States of California, Colorado, Connecticut, Delaware, Hawaii, Illinois, Maryland, Minnesota, New Jersey, New York, Oregon, Rhode Island, Vermont, Washington, Wisconsin, the Commonwealth of Massachusetts, the District of Columbia, and the City of New York

August 2, 2022

Via Electronic Transmission

U.S. Environmental Protection Agency EPA West (Air Docket) 1200 Pennsylvania Avenue, NW, Room B108 Mail Code 6102T Washington, DC 20460

RE: Comments on "California State Motor Vehicle Pollution Control Standards and Nonroad Engine Pollution Control Standards; the 'Omnibus' Low NOx Regulation; Request for Waivers of Preemption," 87 Fed. Reg. 35,765 (June 13, 2022) and "California State Motor Vehicle Pollution Control Standards; Advanced Clean Trucks; Zero Emission Airport Shuttle; Zero-Emission Power Train Certification; Request for Waiver of Preemption," 87 Fed. Reg. 35,768 (June 13, 2022).

Attention: Docket ID Nos. EPA-HQ-OAR-2022-0332 and EPA-HQ-OAR-2022-0331

Dear Administrator Regan,

The States of California, Colorado, Connecticut, Delaware, Hawaii, Illinois, Maryland, Minnesota, New Jersey, New York, Oregon, Rhode Island, Vermont, Washington, Wisconsin, the Commonwealth of Massachusetts, the District of Columbia, and the City of New York ("States") respectfully submit these comments to the United States Environmental Protection Agency ("EPA") in support of the California Air Resources Board's ("CARB") request for waivers of preemption for its Heavy-Duty Omnibus regulation, Advanced Clean Trucks regulation, Zero Emission Airport Shuttle Bus regulation, and Zero Emission Powertrain Certification regulation. *See* 87 Fed. Reg. 35,765 (June 13, 2022); 87 Fed. Reg. 35,768 (June 13, 2022).

Under the Clean Air Act, California may request a waiver of preemption from EPA that allows California to enforce its emission standards for new motor vehicles. *See* 42 U.S.C. § 7543(b)(1). Here, CARB is seeking preemption waivers for a suite of regulations that require manufacturers to reduce emissions and to accelerate the adoption of zero-emission vehicles ("ZEVs") in the medium and heavy-duty vehicle sector. Medium and heavy-duty vehicles are a significant source of pollutants that contribute to ambient levels of ozone and particulate matter

¹ The California Attorney General submits these comments pursuant to his independent power and duty to protect the environment and natural resources of the State. *See* Cal. Const., art. V, § 13; Cal. Gov. Code, §§ 12511, 12600-12612; *D'Amico. v. Bd. of Medical Examiners*, 11 Cal.3d 1, 1415 (1974).

that are linked to premature death, respiratory illness including childhood asthma, cardiovascular problems, and other adverse health impacts.² Indeed, on-road heavy duty vehicles are the largest mobile-source contributor of emissions of nitrogen oxides ("NOx") – an ozone precursor – in the country.³ Impoverished communities and communities of color are disproportionately harmed by heavy-duty truck emissions because the people of those communities are more likely to live, work, or go to school in areas with high truck activity, such as those near ports, highways, railyards, and distribution centers.

The transportation sector is also the largest source of greenhouse gas ("GHG") emissions in the United States, with heavy-duty vehicles being the second-largest contributor within that sector. Reducing GHG emissions from heavy-duty vehicles is thus an essential element of addressing the growing climate emergency that is already impacting our residents. For instance, during the summer of 2021, multiple deadly heatwaves with record-breaking high temperatures, along with record-breaking wildfires and extreme drought, ravaged the western United States while hurricanes of historic force swept across the southern and eastern United States, resulting in mass power outages and producing record-breaking rainfall and fatal flash floods. Scientists project climate change-related impacts like these to worsen, and climate harms will disproportionately impact historically marginalized communities underscoring the urgent need for reductions in GHG emissions from this sector.

Massachusetts, New Jersey, New York, Oregon, and Washington have already finalized adoption of CARB's Heavy-Duty Omnibus regulation and/or the Advanced Clean Trucks regulation,⁴ while others have taken steps to adopt the standards.⁵ However, these states cannot implement and enforce these vital regulatory programs until EPA grants CARB's waiver request. These States as well as the District of Columbia, Connecticut, Colorado, Hawaii, Maine, Maryland, Nevada, North Carolina, Pennsylvania, Rhode Island, Vermont, and Virginia (and the Province of Quebec) have signed a memorandum of understanding to promote the adoption of heavy-duty ZEVs.⁶ As discussed below, these standards are vitally important to the States to

² See Control of Air Pollution from New Motor Vehicles: Heavy-Duty Engines and Vehicle Standards, 87 Fed. Reg. 17,414, 17,444 (March 28, 2022).

³ *Id.* at 17,418. Ozone is created by a chemical reaction in the presence of sunlight between NOx and volatile organic compounds.

⁴ 310 Code Mass. Regs. 7:40 (2021); N.J. Admin. Code §§ 7:27-31 and 33 (2021); N.Y. Comp. Codes R. & Regs., tit. 6, §§ 218-1.1, 218-2.1, 218-4.1, 218-4.2 (2021); Or. Admin. R. 340-257-0050(3) (2021); Wash. Admin. Code § 173-423-010 et seq. (2021).

⁵ See, e.g., https://portal.ct.gov/Office-of-the-Governor/News/Press-Releases/2022/04-2022/Governor-Lamont-Applauds-Final-Passage-of-Climate-Legislation-That-Includes-New-Emissions-Standards

⁶ Multi-State Medium- and Heavy-Duty Zero Emission Vehicle Memorandum of Understanding, July 13, 2020, and amended March 29, 2022, available at https://www.nescaum.org/documents/mhdv-zev-mou-20220329.pdf/ and attached as Exhibit 1.

reduce the exposures experienced by environmental justice communities⁷, to meet the Clean Air Act's National Ambient Air Quality Standards, and to reduce the risks posed to States and our residents by climate change.

For these reasons, the States strongly encourage EPA to grant in full CARB's request for waivers of preemption as soon as possible.

I. BACKGROUND

A. Legal Framework

Section 202(a) of the Clean Air Act requires EPA to set emission standards for air pollutants from new motor vehicles or new motor vehicle engines that the Administrator has found "cause, or contribute to, air pollution which may reasonably be anticipated to endanger public health or welfare." 42 U.S.C. § 7521(a). Standards under Clean Air Act section 202(a) take effect "after such period as the Administrator finds necessary to permit the development and application of the requisite technology, giving appropriate consideration to the cost of compliance within such period." *Id*.

Section 209(a) of the Clean Air Act prohibits states from "adopt[ing] or attempt[ing] to enforce any standard relating to the control of emissions from new motor vehicles or new motor vehicle engines." 42 U.S.C. § 7543(a). However, California may request a waiver of preemption from EPA that allows California to enforce the state's emission standards for new motor vehicles. Specifically, section 209(b)(1) of the Clean Air Act requires EPA to grant a waiver of 209(a) preemption to California, after notice and opportunity for public hearing, if California determines that "the state standards will be, in the aggregate, at least as protective of public health and welfare as applicable Federal standards." 42 U.S.C. § 7543(b)(1). The EPA Administrator will not grant a waiver if he finds that: (1) California's determination that its standards will be at least as protective of public health and welfare as applicable Federal standards "is arbitrary and capricious"; (2) California "does not need the state standards to meet compelling and extraordinary conditions"; or (3) California's "standards and accompanying enforcement procedures are not consistent with section 202(a) of the [Clean Air] Act." See 42 U.S.C. § 7543(b)(1); 87 Fed. Reg. at 35,766.

_

⁷ Environmental justice is defined by EPA as the "fair treatment and meaningful involvement of all people regardless of race, color, national origin or income with respect to development, implementation, and enforcement of environmental laws, regulations and policies." EPA, EPA-300-B-1-6004, EJ 2020 Action Agenda: The U.S. EPA's Environmental Justice Strategic Plan for 2016-2020, at 1 (Oct. 2016). For the purpose of this comment, the term "environmental justice community" refers to a community of color or community experiencing high rates of poverty that due to past and or current unfair and inequitable treatment is overburdened by environmental pollution, and the accompanying harms and risks from exposure to that pollution, because of past or current unfair treatment.

Further, in section 177 of the Clean Air Act ("Section 177"), Congress granted authority directly to states to adopt and enforce California motor vehicle emission standards, so long as: (1) the states' standards are identical to standards for which California has been granted a waiver by EPA; and (2) the states provide two years of lead time. 42 U.S.C. § 7507. The one prerequisite for a state to avail itself of Section 177 is that the state must have "plan provisions" approved under Part D of Subchapter I of the Act. Section 177's reference to "plan provisions" includes maintenance plans for states that have achieved attainment with National Ambient Air Quality Standards, 42 U.S.C. § 7505(a), as well as plans for the Ozone Transport Region, *id.* § 7511c, which can also include states in attainment.

B. California's Emission Standards for Medium and Heavy-Duty Vehicles

Given the significant air quality and climate change challenges faced by California, CARB has adopted several emission standards for new medium and heavy-duty vehicles and engines sold in in the state. And, pursuant to Section 177, a number of other states have opted-in to these California standards to help address their own air quality challenges. At issue in CARB's request for waivers of preemption are CARB's Heavy-Duty Omnibus regulation ("Omnibus regulation"), Advanced Clean Trucks regulation, Zero Emission Airport Shuttle Bus regulation, and Zero Emission Powertrain Certification regulation.

1. Omnibus regulation

In August 2020, CARB adopted the Omnibus regulation, which establishes stringent exhaust emission standards for NOx and particulate matter applicable to new heavy-duty vehicles and engines sold in California.⁸ The Omnibus regulation constitutes the single largest NOx control measure in California's current strategy to attain national ambient air quality standards. The NOx standards become more stringent in two phases, with the first increase applicable to model years 2024-2026 and the second applicable to model year 2027 and continuing thereafter.⁹ Overall, the NOx standards established by the Omnibus regulation are 90 percent more stringent than those applicable to current model years under California's and EPA's programs.¹⁰ The particulate matter standards of the Omnibus regulation require cutting particulate matter emissions in half for covered vehicles beginning with model year 2024.¹¹

The Omnibus regulation also strengthens several elements of California's certification and in-use programs to ensure that NOx emissions are significantly reduced throughout the entire useful life of the vehicle or engine. These revisions include tighter emission standards, revamped in-use testing requirements, a new low-load certification test cycle, more robust durability

⁸ Clean Air Act § 209(b) Waiver and § 209(e) Authorization Request Support Document Submitted by the California Air Resources Board (January 31, 2022) ("CARB Waiver Request") (EPA-HQ-OAR-2022-0332-0009) at 9-41 (describing various elements of the Omnibus regulation).

⁹ *Id.* at 10-11.

¹⁰ *Id.* at 1.

¹¹ *Id.* at 12.

procedures, and longer emission warranties to ensure defective parts are rapidly repaired. These changes ensure that covered vehicles will actually meet the emission standards when operated under real world conditions and will operate without increased emissions for longer periods after their initial sales.

2. Advanced Clean Trucks regulation

The Advanced Clean Trucks regulation aims to accelerate the widespread adoption of ZEVs in the medium and heavy-duty truck sector.¹² The regulation includes two primary elements: (1) it sets manufacturer ZEV sales requirements for medium and heavy-duty trucks; and (2) it requires large entities like retailers, manufacturers, and government agencies to report information that can be used to develop future strategies to further accelerate the use of ZEVs.¹³ Manufacturers can generate a "ZEV credit" by "producing and selling a ZEV into California,"¹⁴ and starting with the 2024 model year, truck manufacturers subject to the regulation will "annually incur deficits based on the manufacturer's annual sales volume of on-road vehicles produced and delivered for sale in California."¹⁵ For each model year, manufacturers must comply by retiring credits to offset their deficits.¹⁶ The regulation also allows manufacturers to "bank" and trade credits.¹⁷

The Advanced Clean Trucks regulation will achieve significant reductions in emissions of NOx, particulate matter, and GHGs in the state.¹⁸ CARB estimates that by 2031 the regulation will reduce NOx emissions by 6.9 tons per day, and emissions of fine particulate matter by 0.24 tons per day.¹⁹ By 2040, the Advanced Clean Trucks regulation will reduce emissions of NOx by 16.9 tons per day and fine particulate matter emissions by 0.46 tons per day.²⁰ Between 2020 and 2040, the Advanced Clean Trucks regulation is projected to reduce GHG emissions by a cumulative 11.2 million metric tons of carbon dioxide equivalent.²¹

3. Zero Emission Airport Shuttle Bus regulation

The Zero Emission Airport Shuttle Bus regulation ("Airport Shuttle regulation") will accelerate the adoption of ZEV technology in airport shuttles, helping these fleets transition to

¹² Advanced Clean Trucks Initial Statement of Reasons (Oct. 22, 2019) ("ACT ISOR") at ES-1, V-1 (Ref. 2A submitted with waiver request EPA-HQ-OAR-2022-0331-0003).

¹³ *Id*.

¹⁴ Cal. Code Regs., tit. 13, §§ 1963, subds. (c)(17) & (c)(22), 1963.2 (credits may be generated beginning with the 2021 model year).

¹⁵ *Id.* § 1963.1, subd. (a).

¹⁶ *Id*.

¹⁷ *Id.* § 1963.2.

¹⁸ ACT ISOR at II-5, V-2.

¹⁹ CARB Waiver Request for ACT at 2 (EPA-HQ-OAR-2022-0331-0003).

 $^{^{20}}$ Id. at 2-3.

²¹ *Id*.

full ZEV adoption by 2035. The regulation sets increasing fleet composition requirements for airport shuttle fleet owners that service the 13 largest California airports. Although the number of airport shuttles is relatively small, "the experience gained by operating these [zero-emission vehicles] will benefit other heavy-duty on-road markets and increase the commercialization, and acceptance, of clean transportation technologies in other applications."²²

By 2031, the Airport Shuttle regulation is projected to reduce NOx emissions by 7.60 tons per year, fine particulate matter by 0.15 tons per year, and GHG emissions by 81 metric tons per day of carbon dioxide equivalent.²³ And by 2040, the regulation is projected to reduce NOx emissions by 9.99 tons per year, fine particulate matter emissions by 0.17 tons per year, and GHG emissions by 107 metric tons per day of carbon dioxide equivalent.²⁴

C. Zero Emission Powertrain Certification regulation

California's current certification paradigm for internal combustion engines and vehicles is not well-suited for the certification of heavy-duty electric vehicles ("HDEV") and heavy-duty fuel cell vehicles ("HDFCV"), and the zero-emission powertrains installed in such vehicles. ²⁵ The Zero Emission Powertrain regulation creates a new, optional certification pathway for HDEVs and HDFCVs. Certified powertrains would be deemed to have no exhaust emissions of any air pollutant or GHG. ²⁶ The powertrains that are used to propel ZEVs must meet the requirements of the Zero Emission Powertrain Certification regulation beginning in the 2024 model year, and the emissions benefits directly attributable to this regulation would be dependent upon specific measures that incorporate that regulation's procedures and requirements. ²⁷

II. EPA MUST GRANT CARB'S REQUEST FOR WAIVERS OF PREEMPTION

The States strongly encourage EPA to grant, in full, CARB's request for waivers of preemption as soon as possible. As detailed below, California and the states that have adopted California's programs need CARB's suite of regulations, including the Omnibus regulation, Advanced Clean Trucks regulation, Airport Shuttle regulation, and Zero Emission Powertrain Certification regulation, to reduce the exposures experienced by environmental justice communities, to meet the Clean Air Act's National Ambient Air Quality Standards, and to reduce the risks posed by climate change to the States and our residents.

²³Id. at 3 (EPA-HQ-OAR-2022-0331-0003) (typographical error indicating that there would be reductions of "107 MMT" when the correct number is "107 MT" or metric tons).

²² *Id.* at 24.

²⁴Id. at 3 (EPA-HQ-OAR-2022-0331-0003) (typographical error indicating that there would be reductions of "1.7 tpy" when the correct number is "0.17 tpy").

²⁵ Zero-Emission Power Train Certification, Initial Statement of Reasons (Dec. 31, 2018) ("ZEP ISOR") at 10 (EPA-HQ-OAR-2022-0331-0011).

²⁶ *Id.* at 13.

²⁷ *Id.* at 3.

A. Air Pollutants Emitted from Heavy-Duty Vehicles Endanger Public Health and Welfare

Heavy-duty truck engines are a significant source of air pollutants that contribute to ambient concentrations of ozone, inhalable particulate matter (PM_{2.5}), and air toxics.²⁸ Exposure to ozone and PM_{2.5} has serious health effects and is associated with increased risk of premature deaths, emergency room visits, and hospital stays.²⁹ A range of adverse respiratory effects are linked to these pollutants such as asthma, respiratory inflammation, and decreased lung function and growth.³⁰

In particular, PM_{2.5} poses the greatest health risk among air pollutants as the fine particles can lodge deep into the lungs and enter into the bloodstream, causing irregular heartbeat, heart attacks, as well as increased risk of lung cancer.³¹ Recent evidence also suggests a causal relationship between PM_{2.5} exposure and a host of other negative health impacts, including reproductive and developmental effects from long-term exposure (*i.e.*, fertility, pregnancy, and birth outcomes), metabolic effects from long-term and short-term exposure, and nervous system effects from short-term exposure.³² Heavy-duty engine emissions also contribute to ambient levels of air toxics,³³ such as benzene, formaldehyde, acetaldehyde, and naphthalene, which are known or suspected to cause cancer, reproductive effects, fetal development, respiratory symptoms, and other serious health effects.³⁴

B. Emissions from Heavy-Duty Vehicles Disproportionately Impact Environmental Justice Communities

Emissions from heavy-duty trucks disproportionately endanger residents of environmental justice communities by exposing them to harmful air pollution that causes significant health impacts. Heavy-duty trucks concentrate their emissions along transportation corridors and near

³¹ EPA Notice of Proposed Rulemaking on the Control of Air Pollution from Airplanes and Airplane Engines: Particulate Matter Standards and Test Procedures, 87 Fed. Reg. 6324, 6331 (Feb. 3, 2022).

²⁸ 87 Fed. Reg. at 17,444.

²⁹ *Id.* at 17,444-51.

³⁰ *Id*.

 $^{^{32}}$ *Id*.

³³ McKeon, Thomas P. et al. (2021). "Environmental exposomics and lung cancer risk assessment in the Philadelphia metropolitan area using ZIP code—level hazard indices." Environmental Science and Pollution Research International, vol. 28, 31758–31769, 31764; Cancer & Environment Network of Southwestern Pennsylvania, National Air Toxics Assessment and Cancer Risk in Allegheny County Pennsylvania (updated May 2021), available at https://www.catf.us/wp-content/uploads/2021/07/NATA-Factsheet-Final-May-2021.pdf.
34 EPA Health Effects Notebook for Hazardous Air Pollutants, available at https://www.epa.gov/haps/health-effects-notebook-hazardous-air-pollutants

ports, warehouses, and distribution centers.³⁵ Communities located near this infrastructure are disproportionately lower-income and communities of color already overburdened by exposure to industrial pollution along with the cumulative impacts of exposure to truck emissions.³⁶ For example, EPA modeling has shown that race and income are significantly associated with living near truck routes nationally, even when controlling for other factors.³⁷ EPA research has also indicated that people of color are more likely to live within 300 feet of major transportation facilities and go to school within 200 meters of the largest roadways.³⁸ Likewise, a comprehensive study by the South Coast Air Quality Management District—which covers Los Angeles and the Inland Empire, the largest logistics hub nationwide—found that communities located near large warehouses scored far higher on California's environmental justice screening tool, which measures overall pollution and demographic vulnerability.³⁹ That study concluded that, compared to the South Coast basin averages, communities in the South Coast basin near large warehouses had a substantially higher proportion of people of color; were exposed to more diesel particulate matter; had higher rates of asthma, cardiovascular disease, and low birth weights; and had higher poverty and unemployment rates.⁴⁰

As the South Coast Air Quality Management District study demonstrates, and as many others corroborate, ⁴¹ residents of environmental justice communities near logistics infrastructure

³⁵ 87 Fed. Reg. at 17,452.

³⁶ EPA Memorandum, Estimation of Population Size and Demographic Characteristics among People Living Near Truck Routes in the Coterminous United States (Feb. 16, 2022), at 11-12, Fig. 3, 17-19, Fig. 9 (EPA-HQ-OAR-2019-0055-0982) (finding that individuals living near major truck routes are more likely to be people of color and lower-income); see also Michelle Meyer and Tim Dallmann, The Real Urban Emissions Initiative, Air quality and health impacts of diesel truck emissions in New York City and policy implications (2022), at 7 Fig. 5 (concluding that Black and Latino individuals in New York City are disproportionately exposed to PM_{2.5} along freight corridors), attached as Exhibit 1; South Coast Air Quality Management District, Final Socioeconomic Assessment for Proposed Rule 2305 – Warehouse Indirect Source Rule – Warehouse Actions and Investments to Reduce Emissions (WAIRE) Program and Proposed Rule 316 – Fees for Rule 2305 (May 2021), at 3-7 (determining that individuals living near warehouses in the logistics-heavy South Coast Air Quality Management District are more likely to be people of color, lower-income, and exposed to high pollution levels), attached as Exhibit 2.

³⁷ EPA Memorandum, "Estimation of Population Size and Demographic Characteristics among People Living Near Truck Routes in the Coterminous United States" at 20-24 (Feb. 16, 2022), EPA-HQ-OAR-2019-0055-0982.

³⁸ Chad Bailey, "Demographic and Social Patterns in Housing Units Near Large Highways and other Transportation Sources" (2011) at 3, EPA-HQ-OAR-2019-0055-0126.

³⁹ South Coast Air Quality Management District, *supra* note 26, at 4-5.

⁴⁰ *Id*. at 5-7

⁴¹ See, e.g., Gaige Hunter Kerr, et al., COVID-19 Pandemic Reveals Persistent Disparities in (continued...)

suffer from health effects due to exposure to NOx and associated heavy-duty truck emissions. These issues are particularly acute in our States, which proudly generate a majority of the nation's economic activity associated with the logistics industry, yet also bear its detrimental environmental impacts. Major ports in some of our States handled 62 percent of all container traffic nationwide in 2020, including the three megaports of Los Angeles, Long Beach, and New York and New Jersey, which together accounted for 43 percent of all container traffic. Reflecting historical redlining, the communities near these ports are overwhelmingly comprised of residents with lower-incomes and people of color who disproportionately suffer exposures and health impacts from pollution from heavy-duty truck engine emissions. Data from the census tracts surrounding the Ports of Los Angeles and Long Beach exemplify these inequalities:

_

Nitrogen Dioxide Pollution 118 Proc. Nat'l Acad. Sciences 30 (2021), attached as Exhibit 3; Mary Angelique G. Demetillo, et al. Space-Based Observational Constraints on NO₂ Air Pollution Inequality from Diesel Traffic in Major US Cities, Geophysical Research Letters 48 (2021); Paul Allen, et al., Newark Community Impacts of Mobile Source Emissions: A Community-Based Participatory Research Analysis (2020), attached as Exhibit 4; Maria Cecilia Pinto de Moura, et al., Union of Concerned Scientists, Inequitable Exposure to Air Pollution from Vehicles in Massachusetts (2019), attached as Exhibit 5; Iyad Kheirbek, et al., The Contribution of Motor Vehicle Emissions to Ambient Fine Particulate Matter Public Health Impacts in New York City: a Health Burden Assessment, 15 Env't Health 89 (2016), attached as Exhibit 6.

⁴² Data from the Bureau of Transportation Statistics, Container TEUs (Twenty-foot Equivalent Units) (2020), https://data.bts.gov/stories/s/Container-TEU/x3fb-aeda/ (ports of Baltimore, Boston, Honolulu, Long Beach, Los Angeles, New York and New Jersey, Oakland, Philadelphia, Seattle, South Jersey, Tacoma, and Wilmington combined for 25.487 million TEUs, 62% of 41.24 million TEUs total nationwide; ports of Long Beach, Los Angeles, and New York and New Jersey combined for 17.62 million TEUs, 43% of 41.24 million TEUs).

⁴³ Beginning in the 1930s, federal housing policy directed investment away from "risky" communities of color. Nearly all of the communities adjacent to the three megaports (the Ports of Los Angeles, Long Beach, and New York and New Jersey) were coded red, deemed "risky" signifying the least desirable areas where investment was to be avoided. *See* University of Richmond Digital Scholarship Lab, Mapping Inequality,

https://dsl.richmond.edu/panorama/redlining/#loc=12/33.748/-118.272&city=los-angeles-ca (Los Angeles, CA), https://dsl.richmond.edu/panorama/redlining/#loc=14/40.678/-74.004&city=brooklyn-ny (Brooklyn, NY),

https://dsl.richmond.edu/panorama/redlining/#loc=13/40.704/-74.068&city=hudson-co.-nj (Hudson County, NJ), https://dsl.richmond.edu/panorama/redlining/#loc=13/40.627/-74.233&city=union-co.-nj (Union County, NJ).

Community of San Pedro⁴⁴

Census Tract	Hispanic	Black	Diesel PM	Asthma	Poverty
6037296500	71.2%	11.5%	80th	91st	88th
6037296210	87%	6%	99th	94th	88th
6037296220	65.3%	12.8%	97th	94th	93rd
6037297110	64.3%	11.1%	99th	94th	97th
6037297120	67.9%	5.6%	97th	94th	72nd

Community of Wilmington

Census Tract	Hispanic	Black	Diesel PM	Asthma	Poverty
6037294302	86.1%	4.4%	98th	82nd	72nd
6037294900	87.6%	3.2%	100th	81st	93rd
6037294820	96.7%	0.9%	99th	83rd	97th
6037294830	93.5%	3.4%	100th	83rd	91st
6037294701	90.3%	4.9%	99th	83rd	91st
6037294620	93.2%	1.5%	45th	83rd	85th
6037294120	92.5%	3.2%	84th	83rd	78th

Community of Long Beach

Census Tract	Hispanic	Black	Diesel PM	Asthma	Poverty
6037572800	30.8%	32.9%	86th	85th	100th
6037572900 ⁴⁵	68.7%	5.8%	98th	82nd	89th
6037573003Error!	45.5%	5.4%	75th	89th	70th
Bookmark not					
defined.					
6037575401	80.5%	9.4%	64th	97th	98th
6037575801	74.5%	10.8%	99th	94th	93rd
6037575803Error!	72.4%	8.1%	99th	96th	95th
Bookmark not					
defined.					

⁴⁴ Data from CalEnviroScreen 4.0, California Office of Environmental Health Hazard Assessment, https://oehha.ca.gov/calenviroscreen/report/calenviroscreen-40. Metrics for diesel particulate matter exposure, asthma rates, and poverty are the census tract's percentile ranking as compared to all census tracts in California, demonstrating that these census tracts are among those with the greatest pollution exposure, detrimental health impacts, and lowest incomes statewide. The raw data for these percentile rankings are available on the CalEnviroScreen 4.0 website.

⁴⁵ Several of the census tracts in Long Beach also have substantial Asian populations: 6037572900 (18%), 6037573003 (20.8%), 6037575803 (7.6%), 6037575901 (7.5%), 6037575902 (6.9%), 6037576001 (20.2%).

6037575901Error!	50.6%	19.9%	99th	86th	86th
Bookmark not					
defined.					
6037575902Error!	35%	15.4%	99th	87th	71st
Bookmark not					
defined.					
6037576001Error!	12.7%	13.7%	98th	85th	22nd
Bookmark not					
defined.					

Logistics hubs demand extensive networks of highways and warehouses to move and store cargo via millions of truck trips annually. Aggravating historical injustices, decision makers disproportionately site highways and warehouses in environmental justice communities whose residents, like those of port communities, suffer higher levels of pollution exposure from heavy-duty trucks than do whiter and higher-income communities. Data demonstrate that the census tracts in California with the highest levels of ozone, PM_{2.5}, and DPM exposure are communities of color bordering such logistics thoroughfares—Highway 99 in the San Joaquin Valley and Highways 10 and 60 in the Inland Empire:

Census Tracts in California with Highest Levels of Ozone, PM_{2.5}, and Diesel PM Exposure⁴⁶

Census Tract	Location	People of Color	Ozone	PM _{2.5}	Diesel PM
6065041408	Riverside	78.1%	91st	92nd	97th
6071002109	Ontario	73.2%	91st	96th	93rd
6071003301	Fontana	91.6%	97th	93rd	94th
6065040303	Jurupa Valley	79.3%	95th	94th	97th
6029003113	Bakersfield	80.4%	94th	100th	96th
6029001801	Bakersfield	57.3%	94th	100th	95th
6029002812	Bakersfield	72.5%	94th	100th	96th
6029002813	Bakersfield	76.6%	94th	100th	95th

Accordingly, achieving emissions reductions from heavy-duty trucks is a critical step to begin dismantling historical patterns of environmental injustice burdening communities near ports, highways, and warehouses. Indeed, CARB's projections show that the Omnibus regulation, Advanced Clean Trucks regulation, Airport Shuttle regulation, and Zero Emission Powertrain Certification will especially have beneficial impacts for "individuals living near highly impacted trucking corridors, such as near major highway arteries or near major

⁴⁶ Data from CalEnviroScreen 4.0, *see supra* note 44. The eight census tracts shown here are examples of the 29 census tracts in California that rank above the 90th percentile statewide for exposure to ozone, fine particulate matter, and diesel particulate matter, all of which are communities in Bakersfield or the Inland Empire near major logistics thoroughfares.

seaports,"⁴⁷ and "in areas surrounding airports that include disadvantaged and low-income communities."⁴⁸

C. Reducing Heavy-Duty Truck Emissions Is Essential for States to Attain and Maintain Federal Air Quality Standards

As stated, heavy-duty engines are a significant source of inhalable particulate matter (PM_{2.5)} and NOx emissions in the country. The CAA requires EPA to set and regularly review and revise federal health-based ambient air quality standards for "criteria pollutants," including PM_{2.5}, NOx, and ground-level ozone.⁴⁹ These National Ambient Air Quality Standards (NAAQS) aim to provide states with achievable goals to protect the health of their residents from air pollution resulting from emissions of criteria air pollutants. The NAAQS for ozone, established in 2015 and retained in 2020, is an 8-hour standard with a level of 70 parts per billion, although EPA recently announced that it may reconsider the previous administration's decision to retain the ozone NAAQS.⁵⁰ EPA is also implementing the previous 8-hour ozone standard, set in 2008 at a level of 75 parts per billion. For PM_{2.5}, there are two NAAQS that were set in 1997, revised in 2006 and 2012, and retained in 2020⁵¹: an annual standard (12.0 micrograms per cubic meter) and a 24-hour standard (35 micrograms per cubic meter).

Depending on whether the air quality in an area meets the NAAQS for a particular pollutant, EPA designates the area as being in "attainment" or "nonattainment." EPA further classifies areas that are in nonattainment according to the severity of their air pollution problem, and areas with more severe pollution levels are given more time to meet the standard while being subject to more stringent control requirements under State Implementation Plans.

As of May 31, 2021, there were 34 ozone nonattainment areas for the 2008 ozone NAAQS and 50 ozone nonattainment areas for the 2015 ozone NAAQS, which amounts to 122 million people living in ozone nonattainment areas.⁵² Sixteen of the 8-hour ozone nonattainment areas are located in California and the only two extreme nonattainment areas in the nation are located

⁴⁷ ACT ISOR at II-5.

⁴⁸ Zero-Emission Airport Shuttle Regulation, Initial Statement of Reasons at ES-3.

⁴⁹ 42 U.S.C § 7408-7409.

⁵⁰ See https://www.epa.gov/ground-level-ozone-pollution/ozone-national-ambient-air-quality-standards-naaqs; https://www.epa.gov/ground-level-ozone-pollution/epa-reconsider-previous-administrations-decision-retain- 2015-ozone

⁵¹ On June 10, 2021, EPA announced that it will reconsider the previous administration's decision to retain the PM NAAQS. *See* Press Release, EPA, EPA to Reexamine Health Standards for Harmful Soot that Previous Administration Left Unchanged (June 10, 2021) ⁵² *See* Control of Air Pollution from New Motor Vehicles: Heavy-Duty Engines and Vehicle Standards, 87 Fed. Reg. 17,414 (March 28, 2022), Regulatory Impact Analysis at 6.1.1.

in the South Coast Air Basin and San Joaquin Valley of California.⁵³ Indeed, for the South Coast Air Basin to meet the federal ozone standards, overall NOx emissions need to be reduced by 70 percent from today's levels by 2023, and approximately 80 percent by 2031.⁵⁴ The Greater Connecticut and New York-Northern New Jersey-Long Island ozone nonattainment areas failed to meet the deadline for moderate nonattainment of the 2008 ozone NAAQS and were redesignated to serious nonattainment status for that NAAQS. These areas must now meet the attainment date of 2021 for the 2008 standard. Many areas of the country are also currently in nonattainment for the PM_{2.5} NAAQS standards, and as of May 31, 2021, more than 32 million people live in PM_{2.5} nonattainment areas.⁵⁵

Given the serious challenges that California and many states are facing to attain and maintain ozone and PM_{2.5} NAAQS, substantial emission reductions are critically necessary. Reducing emissions from heavy-duty vehicles will help states attain and maintain NAAQS for these pollutants. According to California's EMission FACtors (EMFAC) 2017 emissions inventory model, almost a million heavy-duty vehicles operate on California roads each year and contribute 31 percent of all statewide NOx emissions.⁵⁶ In the South Coast Air Basin, heavy-duty vehicles are responsible for 32 percent of mobile source NOx emissions.⁵⁷ In New York, medium and heavy-duty vehicles are responsible for 52 percent of the NOx and 45 percent of the PM_{2.5} emitted by on-road vehicles. Therefore, granting CARB's waiver requests would assist California and the Section 177 states with attaining and maintaining the NAAQS.

D. Zero-emission Technologies Are Necessary to Achieve Emission Reductions of GHGs and other Pollutants

Heavy-duty ZEVs are rapidly becoming an significant presence within the heavy-duty vehicles sector and are an important element of the strategy to stave off the worst effects of climate change, which are caused by anthropogenic emissions of GHGs.⁵⁸ "Elevated

⁵³ 2016 State Strategy for the State Implementation Plan for Federal Ozone and PM_{2.5} Standards (State SIP Strategy) available at https://ww2.arb.ca.gov/resources/documents/2016-state-strategy-state-implementation-plan-federal-ozone-and-pm25-standards

⁵⁵ Control of Air Pollution from New Motor Vehicles: Heavy-Duty Engines and Vehicle Standards, 87 Fed. Reg. 17,414 (March 28, 2022), Regulatory Impact Analysis at 6.1.1. ⁵⁶ Omnibus ISOR at ES-1.

⁵⁴ CARB, Staff Report, Initial Statement of Reasons for Omnibus Rule at II-2 (June 23, 2020), available at

 $[\]frac{https://ww2.arb.ca.gov/sites/default/files/barcu/regact/2020/hdomnibuslownox/isor.pdf}{("Omnibus ISOR")}.$

⁵⁷ CARB, Measures for Reducing Emissions from On-Road Heavy-Duty Vehicles (June 3, 2021) available at http://www.aqmd.gov/docs/default-source/clean-air-plans/air-quality-management-plans/2022-air-quality-management-plan/heavy-duty-trucks-presentations-06-03-21.pdf?sfvrsn=8

⁵⁸ See, e.g., Revised 2023 and Later Model Year Light-Duty Vehicle Greenhouse Gas Emissions Standards, 86 Fed. Reg. 74,434, 74,489 (Dec. 30, 2021).

concentrations of GHGs have been warming the planet, leading to changes in the Earth's climate including changes in the frequency and intensity of heat waves, precipitation, and extreme weather events, rising seas, and retreating snow and ice. The changes taking place in the atmosphere as a result of the well-documented buildup of GHGs due to human activities are changing the climate at a pace and in a way that threatens human health, society, and the natural environment."⁵⁹

The States are already experiencing grievous effects from climate change, which, as described above, are expected to escalate without sharp reductions in GHG emissions.⁶⁰ Our residents have lost property, been displaced from homes, endured respiratory illness and other health impacts, and even been killed as a result of severe weather events exacerbated by climate change.⁶¹ Often these impacts are disproportionately borne by communities with high poverty rates, communities of color, and indigenous peoples.⁶² Rising average temperatures, shrinking

⁵⁹ *Id.*; *see also* Intergovernmental Panel on Climate Change (IPCC), *Climate Change 2022: Impacts, Adaption and Vulnerability, Summary for Policymakers*, at 11 (H.-O. Portner & D. Roberts, eds. 2022) ("*Impacts, Adaptation, and Vulnerability*") (surveying medium-to-high confidence attributions of extreme weather, wildfires, heat-related deaths, and ecosystem loss to greenhouse gas emissions from human activities), available at https://www.ipcc.ch/report/ar6/wg2/downloads/report/IPCC_AR6_WGII_SummaryForPolicymakers.pdf.

https://nca2018.globalchange.gov/downloads/NCA4_Report-in-Brief.pdf; see also IPCC, Impacts, Adaptation, and Vulnerability, supra note 57, at 11-22 (describing ongoing global climate change impacts and projecting near-, mid-, and long-term impacts, particularly from unpredictable cascading and compounded disruptions); IPCC, Climate Change 2022: Mitigation of Climate Change, Summary for Policymakers, at SPM-7, SPM-14 to 19 (2022) ("Mitigation") (finding reductions of GHGs is occurring too slowly to limit global warming to even 2°C and such a goal requires unprecedented accelerations in reductions), available at https://www.ipcc.ch/report/ar6/wg3/downloads/report/IPCC_AR6_WGIII_SPM.pdf.

⁶⁰ U.S. Global Change Research Program, *Impacts, Risks, and Adaptation in the United States:* Fourth National Climate Assessment, Volume II: Report-in-Brief, at 11-19 (D.R. Reidmiller et al. eds., 2018) ("NCA4 Report-in-Brief") (summarizing ongoing and projected impacts to United States from climate change), available at

⁶¹ NCA4 Report-in-Brief, *supra* note 60 at 82-83, 98-103, 115-62 (surveying national losses of coastal property and air quality deterioration and summarizing impacts to health, property, and ecosystems by U.S. region). As but one recent example, Hurricanes Ida and Isaias last year forced Pennsylvanian residents out of their homes, damaged businesses, and submerged the high-profile Vine Street Expressway under several feet of water. *See* Katharine Gilmore Richardson, "Philadelphia Can't Curb the Climate Crisis without Federal Support," *The Philadelphia Inquirer* (Oct. 5, 2021), *available at* https://www.inquirer.com/opinion/commentary/build-back-better-biden-climate-philadelphia-20211005.html.

⁶² NCA4 Report-in-Brief, *supra* note 60 at 82-83, 103-106; *see also* IPCC, *Impacts, Adaptation and Vulnerability*, *supra* note 58 at 14-15 (identifying especially vulnerable communities globally).

mountain snowpack, warmer storms, wildfires, and higher sea levels also harm our economies, infrastructure, and public services.⁶³ These impacts require long-term, resource-intensive adaptation planning and costly disaster response by all levels of government and the private sector. The U.S. Global Change Research Program's 2017-2018 Fourth National Climate Assessment projects more extreme-weather impacts including major damage to agriculture, coastal industries, utility grids, transportation networks, air quality, and human health, from coastal flooding, heat waves, drought, and wildfires, as well as from the spread of tree-killing and disease-carrying pests.⁶⁴

As EPA recognizes, the transportation sector is now the largest U.S. source of GHG emissions, with heavy-duty vehicles contributing 23 percent of the United States' transportation emissions. Action to reduce GHGs from all major-emitting sectors, including the medium and heavy-duty vehicles sector, is necessary. Between 2020 and 2040, the Advanced Clean Trucks regulation is projected to reduce GHG emissions by a cumulative 11.2 million metric tons of carbon dioxide equivalent. And the Airport Shuttle regulation is projected to reduce GHG emissions by 81 metric tons per day of carbon dioxide equivalent by 2021 and 107 metric tons per day of carbon dioxide equivalent by 2040. These regulations are also needed to ensure the development and commercialization of technology required for the future, deeper vehicular emission reductions that California and other states will have to make to attain the NAAQS and achieve other long-term emission goals.

Finally, as CARB's Advanced Clean Trucks regulation demonstrates,⁶⁸ heavy-duty ZEVs are an available and cost-effective technology with enormous GHG reduction potential. In California alone, these GHG reductions translate to \$1.01 billion in avoided climate-related costs from 2020 to 2040, in addition to \$5.5 billion in health benefits from NOx and PM_{2.5} coreductions.⁶⁹ Further, high rates of heavy-duty ZEV deployment are a critical component of States' individual plans for reaching midcentury decarbonization targets set by state law and attaining and maintaining criteria pollutant NAAQS.⁷⁰ These state decarbonization plans further

⁶³ NCA4 Report-in-Brief, *supra* note 60 at 67-68, 70-72, 82-83, 85-91, 93-96.

⁶⁴ NCA4 Report-in-Brief, *supra* note 60 at 11-19; *see also id.* at 102 (by shifting from a high-emissions scenario to a low-emissions scenario, "thousands of American lives could be saved and hundreds of billions of dollars in health-related economic benefits gained *each year*" (emphasis added)).

⁶⁵ 87 Fed. Reg. at 17,592.

⁶⁶ ACT ISOR at VI-3.

⁶⁷ CARB Waiver Request for ACT at 27 (EPA-HQ-OAR-2022-0331-0003).

⁶⁸ ACT ISOR, at 10-17; *id.*, App'x C, Standardized Regulatory Impact Assessment, at 50-53; *see generally id.*, App'x E, Zero Emission Truck Market Assessment.

⁶⁹ ACT ISOR, App'x C, at 16-23 (using current Interagency Working Group social cost of carbon metric and 2.5 discount rate).

⁷⁰ See, e.g., ACT ISOR, App'x C, at 12, 14; Colorado Greenhouse Gas Pollution Reduction Roadmap, at 58-62 (Jan. 2021), available at https://energyoffice.colorado.gov/climate-

support a national program for heavy-duty ZEV adoption as part of the United States' path to achieving its Paris Agreement commitments.⁷¹

III. CONCLUSION

For all of the reasons stated above, the States respectfully request that EPA grant in full CARB's request for waivers of preemption for its Heavy-Duty Omnibus regulation, Advanced Clean Trucks regulation, Zero Emission Airport Shuttle Bus regulation, and Zero Emission Powertrain Certification regulation as soon as possible.

Sincerely,

FOR THE STATE OF CALIFORNIA

ROB BONTA Attorney General

/s/ Kavita Lesser
KAVITA LESSER
DEPUTY ATTORNEY GENERAL
Office of the Attorney General
300 South Spring Street
Los Angeles, California 90013
Tel: (213) 269-6605

FOR THE STATE OF COLORADO

PHILIP J. WEISER Attorney General

/s/ David A. Beckstrom
DAVID A. BECKSTROM
Assistant Attorney General
Natural Resources and Environment
Section
Ralph C. Carr Colorado Judicial Center
1300 Broadway, Seventh Floor
Denver, Colorado 80203
Office: (720) 508-6306
david.beckstrom@coag.gov

energy/ghg-pollution-reduction-roadmap; Mass. 2050 Decarbonization Roadmap, at 39-43 (Dec. 2020), available at https://www.mass.gov/doc/ma-2050-decarbonization-roadmap/download; N.J. Dept. of Envtl. Protection, New Jersey's Global Warming Response Act 80x50 Report, pp. 21-22, 28-29, 31 (Oct. 2020), available at https://www.nj.gov/dep/climatechange/docs/nj-gwra-80x50-report-2020.pdf; N.Y. State Climate Action Council, Draft Scoping Plan, at 104-106 (Jan. 2022), available at https://climate.ny.gov/-/media/Project/Climate/Files/Draft-Scoping-Plan.pdf.

⁷¹ See The United States' Nationally Determined Contribution: A 2030 Emissions Target, at 4 (Apr. 15, 2021), available at

 $[\]frac{https://www4.unfccc.int/sites/ndcstaging/PublishedDocuments/United\%20States\%20of\%20America\%20First/United\%20States\%20NDC\%20April\%2021\%2021\%20Final.pdf.$

FOR THE STATE OF CONNECTICUT

WILLIAM TONG Attorney General

/s/ Scott N. Koschwitz
SCOTT N. KOSCHWITZ
Assistant Attorney General
MATTHEW I. LEVINE
Deputy Associate Attorney General
Connecticut Office of the Attorney General
165 Capitol Avenue
Hartford, Connecticut 06106
(860) 808-5250
scott.koschwitz@ct.gov

FOR THE STATE OF ILLINOIS

KWAME RAOUL Attorney General

/s/ Jason E. James
JASON E. JAMES
Assistant Attorney General
MATTHEW J. DUNN
Chief, Environmental Enforcement
Asbestos Litigation Division
69 W. Washington St., 18th Floor
Chicago, IL 60602
(312) 814-0660
jason.james@ilag.gov

FOR THE STATE OF NEW YORK

LETITIA JAMES Attorney General

/s/ Gavin G. McCabe
GAVIN G. MCCABE
Assistant Attorney General
YUEH-RU CHU
Chief, Affirmative Litigation Section
Environmental Protection Bureau
28 Liberty Street, 19th Floor
New York, NY 10005
(212) 416-8469

FOR THE STATE OF DELAWARE

KATHLEEN JENNINGS Attorney General

/s/ Christian Douglas Wright
CHRISTIAN DOUGLAS WRIGHT
Director of Impact Litigation
JAMESON A.L. TWEEDIE
RALPH K. DURSTEIN III
Deputy Attorneys General
Delaware Department of Justice
820 N. French Street
Wilmington, DE 19801
Tel: (302) 683-8899

FOR THE STATE OF HAWAII

HOLLY T. SHIKADA Attorney General

/s/ Lyle T. Leonard
LYLE T. LEONARD
Deputy Attorney General
State of Hawaii
Dept. of the Attorney General
465 South King Street, Room 200
Honolulu, Hawaii 96813
(808) 587-3050

FOR THE STATE OF MARYLAND

BRIAN E. FROSH Attorney General

/s/ Joshua M. Segal
JOSHUA M. SEGAL
Special Assistant Attorney General
Office of the Attorney General
200 St. Paul Place
Baltimore, MD 21202
(410) 576-6446
jsegal@oag.state.md.us

FOR THE STATE OF MINNESOTA

KEITH ELLISON Attorney General

/s/ Peter N. Surdo
PETER N. SURDO
Special Assistant Attorney General
445 Minnesota Street, Suite 1400
St. Paul, MN 55101-2127
(651) 757-1061

FOR THE STATE OF OREGON

ELLEN F. ROSENBLUM Attorney General

/s/ Paul Garrahan
PAUL GARRAHAN
Attorney-in-Charge
STEVE NOVICK
Special Assistant Attorney General
Natural Resources Section
Oregon Department of Justice
1162 Court Street NE
Salem, OR 97301-4096
(503) 947-4540

FOR THE STATE OF NEW JERSEY

MATTHEW J. PLATKIN Acting Attorney General

/s/ Rachel Manning
Rachel Manning
Deputy Attorney General
Division of Law
Department of Law & Public Safety
25 Market Street, PO Box 093
Trenton, NJ 08625-0093
(609) 376-2740

FOR THE STATE OF RHODE ISLAND

PETER F. NERONHA Attorney General

/s/ Nicholas M. Vaz
NICHOLAS M. VAZ
Special Assistant Attorney General
Office of the Attorney General
Environmental and Energy Unit
150 South Main Street
Providence, Rhode Island 02903
Telephone: (401) 274-4400 ext. 2297
nvaz@riag.ri.gov

FOR THE STATE OF WASHINGTON

ROBERT W. FERGUSON Attorney General

/s/ Christopher H. Reitz CHRISTOPHER H. REITZ Assistant Attorney General Office of the Attorney General P.O. Box 40117 Olympia, Washington 98504-0117 (360) 586-4614 chris.reitz@atg.wa.gov

FOR THE STATE OF WISCONSIN

JOSHUA KAUL Attorney General

/s/ Jennifer S. Limbach
Jennifer S. Limbach
Assistant Attorney General
Wisconsin Department of Justice
P.O. Box 7875
Madison, WI 53707-7875
(608) 266-8940

FOR THE STATE OF VERMONT

SUSANNE R. YOUNG Attorney General

/s/ Nicholas F. Persampieri
NICHOLAS F. PERSAMPIERI
Assistant Attorney General
Office of the Attorney General
109 State Street
Montpelier, VT 05609
(802) 828-6902
nick.persampieri@vermont.gov

FOR THE COMMONWEALTH OF MASSACHUSETTS

Maura Healey Attorney General

/s/ Brian Clappier
BRIAN CLAPPIER
MATTHEW IRELAND
Assistant Attorneys General
Office of the Attorney General
One Ashburton Place, 18th Floor
Boston, MA 02108
(617) 727-2200
brian.clappier@mass.gov

FOR THE DISTRICT OF COLUMBIA

KARL RACINE Attorney General

/s / Lauren Cullum
LAUREN CULLUM
Special Assistant Attorney General
Office of the Attorney General for the District of Columbia
400 6th St. NW
Washington, DC 20001
(202) 727-3400

FOR THE CITY OF NEW YORK

HON. SYLVIA O. HINDS-RADIX Corporation Counsel

/s/ Alice R. Baker ALICE R. BAKER Senior Counsel 100 Church Street New York, NY 10007 (212) 356-2314

lauren.cullum@dc.gov