December 19, 2016

The Honorable Gina McCarthy
Administrator
U.S. Environmental Protection Agency
1200 Pennsylvania Avenue, NW
Washington, DC 20460

Re: Petition to Strengthen Nitrogen Oxides Emissions Standards for Freight Trucks and Buses

Dear Administrator McCarthy:

On behalf of hundreds of thousands of members in states across our nation, Environmental Defense Fund respectfully joins the petitions submitted by the American Lung Association, the National Association of City & County Health Officials, the South Coast Air Quality Management District and other leading experts on the lung health of our families and communities -- in requesting that the U.S. Environmental Protection Agency strengthen nitrogen oxides emissions standards for new freight trucks and buses.[1] Improvements to these standards are long overdue, and will provide healthier, longer lives for millions of Americans. Cost-effective solutions are at hand to reduce this harmful pollutant together with other dangerous airborne contaminants. Well designed standards can create the framework for our nation's leading truck, engine and component manufacturers to deploy innovative technologies and expand job creation in reducing NOx and a suite of harmful air pollutants while ensuring these standards in fact deliver real world air quality protections for our families through improved in-use testing and compliance protocols. This is one of the single most important steps EPA can take to strengthen our nation's clean air protections, to strengthen our economy, and to advance manufacturing jobs for all Americans.

Strengthened Nitrogen Oxides Emissions Standards are Urgently Needed and Long Overdue to Protect Human Health

NOx contributes to ground-level ozone (also known as "smog") as well as particulate pollution. Ground-level ozone and particulate pollution cause significant harms to human health, including increased asthma attacks, exacerbation of respiratory disease, cardiovascular impacts, and increased risk of premature death.[2] Large freight trucks and buses are one of the largest sources of NOx emissions in the U.S., contributing to harmful pollution in communities across the nation.[3] Yet

[1] *See* South Coast Air Quality Management District, *et. al.*, Petition to EPA for Rulemaking to Adopt Ultra-Low NOx Exhaust Emission Standards for On-Road Heavy-Duty Trucks and Engines (June 3, 2016). *See also* Letter from health and medical organizations to Administrator McCarthy (July 19, 2016), *available at* http://www.lung.org/assets/documents/advocacy-archive/truck-nox-standards.pdf; Letter from Members of Congress to Administrator McCarthy (July 20, 2016), *available at* http://www.eenews.net/assets/2016/07/28/document_gw_03.pdf.

[2] See American Lung Association on health harms, http://www.lung.org/our-initiatives/healthy-air/outdoor/air-pollution/ozone.html#howharms (ozone) and http://www.lung.org/our-initiatives/healthy-air/outdoor/air-pollution/particle-pollution.html (particulate pollution).

[3] 2013 Final Report: Integrated Science Assessment of Ozone and Related Photochemical Oxidants at 3-6, *available at* https://cfpub.epa.gov/ncea/isa/recordisplay.cfm?deid=247492.

EPA has not updated on-road heavy-duty engine and vehicle emission standards for NOx since 2001.[4]

Stronger NOx standards for new freight trucks and buses are urgently needed to help ensure communities across the country have the tools necessary to reduce ozone- and particulate-forming pollution, improve air quality, and secure healthier and longer lives for all Americans. Areas such as the Los Angeles-South Coast Air Basin in California - classified as an extreme nonattainment area under the health-based ozone standards - must secure additional NOx reductions from heavy-duty engines to achieve healthier air for the millions at risk, as heavy-duty trucks are the single largest source of NOx pollution in the Basin.[5] Strengthened limits on NOx pollution will also have a critical role in numerous other communities that exceed and are approaching the health-based air quality standards as well as communities near major roadways that are afflicted by air pollution as EPA action will help ensure these communities and neighborhoods have the tools to restore and maintain healthy air for millions of Americans.

Available Technologies Are at Hand to Reduce NOx Emissions and Other Harmful Air Pollution

Updated NOx standards should reflect over 15 years of advances in pollution control technology. Advances in combustion and fuel injection systems, turbochargers, electronic controls, and improved Selective Catalytic Reduction (SCR) technologies are enabling reductions in NOx and other airborne contaminants as well as fuel efficiency optimization.[6] Manufacturers have recognized that significant additional NOx reductions are achievable while lowering other pollutants and ensuring fuel efficiency improvements. For instance, "Cummins believes a 0.1 g/bhp-hr NOX level is feasible with some improvements to the current SCR technology and the conventional diesel combustion process while still allowing for fuel economy optimization."[7] And with "improvements in engine combustion efficiency, thermal management strategies, and advanced aftertreatment technologies," NOx emissions could be reduced to "0.02 to 0.05 g/bhp-hr levels."[8] Similarly, the Truck and Engine Manufacturers Association has expressed its openness "to hearing from both CARB and EPA on their interest in exploring possible future lower NOx reductions."[9] The Manufacturers of Emission Controls Association has likewise noted that "SCR

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[4] Control of Air Pollution from New Motor Vehicles: Heavy-Duty Engine and Vehicle Standards and Highway Diesel Fuel Sulfur Control Requirements, 66 Fed. Reg. 5002 (Jan. 18, 2001).

[5] Heavy-duty diesel trucks were the largest source of NOx emissions in the South Coast Air Basin in 2012, and are projected to remain the largest contributor of NOx emissions in 2023 and 2031. *See supra* n. 1, South Coast Air Quality Management District, *et. al.*, Petition at 10-12 ("absent substantial reductions from heavy-duty trucks and other mobile equipment, every other source of NOx would need to be entirely eliminated"); see, e.g. Kozawa, *et. al.*, "Near-road air pollution impacts of goods movement in communities adjacent to the Ports of Los Angeles and Long Beach," Atmospheric Environment 43 (2009), *available at* http://www.sciencedirect.com/science/article/pii/S1352231009001629 (finding that "diesel-related pollutant concentrations such as BC, NO, UFP, and PB-PAHs were highly elevated within 150 m of freeways and arterial roads that have significant amounts of diesel traffic, resulting in large spatial areas being impacted").

[6] California Air Resources Board, Draft Technology Assessment: Lower NOx Heavy-Duty Diesel Engines (September 2015) at ES-8, *available at* http://www.arb.ca.gov/msprog/tech/techreport/diesel_tech_report.pdf.

[7] *Id*. at ES-9

[8] *Id*.

[9] Greenhouse Gas Emissions and Fuel Efficiency Standards for Medium- and Heavy-Duty Engines and Vehicles—Phase 2, Public Hearings: August 6 and 18, 2015, Oral Statement of the Truck and Engine Manufacturers Association, *available at* https://www.regulations.gov/document?D=EPA-HQ-OAR-2014-0827-1384.

applications on new highway, heavy-duty trucks in both Europe and the U.S. have already been shown to allow engine manufacturers the possibilities of calibrating engines for lower fuel consumption (and lower greenhouse gas emissions), while still meeting applicable NOx emission standards."[10]

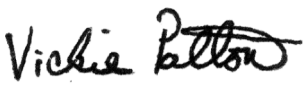
EPA Should Adopt Stronger Testing and Compliance to Ensure Freight Trucks and Buses Are in Fact Delivering Cleaner Air to All Americans

It is critically important that improved emissions standards address the importance of securing real world reductions in NOx and other air pollutants. As EDF and numerous others have previously requested,[11] the history of noncompliance practices in the heavy-duty sector and the recent discovery of VW's use of performance altering software to cheat emissions testing provide a compelling reason for the Agency to address and enhance in-use testing and compliance. The Agency should strengthen its in-use testing and compliance and implement more rigorous in-use testing and compliance requirements for regulated air pollutants to ensure that emissions reductions are in fact achieved under real world conditions and use. The public should be given full confidence that manufacturers meet our nation's pollution limits in the real world for the life of the vehicle.

Conclusion

On behalf of hundreds of thousands of American's in all states in our country, we join with the American Lung Association, the American Public Health Association, the National Association of County & City Health Officials, the Alliance of Nurses for Heathy Environments and many more leading health and air pollution control agencies in respectfully petitioning the U.S. Environmental Protection Agency to strengthen our nation's limits on the NOx pollution discharged from freight trucks and buses through well designed emissions standards that will provide safeguards for NOx and other airborne contaminants, optimize fuel efficiencies, mobilizine innovative technologies, guarantee real world reductions, and strengthen our nation's economy and jobs for all Americans.

Respectfully submitted,



Vickie Patton
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Environmental Defense Fund

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[10] Statement of the Manufacturers of Emission Controls Association on the U.S. Environmental Protection Agency's Proposed Rulemakings on Greenhouse Gas Emissions Standards and Fuel Efficiency Standards for Medium- and Heavy-Duty Engines and Vehicles – Phase 2 (September 25, 2015) at 6, Doc. ID #: EPA-HQ-OAR-2014-0827-1210, *available at* http://www.meca.org/attachments/2674/MECA_comments_on_EPA_Phase_2_HD_GHG_092515_final.pdf.

[11] *See* Letter to EPA Administrator Gina McCarthy, U.S. Secretary of Transportation Anthony Foxx, and California Air Resources Board Chair Mary Nichols from representatives of EDF, Center for Biological Diversity, Ceres, Coalition for Clean Air, Environment America, Natural Resources Defense Council, Sierra Club, Southern Alliance for Clean Air, and Union of Concerned Scientists.