February 25, 2022

Testimony on HB 829
Zero-Emission Truck Act of 2022
Environment & Transportation Committee

Position: Favorable

Environmental Defense Fund submits this testimony to express strong support for House Bill 829, which would require the Department of Environment to adopt the Advanced Clean Trucks regulation (ACT). The ACT would require manufacturers to sell an increasing number of zero-emission trucks and buses through 2035; by passing this bill, Maryland would be furthering its environmental leadership while reducing pollution where it is most needed and improving its economy.

Addressing Transportation Pollution is of Critical Importance

On-road transportation is the single biggest source of greenhouse gas emissions that warm the climate – at 36 percent of the total inventory.[1] As such, transitioning to vehicles that have zero tailpipe emissions will be a critical part of meeting the state's goal of reducing greenhouse gases 40% by 2030 and honoring the commitments that Governor Hogan made by signing the Medium- and Heavy-Duty Memorandum of Understanding. As well, diesel heavy-duty vehicles are a primary contributor to NOx emissions in the Mid-Atlantic and Northeast regions, despite making up a significantly smaller proportion of vehicles than passenger cars.[2] The health harm of these medium- and heavy-duty vehicles is significant, causing asthma and other respiratory illnesses, and exacerbating existing heart and lung conditions. What's more, overreliance on diesel trucks and buses is bad for the economy: a transition to 100% sales of trucks and buses by 2040 would save the United States $485 *billion* dollars in health and environmental benefits – money that is left on the table if Maryland fails to take concrete action such as the one presented by SB 687.

Moreover, the impacts of air pollution are not evenly felt. Taking action on the ACT will result in significant benefits for Marylanders – which suffer the second worst air pollution from transportation after New York State. Of course, the pollution that causes climate change and harms health is not evenly felt – Baltimore City and Prince George's County, home to more than 25% of the state's population, face exposure from fine particulate matter that is 37 and 23 percent higher, respectively, than the state average. In Baltimore City, average exposure is almost 2 times the nation's average and not too far below Los Angeles County. And, the most polluted census tracts – those near freight corridors, ports, and depots, have a higher

[1] *MDOT Greenhouse Gas Reduction Act (GGRA) Plan,* https://www.mdot.maryland.gov/tso/pages/Index.aspx?PageId=88#:~:text=The%20current%20statewide%20emissions%20inventory,rail)%20represents%20another%204%20percent.
[2] Maryland Department of the Environment, *Medium and Heavy Duty Trucks: An Emerging Area to Achieve Significant Emission Reductions* (Mar. 15, 2021), https://mde.maryland.gov/programs/workwithmde/Documents/AQCAC/2021MeetingMaterials/AQCAC%20CARB%20FINAL.pdf.

concentration of low-income and residents of color – almost 15 percent of people living in the highest burden areas are Latino, compared with a state Latino population of just 9 percent.[3]

Adoption of the ACT is economically beneficial and technologically feasible

Adoption of the ACT provides powerful benefits for the economy. Aside from deep benefits that can be seen by avoided costs attributable to missed workdays and hospital visits, adoption of the ACT can attract investment and create good-paying jobs. An illustration of this is seen in a study conducted by MJ Bradley and Associates in New Jersey – which finds that adoption of California standards (both the ACT and the low NOx rule) will contribute to hundreds of jobs and will have much higher jobs than those that they are replacing.

The total cost of ownership of zero-emission trucks and buses is increasingly favorable. Although the upfront cost of zero-emission trucks and buses still exceeds that of their diesel counterparts and requires mitigation, cost parity over the total cost of ownership will be quickly achieved. A recent study by EDF found that by 2027, electric vehicle costs will be less than their internal combustion engine counterparts for most vehicle types, due to maintenance and energy costs – more than enough to overcome any added costs from charging infrastructure. As component costs continue to decline, the business case for zero-emissions vehicles will only strengthen in the coming decades.[4]

Zero-emission vehicle options abound. Major market players like Volvo, Freightliner, and Navistar have made commitments to producing zero-emission vehicles – in addition to smaller players and start-ups like Lion, Nikola, Rivian, and Arrival. Currently, there are only three segments for which EVs will present operational challenges – though even in most of those cases, public charging can alleviate range constraints.[5] And, continual improvements in battery technology in the coming years will continue to close any operational gaps. Importantly, the structure of the ACT provides manufacturers flexibility as technology evolves – ramping up slowly over time and allowing trading between manufacturers and between vehicle classes. In short, there is no economic or technological reason to fail to take action.

Adoption of the ACT will create market certainty

Fleets have also made commitments to transition to zero-emission vehicles – in short, the market is there, if manufacturers meet it.[6] Many fleets have made it clear that they intend to make a transition to zero-emission vehicles. For example, IKEA has committed to transitioning all last mile deliveries be zero-emissions by 2035, Amazon has committed to purchasing 100,000 Rivian vans, and the Joint Electric Truck Scaling Initiative will be testing out Class 8 vehicles manufactured on Daimler and Volvo, utilizing them on freight corridors in Los Angeles and Long Beach. However, of course the vehicles necessary to fulfill those goals need to be available – passage of the ACT will provide market certainty that empower fleets to continue to make ambitious shifts, in addition to building economies of scale that bring down the upfront

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[3] Maria Cecilia Pinto de Moura, *Inequitable Exposure to Air Pollution from Vehicles in Maryland,* Union of Concerned Scientists (Nov. 15, 2019), https://blog.ucsusa.org/cecilia-moura/air-pollution-from-vehicles-maryland/.

[4] Roush Industries and Environmental Defense Fund, *Technical Review of: Medium- and Heavy-Duty Electrification Costs for MY 2027-2030 – Final Report* at 22 (Feb. 2, 2022), http://blogs.edf.org/climate411/files/2022/02/EDF-MDHD-Electrification-v1.6_20220209.pdf.

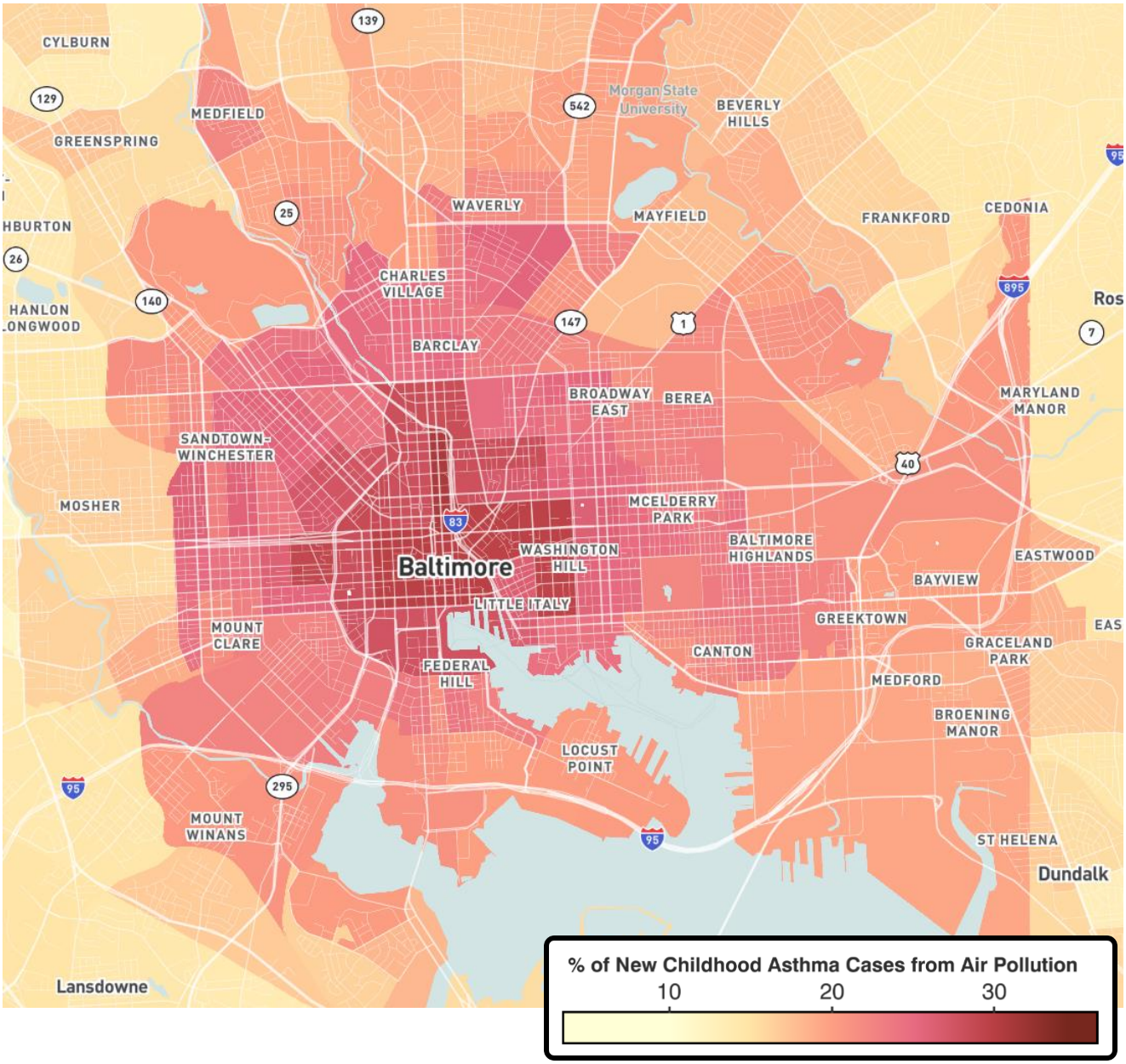
[5] MJ Bradley and Associates, *Medium- and Heavy-Duty Vehicles – Market Structure, Environmental Impact, and EV Readiness* at 20 (Jul. 2021), https://www.mjbradley.com/sites/default/files/EDFMHDVEVFeasibilityReport22jul21.pdf.

[6] *Id.* at 16.

cost of vehicles. This will make vehicles accessible to more and more businesses, broadening the benefits of zero-emission trucks and buses.

For the aforementioned reasons, EDF encourages a **favorable** report for House Bill 829.

Appendix A: Childhood Asthma in Baltimore



- In Baltimore, nitrogen dioxide pollution contributes to **more than 1,300 new childhood asthma cases** every year.
- In some areas of the city, as many as **1 in 4 new childhood asthma cases are attributable to pollution** – across Baltimore, approximately 15% of cases, on average, are attributable to pollution.

Map and estimates based on methodology described in:

SC Anenberg, A Mohegh, DL Goldberg, GH Kerr, M Brauer, K Burkart, P Hystad, A Larkin, S Wozniak, L Lamsal. Long-term trends in urban NO2 concentrations and associated paediatric asthma incidence: Estimates from global datasets. The Lancet Planetary Health Volume 6, Issue 1, 2022, Pages e49-e58. https://doi.org/10.1016/S2542-5196(21)00255-2.