



February 7, 2023

Chair Brian J. Feldman
Members of the Senate Education, Energy and Environment Committee

Re: Earthjustice **support** of SB 224:
Department of the Environment – Zero-Emission Medium – and Heavy-Duty
Vehicles – Regulations (Clean Trucks Act of 2023)

Earthjustice¹ strongly supports the passage of SB 224. SB 224 requires the Maryland Department of the Environment (MDE) to adopt regulations establishing requirements for the sale of new zero-emission (ZEV) medium- and heavy-duty vehicles in the State by December 1, 2023.

To achieve Maryland’s Greenhouse Gas (“GHG”) emissions reduction goals, Maryland must reduce and ultimately eliminate the pollution caused by the transportation sector. SB 224 is a vital step in achieving the commitment Maryland made when then Governor Hogan signed the Multi-State Medium- and Heavy-Duty Zero Emission Vehicle Memorandum of Understanding (“MOU”) on July 13, 2020. Almost two years have passed since Maryland announced its commitment to adopt the California Advanced Clean Truck rules. Further delay will only continue the public health and climate harms caused by Maryland’s reliance on non-electric vehicles.

BACKGROUND

On July 14, 2020, Maryland took another significant step forward in its effort to address the climate crisis and the health impacts of air pollution as it joined fourteen other states and the District of Columbia in signing a MOU to work collaboratively to advance and accelerate the market for electric medium- and heavy-duty vehicles, including large pickup trucks and vans, delivery trucks, box trucks, school and transit buses, and long-haul delivery trucks (big-rigs). The goal is to ensure that 100 percent of all new medium- and heavy-duty vehicle sales be zero emission vehicles by 2050 with an interim target of 30 percent zero emission vehicle sales by 2030. Massachusetts, New York, New Jersey, Oregon, Vermont, and Washington have already joined California in adopting these standards.

¹ Earthjustice is a non-profit public interest environmental law organization that represents other non-profits free of charge. Earthjustice uses the power of law and the strength of partnerships to advance clean energy, combat climate change, protect people’s health and preserve magnificent places and wildlife.

ADOPTION OF THE CLEAN TRUCK RULE IS NECESSARY TO PROTECT PUBLIC HEALTH AND ACHIEVE MARYLAND'S CLIMATE OBJECTIVES

Maryland adopted very challenging, aggressive mandates to reduce Greenhouse Gas emissions to protect public health and to meet state climate change targets. The Climate Solutions Now Act (“CSNA”) calls for a reduction of emissions of 60% by 2031 (from 2006 levels) and requires the state to reach net-zero by 2045. Meeting these goals requires a bold transformation in all sectors including transportation.

Transportation is now the largest source of GHG emissions in Maryland, and where reductions are needed most in the future. Transitioning to Medium - and Heavy -Duty ZEVs will be a key component of achieving additional reductions. In the Northeast corridor, 42% of all GHG emissions come from transportation. Similarly, 54% of all Nox emissions in the Northeast corridor also come from transportation.

Adoption of the Advanced Clean Truck Rule will go a long way toward slashing these harmful emissions. The transportation sector is the nation’s largest source of greenhouse gas emissions and also contributes to unhealthy levels of smog. Accelerating the electrification of trucks and buses is an essential step to achieve the deep emission reductions needed to avoid the worst consequences of climate change and protect the health of millions of Marylanders.

Maryland needs zero-emission technology in the transportation sector not only to achieve its climate objectives but also to protect the health of Maryland residents. Mobile sources and the fossil fuels that power them are the largest contributors to Nox (which is the greatest contributor to ozone), greenhouse gas emissions, fine particulate matter (PM2.5), and toxic diesel particulate matter. Trucks and other large vehicles account for 9% of vehicles on the road but contribute 21% of carbon pollution and 48% of particulate matter pollution (PM2.5) emitted by the entire transportation sector in Maryland. While we have known the brutal health impact of diesel use for decades, recent research shows it’s far worse than previously thought. Updated evidence of air pollution toxicity demonstrates its impacts are roughly double what was previously assumed.² Even low levels of diesel pollution damage virtually every system in the human body – lungs, hearts, brains, skin, and nervous system.

Truck and bus electrification also promises to deliver wide-spread health benefits, particularly in communities with heavy truck traffic that are burdened with higher levels of air pollution. Diesel trucks are one – if not the – starkest forms of environmental racism. A recent study determined that they are the largest source of air pollution disparity in the United States.³ A new wave of freight infrastructure – warehouses and distribution centers – is spreading across

² David Roberts, *Air pollution is much worse than we thought*, Vox (Aug. 12, 2020), <https://www.vox.com/energy-and-environment/2020/8/12/21361498/climate-change-air-pollution-us-india-china-deaths>.

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 (Aug. 25, 2021), <https://agupubs.onlinelibrary.wiley.com/doi/10.1029/2021GL094333>.

the country, unsurprisingly concentrating in low-income communities of color. Parts of the Chesapeake Bay and surrounding areas of Baltimore have become epicenters of the warehouse boom.⁴ Medium- and heavy-duty trucks are a major source of harmful smog-forming pollution, particulate matter, and air toxics. These emissions disproportionately impact low-income communities and communities of color often located near major trucking corridors, ports, and distribution hubs.

By adopting these rules, Maryland will reduce emissions of greenhouse gases, carbon dioxide, nitrogen oxides, fine particulate matter, and other pollutants. The rule also has significant public health impacts—reducing cases of acute bronchitis, exacerbated asthma, and other respiratory conditions.

Maryland has experienced firsthand the severe cost in people and capital from some combination of climate-induced tornados, hurricanes, flooding, or elevated temperatures that worsen air quality and stifle economic activity. Tackling climate change means removing diesel and gasoline from transportation.

AVAILABILITY AND COST OF ELECTRIC MODELS

SB 224 comes at an important transition point for the industry as investment in zero emission vehicle technology for the medium- and heavy-duty sector continues to ramp up. Today, over one hundred electric truck and bus models are on the market, and manufacturers are expected to continually make many more new electric models commercially available over the next decade. Sixty-five percent of medium-duty and half of heavy-duty trucks are electrifiable today.⁵

Every credible analysis has found that zero emission trucks save businesses and drivers money – even faster than electric cars, because of their lower fuel and maintenance costs. Even without incentives, the U.S. Department of Energy found that they would be cheaper to operate in every category by 2035, and for many categories much sooner.⁶ Researchers at Lawrence Berkeley National Laboratory found that by 2035 Class 8 tractor will cost less than half of what it costs for the diesel equivalent.⁷ Now, with the IRA adding a 30% tax credit for commercial EVs (and their chargers), analysts find that ZE trucks will actually be cheaper to purchase

⁴ Ad Crable & Jeremy Cox, *Mega-Warehouses Take Toll on Environment, Localities*, Bay Journal (Jul. 19, 2021), https://www.bayjournal.com/news/growth_conservation/mega-warehouses-take-toll-on-environment-localities/article_2cf71ea8-e55b-11eb-aacc-bfa8835d9767.html.

⁵ Jessie Lund et al., *Charting the Course for Early Truck Electrification*, RMI (2022), <https://rmi.org/insight/electrify-trucking/>.

⁶ Catherine Ledna et al., *Decarbonizing Medium- & Heavy-Duty On-Road Vehicles: Zero-Emission Vehicles Cost Analysis*, NREL (Mar. 2022), <https://www.nrel.gov/docs/fy22osti/82081.pdf>.

⁷ Goldman School of Public Policy UC Berkeley, *Plummeting Costs and Dramatic Improvements in batteries Can Accelerate Our Clean Transportation* (June 2021), http://www.2035report.com/transportation/wp-content/uploads/2020/05/GridLab_2035-Transportation-Appendix.pdf?hsCtaTracking=c4d392a4-96ff-474c-86c3-bfa335c67aa2%7Ce2107ae8-40d7-44ff-8b5b-72016d87fe98.

upfront than diesel in every category by 2031 – and in some categories as early as this year. Meaning they would produce positive cashflow for fleets immediately.

EV CHARGING IS BENEFICIAL TO ELECTRIC UTILITIES AND RATEPAYERS

There's a misconception that widespread charging of EVs will necessarily stress the electric grid, resulting in costly upgrades that drive up electric rates. However, analysis of the two utility service territories with the most EVs of any in the U.S., Pacific Gas & Electric (PG&E) and Southern California Edison (SCE), conducted by Synapse Energy Economics ("Synapse") found the opposite has been observed in the real world.

EVs are pushing electric rates down, largely because they tend to charge overnight when people are sleeping and there is plenty of spare capacity on the grid. In particular, EV customers on time-of-use (TOU) rates, only do 9-14 percent of their charging during on-peak hours when total demand for electricity is at its greatest. And even EV owners that remain on default rates that do not encourage off-peak charging consume less electricity during on-peak hours than typical households.

EVs are not straining the grid to this point, Thus, there is little to no increased utility costs associated with accommodating EV charging, but significant new revenues that is returned to all customers in the form of lower rates and bills.

Synapse evaluated the revenues and costs associated with EVs from 2012 through 2019 in the PG&E and SCE service territories. They compared the new revenue the utilities collected from EV drivers to the cost of the energy required to charge those vehicles, plus the costs of any associated upgrades to the distribution and transmission grid and the costs of utility EV programs that are deploying charging stations for all types of EVs.

In total, EV drivers contributed an estimated \$806 million more than the associated costs. And this finding is not merely a result of the fact most EV drivers in PG&E and SCE territory remain on default rates and pay high upper-tier prices as a result. Even if 3 in 4 were on time-of-use rates designed for EVs, those drivers would still have provided approximately \$621 million in net-revenues.

ADOPTION OF THE ADVANCED CLEAN TRUCK REGULATIONS BY DECEMBER IS VITAL

The federal Clean Air Act requires two years of lead time before a state can enforce a California motor vehicle emission standard.⁸ If MDE fails to finalize the rules before December 31, 2023, Maryland will lose a compliance year and the rule's implementation will be delayed.

As noted above, several states have already adopted the Advanced Clean Truck Rule. Because these states met Clean Air Act-related deadlines to issue the rules before the end of the year, these states can begin to enforce the rules, reduce air pollution, and protect public health

⁸ 42 U.S.C. § 7507(2).

earlier than they could have otherwise. Maryland is being left behind in the transition to clean, electric trucks.

Maryland signed the MOU almost two years ago and cannot afford to lose another year of implementation. The MOU establishes a 30% sales goal by 2030. Each year of delay makes it much harder and much less likely that Maryland will achieve the initial goal set forth in the MOU. Moreover, Maryland cannot achieve the GHG emissions reductions set forth in the CSNA without addressing the transportation sector's significant contribution to this problem.

CONCLUSION

The rule's adoption will result in climate and public health benefits, net savings to fleets operating zero-emission trucks, and benefits to commercial and residential electricity customers due to lower electricity rates made possible by additional electricity sales for electric vehicle charging.

Finally, Earthjustice thanks Chairman Feldman and Senators Augustine, Smith, Washington, Watson and Zucker for their leadership on this important issue.

Earthjustice strongly urges a favorable report for SB 224.

Thank you in advance for your support. Should you have any questions, please contact me at smiller@earthjustice.org.

Respectfully submitted,



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