Mr. Michael Regan
Administrator
Environmental Protection Agency
1200 Pennsylvania Avenue NW
Washington, DC 20460

May 16, 2022

Re: Control of Air Pollution from New Motor Vehicles: Heavy-Duty Engine and Vehicle Standards; Attention 87 FR 17414; Docket ID: EPA-HQ-OAR-2019-0055-0983

Dear EPA Administrator Regan:

Public Citizen and our partners at the Healthy Port Communities Coalition appreciate the opportunity to comment on the above referenced Proposed Rule (the "Proposal") by the Environmental Protection Agency (the "EPA") to reduce air pollution from highway heavy-duty vehicles and engines, including ozone, particulate matter and greenhouse gas emissions.

We appreciate the Proposal put forth and support the need for urgent emission reductions from the heavy-duty vehicle sector. We urge the EPA to strengthen the proposed rule and to move quickly to finalize, implement, and enforce strong standards that will protect the health of the 72 million people living within one tenth of a mile of truck routes and quickly reduce greenhouse gas emissions in order to limit global temperature rise to 1.5° Celsius.

Cleaner technology results in tangible health benefits that will protect public health in communities of color and low-income communities.

Option 1 of the Proposal would clearly provide significant benefit to communities, and the EPA should not consider any rulemaking less stringent than Option 1.

We support the Proposal's inclusion of a health benefits analysis that demonstrates Option 1's significant health savings of $12 to $33 billion (3% discount rate) or $10 to $30 billion (7% discount rate). Many of these benefits will be delivered to communities that are overburdened by pollution from sources beyond transportation-related emissions. Some of these communities may also lack adequate access to health insurance and health care services, so prevention of pollution and resulting disease could provide much needed relief to those harmed by pollution from heavy-duty vehicles.

Option 2 within the Proposal should be rejected by the EPA. Option 2 does not adequately protect human health.

Our own work shows that vehicle turnover and electrification can reduce health and financial burdens on the public. In 2017, Public Citizen and our partners at the Healthy Port Communities Coalition worked with University of Houston researchers to better understand the benefits that cleaning up transportation-related

pollution would have on the greater Houston region in terms of the amount and distribution of air pollution and health benefits. The study found over $1.5 billion in monetized health benefits from aggressive electrification where 70% of the fleet in Greater Houston (both light- and heavy-duty vehicles) is electrified in model year 2040. This scenario would prevent nearly 200 premature deaths per year.[1]

Improvements to compression ignition engines are welcome but may be better directed toward advancing electrification.

The Proposal states that "emission levels demonstrated for certification are not achieved under the broad range of real-world operating conditions," and thus proposes strategies to increase the efficiency of emissions controls of compression ignition (CI) engines.

This statement in the proposal reflects our understanding based on our experience examining heavy duty truck emissions in Texas. Research centered on the greater Houston region reported similar findings. A 2018 study by the Texas Transportation Institute[2] for the Houston-Galveston Area Council that analyzed PAMS and GPS data found that the vehicles studied operated at low speeds, 18 mph on average, with 63% of time at speeds less than 10 mph. Vehicles idled for 54% of the time (185 minutes per day) with most of the activity happening during weekdays between 6 am and 7 pm, when nearby residents are active. This study found that truck engines operated at temperatures suboptimal for SCR functionality almost 60% of the time, meaning that the SCR would be unable to achieve the expected emissions reductions.

The Proposal recommends three laboratory tests to better ensure that trucks meet emissions reduction criteria: (1) the Federal Test Procedure, (2) the Supplemental Emission Test, and (3) the Low-Load Cycle test. Both (1) and (2) are currently used to demonstrate emission control efficacy when a vehicle transitions from low to high loads or under a sustained load. But these tests fail to demonstrate emissions reduction efficiency under low load. The Proposal would add (3) as a way to ensure that engines retain the capacity for emissions reductions at lower speeds and operating temperatures. Controlling emissions over a broader range of conditions would be a welcome relief for communities adjacent to ports and freight corridors where currently even using the newest equipment cannot guarantee emissions reductions.

EPA's efforts in this proposal to increase stringency of emissions testing of compression ignition engines is welcome. However, vehicle manufacturers have lost a tremendous amount of faith from the public due to diesel emissions cheating scandals.

Diesel emissions cheating first came to the awareness of the public in 2015 when a California Air Resources Board investigation led to Volkswagen admitted it had installed defeat devices in over 400,000

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[1] https://www.citizen.org/wp-content/uploads/migration/public-citizen-air-quality-transportation-houston-report-october-2018.pdf

[2] https://www.h-gac.com/getmedia/12a1530d-ad4f-4705-8e8b-68ccd2f29787/Vehicle-Activity-Data-09192018

cars in the U.S. and 11 million vehicles worldwide that altered the performance of the vehicles when tested, creating as much as 40% more NOx pollution than allowed under normal operation[3].

Since that time, the EPA and others have levied violations against numerous companies for defeat devices or other failures in their diesel vehicle emissions controls:

- In 2017, the EPA issued a notice of violation to Fiat Chrysler[4];
- In the UK, as many as 1.3 million Renault-Nissan vehicles were outfitted with defeat devices[5];
- In France, Renault has been investigated, suspected of defeat devices impacting 900,000 vehicles that reduced NOx and CO2 emissions on regulatory tests[6];
- Further investigation found that certain Renault models failed to live up to emission reduction standards outside of test conditions, while NOx filters clogged, rendering them ineffective, and exhaust treatments failed when outside temperatures deviated from that of test conditions[7];
- In 2018, Cummins recalled 500,000 medium- and heavy-duty tracks after the California Air Resources Board had found higher than expected emissions due to SCR failure[8];
- In 2019, Porsche settled with the US for $600 million regarding faulty diesel controls[9];
- In 2020, Daimler (Mercedes-Benz) reached a settlement with the US government for $2.8 billion regarding diesel emissions controls for 250,000 vehicles[10];
- In 2021, Deutsche Umwelthilfe reported that Mercedes-Benz had been using eight defeat devices for its Euro 6-classified diesel engine, resulting in NOx emissions 500 times the standard during regular operating conditions[11];
- In 2022, Toyota subsidiary Hino Motors admitted to manipulating diesel emissions in certain heavy duty engines[12].

Prohibition of diesel defeat devices will not ensure compliance. Furthermore, SCRs and other emissions controls on heavy-duty diesel trucks can easily fail, making it more difficult for emissions targets to be met. Extending regulatory emission warranties may help prevent tampering while also ensuring that operators are covered for necessary repairs should their emission control devices fail. However, the best defense against pollution is to stop it before it begins. Transitioning to zero emissions trucks ensures full compliance with emissions standards, and we recommend that the EPA prioritize the deployment of zero emission vehicles.

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[3] https://www.bbc.com/news/business-34324772
[4] https://www.epa.gov/fca/learn-about-fca-violations
[5] https://www.autocar.co.uk/car-news/new-cars/13-million-renault-nissan-diesels-cheat-emissions-says-uk-law-firm
[6] https://www.connexionfrance.com/article/French-news/Renault-in-emissions-test-fix-report
[7] https://www.reuters.com/article/us-renault-emissions/renault-diesel-allegations-upheld-by-court-study-report-idUSKCN1SJ15E
[8] https://arstechnica.com/cars/2018/08/cummins-to-recall-500000-trucks-after-emissions-tests-but-its-no-vw-scandal/
[9] https://www.caranddriver.com/news/a27395706/porsche-diesel-cheating-fine/
[10] https://www.motor1.com/news/438975/daimler-diesel-emissions-settlement-us/
[11] https://www.motor1.com/news/546045/mercedes-diesel-emissions-scandal-continues/
[12] https://fortune.com/2022/03/07/toyota-sees-shares-tank-after-truck-unit-admits-to-cheating-diesel-emissions-tests/

EPA should support an accelerated transition of the trucking industry toward zero emissions vehicles.

Heavy Duty vehicle manufacturers need to eliminate tailpipe emissions. The only way that we see this achieved is through the widespread adoption of zero emissions vehicles. Zero-emission, battery electric technology will address public health and the climate crisis without the risk of emissions cheating or SCR failure.

This EPA Proposal changes standards for school buses, transit buses, delivery trucks, and short haul tractors because EPA believes that the battery electric vehicle market is changing most rapidly in these areas. We believe that EPA should take a more proactive stance in moving forward zero emission heavy duty vehicles across the board.

While the market penetration of zero emission heavy-duty vehicles is still quite low, deployment is expected to ramp up quickly, according to Calstart[13]. The report states, "A complete transition to ZET technology would not only help mitigate the impacts of climate change and poor air quality but could eventually lower total cost of ownership (TCO) for fleets and create job growth in the United States."

A recent Department of Energy[14] study echoed these findings and showed that costs of zero emissions vehicles are decreasing. According to the study, by 2030, about half of the market-ready zero emissions medium- and heavy-duty trucks will cost less to purchase, maintain, and operate than medium- and heavy-duty diesel trucks. The study further states that zero emissions vehicles can be a boon to the US economy. US Secretary of Energy Jennifer Granholm states:

> DOE is showing a clear pathway for trucking companies to make the switch from diesel to electric that will help them cut costs and pollution for their customers, while combating climate change. The Biden Administration's comprehensive approach is working to make clean transportation a reality—by reducing exposure to volatile fuel prices, investing in American manufacturing and creating a national charging network to support more electric vehicles on the road.[15]

Because battery prices are dropping swiftly and the energy intensity of batteries is improving, zero emission battery electric trucks are primed to accelerate in adoption–if they can acquire the strong policy support needed to overcome higher upfront costs[16]. This is why it is necessary for the EPA to lay out a strong foundation for the adoption and implementation of zero emission battery electric trucks.

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[13] https://calstart.org/wp-content/uploads/2022/02/ZIO-ZETs-Report_Updated-Final-II.pdf
[14] https://www.nrel.gov/docs/fy22osti/82081.pdf
[15] https://www.energy.gov/articles/doe-projects-zero-emissions-medium-and-heavy-duty-electric-trucks-will-be-cheaper-diesel
[16] https://eta-publications.lbl.gov/publications/why-regional-and-long-haul-trucks-are

Some states are moving forward with their own policies to reduce harmful NOx emissions, like California, which set a goal for engines to cut NOx by 75% below current standards starting in 2024 and by 90% in 2027.[17] This rule sets progressive electrification targets to help achieve these reductions.[18] Because all components of the new rule will be phased in, engine manufacturers will have time to prepare for compliance.

Several states and the District of Columbia have set targets to advance zero emission trucks and buses, aiming for 100% of sales to be zero emission by 2050. The interim goal is for 30% of vehicle sales to be zero emission by 2030.[19]

However, given both the contribution of the greenhouse gas emissions from the trucking industry and the urgency of the climate crisis, we call on the EPA to reach 100% zero emission truck sales by 2035. These recommendations will further improve health outcomes in the communities of color and low-income communities most burdened by diesel pollution. We encourage the EPA to boldly pursue environmental justice as it reduces diesel emissions and improves the health of communities near ports and freight corridors.

Sincerely,

Stephanie Thomas, Public Citizen
Bridgette Murray, Achieving Community Tasks
Leticia Ablaza, Air Alliance Houston
Rev. James Caldwell, Coalition of Community Organizations
Kristine Singleton, Texas Health and Environment Alliance

[17] https://www.greencarcongress.com/2020/08/20200829-carb.html
[18] https://www.scientificamerican.com/article/california-passes-historic-clean-truck-rule/
[19] Ibid 12.