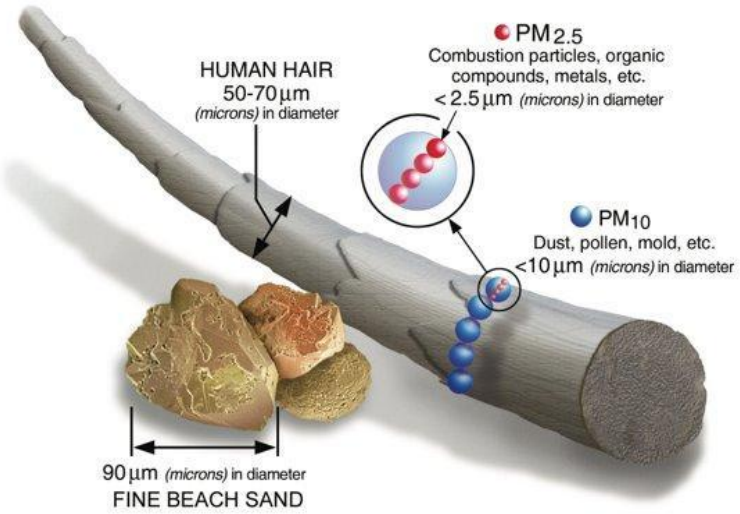
Committee: Economic Matters – Environment and Transportation
Testimony on: HB 829– Zero-Emission Truck Act of 2022
Position: Support
Hearing Date: February 25, 2022

Chesapeake Physicians for Social Responsibility (CPSR) is a statewide evidence-based organization of more than 900 physicians and other health professionals and supporters that addresses existential public health threats: nuclear weapons, the climate crisis, and the issues of pollution and toxic effects on health, as seen through the intersectional lens of environmental, social, and racial justice. As an organization founded by physicians, we understand that prevention is far superior to treatment in reducing costs, death, illness, injury and suffering.

As a physician concerned with the well-being of my patients, and on behalf of fellow physicians in CPSR from a variety of specialties treating Marylanders, I submit this testimony **in strong support** of HB829, which will benefit the health and well-being of thousands of Marylanders by mitigating the most severe impacts of climate change by reducing greenhouse gas emissions and by reducing the concentration of harmful pollutants in the air we breathe.

The medium and heavy duty vehicles included as part of this bill represent roughly 10% of vehicles on the road but contribute to 30% of carbon emissions and 45% of toxic nitrogen oxide emissions. Furthermore, trucks and other heavy duty vehicles are far more likely to run on diesel fuel, which is the most damaging of all vehicle emissions to our respiratory system. This is in part due to a much greater concentration of "ultrafine" particles ($PM_{2.5}$), which achieve deeper penetration into our respiratory airways, ultimately entering our circulation with greater efficiency than other forms of gasoline emissions, including unleaded gasoline (Figure 1)[1]. In fact, while they make up a small minority of vehicles on the road, they account for the majority (57%) of particulate matter emitted by the entire transportation sector.

Figure 1: Size Comparison for PM Particles



The small size of diesel fuel pollutant particles allows deeper penetration of our airways

Consequently, emissions from internal combustion vehicles have been shown to both cause and exacerbate a variety of respiratory diseases, including asthma[2] and COPD[3], and have also been shown to increase mortality related to COVID-19[4]. Diesel emissions are also a known human carcinogen[5].

In addition to the direct health impacts of poor air quality on Marylanders, we are also concerned by the far reaching health impacts of climate change that impact Marylanders in a myriad of ways, including a surge in diseases caused by ticks (e.g. Lyme disease) and mosquitos because of the increased geographic range and duration of warm weather caused by greenhouse gas emissions, to which the transportation sector of our economy is the largest contributor[6].

As physicians who care about the well-being of communities we serve, and to ensure we act as responsible stewards of the planet for future generations, we implore you to meet the urgency of the moment and take this important step to protect the health and well-being of Marylanders.

We **strongly urge favorable action** by the Committee on HB829.

Respectfully submitted,

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1 “Particulate Matter (PM) Basics | US EPA.” https://www.epa.gov/pm-pollution/particulate-matter-pm-basics#effects. Accessed February 2022.

2 Achakulwisut, Pattanun, et al. "Global, national, and urban burdens of pediatric asthma incidence attributable to ambient NO2 pollution: estimates from global datasets." The Lancet Planetary Health 3.4 (2019): e166-e178.

3 Hart, Jaime E et al. “Occupational diesel exhaust exposure as a risk factor for chronic obstructive pulmonary disease.” Current opinion in pulmonary medicine vol. 18,2 (2012): 151-4. doi:10.1097/MCP.0b013e32834f0eaa

4 Chen, Kai, et al. "Air pollution reduction and mortality benefit during the COVID-19 outbreak in China." The Lancet Planetary Health 4.6 (2020): e210-e212.

5 Silverman, Debra T. “Diesel exhaust causes lung cancer: now what?.” Occupational and environmental medicine vol. 74,4 (2017): 233-234. doi:10.1136/oemed-2016-104197

6 McMichael, Anthony J., and Elisabet Lindgren. "Climate change: present and future risks to health, and necessary responses." Journal of internal medicine 270.5 (2011): 401-413.