**ORAL ARGUMENT NOT YET SCHEDULED**

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**No. 20-1145**

Consolidated with Nos. 20-1167, 20-1168, 20-1169, 20-1173, 20-1174, 20-1176, 20-1177, and 20-1230.

**IN THE UNITED STATES COURT OF APPEALS**
**FOR THE DISTRICT OF COLUMBIA CIRCUIT**

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COMPETITIVE ENTERPRISE INSTITUTE, et al.,
*Petitioners,*

v.

NATIONAL TRAFFIC HIGHWAY SAFETY ADMINISTRATION, et al.,
*Respondents*.

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**On Petition for Review of Final Action by the United States Environmental Protection Agency and National Highway Traffic Safety Administration 85 Fed. Reg. 24,174 (Apr. 30, 2020)**

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# CORRECTED BRIEF *AMICI CURIAE* OF THE AMERICAN THORACIC SOCIETY, AMERICAN LUNG ASSOCIATION, AMERICAN MEDICAL ASSOCIATION, AND MEDICAL SOCIETY OF THE DISTRICT OF COLUMBIA IN SUPPORT OF STATE, LOCAL GOVERNMENT, AND PUBLIC INTEREST ORGANIZATION PETITIONERS

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## CERTIFICATE AS TO PARTIES, RULINGS UNDER REVIEW, AND RELATED CASES

Pursuant to Circuit Rule 28(a)(1), *amici curiae* the American Thoracic Society, American Lung Association, American Medical Association, and Medical Society of the District of Columbia, through undersigned counsel, hereby certifies as follows:

(A) **Parties and Amici**. All parties, intervenors, and amici appearing in this Court are listed in Exhibit A to the Notice of Blanket Consent to the Filing of Amicus Briefs, Dkt. No. 20-1145, Doc. No. 1876643 (Dec. 21, 2020).

(B) **Rulings Under Review**. By Orders on May 28, 2020, May 29, 2020, June 1, 2020, and July 1, 2020, this Court consolidated cases Nos. 20-1167, 20-1168, 20-1169, 20-1173, 20-1174, 20-1176, 20-1177, and 20-1230 into Lead No. 20-1145. The consolidated petitions before the Court challenge actions of the U.S. Environmental Protection Agency and National Highway Traffic Safety Administration, jointly published as "The Safer Affordable Fuel-Efficient (SAFE) Vehicles Rule for Model Years 2021-2026 Passenger Cars and Light Trucks," published at 85 Fed. Reg. 24,174 (Apr. 30, 2020).

(C) **Related Cases.** *Amici curiae* are not aware of any related cases other than the consolidated cases before the Court.

Dated: January 25, 2021

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## CORPORATE DISCLOSURE STATEMENT

Pursuant to Circuit Rule 26.1 and Federal Rule of Appellate Procedure 26.1, undersigned counsel certifies that the American Thoracic Society, American Lung Association, American Medical Association, and Medical Society of the District of Columbia are not-for-profit public health and scientific organizations. *Amici curiae* the American Thoracic Society, American Lung Association, American Medical Association, and Medical Society of the District of Columbia do not have parent corporations and no publicly held corporation has ownership of 10 percent or greater in the American Thoracic Society, American Lung Association, American Medical Association, or Medical Society of the District of Columbia. The American Thoracic Society, American Lung Association, American Medical Association, and Medical Society of the District of Columbia do not have any members who have issued shares or debt securities to the public.

Dated: January 25, 2021

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## D.C. CIRCUIT RULE 29(d) STATEMENT

Counsel for *amici curiae* the American Thoracic Society, American Lung Association, American Medical Association, and Medical Society for the District of Columbia certifies, pursuant to Circuit Rule 29(d), that a separate brief is necessary to provide the Court with the perspective and expertise of public health professionals which *amici curiae* represents. In addition, the narrow focus of the American Thoracic Society, American Lung Association, American Medical Association, and Medical Society of the District of Columbia on respiratory and public health is uniquely relevant to the agency action at issue. Accordingly, *amici curiae*, through counsel, certifies that filing a joint brief would not be practicable.

Dated: January 25, 2021

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## STATUTES AND REGULATIONS

Pertinent statutes and regulations are contained in the addenda to Brief for Public Interest Organization Petitioners, Dkt. No. 20-1145, Doc. No. 1880214 (Jan. 14, 2021) and Brief for State and Local Government Petitioners, Dkt. No. 20-1145, Doc. No. 1880213 (Jan. 14, 2021).

## STATEMENT OF IDENTITY, INTEREST IN CASE, AND SOURCE OF AUTHORITY TO FILE OF *AMICI CURIAE*[1]

The American Thoracic Society ("ATS") is an international non-profit organization of more than 16,000 physicians, scientists, nurses, and healthcare professionals dedicated to the detection, prevention, treatment, and cure of respiratory disease, critical care illnesses, and sleep-disordered breathing. ATS accomplishes this through research, clinical care, education, and the development of guidelines regarding respiratory health and air pollution. Through four peer-reviewed journals, ATS supports the dissemination of cutting-edge research and information relevant to adult and pediatric pulmonology.

The American Lung Association ("ALA"), a nonprofit organization founded in 1904, is one of the nation's oldest voluntary health organizations. ALA's mission is to save lives by improving lung health and preventing lung disease. ALA engages in research, public education, and advocacy to reduce air pollution and its accompanying threats to lung health. ALA has published many reports on air pollution, most notably the annual "State of the Air" report. Through its advocacy, ALA has worked to support and enforce laws and regulations related to lung health at the national, state, and local levels, including in the passage of the Clean Air Act Amendments of 1970, 1977, and 1990.

[1] *Amici curiae* ATS and ALA submit this brief with the consent of all parties. *See* Dkt. No. 20-1145, Doc. No. 1876643 (Dec. 21, 2020).

The American Medical Association ("AMA") is the largest professional association of physicians, residents, and medical students in the United States. Through state and specialty medical societies and other physician groups seated in its House of Delegates, substantially all United States physicians, residents, and medical students are represented in the AMA's policymaking process. The AMA was founded in 1847 to promote the science and art of medicine and the betterment of public health, and these remain its core purposes. AMA members practice in every state and in every medical specialty.

The Medical Society of the District of Columbia ("MSDC") was founded in 1817 and is dedicated to ensuring the well-being of physicians and their patients in metropolitan Washington, DC. With over 3,000 members, MSDC is the largest medical organization representing metropolitan Washington physicians. As part of its strategic goal to make the District "the best place to practice medicine," MSDC is continually seeking to ensure access to appropriate medical care for all District residents, regardless of location or income.

*Amici curiae* ATS, ALA, AMA, and MSDC represent thousands of health and medical experts across the nation. *Amici curiae* ATS, ALA, AMA, and MSDC support the Petitioners because the Environmental Protection Agency's ("EPA") and National Highway Traffic Safety Administration's ("NHTSA") Safer Affordable

Fuel-Efficient ("SAFE") Vehicles Rule Standards[2] will have wide-reaching and significant adverse public health impacts across the United States. The collective medical, scientific, and clinical expertise of *amici curiae* leads them to participate in this action to demonstrate the severe effects that the SAFE Rule will have on the nation's air quality and public health.

## STATEMENT OF AUTHORSHIP AND FINANCIAL CONTRIBUTION PURSUANT TO FEDERAL RULE OF APPELLATE PROCEDURE 29(a)(4)(E)

In compliance with Federal Rule of Appellate Procedure 29(a)(4)(E), counsel for *amici curiae* ATS, ALA, AMA, and MSDC hereby state that no counsel for any party to this litigation authored this brief in whole or in part; no party or party's counsel contributed money that was intended to fund, or did fund, the preparation or submission of this brief; and no person, other than *amici curiae*, contributed money that was intended to fund, or did fund, the preparation or submission of this brief.

## BACKGROUND

The Clean Air Act ("CAA"),[3] requires the EPA Administrator to prescribe and periodically revise the air pollutant emissions standards for any class or classes

[2] The Safer Affordable Fuel-Efficient (SAFE) Vehicles Rule for Model Years 2021-2026 Passenger Cars and Light Trucks, 85 Fed. Reg. 24,174 (Apr. 30, 2020) (hereinafter "SAFE Rule").
[3] 42 U.S.C. §§ 7401–7671q.

of new motor vehicles, which in his or her opinion cause, or contribute to, air pollution reasonably believed to cause harm to public health and welfare.[4]

In 2012, EPA and NHTSA finalized GHG and fuel economy standards for Model Year ("MY") 2017–2025 vehicles.[5] These standards were projected to increase average fleet fuel economy to the equivalent of 54.5 miles per gallon for light-duty vehicles by MY 2025,[6] nearly doubling fuel efficiency, and cutting automobile GHG emissions in half in comparison to MY 2010 vehicles.[7] These improvements in federal fuel economy and greenhouse gas emissions standards protect the public and vulnerable communities from automobile-derived emissions, as well as from so-called "upstream" emission sources such as gasoline and oil refineries and transportation terminals.[8]

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[4] 42 U.S.C. § 7521. EPA's duty to promulgate these emission standards is non-discretionary. *Coal. for Responsible Regulation, Inc. v. EPA*, 684 F.3d 102, 126 (D.C. Cir. 2012).

[5] 2017 and Later Model Year Light-Duty Vehicle Greenhouse Gas Emissions and Corporate Average Fuel Economy Standards, 77 Fed. Reg. 62,624, 62,627 (Oct. 15, 2012) (hereinafter "Clean Car Standards").

[6] Press Release, Office of the Press Secretary, Obama Administration Finalizes Historic 54.5 MPG Fuel Efficiency Standards (Aug. 28, 2012), https://obamawhitehouse.archives.gov/the-press-office/2012/08/28/obama-administration-finalizes-historic-545-mpg-fuel-efficiency-standard.

[7] 77 Fed. Reg. at 62,630.

[8] U.S. EPA & Eastern Research Group, *Oil and Gas 101: An Overview of Oil and Gas Upstream Activities and Using EPA's Nonpoint Oil and Gas Emission Estimation Tool for the 2014 NEI,* slide 10 (2015), https://www.epa.gov/sites/production/files/2015-09/documents/101_part_1.pdf (identifying types of upstream sources). *See also* Motion by the Environmental Defense Fund, et al., for Leave to Intervene in Support of Petitioners, *Competitive*

In 2017, based on an extensive and robust technical record, EPA issued a final determination that the standards for MYs 2022–2025 remained appropriate.[9] However, in 2018, EPA abruptly withdrew its 2017 final determination and concluded that the MY 2022–2025 GHG standards were inappropriate.[10]

In 2020, EPA and NHTSA finalized their rollback of the federal automobile GHG and fuel economy standards by promulgating the SAFE Rule for MYs 2021–2026.[11] The SAFE Rule rescinds the Obama-era standards that would have gradually raised average fuel economy for light-duty motor vehicles to 54.5 miles per gallon in 2025.[12] Additionally, the SAFE Rule rescinds the existing vehicle emission standards for light-duty motor vehicles for MYs 2021–2025 and promulgated new, weaker standards for MYs 2021–2026, lowering the required annual reduction in fleetwide GHG pollution from five percent to just 1.5%.[13]

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*Enterprise Institute, et al. v. National Traffic Highway Safety Administration, et. al.,* No. 20-1145 (D.C. Cir. 2020) (Doc. No. 1845212) (Declaration of Elena Craft at ¶¶ 35-42, and Declaration of Jeremy Proville at ¶¶ 8, 11) (explaining upstream emission sources).

[9] EPA, *Final Determination on the Appropriateness of the Model Year 2022–2025 Light-Duty Vehicle Greenhouse Gas Emissions Standards under the Midterm Evaluation* at 1, 3, EPA-420-R-17-001 (Jan. 2017), https://nepis.epa.gov/Exe/ZyPDF.cgi?Dockey=P100QQ91.pdf.

[10] Mid-Term Evaluation of Greenhouse Gas Emissions Standards for Model Year 2022–2025 Light-Duty Vehicles, 83 Fed. Reg. 16,077 (Apr. 13, 2018).

[11] 85 Fed. Reg. at 24,174–21,175.

[12] 77 Fed. Reg. at 62,630; 85 Fed. Reg. at 21,174–21,175.

[13] 85 Fed. Reg. at 24,175.

## SUMMARY OF THE ARGUMENT

Upholding the SAFE Rule will have a significant adverse impact on air quality and human health in the United States. This Court should vacate the SAFE Rule as arbitrary and capricious for two reasons.

First, the SAFE Rule will reverse the progress that the U.S. has already made to address automobile and upstream source-derived air pollution at a time when concrete action is sorely needed. Automobiles and upstream sources emit criteria pollutants and GHGs into the atmosphere, which adversely affect air quality. Implementing strong automobile GHG emissions standards, such as the 2012 Clean Car Standards, helps reduce the formation of criteria pollutants, such as ozone, particulate matter, and nitrogen dioxide. The SAFE Rule will undo this progress at precisely the time the U.S. needs to take bold action to remedy air pollution and address climate change.

Second, because the SAFE Rule will cause substantial increases in GHG and criteria pollutant emissions, it will result in significant public health harms throughout the U.S. By increasing GHG emissions, the SAFE Rule will adversely affect public health by contributing to climate change—exacerbating existing air quality problems and increasing the adverse health impacts of high temperatures and wildfires. By increasing criteria pollutant emission—in particular, ozone precursors and particulate matter—the SAFE Rule will increase morbidity and mortality in the

U.S. Most importantly, the adverse health impacts that will result from the SAFE Rule will disproportionately impact vulnerable populations such as low income communities of color, young children, older adults, pregnant women, outdoor workers, the homeless, and people with chronic illnesses.

It is imperative that the U.S. retain stringent automobile fuel economy and GHG emission standards in order to protect these vulnerable populations, ensure clean, healthy air for all, and combat the existential threat of climate change. Now is the time for the U.S. to move forwards, not backwards, with its automobile fuel economy and GHG emissions standards.[14]

*Amici curiae* submit this brief to assist the Court in understanding the serious public health implications that stem from the SAFE Rule.

## ARGUMENT

### I. THE SAFE RULE WILL UNDO PROGRESS TO ADDRESS AIR POLLUTION IN THE UNITED STATES.

#### A. Automobile and Upstream Source Emissions Have Well-Documented Adverse Effects on Air Quality.

Automobile and upstream source-derived criteria pollutant emissions have an adverse effect on air quality and contribute to climate change. Automobile tailpipes

[14] *See* David Shepardson, *Automakers pledge to work with Biden to reduce emissions*, AUTOMOTIVE NEWS (Dec. 01, 2020), https://www.autonews.com/regulation-safety/automakers-pledge-work-biden-reduce-emissions.

expel nitrogen oxides ("NOx"), volatile organic compounds ("VOCs"), carbon monoxide ("CO"), and particulate matter.[15] Similarly, the "upstream" processes through which gasoline is produced for automobiles—including the extraction, transportation, and refining of crude oil, and its subsequent distribution to fuel stations—also result in the emission of NOx, VOCs, particulate matter, sulfur oxides ("SOx"), and hazardous air pollutants ("HAPs") like benzene.[16] In particular, particulate matter of less than 2.5 microns ("$PM_{2.5}$") comes from a variety of sources (e.g., mobile, point, and area sources) with a large fraction attributable to the gasoline production process and diesel-powered automobiles.[17] The criteria pollutants emitted by automobiles and upstream sources are one of the key contributors to the creation of tropospheric ozone.[18]

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[15] S.L. Winkler et. al., *Vehicle Criteria Pollutant (PM, NOx, CO, HCs) Emissions: How Low Should We Go?,* 1 NPJ– CLIMATE & ATMOSPHERIC SCI. 1, 1 (2018).
[16] Motion by the Environmental Defense Fund, et al., for Leave to Intervene in Support of Petitioners, *supra* note 8 (Declaration of Elena Craft at ¶ 37, and Declaration of Jeremy Proville at ¶ 8).
[17] EPA, *Particulate Matter (PM) Basics*, https://www.epa.gov/pm-pollution/particulate-matter-pm-basics#PM; CTRS. FOR DISEASE CONTROL & PREVENTION, *Particulate Matter*, https://www.cdc.gov/air/particulate_matter.html.
[18] *See* EPA, *Criteria Air Pollutants*, https://www.epa.gov/criteria-air-pollutants; EPA, *Basic Information about NO2*, https://www.epa.gov/no2- pollution/basic-information-about-no2#What%20is%20NO2 (Ozone is formed when sunlight strikes $NO_x$, which are emitted into the air when fossil fuels are burned); *see also* U.S. GLOBAL CHANGE RESEARCH PROGRAM, FOURTH NATIONAL CLIMATE ASSESSMENT, VOLUME II: IMPACTS, RISKS, AND ADAPTATION IN THE UNITED STATES 518 (2018), *available at* https://nca2018.globalchange.gov/downloads/NCA4_2018_FullReport.pdf (noting

Automobiles and upstream sources are also substantial contributors to GHG emissions that exacerbate climate change.[19] In fact, the transportation sector is the largest contributor of U.S. GHG emissions, accounting for twenty-eight percent of annual emissions as of 2018,[20] of which fifty-nine percent are from light-duty vehicles. [21] Additionally, personal vehicles are responsible for 37.3% of transportation sector GHG emissions in 2018.[22] In 2018, the transportation sector also accounted for approximately thirty-six percent of the carbon dioxide ("$CO_2$") emitted from fossil fuel combustion in the U.S.[23]

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that ozone is formed in the atmosphere through reactions between VOCs and $NO_x$). *See infra*, Part II for discussion of health impacts of increased ozone formation.

[19] *See* EPA, INVENTORY OF U.S. GREENHOUSE GAS EMISSIONS AND SINKS: 1990-2018, EPA-430-R-20-002, (Apr. 13, 2020) at 2-3, *available at* https://www.epa.gov/sites/production/files/2020-04/documents/us-ghg-inventory-2020-main-text.pdf (noting that transportation sector fuel combustion and petrochemical production accounted for approximately thirty-three percent and 0.4% of U.S. $CO_2$ emissions in 2018, respectively).

[20] EPA, *Sources of Greenhouse Gas Emissions*, *Overview*, https://www.epa.gov/ghgemissions/sources-greenhouse-gas-emissions; EPA, FAST FACTS: U.S. TRANSPORTATION SECTOR GREENHOUSE GAS EMISSIONS 1990–2018, EPA-420-F-20-037, at 1 (2020), https://nepis.epa.gov/Exe/ZyPDF.cgi?Dockey=P100ZK4P.pdf.

[21] EPA, FAST FACTS, *supra* note 20, at 1. "Light-duty vehicles" encompass both personal vehicles ("passenger cars") and "light-duty trucks." *Id*. Personal vehicles are automobiles used primarily to transport twelve people or less, while "Light-duty trucks" are vehicles used primarily for transporting light-weight cargo and generally include sport utility vehicles and minivans. *Id*. at 4

[22] *Id.* at 2.

[23] EPA, INVENTORY OF U.S. GREENHOUSE GAS EMISSIONS, *supra* note 19, at Table 3–7.

U.S. population growth and increasing car ownership are poised to further exacerbate the transportation sector's outsized climate impacts.[24] In 2017, the U.S. Census Bureau forecasted that the U.S. population will grow by approximately 56.3 million people over the next thirty years. Additionally, between 1990 and 2018 the percentage of U.S. GHG emissions from light-duty vehicles grew by 14.4%.[25] From 1990 to 2018, the number of vehicle miles traveled by light-duty vehicles also grew by 46.1%. [26] Indeed, the 12-month total vehicle miles traveled in the U.S. has consistently risen from approximately 1.3 million miles in 1975 to over 3.2 million miles by 2020.[27] This increasing trend has only declined in 2020 due to the COVID-19 pandemic.[28] Once the pandemic is over, this figure is forecasted to rise again.[29]

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[24] U.S. CENSUS BUREAU, *2017 National Population Projections Tables: Main Series*, https://www.census.gov/data/tables/2017/demo/popproj/2017-summary-tables.html.
[25] EPA, FAST FACTS, *supra* note 20, at 2.
[26] EPA, *Sources of Greenhouse Gas Emissions*, *Transportation Sector Emissions*, https://www.epa.gov/ghgemissions/sources-greenhouse-gas-emissions#transportation.
[27] U.S. Federal Highway Administration, Moving 12-Month Total Vehicle Miles Traveled (M12MTVUSM227NFWA), retrieved from FRED, Federal Reserve Bank of St. Louis, https://fred.stlouisfed.org/series/M12MTVUSM227NFWA (Dec. 7, 2020).
[28] *See id*.
[29] Andy Ohlin, *Traffic Dropped 66%, But it Came Back and the Coronavirus Followed,* KINDER INST. URB. RES. (July 27, 2020), https://kinder.rice.edu/urbanedge/2020/07/27/transportation-traffic-dropped-66-it-came-back-and-covid-19-followed.

Given the upward trends in automobile ownership and usage, the demand for gasoline and the process needed to produce that gasoline will also rise;[30] ultimately increasing the amount of upstream source-derived GHG emissions. It is therefore essential that the U.S. maintain strong automobile emission standards in order to mitigate the transportation sector's impacts on human health and air quality.[31]

### B. The 2012 Clean Car Standards Made Important Steps to Mitigate Automobile Sector and Upstream Source Air Pollution That Must Be Maintained.

In 2012, EPA and NHTSA attempted to mitigate the adverse air quality impacts associated with automobile and upstream source-derived emissions by establishing the Clean Car Standards. These standards aimed to reduce GHG emissions and improve fuel economy for light-duty vehicles for MYs 2017–2025.[32] The Clean Car Standards sought to raise automobile fuel economy to an average of 54.5 miles per gallon by 2025—nearly doubling the 2010 average[33]— and to achieve

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[30] Motion by the Environmental Defense Fund, et al., for Leave to Intervene in Support of Petitioners, *supra* note 8, (Declaration of Elena Craft at ¶ 36, and Declaration of Jeremy Proville at ¶ 12).

[31] *See* University of Delaware, *Ozone Threat from Climate Change,* SCIENCEDAILY (July 23, 2019), *available at* https://www.sciencedaily.com/releases/2019/07/190723121906.htm (rising temperatures lead to increase in surface ozone concentrations); *see also* FOURTH NATIONAL CLIMATE ASSESSMENT, VOLUME II, *supra* note 18, at 514 (reducing GHG emissions can lower emissions of particulate matter, ozone, and other hazardous pollutants—mitigating the adverse effects of air pollution on human health).

[32] 77 Fed. Reg. at 62,624.

[33] *Id.* at 62,630.

a five percent annual increase in the average fuel efficiency of U.S. vehicle fleets between MYs 2021–2025.[34]

The Clean Car Standards would have created several long-term benefits. First, the standards would have reduced GHG emissions by the equivalent of approximately two billion metric tons over the lifetimes of those light-duty vehicles produced in MYs 2017–2025.[35] EPA projected the Clean Car Standards would improve fleetwide MY 2017–2025 $CO_2$ emission levels from 243 grams per mile (in 2017) to 163 grams per mile (in 2025),[36] resulting in yearly $CO_2$ reductions of 51.9 million metric tons (in 2017) and 312.4 million metric tons (in 2025).[37]

The SAFE Rule would undo these important mitigation measures at precisely the time bold steps are needed to further reduce air pollution, improve air quality, and combat climate change. The SAFE Rule would rollback required annual reduction in fleetwide GHG emissions from about five percent to just 1.5%, erasing essential progress to mitigate automobile and upstream source air pollution made since 2012.[38]

According to EPA and NHTSA, the SAFE Rule is "...estimated to result in 1.9 to 2.0 additional billion barrels of fuel consumed and from 867 to 923 additional

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[34] *Id.* at 62,638.
[35] *Id.* at 62,631.
[36] *Id.* at 62,642.
[37] *Id.* at 62,657.
[38] 85 Fed. Reg. at 24,175.

million metric tons of $CO_2$ as compared to current estimates of what [the Clean Car Standards] would require..."[39] EPA and NHTSA also estimate that over the lives of MY 1977–2029 vehicles, in comparison to the 2012 standards, the SAFE Rule will result in 440 to 1,000 more premature deaths due to the increased air pollution from both upstream source and tailpipe emissions.[40]

Given the extensively documented impacts automobile sector air pollution and climate change have on respiratory health, *infra* Part II, it is vital that this Court invalidate the SAFE Rule and that the nation retain the 2012 Clean Car Standards.

## II. THE SAFE RULE WILL CAUSE SUBSTANTIAL ADVERSE IMPACTS ON PUBLIC HEALTH.

### A. The SAFE Rule Will Increase GHG Emissions in the U.S., Creating Significant Harms to Public Health by Exacerbating Climate Change.

The SAFE Rule will significantly harm public health by increasing GHG emissions in the U.S.—further contributing to climate change. GHG emissions cause increased global surface temperatures by preventing heat radiating from the Earth's surface from escaping out of the atmosphere.[41] Without significant GHG mitigation, global annual average temperatures are projected to increase by nine degrees Fahrenheit or more by 2100.[42] EPA estimates that the SAFE Rule will result in an

[39] *Id.* at 24,176.
[40] *Id.* at 25,112.
[41] FOURTH NATIONAL CLIMATE ASSESSMENT, VOLUME II, *supra* note 18, at 39.
[42] *Id.* at 42.

additional 867 to 923 million metric tons of $CO_2$ emissions as compared to the 2012 standards.[43] Americans will suffer severe health impacts from these additional GHG emissions.[44]

**Exacerbation of Existing Air Quality Problems**

The SAFE Rule will adversely affect public health by worsening both climate change and criteria pollution. Air pollution and climate change have an interconnected relationship[45]—there is a direct connection between worsening climate change and worsening air quality.[46] Rising temperatures and changes in precipitation patterns caused by climate change will exacerbate existing air quality problems across the U.S., increasing ozone- and particulate matter-related morbidity and mortality and adverse health impacts from heat and wildfires.[47]

**Heat-Related Morbidity and Mortality**

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[43] *See* 85 Fed. Reg. at 24,176.
[44] *See id*. at 25,073–25,084 Tables VII-132 through VII-143 (detailing negative health outcomes that are predicted to stem from the SAFE Rule); *id*. at 25,112 ("…the Final Rule analysis projects increases in premature deaths, asthma exacerbation, respiratory symptoms, non-fatal heart attacks, and a wide range of other health impacts.").
[45] *See, e.g.*, EPA, *Air Quality and Climate Change Research*, https://www.epa.gov/air-research/air-quality-and-climate-change-research.
[46] *See, e.g.*, FOURTH NATIONAL CLIMATE ASSESSMENT, VOLUME II, *supra* note 18, at 540–41.
[47] Kristie L. Ebi and Jerome A. Paulson, *Climate change and child health in the United States*, 40(1) CURRENT PROBLEMS IN PEDIATRIC AND ADOLESCENT HEALTH CARE 2, 2 –18 (2010); Jesse E. Bell et al., *Changes in Extreme Events and the Potential Impacts on Human Health*, 68(4) J. AIR & WASTE MGMT. ASS'N 265, 272 (2018).

Climate change will increase heat-related morbidity and mortality. Consistent with global trends, temperatures in the U.S. have continuously risen since recordkeeping began in 1895.[48] This warming is attributable to elevated GHG emissions.[49] Warmer temperatures due to climate change are projected to lead to an increase in future mortality on the order of thousands to tens of thousands of additional premature deaths per year across the U.S. by 2100.[50]

High ambient temperatures are linked to a range of adverse health effects.[51] Extreme heat is associated with cardiovascular, respiratory, and renal illnesses; diabetes; hyperthermia; mental health issues; and preterm births.[52] Extreme heat is

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[48] FOURTH NATIONAL CLIMATE ASSESSMENT, VOLUME II, *supra* note 18, at 103, 109, 111. Annual average temperature over the contiguous United States has increased by 1.2ºF over the last few decades and by 1.8ºF relative to the beginning of the Twentieth Century. *Id.* at 698.

[49] U.S. GLOBAL CHANGE RESEARCH PROGRAM, THE IMPACTS OF CLIMATE CHANGE ON HUMAN HEALTH IN THE UNITED STATES: A SCIENTIFIC ASSESSMENT 50 (2016), http://dx.doi.org/10.7930/J0R49NQX.

[50] *See, e.g.*, David Mills et al., *Climate Change Impacts on Extreme Temperature Mortality in Select Metropolitan Areas in the United States*, 131 CLIMATIC CHANGE 83, 83–84, 91, 93 (2015), http://dx.doi.org/10.1007/s10584-014-1154-8; Jennifer F. Bobb, et al., *Heat-related Mortality and Adaptation to Heat in the United States*, 122 ENVTL. HEALTH PERSPECTIVES. 811, 811 (2014), http://dx.doi.org/10.1289/ehp.1307392.

[51] *See* THE IMPACTS OF CLIMATE CHANGE ON HUMAN HEALTH IN THE UNITED STATES, *supra* note 49, at 50.

[52] *Id*.

also associated with increased morbidity-related hospitalization and mortality due to the exacerbation of existing medical conditions.[53]

Extreme heat episodes most acutely impact vulnerable populations, including young children, older adults, pregnant women, outdoor workers, the homeless, and people with chronic illnesses.[54] For example, studies have associated increases in temperature with increased emergency department visits for pediatric asthma[55] and increased respiratory hospitalizations of Medicare populations.[56]

**Adverse Health Impacts from Wildfires**

Increased GHG emissions will cause negative health effects by contributing to warming that increases wildfire frequency and associated air pollution. Wildfires simultaneously aggravate the impact and warming effect of climate change. Climate change is extending the frequency and intensity of wildfires and the length of the

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[53] *See* Anita A.R. et al., *Public Health Impacts of Heat Waves: A Review*, 5(2) INT'L J. PUB. HEALTH & CLINICAL SCI. 68, 68, 71–78 (2018); Bell et al., *supra* note 47, at 272 (noting that "[t]emperature-related illness and death are likely underestimated").

[54] FOURTH NATIONAL CLIMATE ASSESSMENT, VOLUME II, *supra* note 18, at 1108.

[55] *See* Nana Mireku et al., *Changes in Weather and the Effects on Pediatric Asthma Exacerbations*, 103 ANNALS ALLERGY, ASTHMA & IMMUNOLOGY 220, 220 (2009).

[56] *See* G. Brooke Anderson et al., *Heat-Related Emergency Hospitalizations for Respiratory Diseases in the Medicare Population*, 187 AM. J. RESPIRATORY & CRITICAL CARE MED. 1098, 1098 (2013) (study of 12.5 million Medicare beneficiaries finding "a clear and consistent increase in respiratory hospitalizations with increasing outdoor temperature").

wildfire season, particularly in the Western U.S.[57] The increased frequency and intensity of wildfires will cause additional ozone and particulate matter pollution, which, in turn, will increase the risk of respiratory disease and mortality, with immense public health costs.[58] The American Lung Association's 2020 State of the Air report found that wildfires were a central reason for many of the spikes in high ozone and particulate matter days in the Western U.S.[59]

Degraded air quality from wildfires can exacerbate respiratory and cardiovascular conditions.[60] Exposure to wildfire smoke is consistently associated with adverse respiratory health outcomes, and is most clearly associated with adverse outcomes specific to asthma.[61] Wildfire smoke exposure can also result in

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[57] FOURTH NATIONAL CLIMATE ASSESSMENT, VOLUME II, *supra* note 18, at 521 (2018); U.S. FOREST SERV., EFFECTS OF CLIMATIC VARIABILITY AND CHANGE ON FOREST ECOSYSTEMS: A COMPREHENSIVE SCIENCE SYNTHESIS FOR THE U.S. FOREST SECTOR 250 (2012), https://www.fs.fed.us/pnw/pubs/pnw_gtr870/pnw_gtr870.pdf.

[58] *See, e.g.*, THE IMPACTS OF CLIMATE CHANGE ON HUMAN HEALTH IN THE UNITED STATES, *supra* note 49, at 57; David Mills et al., *Projecting Age-Stratified Risk of Exposure to Inland Flooding and Wildfire Smoke in the United States under Two Climate Scenarios*, 126(4) ENVTL. HEALTH PERSPECTIVES 047007, 047007-1 (2018), http://dx.doi.org/10.1289/EHP2594.

[59] *See* AM. LUNG ASS'N, STATE OF THE AIR 2020 at 7–8, 10 (2020 ed.), https://www.stateoftheair.org/assets/SOTA-2020.pdf.

[60] Mills et al., *Projecting Age-Stratified Risk of Exposure to Inland Flooding and Wildfire Smoke*, supra note 58, at 047007-1.

[61] *See* Sarah B. Henderson & Fay H. Johnston, *Measures of Forest Fire Smoke Exposure and their Associations with Respiratory Health Outcomes*, 3 CURRENT OP. ALLERGY & CLINICAL IMMUNOLOGY 221, 222–24 (2012) (severe outcomes from smoke exposure included asthma, COPD, acute bronchitis plus bronchiolitis, upper respiratory infections, and pneumonia).

chronic obstructive pulmonary disease ("COPD"), acute bronchitis and bronchiolitis, upper respiratory infections, and pneumonia.[62] Further, wildfire exposure directly causes premature death, burn injuries, post-traumatic stress disorder, and acute exacerbation of respiratory conditions such as asthma, shortness of breath, decreased lung function, and COPD.[63] Children, older adults, smokers, firefighters, and people with existing cardiopulmonary and respiratory diseases are most vulnerable to the adverse health effects of wildfires.[64] Scientists have found that moderate global emissions mitigation would reduce exposure to wildfire smoke in nearly one million young children and 1.7 million older adults by 2100.[65]

### B. The SAFE Rule will Increase Criteria Pollution in the U.S., Causing Significant Adverse Impacts on Public Health.

The SAFE Rule will result in increased criteria pollutant emissions from upstream sources related to the production and distribution of gasoline.[66] This increase in criteria pollution will adversely affect air quality and human health.[67]

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[62] *See id*. at 222–24.
[63] Bell et al., *supra* note 47, at 274.
[64] *Id*.
[65] *See* Mills et al., *Projecting Age-Stratified Risk of Exposure to Inland Flooding and Wildfire Smoke*, supra note 58, at 047007-1, 047007-12 (as opposed to a high emissions scenario).
[66] *See* 85 Fed. Reg. at 25,057, Table VII-120; *id*. at 25,059, Table VII-122 (depicting cumulative changes in criteria pollutant emissions for MY's 1975-2029 for final fuel economy standards and $CO_2$ standards, respectively).
[67] *See* Kenneth Davidson et al., *The Recent and Future Health Burden of the U.S. Mobile Sector Apportioned by Source*, 15 ENV'T RSCH. LETTERS 1, 5 (2020)

**Adverse Health Impacts of Ozone Pollution**

Ozone—a criteria pollutant formed by emissions from upstream sources and automobiles—is a longstanding threat to public health in the U.S.[68] As a lung and airway irritant,[69] ozone exposure causes adverse health effects such as the development of asthma and asthma attacks;[70] exacerbations of COPD, emphysema, and chronic bronchitis; and premature death.[71] Epidemiological studies consistently show significant correlations between long-term ozone exposure and reduced airway function, even in healthy young adults.[72] Further, recent evidence suggests that decreases in ozone exposure are associated with lower incidences of asthma in children.[73]

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(finding that air pollution from the mobile sector caused about twenty percent of the $PM_{2.5}$ and ozone-attributable deaths in 2011).

[68] *See* EPA, *Ground-level Ozone Basics*, https://www.epa.gov/ground-level-ozone-pollution/ground-level-ozone-basics#formation.

[69] CTRS. FOR DISEASE CONTROL & PREVENTION, *Ozone and Your Health*, https://www.cdc.gov/air/ozone.html.

[70] *See* Louis-Francois Tétreault et al., *Childhood Exposure to Ambient Air Pollutants and the Onset of Asthma: An Administrative Cohort Study in Québec*, 124(8) ENVTL. HEALTH PERSPECTIVES 1276, 1276 (2016) (finding asthma onset in children to be associated with residential exposure to $PM_{2.5}$, ozone, and $NO_2$). Each year approximately 3,500 children and adults die from asthma in the U.S. *See* CTRS. FOR DISEASE CONTROL & PREVENTION, *Asthma*, https://www.cdc.gov/nchs/fastats/asthma.htm.

[71] *See* EPA, *Health Effects of Ozone Pollution*, www.epa.gov/ground-level-ozone-pollution/health-effects-ozone-pollution.

[72] *See* Daniela Nuvolone et al., *The Effects of Ozone on Human Health*, 25 ENV'T SCI. & POLLUTION RSCH. 8074, 8078 (2017).

[73] Erika Garcia et al., *Association of Changes in Air Quality With Incident Asthma in Children in California, 1993–2014*, 321(19) JAMA 1906 (2019).

The damaging health effects of ozone are not just limited to the lungs and airways—medical evidence also links ozone exposure to adverse cardiovascular effects.[74] For example, a large, multi-continent study demonstrated that ozone pollution can lead to an increased risk of premature death from cardiovascular disease.[75] Ozone exposure increases the risk of premature death, particularly for more vulnerable adults, including the elderly, women, African Americans, and people with pre-existing heart disease.[76]

Unless abated by additional emissions reductions of ozone precursors,[77] increases in ozone pollution will cause premature deaths, hospital visits, lost school days, and acute respiratory symptoms.[78]

**Adverse Health Impacts of Particulate Matter Pollution**

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[74] *See* Catherine Pradeau et al., *Air pollution and activation of mobile medical team for out-of-hospital cardiac arrest*, 33(3) AM. J. EMERGENCY MED. 367 (2015); Klea Katsouyanni et al., *Air Pollution and Health: A European and North American Approach (APHENA)*, 142 RSCH. REP. HEALTH. EFFECTS INST. 5, 5–6 (2009).
[75] *See* Katsouyanni et al., *supra* note 74, at 5–6.
[76] *See* Patricia F. Coogan et al., *Long-Term Exposure to $NO_2$ and Ozone and Hypertension Incidence in the Black Women's Health Study*, 30(4) AM. J. HYPERTENSION 367 (2017); Antonella Zanobetti & Joel Schwartz, *Ozone and Survival in Four Cohorts with Potentially Predisposing Diseases*, 184(7) AM. J. RESPIRATORY & CRITICAL CARE MED. 836, 836 (2011).
[77] *See* EPA, *Basic Information about $NO_2$*, *supra* note 18.
[78] THE IMPACTS OF CLIMATE CHANGE ON HUMAN HEALTH IN THE UNITED STATES, *supra* note 49, at 70; Neal Fann et al., *The Geographic Distribution and Economic Value of Climate Change-Related Ozone Health Impacts in the United States in 2030*, 65(5) J. AIR & WASTE MGMT. ASS'N 570, 570, 575–76 (2015).

The adverse health impacts of exposure to particulate matter pollution—emitted by upstream sources and motor vehicles—have been understood for several decades.[79] Exposure to $PM_{2.5}$ is associated with serious chronic and acute health effects, including trachea, bronchus, and lung cancers; COPD; cardiovascular and cerebrovascular diseases; lower respiratory infections; and asthma development and exacerbation.[80]

Studies have shown that long-term particulate matter exposure contributes to cardiovascular morbidity and mortality.[81] Impacts of long-term exposure to particulate matter pollution have been observed for various blood markers of cardiovascular risk, subclinical chronic inflammatory lung injury, and subclinical atherosclerosis.[82] Particulate matter exposure also increases risk of pulmonary

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[79] *See* C. Arden Pope III & Douglas W. Dockery, *Health Effects of Fine Particulate Air Pollution: Lines That Connect*, 56 J. AIR & WASTE MGMT. ASS'N 709, 710 (2006).

[80] *See* THE IMPACTS OF CLIMATE CHANGE ON HUMAN HEALTH IN THE UNITED STATES, *supra* note 49, at 76; Stephen S. Lim et al., *A Comparative Risk Assessment of Burden of Disease and Injury Attributable to 67 Risk Factors and Risk Factor Clusters in 21 Regions, 1990-2010: A Systematic Analysis for the Global Burden of Disease Study 2010*, 380 LANCET 2224, 2227 (2012).

[81] *See* Pope III & Dockery, *supra* note 79, at 722, 731; Lim et al., *supra* note 80, at 2238 (finding the global attributable mortality due to ambient $PM_{2.5}$ to be 3.2 million people in 2010); *see also* George D. Thurston et al., *Ambient Particulate Matter Air Pollution Exposure and Mortality in the NIH-AARP Diet and Health Cohort*, 124(4) ENVTL. HEALTH PERSPECTIVES 484 (2016).

[82] *See* Pope III & Dockery, *supra* note 79, at 731.

infections and risk of acute respiratory distress syndrome,[83] a syndrome of hypoxemic respiratory failure seen in COVID-19 patients. Indeed, current ecologic studies suggest that higher, chronic $PM_{2.5}$ exposure may increase mortality risk for persons infected with the SARS-CoV-2 virus.[84]

Short-term particulate matter exposure is also associated with many adverse health outcomes, including cardiovascular mortality and hospital admissions, stroke mortality and hospital admissions, altered cardiac autonomic function, post-neonatal infant mortality, and pulmonary and systemic inflammation and oxidative stress.[85] Medical studies have consistently shown associations between cardiopulmonary mortality and daily changes in particulate matter levels.[86] A newer generation of studies continues to find adverse cardiovascular health risks as well as broad adverse

[83] *See* John P. Reilly et al., *Low to Moderate Air Pollutant Exposure and Acute Respiratory Distress Syndrome after Severe Trauma*, 199(1) AM. J. RESPIRATORY CRIT. CARE MED. 62, 64-65 (2019).
[84] Editorial Staff, *Understanding the link between COVID-19 Mortality and Air Pollution*, AM. LUNG ASS'N., (Jan. 4, 2021), https://www.lung.org/blog/covid-19-mortality-and-air-pollution?fbclid=IwAR0i4O5nwfCLdzuHY6gegeNXuIhDHMsQfEDZblKKMUP9ZZWvwdYIyVXPL18.
[85] *See* Bart Ostro et al., *Associations of Source-Specific Fine Particulate Matter With Emergency Department Visits in California*, 184(6) AM. J. EPIDEMIOLOGY 450, 452 (2015); Pope III & Dockery, *supra* note 79, at 715–16, 731.
[86] *See* Pope III & Dockery, *supra* note 79, at 731.

effects implicating the respiratory system, nervous system, cancer risk, and mortality risks.[87]

Particulate matter pollution is particularly harmful to vulnerable populations, including the young; older adults; people with asthma, chronic lung disease, cardiovascular disease, or diabetes; communities of color; and low-income populations.[88] These groups face an increased risk of hospitalization and death.[89]

Reducing particulate matter emissions improves public health. There is compelling scientific evidence that reductions in exposure to $PM_{2.5}$ pollution will result in improvements to cardiopulmonary health.[90] A prospective cohort study found that declining levels of $PM_{2.5}$ pollution were associated with statistically and

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[87] *See* EPA, INTEGRATED SCIENCE ASSESSMENT FOR PARTICULATE MATTER 1-21–1-31 (2019), *available at* https://cfpub.epa.gov/ncea/isa/recordisplay.cfm?deid=347534#tab-3.

[88] *See* AM. LUNG ASS'N, STATE OF THE AIR 2020, *supra* note 59, at 11; Mills et al., *Projecting Age-Stratified Risk of Exposure to Inland Flooding and Wildfire Smoke*, *supra* note 58, at 047007-1; Jingchun Fan et al., *The impact of $PM_{2.5}$ on asthma emergency department visits: a systematic review and meta-analysis*, 23(1) ENVTL. SCI. POLLUTION RESEARCH 843, 849 (2015)

[89] *See* Fan et al., *supra* note 89, at 843–844 ; THE IMPACTS OF CLIMATE CHANGE ON HUMAN HEALTH IN THE UNITED STATES, *supra* note 49, at 82; Robert A. Silverman and Kazuhiko Ito, *Age-related association of fine particles and ozone with severe acute asthma in New York City*, 125(2) J. ALLERGY CLINICAL IMMUNOLOGY 367, 370 (2010).

[90] *See* W. James Gaurderman et al., *Association of Improved Air Quality with Lung Development in Children*, 372(10) NEW ENGLAND J. MED. 905, 905–06 (2015); Pope III & Dockery, *supra* note 79, at 731.

clinically significant improvements in lung function growth and reductions of incidents of asthma in children.[91]

### C. Vulnerable Populations will Disproportionately Bear the Public Health Consequences of the SAFE Rule.

The aforementioned adverse public health impacts that will stem from the SAFE Rule will disproportionately impact vulnerable populations. People who are especially vulnerable to climate change and criteria air pollution include children, older adults, communities of color, low-income populations, and people with pre-existing or chronic medical conditions.[92] Protecting these vulnerable populations is critically important because the racial, ethnic, and class disparities in air pollution exposure and associated public health impacts are currently being exacerbated by the stark health and mortality inequalities in the ongoing COVID-19 pandemic.[93]

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[91] *See* Gaurderman et al., *supra* note 90, at 905–06.

[92] *See, e.g.*, Jill A. Poole et al., *Impact of Weather and Climate Change with Indoor and Outdoor Air Quality in Asthma: A Work Group Report of the AAAAI Environmental Exposure and Respiratory Health Committee*, 143(5) J. ALLERGY & CLINICAL IMMUNOLOGY 1702, 1704 (2019); Bell et al., *supra* note 47, at 268; THE IMPACTS OF CLIMATE CHANGE ON HUMAN HEALTH IN THE UNITED STATES, *supra* note 49, at 2, 82.

[93] *See* U.S. CENTERS FOR DISEASE CONTROL AND PREVENTION, *COVID-19 Racial and Ethnic Health Disparities* (Updated Dec. 10, 2020), https://www.cdc.gov/coronavirus/2019-ncov/community/health-equity/racial-ethnic-disparities/index.html.

Indeed, greater exposure to air pollution exposure increases the likelihood of COVID-19 mortality.[94]

Vulnerable populations are more susceptible to the health impacts of GHG emissions and criteria pollution due to varying physical and social factors, such as immature respiratory systems and/or lack of access to financial health care resources.[95] Vulnerable populations also face more exposure to GHG emissions and criteria pollution, thus increasing their risk of adverse health effects. For example, children have greater exposure to air pollution due to spending more time outdoors and breathing more rapidly than adults.[96] In addition, communities of color and low-income populations in the U.S. are on average more likely to live near a high-volume road or in an area with higher traffic density[97] and face disproportionately high

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[94] *See Understanding the link between COVID-19 Mortality and Air Pollution*, *supra* note 84.

[95] *See* THE IMPACTS OF CLIMATE CHANGE ON HUMAN HEALTH IN THE UNITED STATES, *supra* note 49, at 20, 24–25, 38–39; Laura Anderko et al., *Climate Changes Reproductive and Children's Health: A Review of Risks, Exposures, and Impacts*, 87 PEDIATRIC RSCH. 414, 414 (2020) ("[C]hildren are disproportionately affected [by climate change] because of their physical and cognitive immaturity."); Kimberly Thomas et al., *Explaining Differential Vulnerability to Climate Change: A Social Science Review*, 10(2) CLIMATE CHANGE 565, 566 (2019) ("This differential vulnerability to comparable levels of physical change is primarily a function of social rather than physical factors.").

[96] *See* Anderko et al., *supra* note 95, at 414–15.

[97] *See* Gregory M. Rowangould, *A Census of the US Near-Roadway Population: Public Health and Environmental Justice Considerations*, 25 TRANSP. RSCH. PART D 59, 59, 66 (2013), http://dx.doi.org/10.1016/j.trd.2013.08.003 (finding disparity in eighty-four percent of U.S. counties).

exposure to particulate matter pollution.[98] Across the U.S., people of color and people living below the poverty line face a twenty-eight to fifty-four percent higher burden from $PM_{2.5}$ emissions than the general population, with African Americans facing the largest burden.[99]

Demonstrating this increased level of risk, a recent study found that African Americans are seventy-five percent more likely than the average American to live near industrial facilities, including oil and gas facilities, upstream sources of GHG and criteria pollutant emissions.[100] Living near oil and gas facilities, including oil refineries, is associated with a higher prevalence of asthma and other respiratory problems, as well as an increase of adverse effects on pregnancy and birth outcomes.[101] The study also found that more than one million African Americans live within just half a mile of an oil or gas production, processing, and transmission

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[98] Frederica P. Perera, *Multiple Threats to Child Health from Fossil Fuel Combustion: Air Pollution and Climate Change*, 125(2) ENVTL. HEALTH PERSPECTIVES 141, 142 (2017).

[99] Ihab Mikati et al., *Disparities in Distribution of Particulate Matter Emission Sources by Race and Poverty Status*, 108(4) Am. J. Pub. Health 480, 480 (2018).

[100] NAACP & CLEAN AIR TASK FORCE, FUMES ACROSS THE FENCE-LINE: THE HEALTH IMPACTS OF AIR POLLUTION FROM OIL & GAS FACILITIES ON AFRICAN AMERICAN COMMUNITIES 6 (2017) (excluding oil refineries). This report was published data from the EPA's National Emissions Inventory and the National Air Toxics Assessment. *Id.*

[101] Montse Marquès et al., *Health Risks for the Population Living Near Petrochemical Industrial Complexes. 2. Adverse Health Outcomes Other than Cancer*, 730 Sci. Total Env't 139122, 139122 (2020).

facility.[102] Emissions from such oil and gas facilities were attributed to over 138,000 asthma attacks and over 100,000 missed school days each year for African American children.[103]

## CONCLUSION

In light of the overwhelming evidence that the United States needs stringent GHG emissions and fuel economy standards to address pressing public health impacts from climate change and transportation sector criteria pollution, *amici curiae* ATS, ALA, AMA, and MSDC urge this Court to vacate the SAFE Rule.

Dated: January 25, 2021

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[102] *See* NAACP & CLEAN AIR TASK FORCE, *supra* note 100, at 4.
[103] *See id*. The asthma rates in African American children are more than double those of their white counterparts, and African American children are ten times more likely to die from asthma than white children. *Id.* at 8.

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## CERTIFICATE OF COMPLIANCE

I certify that pursuant to Federal Rule of Appellate Procedure 32(a)(7), the attached Corrected Brief of *Amici Curiae* the American Thoracic Society and the American Lung Association, has a typeface of 14-point Times New Roman, and contains 6,349 words, excluding the parts of the brief exempted by Fed. R. App. P. 32(f).

I further certify that this brief complies with the typeface requirements of Fed. R. App. P. 32(a)(5) and the type-style requirements of Fed. R. App. P. 32(a)(6) because it was prepared using Microsoft Office Word 2020 and uses a proportionally spaced typeface, Times New Roman, in 14-point type for body text and 12-point type for footnotes.

I further certify that all privacy redactions have been made.

I further certify that all paper copies submitted to this Court are exact copies of this version, which is being submitted electronically via the Court's CM/ECF system. I further certify that the electronic submission was scanned for viruses with the most recent version of a commercial virus scanning program and is free of viruses.

*/s/ Hope M. Babcock* Date: January 25, 2021
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## CERTIFICATE OF SERVICE

I hereby certify that on January 25, 2021, I electronically filed the foregoing Corrected Brief of *Amici Curiae*, the American Thoracic Society and the American Lung Association, with the Clerk of the Court for the United States Court of Appeals for the District of Columbia Circuit by using the Court's CM/ECF system. I further certify that all parties are represented by counsel registered with the CM/ECF system, so that service will be accomplished by the CM/ECF system.

*/s/ Hope M. Babcock* Date: January 25, 2021
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