another Setback*, INSIDE CLIMATE NEWS (Nov. 8, 2021) <https://insideclimatenews.org/news/08112021/supreme-court-coal-case-biden-climate-plan/> [https://perma.cc/BWA5-EK7X].

II. HOW COURTS SHAPED 21ST CENTURY CLEAN AIR POLICY

The Supreme Court and circuit courts influenced air pollution policy in significant ways for two decades by shifting from the *Chevron* deference standard towards a major questions viewpoint, sowing the seeds for the recent decision in *West Virginia v. EPA*. These influential opinions purport to rely on reasoning that can be crudely divided into three broad categories. First, what exactly constitutes a reasonable consideration of costs? For instance, when considering the cost of compliance with, or implementation of, a regulation, should long-term environmental costs to human health and survival also be considered? Second, whether the EPA, State, environmental organization, or corporation correctly construed or misinterpreted the language of the CAA. Frequently, these debates arise over ambiguities found in what constitutes an air pollutant or a plant modification under the various provisions of the CAA. Third and finally, whether federal common law or state law public nuisance claims are preempted or displaced by the CAA, limiting recourse for those who have suffered environmental harms. This Section examines cases in each of these categories to determine what text within or left out of the CAA supports these decisions and whether the break from the *Chevron* deference is warranted.

A. *Weighing Cost*

At the beginning of the century, in a unanimous opinion by Justice Scalia, the Supreme Court rejected the argument that air pollution standards could be adjusted based solely on the economic impact to private polluters.⁸¹ It affirmed the DC Circuit's decision that the EPA is not permitted to weigh the cost of implementation when setting initial NAAQS, arguing that since cost is expressly mentioned in other provisions of the CAA, its omission from the NAAQS provision "unambiguously bars cost considerations from the NAAQS-setting process."⁸² Additionally, the majority held that it is well within the EPA's authority to set numerical limits for harmful pollutants to protect public health and not an impermissible delegation of authority.⁸³ Concurring in the judgment, Justice Breyer emphasized that the reasoning for the Court's holding should be

⁸¹ *Whitman v. Am. Trucking Ass'ns*, 531 U.S. 457, 472–74 (2001).

⁸² *Id.* at 463, 471.

⁸³ 42 U.S.C. § 7409(b); *Whitman*, 531 U.S. at 473.

based on Congressional intent, rather than solely on textual interpretation. He quoted from the unambiguous legislative record when Congress first introduced the 1970 Amendments to the CAA:

Congress' primary responsibility in drafting the Act was not "to be limited by what is or appears to be technologically or economically feasible," but "to establish what the public interest requires to protect the health of persons," even if that means that "*industries will be asked to do what seems to be impossible at the present time.*"⁸⁴

Although the majority opinion authored by Scalia landed on the environmentally friendly outcome, it did so based on flawed reasoning.⁸⁵ As Justice Breyer predicted, this would not form a just precedent.

Fourteen years later in *Michigan v. EPA*, an extremely detrimental five-to-four decision, Justice Scalia eviscerated the scope of his earlier opinion; this time finding that the EPA was wrong not to consider the cost of compliance when setting standards for HAPs emitted by power plants.⁸⁶ He attempted to distinguish this case from his earlier decision and reconcile his different treatment by arguing that the "appropriate and necessary" standard for HAPs is significantly more exhaustive than the "requisite to protect the public health" standard used for setting the NAAQS.⁸⁷ Scalia found that the former required consideration of costs, while the latter prohibited such consideration.⁸⁸ Beyond swiftly carving strict economic demarcations through ambiguity, Scalia even stated "[i]t is unreasonable to infer that, by expressly making cost relevant to other decisions, the Act implicitly makes cost irrelevant to the appropriateness of regulating power plants"⁸⁹—the very inference he exploited thirteen years prior.⁹⁰ This fickle

⁸⁴ *Whitman*, 531 U.S. at 491 (Breyer, J., concurring) (quoting legislative history, the Congressional Record of the 1970 Amendments to the CAA).

⁸⁵ *Id.* Justice Breyer concurs in the judgment but not in the reasoning: "I would not rest this conclusion solely upon § 109's language or upon a presumption, such as the Court's presumption that any authority the Act grants the EPA to consider costs must flow from a 'textual commitment' that is 'clear.'" *Id.* at 490. He notes that while, in this instance, the interpretation of statutory text and legislative history align, in other instances reading silences or ambiguities as forbidding regulation could lead to results in conflict with the legislative purpose. *Id.* at 490–91. Breyer's fears are realized in *Michigan v. EPA*, where this line of reasoning leads to an incompatible antienvironment result.

⁸⁶ *Michigan v. EPA*, 135 S. Ct. 2699, 2709 (2015).

⁸⁷ *Id.*

⁸⁸ *Id.*

⁸⁹ *Id.*

⁹⁰ In *Whitman*, Scalia wrote, "Subsequent amendments to the CAA have added many more provisions directing, in explicit language, that the Administrator consider costs in performing various duties . . . We have therefore refused to find implicit in

reasoning handed every power plant emitting hazardous pollutants a shortcut to noncompliance without considering public health simply by stating implementation of the new rule was cost prohibitive.

In a dissent that highlighted the shortsightedness of the majority opinion, Justice Kagan, joined by Justices Ginsberg, Breyer, and Sotomayor, pointed out that the EPA did in fact go through an “exhaustive consideration of costs” in the lengthy process of deciding to regulate plants’ hazardous emissions.⁹¹ She noted the majority had honed in on one phrase “appropriate and necessary” and “narrow[ed] its field of vision to that finding in isolation, with barely a glance at all the ways in which [the] EPA later took costs into account.”⁹² Justice Kagan also emphasized the benefits—including economic—of regulation, a crucial factor entirely neglected by the majority:

EPA conducted a formal cost-benefit study which found that the quantifiable benefits of its regulation would exceed the costs up to nine times over—by as much as \$80 billion each year. Those benefits include as many as 11,000 fewer premature deaths annually, along with a far greater number of avoided illnesses.⁹³

It is not just the courts that undergo these 180-degree shifts in reasoning where fossil fuel corporations are concerned—the executive branch’s policies regarding power plants breed such instability. *Michigan* involved the regulation of electric utility steam generating units (EGUs), fossil fuel fired combustion units, more commonly known as power plants.⁹⁴ The Court was likely able to take complete control of what should have been an Agency decision because of the EPA’s weakened position due to its history of inconsistency in regulating EGUs. In 2000, under the Clinton administration, the EPA revealed findings that EGUs produce mercury and are a detriment to public health and need to be regulated.⁹⁵ In 2005, the EPA under the Bush administration backpedaled, arguing it was not “appropriate and necessary” for coal and oil powered EGUs to be regulated.⁹⁶ Then in 2012, under the Obama administration, the EPA once again stated that regulation of EGUs was necessary

ambiguous sections of the CAA an authorization to consider costs that has elsewhere, and so often, been expressly granted.” *Whitman*, 531 U.S. at 467.

⁹¹ *Michigan*, 135 S. Ct. at 2714.

⁹² *Id.* at 2724.

⁹³ *Id.* at 2714.

⁹⁴ *Id.* at 2704–05 (“The Act refers to these plants as electric utility steam generating units, but we will simply call them power plants.”).

⁹⁵ Regulatory Finding on the Emissions of Hazardous Air Pollutants from Electric Utility Steam Generating Units, 65 Fed. Reg. 79, 825 (Dec. 20, 2000).

⁹⁶ Final Rule, 70 Fed. Reg. 15,993 (Mar. 29, 2005).

and began to promulgate their emissions standards.⁹⁷ The fossil fuel industry then petitioned against the regulations, eventually leading to the consolidated cases in *West Virginia v. EPA*.⁹⁸ These 180-degree shifts in conviction with each new administration are particularly harmful to environmental health, which depends on intergenerational improvement.⁹⁹ Without clear guidance from the CAA, wavering and inconsistent EPA regulations will continue to cost the agency authority and credibility, making them susceptible to challenges in court.

B. (Re)interpreting the CAA

A Supreme Court holding that the EPA misinterpreted the words, meaning, or intention of the CAA can rapidly result in a radical reversal of environmental policy. Statutory interpretation, the province of the court, is the most frequent means of reversing EPA regulations.¹⁰⁰ Already, the prior two cases involving cost considerations turned on arguably incompatible interpretations of seemingly unambiguous phrases. Two CAA terms—“any air pollutant” and “modification”—have been reinterpreted by courts and EPA administrations with profound consequences.

1. Any Air Pollutant?

Probably the most important environmental decision of this century was Justice Stevens’s 2007 opinion in *Massachusetts v. E.P.A.*¹⁰¹ Massachusetts filed a claim against the EPA alleging damage to its coastline caused by global warming was due, in part, to the Agency’s failure to perform its duty to regulate greenhouse gas emissions.¹⁰² It based this argument on § 202(a)(1) of the CAA, which states:

⁹⁷ Final Rule, 77 Fed. Reg. 9303 (Feb. 16, 2012).

⁹⁸ See *White Stallion Energy Ctr., LLC v. EPA*, 748 F.3d 1222 (D.C. Cir. 2014) (lower court decision that was overturned by Michigan led by industry petitioners challenging final rule).

⁹⁹ See Gareth Davies, *Climate Change and Reversed Intergenerational Equity: the Problem of Costs Now, for Benefits Later*, 10 CLIMATE L. 269–70 (2020).

¹⁰⁰ See Daniel W. Wolff, *Regulatory—How the Supreme Court Might Constrain Agencies*, CROWELL (Feb. 27, 2019), <https://www.crowell.com/NewsEvents/Publications/Articles/Regulatory-How-the-Supreme-Court-Might-Constrain-Agencies> [<https://perma.cc/2RKA-V9W6>].

¹⁰¹ *Massachusetts v. EPA*, 549 U.S. 497 (2007); see Sam Evans-Brown, *How Massachusetts v. EPA Forced the U.S. Government to Take On Climate Change*, INSIDE CLIMATE NEWS (June 4, 2020) <https://insideclimatenews.org/news/04062020/massachusetts-v-epa-emissions-pollution-climate-change/> [<https://perma.cc/HY5E-XQ77>].

¹⁰² *Massachusetts*, 549 U.S. at 515.

The Administrator shall by regulation prescribe (and from time to time revise) . . . standards applicable to the emission of *any air pollutant* from any . . . new motor vehicles . . . which in his judgment cause, or contribute to, air pollution which may reasonably be anticipated to endanger public health or welfare.¹⁰³

The Court held that unless the EPA could make a judgment that greenhouse gases *do not* contribute to climate change then, under the CAA's "capacious definition of 'air pollutant,'" it was an abuse of its discretion not to regulate greenhouse gases in the interest of public health.¹⁰⁴ In response to this decision, the EPA underwent an extensive review of climate change research and released its Endangerment Finding in 2009.¹⁰⁵ It reported that greenhouse gases contributed to climate change, threatening the "health and [] welfare of current and future generations."¹⁰⁶

Unfortunately, the scope of this long overdue decision only covered GHG emissions from mobile sources in the transportation sector, leaving stationary sources like power plants unregulated. Consequently, five years later the matter returned to the courts to determine whether regulation of GHGs from mobile sources "automatically triggered" permitting requirements for stationary sources of GHG pollution.¹⁰⁷ The DC Circuit dismissed or denied the petitions, holding that the EPA's determination that GHG emissions were "very likely" the "root cause" of climate change was neither arbitrary nor capricious but rational and well supported.¹⁰⁸

However, two years later the Supreme Court reversed the DC Circuit in *Utility Air Regulatory Group v. EPA*.¹⁰⁹ The Court held that not only was the EPA not compelled to apply the GHG standards for moving sources to stationary sources but that such application was an unreasonable construction of the CAA.¹¹⁰ First, Justice Scalia rejected the EPA's clear-language argument, deciding the language of the CAA was ambiguous and

¹⁰³ 42 U.S.C. § 7521(a)(1) (emphasis added).

¹⁰⁴ *Massachusetts*, 549 U.S. at 528, 532–34.

¹⁰⁵ Endangerment and Cause or Contribute Findings for Greenhouse Gases Under Section 202(a) of the Clean Air Act, 74 Fed. Reg. 66495, (Dec. 15, 2009) ("Specifically, the Administrator is defining the 'air pollution' referred to in CAA section 202(a) to be the mix of six long-lived and directly-emitted greenhouse gases: carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF₆)."); Exec. Order No. 13,432, 72 Fed. Reg. 27,717 (May 14, 2007).

¹⁰⁶ *Id.*

¹⁰⁷ *Coal. for Responsible Regul., Inc. v. EPA*, 684 F.3d 102, 115–21 (D.C. Cir. 2012).

¹⁰⁸ *Id.* at 120, 123, 128.

¹⁰⁹ *Util. Air Regul. Grp. v. EPA*, 573 U.S. 302 (2014).

¹¹⁰ *Id.* at 321.

thus ripe for Supreme Court interpretation.¹¹¹ Then, he attempted to draw a distinction between the “Act-wide” all-encompassing definition of air pollutant applied in *Massachusetts* and the definition “in the Act’s operative provisions” affecting power plants that he claimed has a narrower application.¹¹² Once constricted by this narrower application, he found the EPA exceeded its authority by answering a “major question” without express authorization from Congress.¹¹³ Whether power plants that emit GHGs must obtain permits was deemed a “major” question by the majority because of its significant economic impact.¹¹⁴ This is despite the fact that reducing GHG emissions would have a vastly net-beneficial effect on the economy overall.¹¹⁵

The majority’s finding compelled the EPA to change their regulation. It revised the rule “to ensure that neither the PSD nor [operating] rules require a source to obtain a permit solely because the source emits . . . *GHGs above the applicable thresholds*.”¹¹⁶ If, as is undisputed, GHGs are bad for the environment and public health, of what possible consequence is the source of the pollutant? Why would a mobile source require regulation but a stationary source would not? Why assign a “threshold” that two-thirds of sources are free to ignore?¹¹⁷ The decision is inconsistent, illogical, and without regard for public health or the environment.

¹¹¹ *Id.* at 315–16.

¹¹² *Id.*

¹¹³ *Id.* at 325. Although Scalia does not use the term “major question” in this case, he laid the foundation by stating: “When an agency claims to discover in a long-extant statute an unheralded power to regulate ‘a significant portion of the American economy,’ we typically greet its announcement with a measure of skepticism.” *Id.* at 324.

¹¹⁴ *Id.* Here, Scalia references *FDA v. Brown & Williamson Tobacco Corp.*, which does expressly link “major questions” to significant economic impacts. 529 U.S. 120, 159 (2000).

¹¹⁵ See *Quantifying Risks to the Federal Budget from Climate Change*, WHITE HOUSE BRIEFING ROOM (Apr. 4, 2022), <https://www.whitehouse.gov/omb/briefing-room/2022/04/04/quantifying-risks-to-the-federal-budget-from-climate-change/> [<https://perma.cc/73DG-9HZY>]. Permitting requirements are the primary means by which the EPA regulates emissions from new major emitting sources. *Air Emissions Monitoring for Permits*, EPA (last updated Dec. 16, 2021), <https://www.epa.gov/air-emissions-monitoring-knowledge-base/air-emissions-monitoring-permits> [<https://perma.cc/2U4E-CEXY>].

¹¹⁶ Revisions to the Prevention of Significant Deterioration (PSD) and Title V Greenhouse Gas (GHG) Permitting Regulations and Establishment of a Significant Emissions Rate (SER) for GHG Emissions Under the PSD Program, 81 Fed. Reg. 68110 (proposed Oct. 3, 2016) (to be codified at 40 C.F.R. 51) (emphasis added).

¹¹⁷ *Sources of Greenhouse Gas Emissions*, *supra* note 17. This website shows the breakdown of mobile and stationary sources. Approximately one-third are mobile sources of pollution and two-thirds are stationary sources of pollution. *Id.* The former were regulated per *Massachusetts v. EPA*, but *Air Utility* holds that stationary sources are not held to the same regulatory standard.

CAA permitting requirements have led to numerous environmental disputes. In 2021, the Third Circuit attempted to resolve one such discrepancy by looking to the statutory text.¹¹⁸ An environmental group petitioned against a steel corporation for failing to report to the EPA air pollution created when it continued to burn raw, uncleaned fuel after two industrial fires rendered its processing plants unusable.¹¹⁹ The Court held that the environmental group misinterpreted the statutory text by stating emissions are “subject to” CAA permits as meaning “obedient to” or “in compliance with,” when it actually meant “governed by.”¹²⁰ Simply obtaining a permit exempted the steel corporation from mandatory emissions reporting even after the destruction of its processing plant meant it was emitting so much pollution that it was no longer in compliance with its permit.¹²¹ This decision sets a dangerous precedent of allowing power plants to hide behind their permits, retaining their exempt status regardless of whether they remain in compliance with the permitting standards.

2. The Modification Debate

Another frequently contested CAA term is “modification.” While the EPA sets emissions standards for mobile sources and *new* stationary sources, there are far fewer regulations for existing stationary sources. However, existing sources that undergo modifications are subject to new source requirements.¹²² Therefore, what constitutes a modification is a perpetual source of debate. The statutory language of § 111 governing standards of performance for new stationary sources defines “modification” as “*any physical change in, or change in the method of operation of, a stationary source which increases the amount of any air pollutant emitted by such source or which results in the emission of any air pollutant not previously emitted.*”¹²³ Despite this seemingly comprehensive and unambiguous definition, “modification” has been interpreted differently by different EPA administrations, requiring courts to step in to answer *how much modification* amounts to new stationary source status.

¹¹⁸ Clean Air Council v. U.S. Steel Corp., 4 F.4th 204, 207 (3d Cir. 2021).

¹¹⁹ *Id.* at 207.

¹²⁰ *Id.* at 209.

¹²¹ *Id.* at 210, 212.

¹²² 42 U.S.C. § 7411(a)(2) (“The term ‘new source’ means any stationary source, the construction or modification of which is commenced after the publication of regulations . . . prescribing a standard of performance.” *Id.* § 7411(a)(4).

¹²³ Clean Air Amendments of 1970, Pub. L. No. 91-604, 84 Stat. 1676 (codified at 42 U.S.C. § 7411(a)(4) (emphasis added).

In 2002 and 2003, the EPA issued two new rules to facilitate modification of plants without triggering the permitting process for new stationary source: New Source Review (NSR).¹²⁴ The first rule allowed plants to measure their emissions increases based on whether the level of permissible emissions had changed rather than a net change in their actual emissions.¹²⁵ It also allowed power plants to weigh decreases in pollutants even when they caused collateral increases in other pollutants.¹²⁶ Finally, it allowed industry to determine whether changes, updates, or replacements to their plants constituted “modifications,” and if the plants determined their changes were not “modifications” then they were not required to keep emissions records.¹²⁷ The second rule allowed plants to discount modifications it classified as routine maintenance, repair, or replacement that cost up to 20 percent of the total cost of the unit.¹²⁸ This meant that industry groups could essentially renovate their entire plant without triggering NSR so long as it did so in 20 percent increments. Both rules led to challenges and petitions by industry, government, and environmental groups, forcing the DC Circuit to review the new regulations and the meaning of “modification” under the CAA.¹²⁹ It held the first rule was impermissible under the CAA and that the EPA “acted arbitrarily and capriciously” in allowing sources to modify plants without recording emissions changes.¹³⁰ It held the second rule likewise violated the CAA requirements because “any physical change” does in fact mean *any* physical change and not just changes costing more than 20 percent of the value of the whole plant.¹³¹

A year later, the Supreme Court weighed in on the “modification” debate. Duke Energy made extensive modifications to its power plants for over a decade without ever

¹²⁴ See *New York v. EPA*, 443 F.3d 880, 883 (2006); 40 C.F.R. § 52.24 (67 Fed. Reg. 80185 (2003)); 40 C.F.R. §§ 51.165–166 (68 Fed. Reg. 61247 (2003)).

¹²⁵ 40 C.F.R. §§ 51, 52 (67 Fed. Reg. 80185, 80188 (final rule issued Dec. 31, 2002)).

¹²⁶ *Id.*; 68 Fed. Reg. 61247, 61249–50.

¹²⁷ 40 C.F.R. §§ 51, 52 (67 Fed. Reg. 80185, 80189); see generally LARRY PARKER, CONG. RSCH. SERV., RL31757, CLEAN AIR: NEW SOURCE REVIEW POLICIES AND PROPOSALS 3–6 (2003), <https://www.everycrsreport.com/reports/RL31757.html> [<https://perma.cc/7XB5-PNUG>] (explaining the controversy behind avoiding New Source Review under the guise of extensive routine maintenance).

¹²⁸ 68 Fed. Reg. 61247, 61251 (final rule issued Oct. 27, 2003) (to be codified at 40 C.F.R. §§ 51, 52).

¹²⁹ *New York v. EPA*, 413 F.3d at 3, 10 (2005); *New York v. EPA*, 443 F.3d at 885.

¹³⁰ *New York v. EPA*, 413 F.3d at 10, 11. There were other portions of this rule discussed in this case that were upheld, including the implementation of lookback period of ten years of which the plant could choose any two years as its baseline measurement to determine a modification in the present.

¹³¹ *New York*, 443 F.3d at 883–85.

obtaining a permit.¹³² The plants' modifications allowed them to run longer hours, so although their annual emissions significantly increased, their hourly emissions only slightly increased.¹³³ Duke Energy was sued by Environmental Defense for violating the PSD program's permitting requirements that are triggered by an increase in annual emissions.¹³⁴ Duke argued that a definition of "modification" from the NSPS provision requiring permits based on a change in the *hourly rate* of emissions should apply instead.¹³⁵ The Court ruled in favor of Environmental Defense, reasoning that since the definition of "modification" in the CAA does not on its face specify either hourly or annual rates, then under the *Chevron* deference standard, the EPA is within its discretion to further define different provisions as it sees fit, so long as its interpretation is reasonable given the general definitions supplied in the CAA.¹³⁶

Duke Energy was decided in 2007 by the same court as *Massachusetts*, whereas *Utility Air* was decided in 2014 by the same court as *Michigan*, so the "modification" debate reached a just result where "any air pollutant" could not. We cannot hang our hopes of human survival on the luck of a just bench. The terms in the CAA must be defined consistently, based on science to protect public health, not subject to the interests of lobbyists to protect oil profits.

C. Preemption Under the CAA

Ambiguity in the CAA also leads to inconsistent jurisdictional findings over what type of claims it preempts. Not all causes of action for air pollution arise under the CAA. For localized pollution, private individual plaintiffs and environmental organizations often prefer to seek remedies for the prevention of and compensation for environmental harms via tort claims for nuisance, negligence, or trespass.¹³⁷ Such common law claims can be preferable to private plaintiffs seeking remedies for harm to health or property since violations of the CAA most often result in government fines or payments

¹³² *Env't Def. v. Duke Energy Corp.*, 549 U.S. 561, 570–71 (2007); *see also* *Env't Def. v. Duke Energy Corp.*, OYEZ, <https://www.oyez.org/cases/2006/05-848> [<https://perma.cc/D3ZD-J8ZG>].

¹³³ *Env't Def.*, 549 U.S. at 571.

¹³⁴ *Id.* at 569–70.

¹³⁵ *Id.* at 571.

¹³⁶ *Id.* at 576.

¹³⁷ Matthew Morrison & Bryan Stockton, *What's Old Is New Again: State Common-Law Tort Actions Elude Clean Air Act Preemption*, ENV'T L. REP. 10282, 10282 (2015).

to the public rather than any individual.¹³⁸ Further, the NAAQS set the maximum amount of a pollutant permissible in the air, leaving states free to set more stringent standards. This can lead to the reasonable assumption that a state law claim may be filed when the CAA no longer offers protection. However, environmental litigation over the past twenty years has frankly left more questions than answers as to precisely what is and is not preempted by the CAA.

In 2010, North Carolina filed a nuisance claim against Tennessee Valley Authority, alleging that untreated air pollution from its coal-fired plants in Alabama and Tennessee was a public nuisance to its citizens.¹³⁹ The district court granted North Carolina an injunction but the Fourth Circuit reversed, reasoning that allowing the injunction would open the door to a wave of vague nuisance claims that would undermine the carefully determined and extensively refined federal systems in place under the CAA.¹⁴⁰ The court made clear it was not stating the entire field of emissions regulations was preempted.¹⁴¹ A year later, the Supreme Court granted certiorari in *American Electric Power v. Connecticut* to weigh in on the issue of preemption under the CAA.¹⁴² “Several states, the city of New York, and three private land trusts” sued the power company seeking abatement from the public nuisance caused by the continuous contributions to global warming from its fossil-fuel powered plants in twenty states.¹⁴³ The Court held that the CAA displaces federal common law tort claims but noted that its decision did not address whether *state* tort claims are also preempted.¹⁴⁴ The following year the Ninth Circuit expanded that decision, holding that federal tort claims for damages, as well as injunctive relief against future emissions, are preempted.¹⁴⁵

By contrast, the Third, Sixth, and Ninth Circuits found that state tort claims were not preempted.¹⁴⁶ In the first two cases

¹³⁸ *Id.*; see also *Enforcement Actions Under Title VI of the Clean Air Act*, EPA (last updated July 25, 2022), <https://www.epa.gov/ozone-layer-protection/enforcement-actions-under-title-vi-clean-air-act> [<https://perma.cc/B2MH-GEFN>].

¹³⁹ North Carolina *ex rel.* Cooper v. Tenn. Valley Auth., 593 F. Supp. 2d 812, 815 (W.D.N.C. 2009).

¹⁴⁰ North Carolina *ex rel.* Cooper v. Tenn. Valley Auth., 615 F.3d 291, 296, 301 (4th Cir. 2010).

¹⁴¹ *Id.* at 302–03.

¹⁴² See Am. Elec. Power Co. v. Connecticut, 564 U.S. 410, 415 (2011).

¹⁴³ *Id.*

¹⁴⁴ *Id.* at 424, 429.

¹⁴⁵ Native Vill. of Kivalina v. ExxonMobil Corp., 696 F.3d 849, 856–57 (9th Cir. 2012).

¹⁴⁶ Bell v. Cheswick Generating Station, 734 F.3d 188, 189–90 (3d Cir. 2013), *cert. denied* 572 U.S. 1149 (2014); Merrick v. Diageo Ams. Supply, Inc., 805 F.3d 685, 686 (6th Cir. 2015); City of Oakland v. BP PLC., 969 F.3d 895, 907 (9th Cir. 2020).

from 2013 and 2015, circuit courts held that class action tort claims brought by private property owners were not preempted, and they were denied certiorari and rehearing en banc respectively.¹⁴⁷ In 2020, the Ninth Circuit reversed and remanded the dismissal of the City of Oakland's state-law public nuisance claims against BP, ExxonMobil, Chevron, and Shell for harms from global warming caused by the companies' production of fossil fuels.¹⁴⁸ The action was initiated in state court before defendants removed to federal court where the Ninth Circuit held that "the state-law claim for public nuisance fail[ed] to raise a substantial federal question," and so is not preempted by the CAA.¹⁴⁹ The Supreme Court again denied certiorari.¹⁵⁰

A year later, the Second Circuit entered the debate when New York City brought a similar claim against Chevron, ExxonMobil, and Shell for harms caused by their GHG emissions.¹⁵¹ This time the court relayed in a lengthy opinion that state law claims are displaced by federal common-law, which is in turn displaced by the CAA.¹⁵² When environmental harms cause individuals, organizations, and municipalities financial hardship from damage to health or property, the CAA offers them little remedy. At the same time, there are no preemption parameters expressed in the CAA, which leads to conflicting interpretations across circuits and often no alternative recourse for claimants. The CAA needs clarifying language to expand the remedies available to those harmed by reckless or negligent environmental practices.

This Part looked at case law concerning consideration of costs, reinterpretation of key CAA terms, and preemption of state law tort claims by the CAA. Amending the statute with unambiguous language regarding cost, terms, and preemption would close the most exploited loopholes to implementation and enforcement, giving EPA regulations a fighting chance to effectuate climate progress. The next Part assesses alternative climate strategies in order to demonstrate that they are insufficient to avoid climate disaster, and therefore greater

¹⁴⁷ *Bell*, 734 F.3d 188; *Merrick*, 805 F.3d at 685. The Supreme Court denied certiorari of the 2013 Third Circuit claim, *GenOn Power Midwest, L.P. v. Bell*, 572 U.S. 1149 (2014). The 2015 Sixth Circuit claim was denied rehearing en banc on Dec. 7, 2015, and did not file for certiorari.

¹⁴⁸ *City of Oakland*, 969 F.3d at 901, 912.

¹⁴⁹ *Id.* at 901, 906–07.

¹⁵⁰ *Chevron Corp. v. City of Oakland*, 141 S. Ct. 2776 (2021).

¹⁵¹ *N.Y.C. v. Chevron Corp.*, 993 F.3d 81, 86, 88, 103 (2d Cir. 2021).

¹⁵² *Id.* at 89, 95. This claim also raised the topic of extraterritoriality because many of the respondent corporations own and operate plants overseas. The court held that when, like the CAA, a statute does not assert extraterritorial reach, it has none; nevertheless, the claims were dismissed due to foreign policy considerations. *Id.* at 100–03.

congressional action is necessary. The final Part then proposes a two-prong solution to congressional amendment of the CAA.

III. WHY MUST CLIMATE ACTION FALL TO CONGRESS?

Global warming is unavoidable. Solutions and oppositions are everywhere—all over the news and disrupting our daily lives. But despite the inescapability of climate change’s global exposure, the time for mitigating its most devastating effects is evading our grasp. This Part explores other avenues and attitudes to climate change to demonstrate that congressional action is necessary. It first recounts efforts by the executive branch to combat climate change and by the judicial branch to prevent climate progress. Then it examines corporate commitments to climate goals, the influence of concerned citizens, and climate actions at the state level.

A. *Efforts by the Executive and Judicial Branches*

On his first day in office, President Biden issued an executive order setting forth his administration’s admirable goals “to tackle the climate crisis.”¹⁵³ By the end of the first week he issued a second executive order rejoining the Paris Agreement.¹⁵⁴ Another four climate-related orders followed.¹⁵⁵ Without congressional support, however, he may never see them implemented. Even if his climate orders are implemented, they are unlikely to last long enough to have any meaningful impact.

There are two primary reasons why executive orders are often short lived. First, new administrations frequently knock down what has come before and make 180-degree shifts to serve their party’s interests.¹⁵⁶ Section two of Biden’s first order directs the heads of all administrative agencies to “immediately review all existing regulations, orders, guidance documents, policies”

¹⁵³ Exec. Order No. 13990, 86 Fed. Reg. 7037 (2021) (“Protecting Public Health and the Environment and Restoring Science to Tackle the Climate Crisis.”).

¹⁵⁴ Exec. Order No. 14008, 86 Fed. Reg. 7619 (2021) (“Tackling the Climate Crisis at Home and Abroad.”).

¹⁵⁵ See Exec. Order No. 14013, 86 Fed. Reg. 8839 (2021); (“Rebuilding and Enhancing Programs To Resettle Refugees and Planning for the Impact of Climate Change on Migration.”); Exec. Order No. 14027, 86 Fed. Reg. 25947 (2021) (“Establishment of the Climate Change Support Office.”); Exec. Order No. 14030, 86 Fed. Reg. 27967 (2021) (“Climate-Related Financial Risk.”); Exec. Order No. 14037, 86 Fed. Reg. 43583 (2021) (“Strengthening American Leadership in Clean Cars and Trucks.”).

¹⁵⁶ See, e.g., Exec. Order No. 13990, 86 Fed. Reg. 7037 (2021); see also Ashlyn Still & Adrian Blanco, *A Visual Breakdown of Biden’s Barrage of Executive Actions in His First Weeks*, WASH. POST (Feb. 5, 2021), <https://www.washingtonpost.com/politics/interactive/2021/biden-executive-orders-breakdown/> [https://perma.cc/ZVU9-JJNL].

enacted or followed by the previous administration, and “consider publishing . . . proposed rule[s] suspending, revising, or rescinding” regulations that do not “prioritize the development of a clean energy economy.”¹⁵⁷ The process of reversing executive orders has been a trend since Truman’s presidency and is only getting more damaging with party polarization.¹⁵⁸ Trump signed more orders per year than any president since Jimmy Carter and was extremely vocal about undoing everything that had come before.¹⁵⁹ The second factor preventing executive branch policy from maturing into long-lasting climate progress is the judicial branch’s growing pattern of regulation reversal.¹⁶⁰ This is due to the conservative supermajority’s shift from *Chevron* deference to a major questions viewpoint.¹⁶¹

The Biden administration’s planned climate policy depends on federal agencies for implementation and enforcement, and the process takes time. In October 2021, twenty-three federal agencies released “Climate Adaption and Resilience Plans” in response to the President’s first two executive orders.¹⁶² The plans outline the steps each agency will take to contribute to the administration’s government-wide approach to addressing the climate crisis.¹⁶³ The first objective

¹⁵⁷ See Exec. Order No. 13990, 86 Fed. Reg. 7037 (2021).

¹⁵⁸ See James Pfiffner & Joshua Lee, *Trump Pledged to Reverse Obama’s Executive Orders: Here’s How Well Past Presidents Have Fulfilled That Pledge*, WASH. POST (Jan. 23, 2017), <https://www.washingtonpost.com/news/monkey-cage/wp/2017/01/23/trump-pledged-to-reverse-obamas-executive-orders-heres-how-well-past-presidents-have-fulfilled-that-pledge/> [https://perma.cc/WCK7-9FKR]; Major Garrett, *Bush May Seek to Overturn Clinton Executive Orders on Environment*, CNN (Jan. 5, 2001), <https://www.cnn.com/2001/ALLPOLITICS/stories/01/05/bush.environmental/index.html> [https://perma.cc/CHG6-BNEM].

¹⁵⁹ *Statistics*, AM. PRESIDENCY PROJECT (last updated June 16, 2022), <https://www.presidency.ucsb.edu/statistics/data/executive-orders> [https://perma.cc/Z9XV-VPT4]; *Executive Orders*, FED. REG., <https://www.federalregister.gov/presidential-documents/executive-orders> [https://perma.cc/9R8Z-ETV2]; see, e.g., Exec. Order No. 13765, 82 Fed. Reg. 8351 (2017); Exec. Order No. 13766, 82 Fed. Reg. 8657 (2017); see Graig Graziosi, *Trump Says Obama Isn’t a Great President Because ‘Much of What he’s Done We’ve Undone’*, INDEPENDENT (Aug. 21, 2020), <https://www.independent.co.uk/news/world/americas/us-election/donald-trump-barack-obama-president-policies-undone-a9683036.html> [https://perma.cc/V8P8-AUVH]; see also Philip Bump, *What Trump has Undone*, WASH. POST (Dec. 15, 2017, 4:00 PM), <https://www.washingtonpost.com/news/politics/wp/2017/08/24/what-trump-has-undone/> [https://perma.cc/86JJ-F3M8].

¹⁶⁰ See Dan Farber, *Major Questions About the Major Questions Doctrine*, LEGAL PLANET (Nov. 4, 2021), <https://legal-planet.org/2021/11/04/major-questions-about-the-major-questions-doctrine/> [https://perma.cc/F59B-XQJQ]; *supra* Part II.

¹⁶¹ *Id.*

¹⁶² *FACT SHEET: Biden Administration Releases Agency Climate Adaptation and Resilience Plans from Across Federal Government*, WHITE HOUSE BRIEFING ROOM (Oct. 7, 2021), <https://www.whitehouse.gov/briefing-room/statements-releases/2021/10/07/fact-sheet-biden-administration-releases-agency-climate-adaptation-and-resilience-plans-from-across-federal-government/> [https://perma.cc/L5CY-JPPM].

¹⁶³ *Id.*

listed in the EPA's plan is reducing GHG emissions that cause climate change.¹⁶⁴ To meet this objective, its long-term performance goal is to promulgate a final rule by September 30, 2026.¹⁶⁵ The EPA released its GHG Endangerment Finding following *Massachusetts* back in 2009, then the CPP was repealed and appealed, and now a new goal of 2026 is set—seventeen years have passed since the threat to public health from GHGs was made “official,” and the United States still does not have its *first* law regulating carbon. And now the future is so uncertain. To effectively regulate carbon emissions, the EPA's new rule must enforce emissions limitations on existing stationary sources through generation shifting to renewable energy sources—precisely what it just lost the authority to do after the Supreme Court's *West Virginia v. EPA* decision.¹⁶⁶

The massive dispute at issue in this case evolved from hundreds of consolidated and reconsolidated cases and has petitioners, respondents, and amici curiae including almost every state, numerous municipalities, agencies, fossil fuel corporations, public health organizations, and environmental activist groups.¹⁶⁷ It stems from the industry backlash to the Obama administration's 2015 Clean Power Plan and the subsequent stream of petitions following outrage at Trump-era EPA administrator, Andrew Wheeler's attempt to repeal the CPP and replace it with the ACE rule.¹⁶⁸

When environmental groups and health advocates opposed the ACE rule, the Trump-era EPA fought against its own regulatory power arguing it lacked the statutory authority to

¹⁶⁴ EPA, ADAPTION ACTION PLAN 1 (2021), <https://www.epa.gov/system/files/documents/2021-09/epa-climate-adaptation-plan-pdf-version.pdf> [https://perma.cc/VBF7-B938].

¹⁶⁵ EPA STRATEGIC PLAN DRAFT, *supra* note 79, at 8.

¹⁶⁶ Generation shifting means moving from nonrenewable resources like oil and gas to renewable resources such as solar and wind power. Without express command from Congress, the EPA does not have the authority to make these “outside the fenceline” shifts because of the Major Questions doctrine. *See* EPA STRATEGIC PLAN DRAFT, *supra* note 79, at 9–10; *see also* *West Virginia v. EPA*, 142 S. Ct. 2587, 2614 (2022); LINDA TSANG, CONG. RSCH. SERV., LSB10198, EPA PROPOSES THE AFFORDABLE CLEAN ENERGY RULE TO REPLACE THE CLEAN POWER PLAN 2 (2018), <https://crsreports.congress.gov/product/pdf/LSB/LSB10198> [https://perma.cc/T3N8-JE7T].

¹⁶⁷ *See West Virginia*, 142 S. Ct. 2587 (consolidating cases Nos. 19-1140, 19-1165, 19-1166, 19-1173, 19-1175, 19-1176, 19-1177, 19-1179, 19-1185, 19-1186, 19-1187, 19-1188); *see also* *Am. Lung Ass'n v. EPA*, 985 F.3d 914, 922–28 (D.C. Cir. 2021).

¹⁶⁸ *See* EPA, FACT SHEET: REPEAL OF THE CLEAN POWER PLAN 1, https://www.epa.gov/sites/default/files/2019-06/documents/cpp_repeal_fact_sheet_6.18.19_final.pdf [https://perma.cc/2WQR-DZSU]; *see also* *Proposal: Affordable Clean Energy (ACE) Rule*, EPA (last updated on Mar. 3, 2021), <https://www.epa.gov/stationary-sources-air-pollution/proposal-affordable-clean-energy-ace-rule> [https://perma.cc/QA4U-L9QP]; ENV'T DEF. FUND, STATEMENTS OPPOSING ANDREW WHEELER'S WEAKENED CLEAN POWER PLAN REPLACEMENT PROPOSAL (2018), <https://blogs.edf.org/climate411/files/2018/08/Statements-Opposing-Wheelers-CPP-Replacement-Plan.pdf> [https://perma.cc/ZJG2-2FFS].

implement the CPP.¹⁶⁹ The DC Circuit Court held that judicial precedent and Congress support that the EPA has long had statutory authority to regulate greenhouse gases under § 111(d); it therefore vacated the ACE rule and remanded to the Biden administration EPA to write a new rule.¹⁷⁰ The court stated that in promulgating the ACE rule the EPA “ignored the environmental and public health effects of the Rule’s compliance slowdown . . . thus fail[ing] to consider an important aspect of the problem—indeed, arguably the most important aspect.”¹⁷¹

In order to reverse this logical and well-supported decision, on appeal in *West Virginia v. EPA* the Supreme Court relied upon the “major questions doctrine”—the first use of this term in a Supreme Court opinion and a worryingly open-ended, expansive application of the doctrine.¹⁷² It is so damaging to climate action because it prevents the EPA from regulating emissions by requiring a transition to renewable energy sources.¹⁷³ The EPA must have known this was possible given that Justices Kavanaugh, Alito, Thomas, and Gorsuch have already made their antiregulation views apparent,¹⁷⁴ and the questions raised during oral argument suggested they were gearing up to deliver this final blow to environmental progress. Nevertheless, this unfavorable holding leaves the administration reeling and concerned citizens on tenterhooks, wondering what the new course of action will be. Unfortunately, it could place vital carbon decisions in the hands of state governments, and although a few red states are making green decisions, most are not.

¹⁶⁹ EPA, *supra* note 168.

¹⁷⁰ *Am. Lung Ass’n v. EPA*, 985 F.3d 914, 959, 988, 995 (D.C. Cir. 2021).

¹⁷¹ *Id.* at 995 (internal citation omitted).

¹⁷² See *West Virginia*, 142 S. Ct. at 2605 (Roberts, CJ. Majority), 2634 (Kagan, J., dissenting).

¹⁷³ See Petition for Writ of Certiorari at 7, 14, 5, *West Virginia v. EPA*, 142 S. Ct. 2587 (2022), No. 20-1530; see also Brief for Respondents at 9, *West Virginia v. EPA*, 142 S. Ct. 2587 (2022), No. 20-1530, 20-1778, 20-1780, https://www.supremecourt.gov/DocketPDF/20/20-1530/186855/20210805165924807_W%20Va%20080521.3.pdf [<https://perma.cc/F97T-K649>].

¹⁷⁴ See *Coal. for Responsible Regul. v. EPA*, No. 09-1322 etc., 2012 WL 6621785, at *14 (Dec. 12, 2012) (Kavanaugh, J., dissenting) (order denying rehearing en banc); see also Brad Plumer, *How Brett Kavanaugh Could Reshape Environmental Law from the Supreme Court*, N.Y. TIMES (Jul. 10, 2018), <https://www.nytimes.com/2018/07/10/climate/kavanaugh-environment-supreme-court.html> [<https://perma.cc/68JL-CEDK>]; see also *Nat’l Fed. of Indep. Bus. v. Dep’t of Labor*, 142 S. Ct. 661, 666–67 (2022). Gorsuch wrote a separate concurrence, joined by Thomas and Alito just to raise the issue of major questions, even though the court had already granted the stays against the vaccine mandate and suggested the mandate likely exceeded statutory authority. *Id.* at 667–70.

B. Corporations, Concerned Citizens, and States

The necessity of federal climate policy is also undermined by the belief that corporations will make the shift to greener technologies because it is good business to do the right thing.¹⁷⁵ In today's cultural climate, it is in the interest of big oil companies like ExxonMobil, Chevron, Shell, and BP to take steps towards reducing their carbon emissions and invest in clean energy alternatives. Each one of these fossil fuel titans has some sort of climate pledge on its website—a pithy catchphrase denoting how much they care about the health and future of our planet.¹⁷⁶ Undoubtedly, they post these promises to assuage the fears of investors amidst shareholders' climate change concerns.¹⁷⁷ But what measurable steps have they actually taken towards these purported goals, and what less-publicized steps have they taken to undermine them?

In 2020, ExxonMobil's ambitious plans to increase investment in oil and gas were leaked to the public.¹⁷⁸ The Texas gas giant's internal projections revealed fossil fuel production set to increase by about “a third in the next four years.”¹⁷⁹ Such reports belie any intentions of substantive emissions reduction goals. Exxon's climate inaction led to the replacement of three board members by activist investors, which prompted it to

¹⁷⁵ See David Gelles & Somini Sengupta, *Big Business Says It Will Tackle Climate Change, but Not How or When*, N.Y. TIMES (Jan. 23, 2020), <https://www.nytimes.com/2020/01/23/business/corporate-climate-davos.html> [<https://perma.cc/X9MF-JP3P>]; see also Naomi Oreskes & Auden Schendler, *Corporations Will Never Solve Climate Change*, HARV. BUS. REV. (Dec. 4, 2015), <https://hbr.org/2015/12/corporations-will-never-solve-climate-change> [<https://perma.cc/ARJ7-GHL6>].

¹⁷⁶ See ENERGY FOR OUR FUTURE, EXXONMOBIL, <https://corporate.exxonmobil.com/-/media/Global/Files/locations/Nigeria-operations/social-investment-projects/EM-Corporate-Energy-for-our-Future.pdf> [<https://perma.cc/PR6Z-BTHZ>] (“Energy for our Future”); *Home Page*, CHEVRON, <https://www.chevron.com/> [<https://perma.cc/LJP2-RUY8>] (“The future of energy is lower carbon, it's only human.”); *Powering Progress*, SHELL, <https://www.shell.com/powering-progress.html> [<https://perma.cc/4Z89-8686>] (“Powering Progress”).

¹⁷⁷ See Liz Doherty, *Investors and Courts Send Strong Powerful Wake-Up Call to Oil Giants Exxon, Chevron, and Shell*, SIERRA CLUB (May 26, 2021), <https://www.sierraclub.org/press-releases/2021/05/investors-and-courts-send-powerful-wake-call-oil-giants-exxon-chevron-and> [<https://perma.cc/5USG-6R6G>].

¹⁷⁸ Kevin Crowley & Akshat Rathi, *Exxon's Plan for Surging Carbon Emissions Revealed in Leaked Documents*, BLOOMBERG (Oct. 5, 2020, 10:28 PM), <https://www.bloomberg.com/news/articles/2020-10-05/exxon-carbon-emissions-and-climate-leaked-plans-reveal-rising-co2-output> [<https://perma.cc/T46G-67YG>].

¹⁷⁹ Derek Brower, *Why ExxonMobil is Sticking with Oil as Rivals Look to a Greener Future*, FIN. TIMES (Oct. 28, 2020), <https://www.ft.com/content/30ffa51b-2079-400e-84f1-2e45991194c8> [<https://perma.cc/S8A4-AF6S>]; see *Leading Oil and Gas Companies in the US*, WORLDATLAS, <https://www.worldatlas.com/articles/leading-oil-and-gas-companies-in-the-us.html> [<https://perma.cc/39RC-488J>]; Crowley & Rathi, *supra* note 178.

“consider” making a net-zero pledge.¹⁸⁰ Two months later, Chevron, the second largest US oil and gas company, set a net-zero “aspiration” for *operational* emissions by 2050 and three months later Exxon followed suit.¹⁸¹ It is hard to believe, however, that such statements are more than mere tokens intended to portray a willingness to cooperate when the fine print is vague and concerning. The targeted commitments only include emissions from operations (energy the company itself uses), which account for a minute fraction of fossil fuel corporations’ net emissions.¹⁸² The vast majority of their emissions, of course, come from secondary sources, such as consumers using their product to put gas in their cars.¹⁸³ Exxon and Chevron lag behind European energy producers BP and Royal Dutch Shell in pledges, transparency, and investment in renewable energy—no doubt a reflection of the disparate treatment of the climate crisis by government.¹⁸⁴ Regardless, across the board corporate pledges rely too heavily on carbon offsets and expensive carbon capture technology still in its infancy.¹⁸⁵

Finally, there have been important climate actions taken at the state level. In the past year, five more states joined the six that previously passed carbon-neutrality laws.¹⁸⁶ But state action does not replace the need for federal action. The eleven states only account for one-third of the nation’s population, and

¹⁸⁰ See Christopher M. Matthews & Emily Glazer, *Exxon Considers Pledging ‘Net Zero’ Carbon by 2050*, WALL ST. J. (Aug. 5, 2021, 1:00 PM), <https://www.wsj.com/articles/exxon-considers-pledging-net-zero-carbon-by-2050-11628161201> [<https://perma.cc/VDF2-TFL4>].

¹⁸¹ See Kevin Crowley, *Chevron Adopts Operational Net Zero ‘Aspiration’ by 2050*, BLOOMBERG GREEN (Oct. 11, 2021, 6:57 AM), <https://www.bloomberg.com/news/articles/2021-10-11/chevron-targets-net-zero-emissions-from-own-operations-by-2050> [<https://perma.cc/77LV-TNHZ>]; see also *Exxon Pledges Net-Zero Carbon Emissions from Operations by 2050*, CNBC (Jan. 18, 2022 8:14 AM), <https://www.cnbc.com/2022/01/18/exxon-pledges-net-zero-carbon-emissions-from-operations-by-2050.html> [<https://perma.cc/T7RJ-GWDK>].

¹⁸² See Eric Rosenbaum, *Climate Experts are Worried About the Toughest Carbon Emissions for Companies to Capture*, CNBC (Aug. 18, 2021, 6:19 PM), <https://www.cnbc.com/2021/08/18/apple-amazon-exxon-and-the-toughest-carbon-emissions-to-capture.html> [<https://perma.cc/MGH9-KWHW>].

¹⁸³ *Id.*

¹⁸⁴ See Mei Li et al. *The Clean Energy Claims of BP, Chevron, ExxonMobil and Shell: A Mismatch Between Discourse, Actions and Investments*, PLOS ONE (Feb. 16, 2022), <https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0263596> [<https://perma.cc/DSX3-UHSK>]; see also Clifford Krauss, *U.S. and European Oil Giants Go Different Ways on Climate Change*, N.Y. TIMES (Oct. 13, 2021), <https://www.nytimes.com/2020/09/21/business/energy-environment/oil-climate-change-us-europe.html> [<https://perma.cc/EH96-FYVL>].

¹⁸⁵ See Jack Arnold and Perrine Toledano, *Corporate Net-Zero Pledges: The Bad and the Ugly*, COLUM. CTR. ON SUSTAINABLE INV. (Dec. 1, 2021), <https://ccsi.columbia.edu/news/corporate-net-zero-pledges-bad-and-ugly> [<https://perma.cc/JWE3-JN2E>].

¹⁸⁶ See Dan Gearino, *Inside Clean Energy: Here Are 5 States that Took Leaps on Clean Energy Policy in 2021*, INSIDE CLIMATE NEWS (Dec. 23, 2021), <https://insideclimatenews.org/news/23122021/inside-clean-energy-states-2021/> [<https://perma.cc/S3DD-N4JJ>].

additional states are not expected to pass laws in 2022.¹⁸⁷ With President Biden's climate plans reliant on regulatory power, with the Court likely to soon shred that power, and with industry's empty promises—without Congress onside there is little hope of implementing a climate plan with enough staying power to deliver the much-needed changes.

IV. THE PATH TO AMENDMENT

In this political climate, passing any legislation is an uphill slog. Long gone are the days of bipartisan action to push through priority policy. The 1977 Amendments to the CAA became law just four months after introduction in the House.¹⁸⁸ The 1990 Amendments started in the Senate and took fourteen months to become law, passing by a vote of eighty-nine to ten.¹⁸⁹ Today, such timelines and consensus for bills of that breadth and complexity are unheard of in any policy area. Passing effective climate policy is particularly difficult for two reasons: it cannot be resolved for anyone without the cooperation of everyone, and timing. Gases that trap heat in the atmosphere do not adhere to boundaries of the states where they were created, making climate change a uniquely national problem that cannot be remedied without federal enforcement. The timing is anomalous because of the urgency to act with foresight. Scientists are asking the public to act now to mitigate inevitable catastrophic climate disasters in their future, but human nature is to prioritize what we see and feel in our immediate sphere.

This final Part proceeds in two stages. First, it outlines the proposed amendment at a basic technical level. This is neither groundbreaking nor novel.¹⁹⁰ In fact, anyone who has

¹⁸⁷ *Id.*

¹⁸⁸ An Act to Amend the Clean Air Act, and for other purposes, H.R. Res. 6161, 95th Cong. (1977); Clean Air Act Amendments of 1977, Pub. L. No. 95-95, 91 Stat. 685 (codified as amended at 42 U.S.C. § 7401). See *H.R. 6161—An Act to Amend the Clean Air Act, and for Other Purposes*, CONGRESS.GOV, <https://www.congress.gov/bill/95th-congress/house-bill/6161> (last visited Aug. 1, 2022) (noting that the Act was introduced to the House on April 6, 1977, and became law on August 7, 1977).

¹⁸⁹ Clean Air Act Amendments of 1990, S. Res. 1630, 101st Cong., Pub. L. No. 101-549 (codified as amended at 42 U.S.C. § 7401). See *S. 1630-Clean Air Acts of 1990*, CONGRESS.GOV, <https://www.congress.gov/bill/101st-congress/senate-bill/1630/actions> (last visited on Aug. 1, 2022) (noting that the bill was first introduced in the Senate on September 14, 1989, and became law on November 15, 1990).

¹⁹⁰ In 2009, following the EPA's Endangerment Finding, the Center for Biological Diversity petitioned to set NAAQS for GHGs. See CTR. FOR BIOLOGICAL DIVERSITY & 350.ORG, PETITION TO ESTABLISH NATIONAL POLLUTION LIMITS FOR GREENHOUSE GASES PURSUANT TO THE CLEAN AIR ACT (2009), https://www.biologicaldiversity.org/programs/climate_law_institute/global_warming_litigation/clean_air_act/pdfs/Petition_GHG_pollution_cap_12-2-2009.pdf [<https://perma.cc/7FUS-FA32>].

taken an introductory environmental law course will agree that the CAA's frailties are readily apparent. The second Section confronts a far more daunting and impenetrable barrier to progress: partisan polarization. Setting aside possible financial motives of the mega rich, opposition to pro-environment legislation by swathes of climate deniers is entrenched, pervasive, and often shrouded in a veil of ignorance. This Section proposes a canvassing solution to break down political barriers to amendment on a personal level by offering environmental aid tailored to ease individual economic hardship.

A. *Proposed Changes to the CAA*

The Clean Air Act is the backbone of all air pollution policy. Every regulation, court decision, executive action, and future climate legislation depends on its clarity and comprehensiveness. To this end, guided by caselaw of the previous Part, this Section addresses three areas of the CAA that can be strengthened to support climate progress and prevent a vicious cycle of Agency disputes. First, explicitly requiring that prior to finalizing regulations the EPA must consider all relevant long-term economic factors, including costs to human health and from natural disasters caused by climate change. Next, making sure "air pollutant" and "modification" are clearly defined across all provisions of the Act and that all known air pollutants are explicitly named as such. Finally, incorporating text confirming that the CAA sets only *minimum* standards for regulation, and does not preempt state law environmental claims.

1. Weighing Social and Environmental Costs

As discussed, the Supreme Court held that monetary costs of compliance for industry should be given weight when promulgating administrative regulations.¹⁹¹ If costs to industry must be accounted for, then agencies must weigh all economic factors, including long-term costs to human health and mortality and costs of damage to buildings and infrastructure from flooding, droughts, and wildfires. All economic factors directly resulting from the regulation under consideration must be weighed. Not doing so would be dangerously short sighted. Allowing the CAA to be interpreted as prioritizing the fiscal avoidance of power plant magnates over the hospital bills of

¹⁹¹ See *supra* notes 86–98 and accompanying text relating to *Michigan v. EPA*, 576 U.S. 743, 755 (2015).

those forced to live near them is not only morally reprehensible but economically unsound. There is now enough scientific research available to measure and quantify these previously elusive costs—human cost *is* economic cost.¹⁹² In celebrating fifty years of the CAA in 2020, the EPA took stock weighing the costs and benefits of the Act since its last amendment—\$65 billion in spending has saved \$2 trillion.¹⁹³

The most efficient way to apply this amendment would be to insert a definition under subsection (a) in each of the following parts: §§ 103–04 Research, investigation, and training, § 111 Standards of performance for new stationary sources, and § 112 Hazardous Air Pollutants.¹⁹⁴ The definition could be phrased as: (1) Cost Consideration. Throughout this section, all [8, 9, 13] times that “taking into consideration the cost of achieving . . .,” “taking into account costs,” “considering costs,” or any form thereof appears, this requires the EPA to conduct research, review, and consider *all measurable costs*, including long-term costs to human health, property, and the environment that are caused by climate change. Most of the relevant research has already been conducted by the IPCC and other environmental organizations, so the time needed to assemble the information for this cost-benefit analysis should not be detrimental.

2. Defining “Air Pollutant” and “Modification”

It is also essential that all pollutants known to cause climate change are incorporated into the necessary provisions of the CAA. Following *Massachusetts v. EPA*, six GHGs were listed under the definitions section regulating fuel for mobile sources.¹⁹⁵ There is a provision under this section, § 211(o)(12), that prohibits construing the addition of GHGs to this section to have any effect on the regulation of GHGs in any other section of the CAA.¹⁹⁶ This provision should be eliminated in its entirety. Subsection § 109(c), which directs the Administrator to add nitrogen dioxide by or before 1977, should likewise be eliminated

¹⁹² Jake Thompson & Elizabeth Heyd, *Report: Health Costs from Climate Change and Fossil Fuel Pollution Tops \$820 Billion a Year*, NRDC (May 20, 2021), <https://www.nrdc.org/media/2021/210520> [<https://perma.cc/JVZ5-WJ7R>]; OFF. MGMT. & BUDGET, ANALYTICAL PERSPECTIVES: BUDGET OF THE U.S. GOVERNMENT FISCAL YEAR 2023 31, 33–34 (2022), https://www.whitehouse.gov/wp-content/uploads/2022/04/spec_fy2023.pdf [<https://perma.cc/FR5C-2YE8>]; *Id.* at 277–84.

¹⁹³ *Benefits and Costs of the Clean Air Act 1990–2020, the Second Prospective Study*, EPA (Aug. 12, 2021), <https://www.epa.gov/clean-air-act-overview/benefits-and-costs-clean-air-act-1990-2020-second-prospective-study> [<https://perma.cc/ZW7Q-DK8L>].

¹⁹⁴ See 42 U.S.C §§ 7403–04, 7411, 7412.

¹⁹⁵ See *id.* § 7545(o)(1)(G).

¹⁹⁶ *Id.* §§ 7545(o)(12), 7409(c).

as outdated. In its place, that subsection should simply list known NAAQS pollutants, much like in the parallel provision under § 112 for HAPs. The six current NAAQS pollutants would be listed, as they are not yet named within the CAA, and then the GHGs: carbon dioxide, methane, nitrous oxide, and fluorinated gases. Inclusion under § 109 requires monitoring primary standards for public health and secondary standards for public welfare including damage to animals, crops, vegetation, and buildings.¹⁹⁷ The emissions levels of SO₂ and NO₂, pollutants already included under this section, have decreased by 87 to 92 percent since 1995 compared with a reduction in CO₂ of just 21 percent.¹⁹⁸ Required reporting and regulation of GHGs known to contribute to climate change across mobile and stationary sources will ensure these pollutants are similarly reduced. Notably, the Administrator is already authorized to add to this list of pollutants and, despite long-standing knowledge that GHGs cause climate change, they were never added to the list. Further still, this provisional power vested in the Administrator is subject to court scrutiny under nondelegation.¹⁹⁹

Once the GHGs are listed under § 109(c), then the definition of “air pollutant” under each section of the CAA must be updated to avoid ambiguity over the pollutants’ status as air pollutants across provisions.²⁰⁰ In Title III, general provisions, § 302, that definition might read:

The term ‘air pollutant’ means any anthropogenic substance, physical, chemical, biological, radioactive, and any matter emitted into or that otherwise enters the ambient air, known to cause harm to human health, animals, crops, buildings, other property, or to contribute to climate change including, but not limited to, those pollutants listed in § 109(c).²⁰¹

This definition should also be added to each of the Act’s operative provisions: §§ 111(a), 169, 171, and 501.²⁰² Alternatively, a cross-reference in each of these operative

¹⁹⁷ *NAAQS Table*, *supra* note 42.

¹⁹⁸ *Power Plant Emission Trends*, EPA (Mar. 21, 2022, 3:24 PM), <https://www.epa.gov/airmarkets/power-plant-emission-trends> [<https://perma.cc/NQF6-2PCH>].

¹⁹⁹ 42 U.S.C. §§ 7409(d), 7411(a)(1), (b)(1), 7412(a)(1), (c)(5).

²⁰⁰ *Id.* §§ 7409(c), 7602(g).

²⁰¹ The original text from the CAA reads: “(g) The term “air pollutant” means any air pollution agent or combination of such agents, including any physical, chemical, biological, radioactive (including source material, special nuclear material, and byproduct material) substance or matter which is emitted into or otherwise enters the ambient air. Such term includes any precursors to the formation of any air pollutant, to the extent the Administrator has identified such precursor or precursors for the particular purpose for which the term “air pollutant” is used.” *Id.* § 7602(g).

²⁰² See corresponding sections of the U.S. Code at 42 U.S.C. §§ 7411(a), 7479, 7501, 7602, 7661.

provisions stating that the Act-wide definition in § 302 applies would suffice.

Finally, the definitions of “modification” in the “standards of performance” and “hazardous air pollutant” sections must be clarified and made impervious to misinterpretation.²⁰³ The revised definition of modification could read:

(4) The term “modification” means, to the nearest measurable metric ton, any physical change in, or change in the method of operation of, a stationary source which increases the total amount of any air pollutant emitted by such source or which results in the emission of any air pollutant not previously emitted. The administrator may at their discretion review any source modifications for compliance with this section regardless of whether the implicated facility holds a permit.

** note: the term “total” cannot be construed as a percent or average. Further, sources may not register a decrease of one pollutant that causes a collateral increase in a precursor to that pollutant.*²⁰⁴

These definitional changes should preclude the most common and egregious anti-environment interpretations of ‘air pollutant’ and ‘modification’ that are frequently used to stop or stall climate policy.

3. State Law Environmental Tort Claims are not Preempted by the CAA

The predominant argument in favor of CAA preemption of state law claims is that permitting plaintiffs to bring environmental tort claims would somehow undermine the CAA. Despite this assertion being bolstered by certain circuit courts, it lacks merit on policy and substantive grounds. The purpose of the CAA is “to protect and enhance the quality of the Nation’s air resources so as to promote the public health and welfare.”²⁰⁵ How can a proposal that follows (and exceeds) the directives of the CAA be in conflict with it? Further, nowhere does the CAA text prohibit air pollution claims brought under other legal grounds.

On the contrary, the NAAQS standards and other CAA requirements, such as using the best available technology, set the maximum permissible emissions levels.²⁰⁶ Under the CAA,

²⁰³ *Id.* §§ 7411(a)(4), 7412(a)(5).

²⁰⁴ The original text from the CAA reads: “(4) The term ‘modification’ means any physical change in, or change in the method of operation of, a stationary source which increases the amount of any air pollutant emitted by such source or which results in the emission of any air pollutant not previously emitted.” *Id.* § 7411(a)(4).

²⁰⁵ 42 U.S.C § 7401(b)(1).

²⁰⁶ *Id.* §§ 7409(b)(1), 7410(j), 7411(a)(1).

states are free to set more stringent standards and require further emissions reductions.²⁰⁷ Following this logic, private party claims that serve as emissions deterrents are not in conflict with the purpose of the CAA. Further, federal agencies are outside the jurisdiction of state courts, so as long as the EPA is not a party to a related claim and has no third-party interest in the claim, then there is no jurisdictional conflict.²⁰⁸ State courts are the appropriate venue for litigation over state standards that are more stringent than federal standards. Therefore, there is no jurisdictional or statutory reason for the CAA to displace an injured party's state law environmental nuisance, negligence, or trespass tort.

This may be simply expressed with a clear directive such as:

State standards must be *at least as stringent* as the comparable applicable federal standard. As such, a polluter may be liable under state law but not under the CAA. No state law tort claim is automatically preempted by any provision in this act unless it conflicts with a cause of action currently being litigated under the CAA or potential causes of action arising within the two years prior to the state law claim. This subsection should be incorporated under the Title III General Provisions, § 304 Citizen suits, subsection (e) Non-restriction of other rights. The addition of this subsection should leave no legitimate statutory reason preventing states or private parties from filing environmental tort claims in state court.

4. Breaching the Environmental Divide to Get Republicans Onside

The Biden administration's "Roadmap to Build a Climate-Resilient Economy" outlines how transitioning to net-zero carbon emissions will save money, protect pensions, create jobs, and stimulate the economy.²⁰⁹ The jobs-based approach is certainly the right track, framing the conversation in terms of peoples' livelihoods—cash out of their pockets. The number one objection and fear-mongering tactic employed by anti-environment news outlets and energy lobbyists is that clean energy is a threat to the economy and job security.²¹⁰ The

²⁰⁷ See *Union Elec. Co. v. EPA*, 427 U.S. 246, 265 (1976).

²⁰⁸ *Federal Courts & the Public*, UNITED STATES CTS., <https://www.uscourts.gov/about-federal-courts/federal-courts-public> [https://perma.cc/MB9X-Y585] ("A challenge to actions taken by a federal agency might . . . be heard in federal court.").

²⁰⁹ WHITE HOUSE, A ROADMAP TO BUILD A CLIMATE-RESILIENT ECONOMY 10, 21 (2021), <https://www.whitehouse.gov/wp-content/uploads/2021/10/Climate-Finance-Report.pdf> [https://perma.cc/F9GV-5UJG].

²¹⁰ See, e.g., Alex Epstein, *Four Dirty Secrets About Clean Energy*, FOX NEWS (May 7, 2015, 1:11 AM), <https://www.foxnews.com/opinion/four-dirty-secrets-about->

administration's roadmap is constructed to assuage that fear and highlight the true cost of the climate crisis. The report's foreword emphasizes the staggering financial cost of climate change. Damage caused by extreme weather cost American taxpayers and families \$99 billion in 2020 alone and over \$600 billion in the last five years.²¹¹ Moreover, beyond the enormous cost to human, animal, and plant life and the immense financial burdens of weather-related disasters—all recent reports indicate extracting and burning fossil fuels is now more expensive than transitioning to renewable sources of energy.²¹² Despite being the only economically sound way forward, Biden's climate agenda has been met with staunch resistance by Republicans (and a masquerading Democrat) in Congress.²¹³

Despite having control of the White House and both houses of Congress, it is still incredibly hard to get legislation passed because a bill needs sixty votes in the Senate to circumvent a minority filibuster.²¹⁴ One procedural avenue that permits passage of a bill with a simple majority of fifty-one to fifty is the use of a reconciliation bill to pass budgetary measures.²¹⁵ That is exactly what the Democrats achieved on August 16, 2022 when the Inflation Reduction Act was signed

clean-energy [https://perma.cc/NK9X-LWTT]; James Delingpole, *Climate Change: The Hoax that Costs Us \$4 Billion a Day*, BREITBART (Aug. 8, 2015), https://www.breitbart.com/politics/2015/08/08/climate-change-the-hoax-that-costs-us-4-billion-a-day [https://perma.cc/VEM8-QKRF]; Justin Haskins, *Democrats' 'Green New Deal' Is a Crazy New Deal That Would Be a Disaster for Us All*, FOX NEWS (Feb. 7, 2019, 4:22 PM), https://www.foxnews.com/opinion/democrats-green-new-deal-is-a-crazy-new-deal-that-would-be-a-disaster-for-us-all [https://perma.cc/8GEV-XW98]; Charles Creitz, *Hannity: Middle Class Paying the Price for Biden's Socialist Agenda*, FOX NEWS (Oct. 14, 2021, 11:45 PM), https://www.foxnews.com/media/hannity-middle-class-paying-price-biden-socialist-agenda [https://perma.cc/6YJ8-A5NH].

²¹¹ See WHITE HOUSE, *supra* note 209; see also *Billion-Dollar Weather and Climate Disasters: Overview*, NOAA NAT'L CTRS. FOR ENV'T INFO. (2021), https://www.ncdc.noaa.gov/billions/ [https://perma.cc/DA9L-M34U].

²¹² See Max Roser, *Why Did Renewables Become So Cheap So Fast?*, OUR WORLD IN DATA (Aug. 2021), https://ourworldindata.org/cheap-renewables-growth [https://perma.cc/MS4T-KUFP]; see also Victoria Masterson, *Renewables Were the World's Cheapest Source of Energy in 2020, New Report Shows*, WORLD ECON. F. (Jul. 5, 2021), https://www.weforum.org/agenda/2021/07/renewables-cheapest-energy-source/ [https://perma.cc/5VF6-AVM8].

²¹³ See Grace Segers, *The Democrat's Dilemma: Build Back Faster or Build Back Longer?*, NEW REPUBLIC (Oct. 14, 2021), https://newrepublic.com/article/164033/build-back-better-democrat-negotiations [https://perma.cc/LTU9-C86U]; West Virginia conservative Democrat Joe Manchin, has been named by many as a basically a Republican. Bill Maher called him "the most powerful republican in the Senate." Ross A. Lincoln & Phil Owen, *Maher Mocks Joe Manchin as "The Most Powerful Republican in the Senate"*, THE WRAP (June 11, 2021, 7:37 PM), https://www.thewrap.com/maher-mocks-joe-manchin-as-the-most-powerful-republican-in-the-senate-video/ [https://perma.cc/VM69-Y2NU].

²¹⁴ Dylan Scott, *9 Questions About Budget Reconciliation You Were Too Afraid to Ask*, VOX (Jan. 25, 2021, 8:00 AM), https://www.vox.com/22242476/senate-filibuster-budget-reconciliation-process [https://perma.cc/5C43-UK9M].

²¹⁵ *Id.*

into law.²¹⁶ Democrats' original proposal, the "Built Back Better bill," made significant strides towards the United States' goal of cutting emissions in half by 2030 but still fell short by about five years.²¹⁷ After months stalled on the Senate floor, the current bill underwent significant cuts and compromise necessary to guarantee its passage, unfortunately in its final form it falls far short.²¹⁸

Biden's aim of achieving his climate goals by prioritizing long-neglected environmental justice concerns and creating new, good jobs in clean energy, is almost certainly the best possible approach, but it must be as tailored as possible. Change the conversation slightly. Shift from talking about \$2 trillion to fund this initiative, \$235 billion invested in clean energy, or \$60 billion to expand clean fuel and vehicle tax credits.²¹⁹ Instead of overwhelming people with unfathomably high sums, greet them with figures they can comprehend. Talk to them about how renewable energy sources will help their community specifically. Many people have heard the rhetoric about "good-paying jobs" coming with the transition to clean energy but sweeping talk does little to make people feel secure in their economic futures.²²⁰ Break down the nine million oil industry jobs and tell people how and with what they will be replaced.²²¹

²¹⁶ See Gabriel T. Rubin & Richard Rubin, *From BIF to Byrd, a Guide to Congressional Fiscal Terms*, WALL ST. J. (Sept. 30, 2021, 3:55 PM), <https://www.wsj.com/articles/from-bif-to-byrd-a-guide-to-congressional-fiscal-terms-11633026402> [https://perma.cc/F923-P7EX]; see also Friedman & Davenport, *supra* note 9.

²¹⁷ See Brad Plumer & Nadja Popovich, *What the Stalled Build Back Better Bill Means for Climate, in One Chart*, N.Y. TIMES (Dec. 21, 2021), <https://www.nytimes.com/interactive/2021/12/21/climate/manchin-climate-change-build-back-better.html> [https://perma.cc/E28H-U9PM].

²¹⁸ See Lisa Mascaro & Jonathan Lemire, *Biden: Budget Talks Hit 'Stalemate,' \$3.5T May Take a While*, ASSOCIATED PRESS (Sept. 25, 2021), <https://apnews.com/article/joe-biden-business-bills-b9fb060c728da28709fc9effaeb0b9a>; see also *Country Summary*, CLIMATE ACTION TRACKER (Aug. 16, 2022), <https://climateactiontracker.org/countries/usa/> [https://perma.cc/4QVT-7PHB].

²¹⁹ See Kelsey Snell, *The House Passes a \$2 Trillion Spending Bill, but Braces for Changes in the Senate*, NPR (Nov. 22, 2021, 7:55 PM), <https://www.npr.org/2021/11/19/1056833510/the-house-passes-a-2-trillion-spending-bill-but-braces-for-changes-in-the-senate> [https://perma.cc/G26S-A7R9]; *Full Estimates of the House Build Back Better Act*, COMM. FOR A RESP. FED. BUDGET (Nov. 18, 2021), <https://www.crfb.org/blogs/full-estimates-house-build-back-better-act> [https://perma.cc/TY2E-HSWG].

²²⁰ See *FACT SHEET: President Biden to Highlight Clean Energy Manufacturing and Deployment Investments that Cut Consumer Costs, Strengthen U.S. Energy Sector, and Create Good-Paying Jobs*, WHITE HOUSE BRIEFING ROOM (Feb. 28, 2022), <https://www.whitehouse.gov/briefing-room/statements-releases/2022/02/28/fact-sheet-president-biden-to-highlight-clean-energy-manufacturing-and-deployment-investments-that-cut-consumer-costs-strengthen-u-s-energy-sector-and-create-good-paying-jobs/> [https://perma.cc/VCB7-LFKZ].

²²¹ See *Climate: 10 Million Clean Energy Jobs*, BIDEN HARRIS DEMOCRATS, <https://joebiden.com/climate-labor-fact-sheet/> [https://perma.cc/FXK7-R58P]; see also

Even in red states, peoples' attitudes toward the climate crisis are already shifting, but too many of these voices are just not being heard by those in power. Senator Manchin claimed "if he can't go home to West Virginia and explain it, he can't vote for it," but the coal miners' union of West Virginia was asking him to vote yes.²²² Midwestern farmers confess they have known for a decade that persistent worsening weather is changing farming forever—though climate change is still a dirty word.²²³ With sustained wetness in their crop fields not seen before, many farmers started using new drainage systems and equipment to adapt to heavier rains, higher temperatures, and the changing growing season.²²⁴ Nebraska recently became "the first solid Red state" to set emissions targets.²²⁵ In Iowa last year "epic floods . . . scoured tens of thousands of acres," and this year the plains are "burning up from drought."²²⁶ Republicans across the nation are besieged by climate change, but pressures on those in power to toe the party line to preserve their political futures prevent their constituents from progress and protection.²²⁷

The administration should reach out to these individuals and communities. The 2020 Republican presidential campaign spent almost two billion dollars and boasted 4,300 volunteers knocking on doors.²²⁸ Four of the reddest states in the wind belt—

The 2019 U.S. Energy and Employment Report, NAT'L ASS'N OF STATE ENERGY OFF., <https://www.usenergyjobs.org/2019-report> [<https://perma.cc/9U55-FK45>].

²²² See Andreas Karelas, *Joe Manchin, the Climate Grinch*, THE HILL (Dec. 25, 2021, 9:30 AM), <https://thehill.com/opinion/energy-environment/587217-joe-manchin-the-climate-grinch> [<https://perma.cc/H3RV-AEB2>].

²²³ See Chris McGreal, *As Climate Change Bites in America's Midwest, Farmer Are Desperate to Ring the Alarm*, GUARDIAN (Dec. 12, 2018, 6:00 AM), <https://www.theguardian.com/us-news/2018/dec/12/as-climate-change-bites-in-americas-midwest-farmers-are-desperate-to-ring-the-alarm> [<https://perma.cc/67GZ-YQXB>].

²²⁴ *Id.*

²²⁵ See Dan Farber, *Cornhuskers Go Green: Nebraska Has Become the First Solid Red State to Adopt Climate Targets*, LEGAL PLANET (Dec. 13, 2021), <https://legalplanet.org/2021/12/13/cornhuskers-go-green/> [<https://perma.cc/VTJ3-B599>].

²²⁶ See Art Cullen, *Extreme Weather Just Devastated 10M Acres in the Midwest. Expect More of This*, GUARDIAN (Aug. 17, 2020, 6:24 AM), <https://www.theguardian.com/commentisfree/2020/aug/17/extreme-weather-midwest-climate-crisis> [<https://perma.cc/EKE6-PWMA>].

²²⁷ See Ronald Brownstein, *The Great Irony of Climate Change Politics Is Red States Face More Pain*, CNN (Jan. 29, 2019, 4:30 PM), <https://www.cnn.com/2019/01/29/politics/climate-change-irony-brookings> [<https://perma.cc/6GFL-7C2Y>]; see Chris Cillizza, *Here's Exactly Why Republicans Are Afraid to Criticize Donald Trump*, CNN (Oct. 6, 2021, 8:50 PM), <https://www.cnn.com/2021/10/06/politics/trump-gop-criticism-poll/index.html> [<https://perma.cc/H436-ALZF>].

²²⁸ See Sean McMinn et al., *Money Tracker: How Much Trump and Biden Have Raised in the 2020 Election*, NPR (Dec. 4, 2020), <https://www.npr.org/2020/05/20/858347477/> [<https://perma.cc/9XNL-ZMES>]; see also Dylan Matthews, *The Pandemic Is Forcing Democrats to Ask: How Important is Door-Knocking Anyway?*, VOX (Oct. 1, 2020), <https://www.vox.com/21366036/canvass-ground-game-turnout-gotv-phone-bank-tv-ads-mailers>.

—Kansas, Nebraska, Oklahoma, and Arkansas—have a total of 222,600 farms.²²⁹ With a crew of 250, visiting seventeen farms a week, the administration could speak with every single one of them in a year. If someone from the President’s office visited your farm to talk to you about the difficulties you are facing, took notes and asked what they could do to help, perhaps with a video message from the president, that would go a long way to proving the administration’s climate initiatives are truly built with people’s livelihoods in mind.²³⁰ Especially when they are able to help those who have been harmed by the fossil fuel industry—this is how we change peoples’ minds—and earn their vote.²³¹

Consider a landowner who leased his mountain to a mining company that quickly abandoned the excavated mine, leaving him with dangerous and scarred land he believes to be useless.²³² But it may be possible to fill that land, level it, and install wind turbines to create new economic life.²³³ Likewise, lands left ravaged by fracking, which can contaminate water and damage infrastructure, can be restored to safety and made capable of supporting turbines. In 2019, “biblical” floods affecting nearly fourteen million people left eleven states in need of disaster relief from the federal government.²³⁴ In Ohio alone, 15 percent of all farmland—almost 1.5 million acres—could not

²²⁹ See *2021 State Agriculture Overview: Kansas*, U.S. DEPT OF AGRIC., https://www.nass.usda.gov/Quick_Stats/Ag_Overview/stateOverview.php?state=KANSAS/ [<https://perma.cc/78A3-PBS2>]; *2021 State Agriculture Overview: Nebraska*, U.S. DEPT OF AGRIC., https://www.nass.usda.gov/Quick_Stats/Ag_Overview/stateOverview.php?state=NEBRASKA; [<https://perma.cc/YT2G-GMG2>] *2021 State Agriculture Overview: Arkansas*, U.S. DEPT OF AGRIC., https://www.nass.usda.gov/Quick_Stats/Ag_Overview/stateOverview.php?state=ARKANSAS; [<https://perma.cc/TZX6-RBRT>] *2021 State Agriculture Overview: Oklahoma*, U.S. DEPT OF AGRIC., https://www.nass.usda.gov/Quick_Stats/Ag_Overview/stateOverview.php?state=OKLAHOMA; [<https://perma.cc/WVY7-JWTS>].

²³⁰ See LEE RAINIE ET AL., *Trust and Distrust in America*, PEW RSCH CTR. (July 22, 2019), <https://www.pewresearch.org/politics/2019/07/22/trust-and-distrust-in-america/> [<https://perma.cc/4N2S-THWE>] (“About half of Americans (49%) link the decline in interpersonal trust to a belief that people are not as reliable as they used to be.” Trust is improved by “disclosure of what the government is doing . . . [and] greater honesty and cooperation among those in the political class.”).

²³¹ See Alan Gerber & Donald Green, *Does Canvassing Increase Voter Turnout? A Field Experiment*, 96 PROC. OF NAT’L ACAD. SCIS. 10939, 10941 (1999).

²³² See James Bruggers, *Coal Powered the Industrial Revolution. It Left Behind an ‘Absolutely Massive’ Environmental Catastrophe*, INSIDE CLIMATE NEWS (Dec. 12, 2021), <https://insideclimatenews.org/news/12122021> [<https://perma.cc/KBL4-CJ37>].

²³³ See US NUCLEAR REGUL. COMM’N, A BREATH OF FRESH AIR FOR AMERICA’S ABANDONED MINE LANDS: ALTERNATIVE ENERGY PROVIDES A SECOND WIND (2012), <https://www.nrc.gov/docs/ML0532/ML053210103.pdf> [<https://perma.cc/BV5C-R5UX>].

²³⁴ See Sarah Almukhtar et al., *The Great Flood of 2019: A Complete Picture of a Slow-Motion Disaster*, N.Y. TIMES (Sept. 11, 2019), <https://www.nytimes.com/interactive/2019/09/11/us/midwest-flooding.html> [<https://perma.cc/YBH3-T4KC>].

be planted, damaging corn, soybean, and wheatfields.²³⁵ Sodden fields can still hold turbines, and research suggests turbines even have a positive effect on crops creating a double purpose for farmland.²³⁶ In undamaged areas, some farmers already rely on green alternatives for economic survival by selling access to their wind, a new crop, to get through tough times.²³⁷ Tidal hydroelectric power, a relatively unexplored source of clean energy, might be harnessed in coastal regions of Florida, Mississippi, Alabama, and Louisiana where businesses and tourism have been harmed by noxious red tides exacerbated by rising ocean temperatures and made exponentially worse when regulators authorized the discharge of wastewater.²³⁸ Where conditions are not well suited to tidal power, off-shore turbines may serve as an alternative method of remediating climate related economic hardship. In communities affected by mass power outages caused by an overextended electrical grid, small scale projects to raise funds for solar powered generators can provide relief.

Each of these scenarios presents a common consequence of climate change. The government should first assist communities, families, and individuals to repair damage from fossil fuel extraction, flooding, or to meet their immediate energy needs. Then the government can partner with them, so they are able to regain financial security. This could be done through interest-free loans to pursue clean energy projects, to be paid back through a percentage of project earnings. For example, wind turbines earn an average of \$8,000 a year per turbine.²³⁹

²³⁵ See Camille McManus, *Wasted Farmland: Ohio Lost Fewer Acres to Spring Storms, Floods in 2020*, USA TODAY (Aug. 25, 2021, 6:16 AM), <https://www.thenewsmessenger.com/story/news/2020/08/25/gda-wasted-farmland-2020-oh-pfre/42209647/> [<https://perma.cc/LFZ6-NXZU>].

²³⁶ See Gene Takle, *Wind Farms Impact Crops*, AGRI-VIEW (Apr. 1, 2018), https://www.agupdate.com/agriview/news/crop/wind-farms-impact-crops/article_bb057e6c-e58b-5990-b4d5-62640803121f.html [<https://perma.cc/9P2N-TSYE>].

²³⁷ See Elisabeth Weise, *Wind Energy Gives American Farmers a New Crop to Sell in Hard Times*, U.S.A TODAY (Feb. 16, 2020, 12:08 PM), <https://www.usatoday.com/story/news/nation/2020/02/16/wind-energy-can-help-american-farmers-earn-money-avoid-bankruptcy/4695670002/> [<https://perma.cc/FPC7-PJZT>].

²³⁸ See Iris Crawford & Michael Howland, *Why Don't We Use Tidal Power More?*, MASS. INST. TECH. CLIMATE PORTAL (Apr. 12, 2022) <https://climate.mit.edu/ask-mit/why-dont-we-use-tidal-power-more> [<https://perma.cc/2XKJ-JB9S>]; see Angela Fritz, *How Climate Change is Making Red Tide Algal Blooms Even Worse*, WASH. POST (Aug. 15, 2018, 11:00 AM), <https://www.washingtonpost.com/news/capital-weather-gang/wp/2018/08/14/how-climate-change-is-making-red-tide-algal-blooms-even-worse/> [<https://perma.cc/B26B-P6MH>]; Aman Ahar, *Florida's Red Tides Are Getting Worse and May Be Hard to Control Because of Climate Change*, INSIDE CLIMATE NEWS (Jan. 19, 2022), <https://insideclimatenews.org/news/19012022/florida-red-tide-climate-change-desantis/> [<https://perma.cc/VE87-D3ES>].

²³⁹ See EPA, RECLAIMING ABANDONED MINE LANDS ONE PARCEL AT A TIME, (2015), https://www.epa.gov/sites/default/files/2015-10/documents/epa_oblr_successstory

Larger-scale projects for communities would have higher earning potential.

The key is making the relief personal. Fulfilling the needs of communities harmed by climate change and providing them with a means to economic independence. The Inflation Reduction Act includes a plethora of possible rebates and tax credits to support the transition to clean energy, what is missing is targeted projects of a reparative nature. Market-forces may reduce GHGs faster than the administration can change anyone's mind, but then again, they may not. Even if the need for further legislation is eliminated, paving the way for structural change by mending fences broken by big oil—can only improve tensions and partisan discord.

CONCLUSION

The CAA works, but it must adapt to the changed political and environmental climate we now face. Amending the CAA would provide the foundation necessary for national emissions limitations that cannot be undone by an incoming administration or the conservative Court. Further, it would ensure that the unprecedented spending earmarked for clean energy in the Inflation Reduction Act is not undermined by continued growth of fossil fuel production. Given the number of months—eighteen to be exact—spent battling out the budget bill, the years spent researching and writing a regulation to have it reversed, and the ever-widening rift between Democrats and Republicans over the last two decades—surely canvassing for climate action is worth a try. A more personal approach is the administration's best chance to garner the votes to coax amendment through an, as yet, impenetrable red wall. Perhaps Congress will never do what is needed, but that does not mean it should be left unsaid. Maybe, at the very least, we can change the conversation. In early 2019, when Representative Alexandra Ocasio Cortez introduced the Green New Deal proposing a transition to 100 percent renewable energy sources, it failed in the Senate fifty-seven to zero.²⁴⁰ Despite showing little traction overall thus far, backed by a contingent of avid supporters, this

_earth_conservancy_v4_508.pdf [https://perma.cc/9H87-KFLL] (projecting costs for filling large scale mine reclamation projects that range from \$240,000 to 1.5 million dollars and the cost for smaller projects would be far less.); *Wind Turbine Release Rates*, LANDMARK DIVIDEND, <https://www.landmarkdividend.com/wind-turbine-lease-rates-2/> [https://perma.cc/3GAU-9YMM].

²⁴⁰ S.J. Res. 8, 116th Cong. (2019); H.R. Res. 109, 116th Cong. (2019), <https://www.congress.gov/bill/116th-congress/house-resolution/109/text>.

climate-economy platform without a single vote on either side of the aisle helped shift industry perspective and sway stragglers to popular opinion.²⁴¹ The urgency is palpable—our only world is burning—but under this broken system of government everything can turn on a single senatorial vote.

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²⁴¹ See Robinson Meyer, *So Has the Green New Deal Won?*, ATLANTIC (Nov. 15, 2019), <https://www.theatlantic.com/science/archive/2019/11/did-green-new-deal-win-look-after-one-year/602032/> [<https://perma.cc/ZJ2D-7P5H>].

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