

Congress of the United States

Washington, DC 20515

April 9, 2024

The Honorable Michael Regan
Administrator
U.S. Environmental Protection Agency
1200 Pennsylvania Avenue, NW
Washington, DC 20004

Dear Administrator Regan,

In its recent heavy-duty vehicle rulemaking proceeding, the Environmental Protection Agency (EPA) finalized changes to align its preemption regulations for locomotives with the Clean Air Act.¹ This is a welcome step. But we urge the EPA to go further, and expand and modernize its federal air pollution regulations for locomotives. We urge the EPA to adopt standards that fully protect the health of rail workers and the communities through which trains run, and close the regulatory loopholes that rail carriers exploit to keep old, dirty trains on the tracks.

The EPA has not updated its locomotive emissions standards since 2008.² Then, the EPA established stricter air pollution emissions standards for the remanufacturing of locomotives built between 1973 and 2008—described as Tier 0, Tier 1, and Tier 2 standards in the rulemaking. The EPA also put in place short- and long-term standards for newly built locomotive and marine engines, known as Tier 3 and Tier 4 standards, respectively.

The tiers generally impose increasing levels of emissions reductions. But there is a significant difference between the reductions required by the weaker, short-term Tier 3 standards and the stronger, long-term Tier 4 standards. The Tier 4 standards, which are based on the installation of catalytic after-treatment technology, require engines to emit 80 percent less particulate matter, 70 percent fewer hydrocarbons, and 80 percent fewer nitrous oxides than engines subject to the Tier 3 standard.³ This difference translates into considerably less public health protection under Tier 3 than under Tier 4.

Rail workers and communities need the highest possible level of protection. The disastrous spill of 100,000 gallons of vinyl chloride in East Palestine, Ohio shed important light on the health and environmental effects of train derailments. Routine rail operations also expose communities and rail workers to long-term health risks from diesel emissions, especially older locomotives. According to the World Health Organization, diesel engine exhaust is a known carcinogen.⁴ Diesel exhaust from locomotives increases cancer risk and cancer mortality for

¹ Locomotives and Locomotive Engines; Preemption of State and Local Regulations, 88 Fed. Reg. 77,004 (Nov. 8, 2023) (to be codified at 40 CFR Part 1074), <https://www.govinfo.gov/content/pkg/FR-2023-11-08/pdf/2023-24513.pdf>.

² Control of Emissions of Air Pollution from Locomotive Engines and Marine Compression-Ignition Engines less than 30 Liters per Cylinder; Republication, 73 Fed. Reg. 37,096 (June 30, 2008) (to be codified at 40 CFR Parts 9, 85, 86, 89, 92, 94, 1033, 1039, 1042, 1065, and 1068), <https://www.federalregister.gov/documents/2008/06/30/R8-7999/control-of-emissions-of-air-pollution-from-locomotive-engines-and-marine-compression-ignition>.

³ Environmental Protection Agency, Technical Highlights: Emission Factors for Locomotives (Mar. 2008), <https://nepis.epa.gov/Exe/ZyPDF.cgi/P100500B.PDF?Dockey=P100500B.PDF>.

⁴ Press Release, International Agency for Research on Cancer, World Health Organization, IARC: Diesel Engine Exhaust Carcinogenic (Jun. 12, 2012), https://www.iarc.who.int/wp-content/uploads/2018/07/pr213_E.pdf.

rail workers^{5,6} while creating lung and heart problems in residents of communities near railyards.^{7,8} Emissions-reduction technologies can significantly lower the risks that diesel exhaust poses.

It is therefore disconcerting that, although zero-emission technology has advanced far faster than anticipated since 2008, rail carrier transition to cleaner engines has lagged behind predictions.⁹ According to 2016 data, 48 percent of existing locomotives are uncontrolled pre-Tier 0 locomotives, which have no standards for any pollutants.¹⁰ As of 2020, a staggering 89 percent of the active fleet of Class I locomotives are still Tier 3 or lower.¹¹

This inadequate fleet modernization is unfortunately unsurprising for an industry whose executives have pursued a decades-long obsession with cost-cutting and prioritizing profits over safety and the environment.¹² Since the catastrophic derailment in East Palestine and surrounding communities in Pennsylvania, increased scrutiny has shone a light on the rail industry's long history of lobbying for deregulation,¹³ cutting spending on repair and maintenance,¹⁴ and a top-down culture of skipping inspections.¹⁵ These measures have led to record profits while endangering rail workers and the communities near railroads.¹⁶

Rail carriers have also sought to evade the Tier 4 emissions standards. In 2008, the EPA foreshadowed a loophole that carriers could use to get around those tougher emissions standards, by refusing to purchase new locomotives and either doing nothing or opting to refurbish with a polluting, used engine to sidestep requirements to meet stronger emissions standards.¹⁷

⁵ Eric Garshick et al., *Lung Cancer in Railroad Workers Exposed to Diesel Exhaust*, 112 *Environmental Health Perspectives* 15, 1539-1543 (Nov. 2004), <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC1247618/>.

⁶ Paul E. Rosenfeld et al., *Cancer Risk and Diesel Exhaust Exposure Among Railroad Workers*, 233 *Water, Air, & Soil Pollution* 171, 1-12 (2022), <https://link.springer.com/article/10.1007/s11270-022-05651-4>.

⁷ Michael Hawthorne & Alex Richards, *EPA finds rail yards transfer pollutants as well as freight*, *Chicago Tribune* (Jun. 27, 2014), <https://www.chicagotribune.com/news/ct-railyard-diesel-pollution-met-20140627-story.html>.

⁸ Anamika Vaughn, *Portland Air Quality Group Organizes to Fight Diesel Pollution from Brooklyn Rail Yard*, *Willamette Week* (Sept. 26, 2018), <https://www.wweek.com/news/city/2018/09/26/portland-air-quality-group-organizes-to-fight-diesel-pollution-from-brooklyn-rail-yard/>.

⁹ Sarah Lazare, *The Filthy Emissions of Railroad Locomotives—and the Rail Unions Sounding the Alarm*, *The American Prospect* (Mar. 14, 2023), <https://prospect.org/environment/2023-03-14-filthy-emissions-railroad-locomotives/>.

¹⁰ Lauren Steele, *EPA Regulatory Overview: Locomotives*, U.S. Environmental Protection Agency MSTRS Spring Meeting (May 11, 2023).

¹¹ Eastern Research Group, Inc., 2020 National Emissions Inventory Locomotive Methodology (May 19, 2022) (prepared for U.S. Environmental Protection Agency, EPA Contract No. EP-C-17-011), https://www.epa.gov/system/files/documents/2023-01/2020_NEI_Rail_062722.pdf.

¹² Niraj Chokshi & Peter Eavis, *Railroads' Strategy Thrilled Wall Street, but Not Customers and Workers*, *N.Y. Times* (Sept. 19, 2022), <https://www.nytimes.com/2022/09/19/business/freight-rail.html>

¹³ Kendra Pierre-Louis, *How Decades of Lax Rules Enable Train Disasters*, *The Atlantic* (Mar. 23, 2023), <https://www.theatlantic.com/science/archive/2023/03/how-deregulation-enabled-train-disasters-like-east-palestine/673502/>

¹⁴ Bill Alpert, *Norfolk Southern Cut Safety Spending Before Ohio Crash, Analysis Shows*, *Barron's* (Mar. 9, 2023), <https://www.barrons.com/articles/norfolk-southern-safety-spending-train-derailments-30d5a70b>

¹⁵ Michael Sainato, *Leaked audio reveals US rail workers were told to skip inspections as Ohio crash prompts scrutiny to industry*, *The Guardian* (Mar. 3, 2023), <https://www.theguardian.com/us-news/2023/mar/03/us-rail-workers-east-palestine-ohio-train-crash>

¹⁶ Peter Eavis & Mark Walker, *Norfolk Southern's Profits and Accident Rates Rose in Recent Years*, *N.Y. Times* (Feb. 17, 2023), <https://www.nytimes.com/2023/02/17/business/energy-environment/norfolk-southern-derailment-safety.html>

¹⁷ Control of Emissions of Air Pollution From Locomotive Engines and Marine Compression-Ignition Engines Less Than 30 Liters per Cylinder; Republication, 73 *Fed. Reg.* 37095 (July, 7, 2008) (to be codified at 40 C.F.R. pt. 1033), <https://www.federalregister.gov/documents/2008/06/30/R8-7999/control-of-emissions-of-air-pollution-from-locomotive-engines-and-marine-compression-ignition>.

Rail industry publications outline exactly how to exploit this loophole. In May 2020, *Railway Age* published guidance from National Railway Equipment Company (NRE) experts, explaining that “with [50 percent] previously used parts, the engine retains its original date of build and requisite EPA Tier Level, BUT if refurbished with [between 25 percent and 50 percent] used parts, that locomotive is subject to the Tier 3 EPA standards,” and “[i]f refurbished with [less than 25 percent] previously used parts, that locomotive is considered freshly manufactured and is subject to the Tier 4 EPA standard.”¹⁸ The sheer volume of pre-Tier 0, Tier 0, Tier 1, and Tier 2 locomotives still on rail lines shows that the rail industry has sought to evade modern standards—rejecting available technology, undercutting union jobs, and creating a public health hazard for communities, workers, and our climate.¹⁹

Consequently, the EPA’s 2008 rulemaking has not resulted in the expected level of diesel exhaust emissions reductions, as the rail industry has dodged regulation instead of adopting available emissions-reducing technologies.

With additional technological advances since 2008, the gap between actual and possible emissions reductions is even wider. Another proven technology for emissions reduction is electrification. Advances in hybrid and fully battery-electric technologies have created new opportunities to expand beyond the EPA’s 2008 projections, with battery-electric trains soon projected to reach cost parity with diesel trains.²⁰ Overhead catenary lines have been used to electrify rail for more than a century, and can power trains for 50 percent of the price of diesel.²¹ In the 1910s in the United States – more than 100 years ago – the Chicago, Milwaukee, St. Paul and Pacific Railroad electrified large swaths of the network through both densely and sparsely populated areas. In the 1960s and 1970s, the Pennsylvania Railroad, Penn Central and Conrail used electric catenary freight trains. The only barrier to electrification of the freight rail network is the railroads’ unwillingness to invest in building the required infrastructure.

In short, old, dirty locomotives continue to run through communities, jeopardizing public health, as rail executives continue to avoid the adoption of best available control technologies measures, at the expense of the air, the environment, and workers. We therefore urge the EPA to adopt strong locomotive regulations that protect workers and communities from health harms of diesel exhaust and outdated emissions-reduction technology. The EPA should:

- develop new, stronger rules to combat locomotive air pollution, including a zero-emission locomotive standard reflective of both the known health harms of diesel exhaust and the technological advances in zero-emission locomotive technology;
- close the regulatory loopholes that allow billion-dollar companies to evade modern emissions standards instead of adopting new technologies; and
- ensure labor unions and frontline and fenceline communities are valued as stakeholders in the conversation on any rulemakings for low-emission and zero-emission rail technology
- ensure robust labor protections are, to the maximum extent possible, attached to any federal investment

¹⁸ Jim Blaze, *Does Rebuilding Locomotives Beat Buying New*, *Railway Age* (May 21, 2020), <https://www.railwayage.com/news/does-rebuilding-locomotives-beat-buying-new/>.

¹⁹ Lauren Steele, *EPA Regulatory Overview: Locomotives*, U.S. Environmental Protection Agency MSTRS Spring Meeting (May 11, 2023).

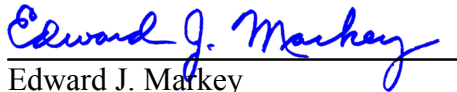
²⁰ Natalie D. Popovich et al., *Economic, environmental and grid-resilience benefits of converting diesel trains to battery-electric*, *Nature Energy* 6, 1017-1025 (2021), <https://www.nature.com/articles/s41560-021-00915-5>.

²¹ Richard Nunno, *Electrification of U.S. Railways: Pie in the Sky, or Realistic Goal?* Environmental and Energy Study Institute (May 30, 2018), <https://www.eesi.org/articles/view/electrification-of-u.s.-railways-pie-in-the-sky-or-realistic-goal>.

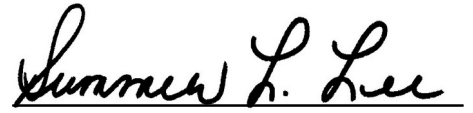
By creating a stronger locomotive emissions standard, the EPA will fulfill its duty to ensure clean air for all while creating high-quality union jobs, reducing burdens on environmental justice communities, and ultimately lowering costs for consumers.

We thank you for your consideration as you continue to work on protecting clean air and reducing pollution from sources throughout our economy.

Sincerely,



Edward J. Markey
United States Senator



Summer Lee
Member of Congress



Jesus G. "Chuy" Garcia
Member of Congress



Laphonza Butler
United States Senator



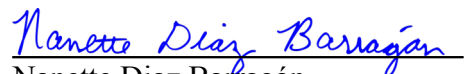
Bernard Sanders
United States Senator




Shri Thanedar
Member of Congress



Alexandria Ocasio-Cortez
Member of Congress



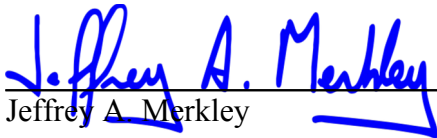
Nanette Diaz Barragan
Member of Congress



Mark Takano
Member of Congress



Delia C. Ramirez
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Jeffrey A. Merkley
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Katie Porter
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Eleanor Holmes Norton
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Emanuel Cleaver, II
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Raja Krishnamoorthi
Member of Congress



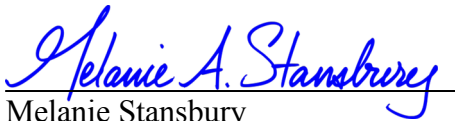
Rashida Tlaib
Member of Congress



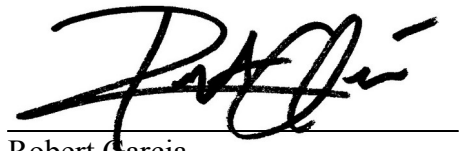
Ro Khanna
Member of Congress



Jamaal Bowman, Ed.D.
Member of Congress



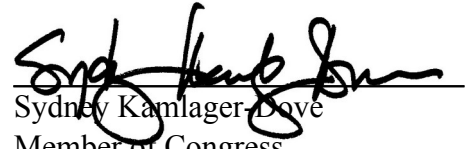
Melanie Stansbury
Member of Congress



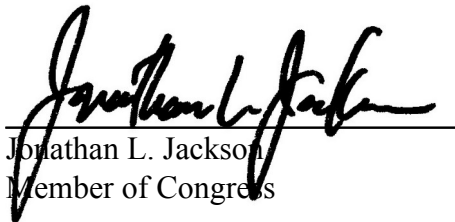
Robert Garcia
Member of Congress



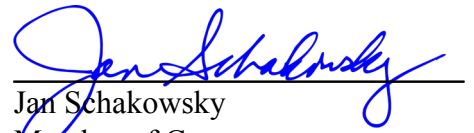
Barbara Lee
Member of Congress



Sydney Kamlager-Dove
Member of Congress



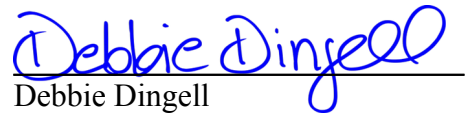
Jonathan L. Jackson
Member of Congress



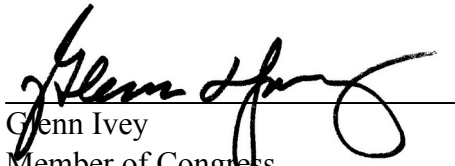
Jan Schakowsky
Member of Congress



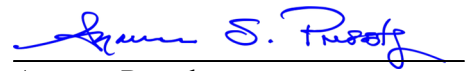
Danny K. Davis
Member of Congress



Debbie Dingell
Member of Congress



Glenn Ivey
Member of Congress



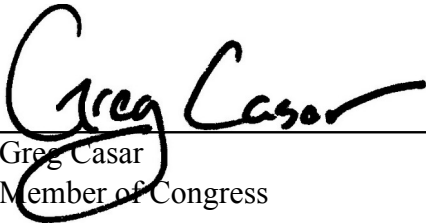
Ayanna Pressley
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Raúl M. Grijalva
Member of Congress



Cori Bush
Member of Congress



Greg Casar
Member of Congress



André Carson
Member of Congress



Chris Deluzio
Member of Congress



Cory A. Booker
United States Senator



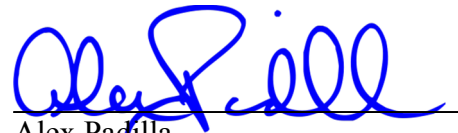
Bonnie Watson Coleman
Member of Congress



Dan Goldman
Member of Congress



Dwight Evans
Member of Congress



Alex Padilla
United States Senator