

HB 829_byarlagadda_fav.pdf

Uploaded by: Brinda Yarlagadda

Position: FAV

May 23, 2022

**Testimony on HB 829–
Zero-Emission Truck Act of 2022
Environment and Transportation Committee**

Position: Favorable

We, the undersigned 39 Maryland-based scientists, researchers, health professionals, economists, engineers, and planners respectfully submit this testimony in strong support of HB 829 /SB 687, the Zero-Emission Truck Act of 2022, and encourage a favorable report from the Committee.

Not only are medium- and heavy-duty trucks and school buses a climate issue for Maryland, but they are also [a major public health problem](#). Diesel pollution is responsible for dangerous levels of nitrogen oxide and fine particulate matter that increases the risk of severe respiratory illnesses and other health problems. Studies continue to link long-term exposure to fine particulate matter with an [increased risk of death](#) from the COVID-19 pandemic.

The good news is that zero-emission trucks are already becoming readily available in a wide variety of models and sizes. Battery-electric trucks do not release tailpipe emissions, and when charged on the Maryland electric grid they have [49-67 percent lower](#) lifecycle global warming emissions compared to diesel trucks.

A recent [analysis](#) from the International Council on Clean Transportation shows if Maryland adopts the Zero-Emission Truck Act of 2022, the state could see more than 178,000 zero-emission trucks on the road by 2050. This policy would also bring over \$1.6 billion in public health benefits to our state in that same timeframe, from avoiding over 230 hospital admissions and emergency room visits, 270 premature deaths, and 116,200 cases of minor illnesses.

The Zero-Emission Truck Act of 2022 is a key step in the right direction. By supporting this legislation, you will demonstrate your commitment to cleaner air and a healthier future. Now is the time for Maryland to continue its climate and clean air leadership.

We encourage a FAVORABLE report for this important legislation.

Thank you,

Michele Alexander
Epidemiology
Rockville, MD

Beverly Antonio
Research; Public Health
Centreville, MD

Peter Alexander
Biotechnology and Biochemical Engineering
Woodbine, MD

Sima Bakalian
Pediatrics; Medicine
Rockville, MD

Laura Allen
Nursing; Public Health
Westminster, MD

Kristina Borrer
Molecular Biology; Research Regulation
Silver Spring, MD

Signature continue next two pages.

Richard Bourgin
Functional Analysis; Mathematics
Savage, MD

William Bridgman
Astronomy; Data Visualization; Physical Science
Silver Spring, MD

Laurette Cucuzza
Adolescent Sexual Reproductive Health &
Rights; Public Health
Rockville, MD

Barry Daly
Radiology; Medicine
Hunt Valley, MD

Robert Erdman
Telecommunications; EVs; Engineering
Potomac, MD

Albert Garcia-Romeu
Psychology; Social Sciences
Baltimore, MD

Michael Gnat
Internal Medicine; Medicine
Rockville, MD

John Haresch
Family Medicine; Medicine
Potomac, MD

Gary Hedges
Education; Ecology
Frederick, MD

Erika Hoffeld
Anatomic Pathology; Medicine
Silver Spring, MD

Alice Imlay
Invasive Species Control; Biology
Bryans Road, MD

Marc Imlay
Invasive Species Control; Biology
Bryans Road, MD

Barry Klinger
Climate; Physical Oceanography
Potomac, MD

Raymond LeVesque
Spacecraft Contamination Control; Engineering
Columbia, MD

Ted Llana
Immunology; Biology
Lexington Park, MD

Edward Maibach
Climate Change; Public Health
Potomac, MD

Suhas Malghan
Electric Vehicles; Engineering
Baltimore, MD

Elizabeth Maloney
Epidemiology; Public Health
Rockville, MD

Allison McDaniel
Genetics; Life Science
Germantown, MD

Elizabeth Moore
Computational Fluid Dynamics; Engineering
Gaithersburg, MD

William Reamy
Air Pollution; Engineering
Towson, MD

Elizabeth A. Riley
Mental Health; Medicine
Silver Spring, MD

William Rutter
Mechanical Engineering
Mechanicsville, MD

John Sadler
Nephrology; Medicine
Reisterstown, MD

Gerald Share
High Energy; Physical Science
Silver Spring, MD

Linda Silversmith
Biochemistry
Rockville, MD

Gregory Taylor
Infectious Disease; Medicine
Baltimore, MD

Sara Via
Agroecology; Biodiversity; Soils
Ellicott City, MD

Casey Weiner
Biomedical Engineering
Baltimore, MD

Michael Weinrich
Neurology; Rehabilitation; Biophysics; Medicine
Baltimore, MD

Katherine White
Neonatology; Medicine
Derwood, MD

Brinda Yarlagadda
Energy-Climate-Human Systems Modeling;
Engineering
Silver Spring, MD

HB0829_ZE_Truck_Act_MLC_FAV.pdf

Uploaded by: Cecilia Plante

Position: FAV



TESTIMONY FOR HB0829

Department of the Environment – Zero–Emission Medium and Heavy Duty Vehicles – Regulations (Zero–Emission Truck Act of 2022)

Bill Sponsor: Delegate Love

Committee: Environment and Transportation

Organization Submitting: Maryland Legislative Coalition

Person Submitting: Cecilia Plante, co-chair

Position: FAVORABLE

I am submitting this testimony in favor of HB0829 on behalf of the Maryland Legislative Coalition. The Maryland Legislative Coalition is an association of individuals and grassroots groups with members in every district in the state with well over 30,000 members.

This important legislation would require that the Maryland Department of Environment adopt the Advanced Clean Truck rule by December 1, 2022. This rule requires that vehicle manufacturers sell an increasing annual percentage of electrified medium and heavy-duty vehicles including pickup, delivery, and semi-trucks as well as school buses between Model Year 2026 (for states that adopt in 2022) and 2035. These vehicles represent 10% of vehicles on the road but disproportionately contribute to 30% of carbon emissions, 45% of toxic nitrogen oxide emissions, and 57% of health harming particulate matter emitted by the entire transportation sector in the US.

We have to electrify vehicles as soon as possible, and that will not happen without some requirements for it to happen. Manufacturers are disinclined to re-tool their factories and sell electrified vehicles when they are able to sell gas-combustion vehicles.

Under Section 177 of the Clean Air Act, states other than California are not allowed to set their own emissions standards. However, states can choose to follow and adopt vehicle standards that California has enacted. Maryland first adopted California’s clean car standards for personal vehicle electrification through legislative action in 2007. Maryland has the opportunity to enact similar standards again and clean up large dirty diesel vehicles that continue to harm our health and exacerbate climate change.

This legislation would help Maryland follow through on its commitment for 30% of all medium and heavy-duty vehicles sales to be electric by 2030 and could create high quality green jobs in the process. Maryland would also be included in the growing number of states adopting the Advanced Clean Truck Rule, including California, Massachusetts, New York, New Jersey, Washington, and Oregon.

We support this bill and recommend a **FAVORABLE** report in committee.

HB829_Christine Berg_FAV .pdf

Uploaded by: Christine Berg

Position: FAV

HB 829: Zero-Emission Truck Act of 2022

Date: February 25, 2022

Committee: House Environment & Transportation

Position: FAVORABLE

Christine D. Berg, M.D.

Oncologist

As a concerned oncologist, internationally recognized in cancer screening, I respectfully submit the following public comments in **FAVOR** of HB 829 the Zero-Emission Truck Act of 2022. This is a robust bill that will significantly lower emissions from medium- and heavy-duty trucks in Maryland. I would like to particularly acknowledge D16 Delegate Love who is the House Sponsor.

Importantly, zero-emission trucks will not have CO₂ emissions which are the leading greenhouse gas contributing to the devastating health effects being experienced from climate change. Of concern to all of us, our friends and loved ones is the effect of worsening climate change on the risks of developing cancer, adverse effects on survival from cancer, and increases in the risk of cancer patients suffering from other diseases such as infections. As an oncologist it is my goal to raise awareness of these issues and help to mitigate them. Two peer-reviewed manuscripts I have co-authored document these worsening impacts^{1,2}. All of the climate bills before the House in this session will help to lower this devastating toll.

Additionally, the fine particulate matter, primarily PM 2.5, which is included in diesel exhaust, is responsible for [nearly 1 in 6 lung cancer cases worldwide](#)³. While lung cancer survival is improving with improved treatment and early detection, for which my research was instrumental for implementation, it still remains poor⁴. These types of pollutants are also linked to numerous other respiratory and cardiovascular diseases such as asthma, emphysema, and heart attacks. When inhaled, PM_{2.5} impacts the entire length of the respiratory tract, from tracheobronchial tree to the air sacs (alveoli) in the lungs. Polyaromatic hydrocarbons bind to PM_{2.5} and cause oxidative damage and low-grade, chronic inflammation, [resulting in DNA adducts and gene mutations, among other molecular changes](#)⁵. [This also worsens viral respiratory infections by various mechanisms](#)⁶, including impairment of the immune response, damage of the cilia in the respiratory tract, and intracellular oxidative stress. Another recent study published in Nature Aging showed that short-term exposure to polluted air, [even at levels generally considered "acceptable," can impair mental ability in the elderly](#)⁷.

Nitrous oxide is another harmful pollutant from our transportation system that has dramatic health consequences. When combined with volatile organic compounds (VOCs), the reaction creates ozone in the presence of sunlight and heat. Exposure of healthy individuals to [relatively low ozone concentrations can cause harmful respiratory conditions](#) and cardiopulmonary impacts, including lung irritation, breathing difficulties, reduced lung capacity, aggravated asthma, COPD, and increased mortality from cardiopulmonary and lung disease⁸. Millions of Americans suffer from the [harmful effects of ground-level ozone pollution](#) —be they children too

Americans suffer from the [harmful effects of ground-level ozone pollution](#) —be they children too sick to go to school, high school football players not allowed to practice outdoors in the summer, 65-year-olds with lung disease unable to take a walk in the park, or farmers at risk when they harvest their fields⁹. Ozone pollution will also worsen as climate change worsens.

In one year, in the Northeast and mid-Atlantic alone, tailpipe-related pollution caused an estimated 7,100 premature deaths¹⁰. According to a new study that analyzed 2016 data, [many of these deaths were from the pollution that crosses state lines](#). The authors said that this new, detailed modeling of the damages from specific pollutants and classes of vehicles could help policymakers target regional efforts and replicable efforts (such as the ACT rule) to curb interstate transportation pollution¹¹. An additional study by the Clean Air Task Force focusing on Maryland, see Figure attached, documents adverse health effects localized to Maryland from diesel exhaust here in the state¹².

Based on my discussions with transportation and climate change experts, including at the Union of Concerned Scientists, I am confident this Act is a reasonable policy solution to meet our mutual goal of improving the health of Maryland residents while also curbing climate change which has additional negative health consequences. By joining with other states in our region, Massachusetts, New Jersey, and New York, this will serve as a model for all states to reduce a significant source of particulate and greenhouse gas emissions.

In summary, I urge a **FAVORABLE** vote on HB 829 Zero-Emission Truck Act of 2022,

Sincerely,

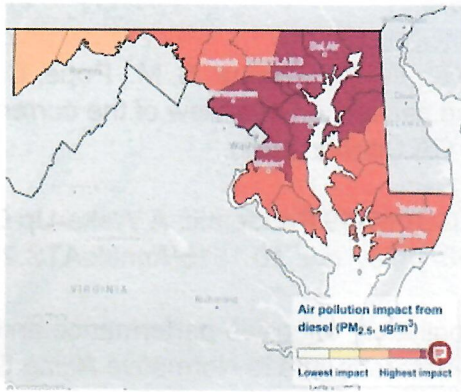


Christine D. Berg, MD
8003 Greentree Road, Bethesda, MD 20817
drchrisberg@outlook.com
301-908-0398 (cell)

Note: The ideas expressed in these written comments are solely my own and do not express the views or opinions of my employers.

FIGURE

Health Effects of Diesel | Maryland



Annual Projected Impacts in 2023: Health

Deaths	186	# of deaths
Heart Attacks	73	# of heart attacks
Acute Bronchitis	115	# of cases
Upper Respiratory Symptoms	2,088	# of cases
Lower Respiratory Symptoms	1,462	# of cases
Emergency Room Visits, Asthma	48	# of visits
Asthma Exacerbation	2,149	# of cases
Lifetime Cancer Risk Per Million	246	# of cases per million people

Clean Air Task Force <https://www.catf.us/work>

REFERENCES

1. Dickman E, Backler C, **Berg CD**, Komandt M, Schiller Climate Change and Oncology Nursing: A Call to Action. *J.Clin J Oncol Nurs*. 2022 Feb 1;26(1):109-113. doi: 10.1188/22.CJON.109-113.PMID: 35073306
2. Schiller JH, Averbuch SD, **Berg CD**. Why Oncologists Should Care About Climate Change. *JCO Oncol Pract*. 2020 Dec;16(12):775-778. doi: 10.1200/OP.20.00609. Epub 2020 Sep 11.PMID: 32915709
3. Hiatt, R. A., & Beyeler, N. (2020). Cancer and climate change. *Lancet Oncol*, 21(11), e519-e527. doi:10.1016/S1470-2045(20)30448-4
4. <https://www.lung.org/media/press-releases/solc-2021>
5. Turner M.C. Andersen, Z. J., Baccarelli, A., Diver, W. R., Gapstur, S. M., Pope, C. A., 3rd, Cohen, A. (2020). Outdoor air pollution and cancer: An overview of the current evidence and public health recommendations. *CA Cancer J Clin*. doi:10.3322/caac.21632
6. Mein SA, Annesi-Maesano I, Rice MB.(2021) COVID-19 Pandemic: A Wake-Up Call for Clean Air. *Ann Am Thorac Soc*. Sep;18(9):1450-1455. doi: 10.1513/AnnalsATS.202012-1542VP.
7. Gao, X., Coull, B., Lin, X. et al. Short-term air pollution, cognitive performance and nonsteroidal anti-inflammatory drug use in the Veterans Affairs Normative Aging Study. *Nat Aging* 1, 430–437 (2021). <https://doi.org/10.1038/s43587-021-00060-4>
8. Schwartz J. (2016) The Year of Ozone. *Am J Respir Crit Care Med*. 2016 May 15; 193(10): 1077–1079;doi: 10.1164/rccm.201512-2533ED; PMID: PMC4872672; PMID:
9. <https://www.epa.gov/environmental-topics/air-topics>
10. <https://www.edf.org/sites/default/files/documents/TransportationWhitePaper.pdf>
11. <https://www.hsph.harvard.edu/c-change/news/trechsources/>
12. *Clean Air Task Force* <https://www.catf.us/work>

Testimony.HB 829.Zero Emission Truck Act of 2022.F

Uploaded by: Christine Slater

Position: FAV

February 25,2022

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

Position: Favorable

Tina Slater of Silver Spring MD supports HB 829.

This proposed legislation would require that the Maryland Department of Environment adopt the Advanced Clean Truck rule by December 1, 2022. This rule requires that vehicle manufacturers sell an increasing annual percentage of medium and heavy duty vehicles including pickup, delivery, and semi trucks as well as school buses between Model Year 2026 (for states that adopt in 2022) and 2035. These vehicles represent 10% of vehicles on the road but disproportionately contribute to 30% of carbon emissions, 45% of toxic nitrogen oxide emissions, and 57% of health harming particulate matter emitted by the entire transportation sector in the US.

While automakers have detailed plans to electrify large portions of their fleets over this coming decade, now several truck manufacturers are joining the party! Ford plans to develop an all-electric version of its popular Transit cargo van. Volvo Trucks has a zero-emission semi truck, the VNR Electric, with a 150-mile range, speeds up to 65 mph on the highway, and get this --- an 80% charge for the vehicle takes 70 minutes (that's enough time for lunch and a mini-nap!).

This bill phases-in the requirements for electric medium and heavy-duty trucks, starting four years from now. By that time, there will certainly be many electric vehicles to choose from. These newer larger vehicles will come with better batteries, advanced technologies, and provide extended range at a lower cost.

Under Section 177 of the Clean Air Act, states other than California are not allowed to set their own emissions standards. However, states can choose to follow and adopt vehicle standards that California has enacted. Maryland first adopted California's clean car standards for personal vehicle electrification through legislative action in 2007. Maryland has the opportunity to enact similar standards again and clean up large dirty diesel vehicles that continue to harm our health and exacerbate climate change.

This legislation would help Maryland follow through on its commitment for 30% of all medium and heavy duty vehicles sales to be electric by 2030 and could create high quality green jobs in the process. Maryland would also be included in the growing number of states adopting California's standards, including Massachusetts, New York, New Jersey, Washington, and Oregon.

I encourage a FAVORABLE report for this important legislation.

Business Support for Advanced Clean Trucks Rule in

Uploaded by: Dave Robba

Position: FAV



To: Chair Kumar P. Barve
Room 251 House Office Building
6 Bladen Street
Annapolis, MD 21401

RE: Business, Investor, and Employer Support for HB 829

Dear Chair Barve, Vice Chair Stein, and Members of the House Environment and Transportation Committee. My name is Dave Robba and I oversee state policy work in the mid-Atlantic at Ceres – A nonprofit organization that advances leadership among investors, companies, and capital market influencers to drive solutions and take action on the world’s most pressing sustainability issues. **I am writing today in support of Maryland’s adoption of the Advanced Clean Truck (ACT) rule.**

Ceres organizes the [Business for Innovative Climate and Energy Policy Network](#) – a coalition of over 80 major businesses - all committed to driving sustainability throughout the economy. We also coordinate the [Ceres Investor Network](#), which includes 175 members with collectively nearly \$30 trillion in assets under management.

Ceres also runs the [Corporate Electric Vehicle Alliance](#), a collaboration of 30 companies including Amazon, DHL, JLL, IKEA, Siemens and others looking to completely decarbonize and electrify their fleets. The members of this alliance collectively own, lease or operate nearly 1.3 million on-road vehicles in the United States.

The companies and investors we engage with through these networks see climate change as a significant risk and see reducing GHGs as an economic opportunity. This is why more than 70 major businesses, institutions, healthcare systems, employers, and investors with nearly \$43 billion in assets under management - including many with operations or business interests in Maryland¹ - recently signed a letter calling on states across the nation to adopt the ACT Rule. **Like these companies, we strongly support Maryland's adoption of the ACT Rule and see it as an essential component of a comprehensive plan to reduce transportation emissions in the state.**

The proposed legislation (SB 687) would require that the Maryland Department of Environment adopt the ACT rule by December 1, 2022. This rule requires that vehicle manufacturers sell an increasing annual percentage of medium and heavy duty vehicles including pickup, delivery, and semi-trucks as well as school buses between Model Year 2026 (for states that adopt in 2022) and 2035. These vehicles represent 10% of vehicles on the road but disproportionately contribute to 30% of carbon emissions, 45% of toxic nitrogen oxide emissions, and 57% of health harming particulate matter emitted by the entire transportation sector in the US. With particulate matter emissions from the transportation sector disproportionately impacting low-

¹ See Letter in Appendix A. Signatory names in bold have operations or business interests in Maryland

income communities and communities of color, adoption of the ACT rule will also help to address existing inequities in who bears the brunt of vehicle pollution.

Because transportation is also a major cost center for companies, adopting the ACT rule presents a unique opportunity to create savings for fleet owners while decarbonizing the most polluting portion of the transportation sector and improving public health. In addition to helping clean up Maryland's air, increasing access to cost-effective zero-emission commercial transportation options helps businesses stay competitive in a market where their customers, investors, patients, students, and employees increasingly expect them to lead on sustainability. Maryland's adoption of the ACT rule will drive local innovation and investment in clean technology development and manufacturing – creating new jobs, driving long-term cost savings in company value chains, mitigating climate risk, improving public health, and reducing health care costs.

To make these ambitious corporate clean transportation goals possible, however, businesses need strong policies to coordinate industry leaders and stakeholders, increase access to zero emission vehicles, unlock cost savings and benefits, and drive market transformation at a pace and scale the private sector cannot achieve on its own. Our Corporate Electric Vehicle Alliance is growing and companies are investing in electrification because transitioning to EVs can generate cost savings over the life of a vehicle. A recent survey and analysis of 13 members of this network revealed plans to procure [approximately 333,000 electric vehicles](#) over the next five years, as appropriate models become available. **The demand is there and the Advanced Clean Trucks rule will ensure there is supply.**

This rule will accelerate the cost-effective deployment of electric medium- and heavy-duty vehicles, allow our members to meet financial and climate goals, and significantly reduce air pollution-related health impacts and costs across the state. We applaud Maryland for taking this step and look forward to working with you to continue the ambition in reducing transportation emissions.

Ceres encourages a favorable report for this important legislation and thank you for your time and leadership.

Sincerely,

Dave Robba

Senior Associate – State Policy

Ceres





Appendix A

November 15, 2021

Re: 70+ Businesses Support State Adoption of the Advanced Clean Trucks (ACT) Rule

Dear Governors considering adopting the Advanced Clean Trucks Rule:

As major businesses, institutions, healthcare systems, employers, and investors with nearly \$43 billion in assets under management, we write to express our strong support for adoption of the Advanced Clean Truck (ACT) rule across states. The ACT rule will help bring down costs for zero-emission medium- and heavy-duty vehicles by requiring manufacturers to increase model availability to meet the needs of fleet operators and driving investment in clean transportation research and development. This will enable cost-effective electrification of commercial vehicles at the pace and scale needed to meet climate and air quality goals, while delivering public health and economic benefits for communities and businesses alike.

We have made significant commitments to reduce our greenhouse gas (GHG) emissions to protect the health and economic well-being of the communities in which we live and operate. Transportation is now the largest source of GHG emissions across the nation, a substantial component of our carbon footprint, and a major operating expense. Moreover, transportation is a major source of harmful air pollutants that disproportionately impact low-income communities. Improving air quality is not only the right thing to do for public health and for these communities, it also makes economic sense. Fewer instances of respiratory illness, missed days of work and hospitalizations will increase personal disposable income and help reduce the financial pressure on our healthcare system. These impacts cross state lines, just like the commercial vehicles in our fleets and value chains.

Increased access to cost-effective zero-emission commercial vehicles across states will allow us to remain competitive in a market where our customers, investors, patients, and employees increasingly expect us to lead on sustainability. A growing number of clean vehicles offer significant cost savings through lower fuel and maintenance costs, and reduce the risk associated with the volatility of fossil fuel prices and supply. However, commercial vehicle electrification still faces significant challenges due to higher upfront costs, weight, charging time, battery range, and the availability of charging infrastructure. Market-enabling policies like the ACT will rapidly unlock the long-term savings, climate, and clean air benefits of medium- and heavy-duty vehicle (MHDV) electrification, while spurring the much-needed widespread deployment of charging stations. The more states that adopt ACT, the greater the market-forcing benefits of the rule, thereby lowering costs and creating a more stable and self-sustaining market.

Electrification of commercial transportation will support a cleaner, more energy-efficient economy through local innovation and investment in clean technology manufacturing—creating new jobs, cutting costs for our value chains, mitigating climate risk, improving public health, and reducing health care costs. Bold action by state leaders is urgently needed. We strongly support adoption of the ACT rule across states to accelerate MHDV electrification, allowing both manufacturers and fleet operators to capture savings from economies of scale and provide more cost-effective emissions reductions for all.

Sincerely,

Adrian Dominican Sisters, Portfolio Advisory Board

AMPLY Power

Appropriate Technology Group

Arapahoe Basin Ski Area

Arjuna-Capital

Aspen Skiing Company

Avocado Green Mattress

Ben and Jerry's

Boston Common Asset Management

Boston Trust Walden Company

California Health Care Climate Alliance

Clif Bar

CommonSpirit Health

Congregation of St. Joseph

Danfoss

Daughters of Charity, Province of St. Louise

Domini Impact Investment

DSM North America

eBay

ECOS Corporation

The Episcopal Church (Domestic & Foreign

Missionary Society)

Etsy

Everence and the Praxis Mutual Funds

Figure 8 Investment Strategies

Friends Fiduciary

Green Century Capital Management

Grove Collaborative

GreenPower Motor Company

Hemp Ace International

IKEA Retail U.S.

Impax Asset Management

Independence Solar

Interfaith Center on Corporate Responsibility

Legacy Vacation Resorts

Lime

Macroclimate

Mercy Investment Services, Inc.

Miller/Howard Investments

Mountain Gear

National Grid

Natural Investments, LLC.

Nestlé

New Belgium Brewing Company

Next to Nature

Nikola Corporation

Northwest Coalition for Responsible Investment

Numi Tea

Oregon Business For Climate

Proterra

Province of St. Joseph of the Capuchin Order

Revision Energy

Rivermoor Energy

Saunders Hotel Group

Siemens

Sierra Nevada Brewing Co.

Sigma Consultants, Inc.

Sisters of St. Dominic of Caldwell

Sisters of St. Dominic of Racine

Sisters of St. Francis of Philadelphia

Stonyfield Organic

Studio G Architects

Sustainable Advisors Alliance, LLC

Ten Directions Design

The Green Engineer, Inc.

Trillium Asset Management

TripZero

UMC, Inc.

Unilever

United Church Funds

United Natural Foods Inc.

Vert Asset Management

Worthen Industries

WR Consulting, Inc.

Zero Emission Transportation Association (ZETA)

***The following signatories do not have logos available: Appropriate Technology Group, The Episcopal Church (Domestic & Foreign Missionary Society), Grove Collaborative, Macroclimate, Natural*

Investments, LLC., Province St. Joseph of the Capuchin Order, Sigma Consultants, and WR Consulting, Inc.

For more information or to connect with the signatories, please contact Jennifer Helfrich, Senior Manager for State Policy at Ceres (helpfrich@ceres.org).

Ceres is a nonprofit organization working with influential capital market leaders to transform the economy in order to build a just and sustainable future for people and the planet. Learn more about Ceres and the Business for Innovative Climate and Energy Policy (BICEP) Network at www.ceres.org.

HB00829-Zero Emission Trucks - E&T-CJW-FAV.pdf

Uploaded by: Diana Younts

Position: FAV



Committee: Environment & Transportation

Testimony on: HB829 - Dept. of Environment-Zero-Emission Medium and Heavy Duty Vehicles-Regulation (Zero Emission Truck Act of 2022)

Organization: MLC Climate Justice Wing

Submitting: Diana Younts, Co-Chair

Position: Favorable

Hearing Date: February 25, 2022

Dear Mr. Chairman and Committee Members:

Thank you for allowing our testimony today. The MLC Climate Justice Wing, a statewide coalition of over 50 grassroots and professional organizations, urges you to vote favorably on HB829.

The Advanced Clean Truck Rule requires that vehicle manufacturers sell an increasing annual percentage of medium and heavy duty vehicles including pickup, delivery, and semi trucks as well as school buses between Model Year 2026 (for states that adopt in 2022) and 2035.

These vehicles represent 10% of vehicles on the road but disproportionately contribute to 30% of carbon emissions, 45% of toxic nitrogen oxide emissions, and 57% of health harming particulate matter emitted by the entire transportation sector in the U.S.

The transportation sector is Maryland's number one generator of climate-damaging greenhouse gas emissions. Our state's Greenhouse Gas Inventory indicates that gasoline and diesel powered vehicles account for 89% of this pollution.

Tailpipe emissions from these vehicles also are hazardous to human health and contribute to cancers, heart disease, asthma, emphysema and other respiratory diseases. More than 80% of Marylanders live in counties that do not meet federal clean air standards for ozone, due in significant part to tailpipe emissions. Many black and brown communities in Maryland are particularly hard hit with health issues caused by tailpipe pollution due to the cumulative impact created by their proximity to major highways and roadways; and industry polluters such as the Wheelabrator incinerator, land fills, fossil fuel power plants, sub stations, and open coal transfer stations.

In 2013, Maryland joined seven other states in signing a memorandum of understanding committing to have 300,000 zero-emission vehicles (including plug-ins) on the road by 2025,

and 600,000 EVs on the road by 2030. The state also has a goal it set for itself to reduce state greenhouse gas emissions 50% by 2030 (compared to the 2006 level). In separate legislation that goal is planned to change to 60% by 2030 and 100% by 2045.

This bill would significantly increase the likelihood the state will be able to meet its greenhouse emission reduction goals and would improve the lives of everyone who live near major roads and highways.

We support this bill and recommend a **FAVORABLE** report in committee.

MLC Climate Justice Wing:

Assateague Coastal Trust	DoTheMostGood Montgomery County
Bethesda Green	MCPS Clean Energy Campaign
Maryland Legislative Coalition	MoCo DCC
MD Campaign for Environmental Human Rights	Potomac Conservancy
Chesapeake Climate Action Network	Casa de Maryland
WISE	Nuclear Information & Resource Service
Frack Free Frostburg	Clean Air Prince Georges
Mountain Maryland Movement	Laurel Resist
Howard County Indivisible	Greenbelt Climate Action Network
Howard County Sierra Club	Unitarian Universalist Legislative Ministry of Maryland
Columbia Association Climate change and sustainability advisory committee	Concerned Citizens Against Industrial Cafos
HoCo Climate Action	Wicomico NAACP
CHEER	Chesapeake Physicians for Social Responsibility
Climate XChange - Maryland	Chispa MD
Mid-Atlantic Field Representative/	Climate Law & Policy Project
National Parks Conservation Association	Maryland Poor Peoples Campaign
350 Montgomery County	Labor for Sustainability
Glen Echo Heights Mobilization	The Nature Conservancy
The Climate Mobilization Montgomery County	Clean Air Prince Georges
Montgomery County Faith Alliance for Climate Solutions	350 Baltimore
Montgomery Countryside Alliance	Maryland Environmental Health Network
Takoma Park Mobilization Environment Committee	Climate Stewards of Greater Annapolis
Audubon Naturalist Society	Talbot Rising
Cedar Lane Unitarian Universalist Church	Adat Shalom Climate Action
Environmental Justice Ministry	Chesapeake Earth Holders
Coalition For Smarter Growth	Climate Parents of Prince Georges
	Echotopia

Maryland NAACP State Conference,
Environmental Justice Committee

HB829 Clean Air Task Force FAV.pdf

Uploaded by: Dru Schmidt-Perkins

Position: FAV



February 23, 2022

HB 829 Department of the Environment – Zero-Emission Medium and Heavy Duty Vehicles – Regulations (Zero-Emission Truck Act of 2022)

Clean Air Task Force
114 State Street, 6th Floor
Boston, MA 02109

P: 617.624.0234
F: 617.624.0230

[catf.us](https://www.catf.us)

Position: Support

Clean Air Task Force (CATF), a global nonprofit organization working to safeguard against the worst impacts of climate change by catalyzing the rapid development and deployment of low-carbon energy and other climate-protecting technologies, is pleased to provide these comments in support of Maryland House of Delegates Bill HB 829, titled “Zero-Emission Truck Act of 2022.”

Heavy trucking produces around 2.3 billion metric tons¹ per year of CO₂, of which about 450 million metric tons² per year are emitted in the U.S. This is 24%³ of the emissions from the U.S. transportation sector. In Maryland, transportation is responsible for 30.4 million metric tons⁴ of GHG emissions annually. Trucking makes up a substantial portion of these emissions in Maryland and throughout the United States.

Diesel pollution from trucks also causes significant negative health impacts. According to CATF’s Deaths by Dirty Diesel tool, in 2023 diesel vehicle emissions (both on- and off-road) are projected to contribute to 186 deaths and approximately \$2 billion in monetized health impacts in the state of Maryland.⁵

¹ Calculated by CATF based on fuel consumption data of 31 quads, assuming 74 kg of CO₂ per MMBtu of fuel. See U.S. Energy Info. Admin, *International Energy Outlook 2019*, <https://www.eia.gov/outlooks/aeo/data/browser/#/?id=51-IEO2019®ion=0-0&cases=Reference&start=2010&end=2050&f=A&linechart=~Reference-d080819.14-51-IEO2019&map=&ctype=linechart&sourcekey=0>.

² See Env’t Prot. Agency, *Fast Facts on Transportation Greenhouse Gas Emissions*, <https://www.epa.gov/greenvehicles/fast-facts-transportation-greenhouse-gas-emissions>; see also Env’t Prot. Agency, Greenhouse Gas Inventory Data Explorer, <https://cfpub.epa.gov/ghgdata/inventoryexplorer/#allsectors/allsectors/allgas/econsect/current>.

³ See Env’t Prot. Agency, *Fast Facts on Transportation Greenhouse Gas Emissions*, <https://www.epa.gov/greenvehicles/fast-facts-transportation-greenhouse-gas-emissions>.

⁴ See U.S. Energy Information Administration State CO₂ emissions <https://www.eia.gov/environment/emissions/state/> Table 4, Maryland.

⁵ See CATF, *Deaths by Dirty Diesel*, <https://www.catf.us/deathsbydiesel/>.

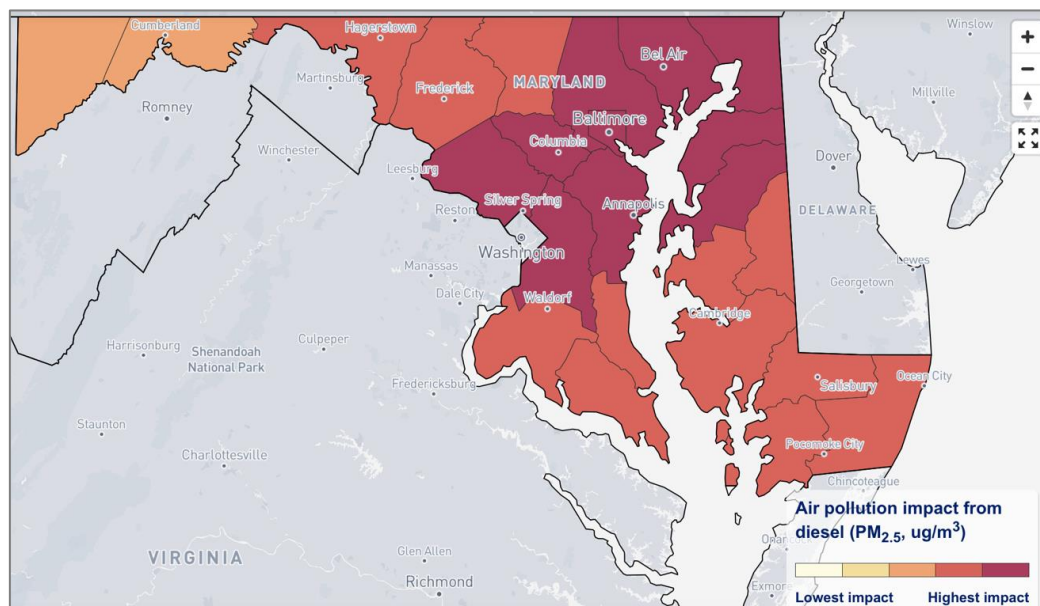


Figure 1: Maryland's air pollution impacts from diesel (CATF's Deaths by Dirty Diesel tool).

Emissions-free electric drivetrains are likely to be a powerful decarbonization tool for the heavy trucking sector. Electric drivetrains can be powered by onboard battery energy storage, similar to the battery systems used in electric cars, or by catenary wires and other continuous electricity delivery systems that are the subject of research and may play a role in very high-throughput corridors. Hydrogen fuel cells can also power electric drivetrains, and the fundamentals of onboard fuel and battery energy storage suggest that hydrogen or other zero-carbon fuels will play a substantial role in long-haul heavy trucking. By adopting California's Advanced Clean Trucks (ACT) regulation, Maryland will promote the continued development of electrification and hydrogen technologies while pursuing a concrete strategy to abate emissions from the heavy-duty truck sector.

California's Advanced Clean Trucks regulation⁶ aims to accelerate the transition of Class 2b to Class 8 medium and heavy-duty diesel trucks to zero emission vehicles (ZEVs). The regulation has two components: a manufacturer sales requirement as well as a large fleet and large employer reporting requirement. By 2035, manufacturers who certify Class 2b to Class 8 chassis or complete vehicles will need 55% of Class 2b – 3 trucks, 75% of Class 4 – 8 straight trucks, and 40% of truck tractor sales to be ZEVs. Large employers are required to report information about shipments and shuttle services and large fleet owners with 50 trucks or more are required to report on their existing fleet operations.

A key attribute of the regulation is that it defines ZEV as an on-road vehicle with a drivetrain that produces zero exhaust emission of any criteria pollutant (or precursor pollutant) or greenhouse gas under any possible operational modes or conditions. This definition allows hydrogen fuel cell vehicle technology to play a role in decarbonizing heavy trucking—something that CATF sees as critical, especially for the difficult-to-electrify long haul routes.

The utility of hydrogen-powered electric drivetrains in long-haul applications is evident from recent estimates from the National Renewable Energy Laboratory (NREL) on the weight, range, and

⁶ See California Air Resources Board Advanced Clean Trucks Regulation, Final Regulation Order <https://ww3.arb.ca.gov/regact/2019/act2019/fro2.pdf>.

refueling time for heavy trucks with plug-in battery electric vehicle (BEV) and hydrogen fuel cell electric vehicle (FCEV) drivetrains. These drivetrains are similar in many ways, but the FCEV drivetrain has a much smaller battery and includes several compressed gaseous hydrogen storage tanks and fuel cells that the BEV does not have.

By supporting the use of FCEV drivetrains, the bill creates flexibility that will likely result in environmental and economic benefits. According to recent NREL research, the advantages of the hydrogen fuel cell drivetrain led to reduced costs for truck owners on certain routes. That reduced cost, in addition to the operational flexibility of hydrogen drivetrains, suggests that availability of hydrogen fuel cell electric trucks and fueling infrastructure would be a significant decarbonization promoter. Major manufacturers see this opportunity and are developing commercial products to pursue it.⁷

While not the majority of truck activity, long-haul (e.g., sleeper) routes, defined by NREL as greater than 500 miles, make up approximately 49%⁸ of fuel consumption in the U.S. heavy trucking sector. Given Maryland's proximity to key commercial hubs along the East Coast and in the Midwest, long-haul routes are expected to make up a good portion of truck activity in Maryland. By allowing for FCEVs in addition to BEVs, including a reporting requirement, and maintaining sensible timeframes for requiring manufacturers to enter the market, the Advanced Clean Trucks regulation sensibly tackles the climate impacts from the trucking sector. Adopting this regulation will reduce the climate impact of medium and heavy-duty trucking, benefiting Maryland into the future.

We urge the Committee to issue a favorable report on HB 829.

Please reach out to Angela Seligman (email: aseligman@catf.us, cell: 314.922.5293) with any questions.

CATF is a global nonprofit organization working to safeguard against the worst impacts of climate change by catalyzing the rapid development and deployment of low-carbon energy and other climate-protecting technologies. With 25 years of internationally recognized expertise on climate policy and a fierce commitment to exploring all potential solutions, CATF is a pragmatic, non-ideological advocacy group with the bold ideas needed to address climate change. CATF has offices in Boston, Washington D.C., and Brussels, with staff working virtually around the world.

⁷ See Air Products and Cummins to Accelerate Development and Deployment of Hydrogen Fuel Cell Trucks, July 2021, available at <https://www.cummins.com/news/releases/2021/07/26/air-products-and-cummins-accelerate-development-and-deployment-hydrogen>. See also <https://www.greencarcongress.com/2021/06/20210614-pola.html> and <https://www.cnbc.com/2021/11/12/too-risky-to-not-use-battery-and-hydrogen-tech-daimler-truck-ceo.html>.

⁸ See Dep't of Transp., *Freight Facts and Figures 2017*, Table 2-3, Figure 2-1, Table 6-8, Table 6-9 (Oct. 13, 2017), https://www.bts.dot.gov/sites/bts.dot.gov/files/docs/FFF_2017.pdf.

LNS Testimony_Zero Emission Truck Act_HB 829 (1).p

Uploaded by: Elizabeth Bunn

Position: FAV



LABOR NETWORK FOR SUSTAINABILITY

A PROJECT OF VOICES FOR A SUSTAINABLE FUTURE, INC.

Labor Network for Sustainability seeks to build a powerful labor-climate movement to secure an ecologically sustainable and economically just future where everyone can make a living on a living planet.

February 23, 2022

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

Position: Favorable

The Labor Network for Sustainability (LNS) supports the Zero-Emission Truck Act and urges a favorable report.

This proposed legislation would require that the Maryland Department of Environment adopt the Advanced Clean Truck rule by December 1, 2022. This rule requires that vehicle manufacturers sell an increasing percentage of zero emissions medium and heavy duty vehicles annually between Model Year 2026 (for states that adopt in 2022) and 2035. These vehicles, which include pickup, delivery, and semi trucks and school buses, represent 10% of vehicles on the road but disproportionately contribute to 30% of carbon emissions, 45% of toxic nitrogen oxide emissions, and 57% of health harming particulate matter emitted by the entire transportation sector in the US.

LNS is committed to creating a sustainable economy that is also economically just. This bill helps Maryland transition to a carbon-free transportation system that we need and deserve. It should be accompanied by measures that address potential harm to workers and communities the bill might cause so that the transition is just. We should also work to adopt policies to provide incentives to companies manufacturing zero emissions vehicles to locate in Maryland and to encourage high quality job standards.

Under Section 177 of the Clean Air Act, states other than California are not allowed to set their own emissions standards. However, states can choose to follow and adopt vehicle standards that California has enacted. Maryland first adopted California's clean car standards for personal vehicle electrification through legislative action in 2007. Maryland has the opportunity to continue its climate leadership role by enacting similar standards for medium and heavy duty vehicles and begin to to mitigate the harm caused by large diesel vehicles. This is a public health imperative.

Additionally, this legislation would help Maryland meet its commitment for 30% of all medium and heavy duty vehicles sales to be electric by 2030 and could create high quality green jobs in the process. Maryland would also be included in the growing number of states adopting the Advanced Clean Truck Rule, including California, Massachusetts, New York, New Jersey, Washington, and Oregon.

We encourage a FAVORABLE report for this important legislation.

Elizabeth Bunn
Maryland State Director
Ebunn@labor4sustainability.org

HB829_MDPIRG_ENVMD_FAV.pdf

Uploaded by: Emily Scarr

Position: FAV



Maryland PIRG
Maryland Public Interest Research Group

**Testimony HB829
Zero-Emission Truck Act of 2022
Environment & Transportation
February 25th, 2022
Emily Scarr, Maryland PIRG Director
FAVORABLE**

Maryland PIRG is a state based, small donor funded public interest advocacy organization with grassroots members across the state. For fifty years we've stood up to powerful interests whenever they threaten our health and safety, our financial security, or our right to fully participate in our democratic society.

Environment Maryland is a citizen-based environmental advocacy organization. We work to protect clean air, clean water, and open space.

Throughout the state, Maryland children and families are suffering from the damaging effects of living with unhealthy air quality. In October, Maryland PIRG Foundation and Environment Maryland Research and Policy Center released "[Trouble in the Air](#)," which outlined elevated air pollution days throughout the state. The Baltimore area experienced 43 elevated air pollution days in 2020, and many metropolitan areas throughout Maryland faced similar levels of air pollution. Elevated air pollution increases the risk of premature death, asthma attacks, cancer and other adverse health impacts.

In the [American Lung Association's 2021 State of the State Report](#), six Maryland counties received an "F" for air quality. [See chart on final page]

Clearly, the Advanced Clean Truck rule (ACT) won't clean up all of our vehicles or even electrify all our trucks. But it will start to put us towards a path of mandating an increasingly higher number of electric trucks sold in the state starting in 2025, and ramping up for more than a decade.

Diesel fumes from medium and heavy duty trucks on the road is a true health hazard.

Diesel particulate matter contributes to numerous health impacts including increased hospital admissions, particularly for heart disease, but also for respiratory illnesses, and even premature death.

Diesel trucks, like all fossil fuel vehicles, are also a source of global warming pollution.

The Advanced Clean Truck rule would apply to everything as small as delivery trucks to as big as 18-wheelers. It sets a sales requirement that increases each year, starting in 2025, so that a certain percentage of all trucks sold each year must be electric and ratcheting up through 2035.

This rule requires that vehicle manufacturers sell an increasing annual percentage of medium and heavy duty vehicles including pickup, delivery, and semi trucks as well as school buses

between Model Year 2026 (for states that adopt in 2022) and 2035. **These vehicles represent 10% of vehicles on the road but disproportionately contribute to 30% of carbon emissions, 45% of toxic nitrogen oxide emissions, and 57% of health harming particulate matter emitted by the entire transportation sector in the US.**

The most common opposition to this bill by the vehicle industry is that the cost exceeds the benefits. This is false from multiple perspectives.

First, zero-emission trucks provide savings to fleets: many trucks are already cost competitive on a total cost of ownership basis; larger vehicles are expected to achieve parity by 2025, and heavy-duty long-haul vehicles are expected to achieve parity by 2030, even without incentives (ZEV owners are anticipated to save \$30,000 over the lifetime and especially after model year 2035).¹ This is largely due to fuel cost savings from charging with less expensive fuel and anticipated lower maintenance costs.

The upfront price of vehicles is also expected to continue to decline significantly as battery prices decline; adopting the ACT will only further that trend by increasing supply and improving economies of scale in a way that continues to depress prices. That being said, it is important to remember in the nearer term that looking only at these upfront expenses results in a myopic point of view - one that tells only a small part of the story and doesn't take into account public health impacts and related healthcare costs.

By passing this bill, Maryland would join a growing number of states adopting the Advanced Clean Truck Rule, including California, Massachusetts, New York, New Jersey, Washington, and Oregon. This legislation would also help Maryland follow through on its commitment for 30% of all medium and heavy duty vehicles sales to be electric by 2030 and could create high quality, environmentally friendly jobs in the process.

We respectfully request a favorable report.

¹ North American Council for Freight Efficiency, *Electric Trucks: Where They Make Sense* (May 2019) at 13-14, <https://nacfe.org/emerging-technology/electric-trucks/>; ICF, Comparison of Medium- and Heavy-Duty Technologies in California – Executive Summary (Dec. 2019) at 4, https://www.caletc.com/assets/files/ICF-Truck-Report_Final_December-2019.pdf.

Zero-Emission Truck Act of 2022.pdf

Uploaded by: Emma Weirich

Position: FAV

February 24, 2022

Testimony on SB 687
Zero-Emission Truck Act of 2022
Education, Health, and Environmental Affairs

Position: Favorable

Emma Weirich supports SB 687.

This proposed legislation would require that the Maryland Department of Environment adopt the Advanced Clean Truck rule by December 1, 2022. This rule requires that vehicle manufacturers sell an increasing annual percentage of medium and heavy duty vehicles including pickup, delivery, and semi trucks as well as school buses between Model Year 2026 (for states that adopt in 2022) and 2035. These vehicles represent 10% of vehicles on the road but disproportionately contribute to 30% of carbon emissions, 45% of toxic nitrogen oxide emissions, and 57% of health harming particulate matter emitted by the entire transportation sector in the US.

Under Section 177 of the Clean Air Act, states other than California are not allowed to set their own emissions standards. However, states can choose to follow and adopt vehicle standards that California has enacted. Maryland first adopted California's clean car standards for personal vehicle electrification through legislative action in 2007. Maryland has the opportunity to enact similar standards again and clean up large dirty diesel vehicles that continue to harm our health and exacerbate climate change.

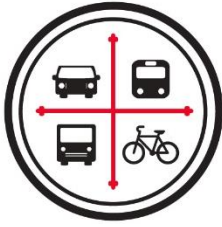
This legislation would help Maryland follow through on its commitment for 30% of all medium and heavy duty vehicles sales to be electric by 2030 and could create high quality green jobs in the process. Maryland would also be included in the growing number of states adopting the Advanced Clean Truck Rule, including California, Massachusetts, New York, New Jersey, Washington, and Oregon.

We encourage a FAVORABLE report for this important legislation.

HB 829 Support_CMTA.pdf

Uploaded by: Eric Norton

Position: FAV



Transportation Alliance

February 25, 2022

**Testimony on HB 829 –
Department of the Environment – Zero-Emission Medium and Heavy-Duty
Vehicles – Regulations (Zero-Emission Truck Act of 2022)
Environment & Transportation**

Position: Favorable

The Central Maryland Transportation Alliance supports HB 829.

This proposed legislation would require that the Maryland Department of Environment adopt the Advanced Clean Truck rule by December 1, 2022. This rule requires that vehicle manufacturers sell an increasing annual percentage of medium and heavy-duty vehicles including pickup, delivery, and semi-trucks as well as school buses between Model Year 2026 (for states that adopt in 2022) and 2035. These vehicles represent 10% of vehicles on the road but disproportionately contribute to 30% of carbon emissions, 45% of nitrogen oxide (NOx) emissions, and 57% of health harming particulate matter emitted by the entire transportation sector in the US.

As a precursor to forming ground-level ozone, NOx emissions are especially impactful in the Baltimore metropolitan region because it is a non-attainment area under the Environmental Protection Agency's (EPA) standard for 8-hour ozone levels. Being a non-attainment area means that ozone levels exceed those set by the EPA through its National Ambient Air Quality Standards. High concentrations of ground-level ozone are a major environmental and health concern. Breathing ozone can scar lung tissue, reduce lung function, and trigger chest pain, coughing, and congestion, as well as worsen asthma, bronchitis, and emphysema.

This legislation would help Maryland follow through on its commitment for 30% of all medium and heavy-duty vehicles sales to be electric by 2030 and could create high quality green jobs in the process. Maryland would also be included in the growing number of states adopting the Advanced Clean Truck Rule, including California, Massachusetts, New York, New Jersey, Washington, and Oregon.

We encourage a favorable report on HB 829.

House Bill 829- Zero Emmission Trucks - Feb 25 - H

Uploaded by: Henry Bogdan

Position: FAV

February 25, 2022

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

Position: Favorable

Maryland Nonprofits is a statewide association of more than 1300 nonprofit organizations and institutions. We strongly urge you to support House Bill 829 to join other states in adopting the Advanced Clean Truck Rule for Maryland.

Air quality, like other aspects of the environment, has a significant impact on the health of our communities. Public infrastructure, and environmental hazards (including factors such as traffic congestion and truck-routing) often have disproportionate effects on low-income communities and communities of color.

The Advanced Clean Truck Rule requires that vehicle manufacturers sell an increasing annual percentage of medium and heavy-duty vehicles including pickup, delivery, and semi-trucks as well as school buses between Model Year 2026 (for states that adopt in 2022) and 2035. These vehicles represent 10% of vehicles on the road but disproportionately contribute to 30% of carbon emissions, 45% of toxic nitrogen oxide emissions, and 57% of health harming particulate matter emitted by the entire transportation sector in the US.

Under Section 177 of the Clean Air Act, states other than California are not allowed to set their own emissions standards. However, states can choose to follow and adopt vehicle standards that California has enacted. Maryland first adopted California's clean car standards for personal vehicle electrification through legislative action in 2007. Maryland has the opportunity to enact similar standards again and clean up large dirty diesel vehicles that continue to harm our health and exacerbate climate change.

This legislation would help Maryland follow through on its commitment for 30% of all medium and heavy-duty vehicles sales to be electric by 2030 and could create high quality green jobs in the process. Maryland would also be included in the growing number of states adopting the Advanced Clean Truck Rule, including California, Massachusetts, New York, New Jersey, Washington, and Oregon.

We urge you to give House Bill 829 a favorable report.

Testimony in SUPPORT of HB0829.pdf

Uploaded by: Joseph Jankowski

Position: FAV

Testimony in SUPPORT of HB0829 – Zero-Emission Medium and Heavy Duty
Vehicles – Regulations (Zero Emission Truck Act of 2022)

Dear Chairman Barve and members of the Environmental and Transportation Committee,

I support the Zero Emission Truck Act of 2022 HB0829 / SB0687.

The Eastern Shore of Maryland will be subject to sea level rise before most of the area of the United States due to human induced climate change. This bill proposes actions which Maryland can take to reduce greenhouse gas emissions which are a major cause of human induce climate change.

My waterfront home is located on coastal bays of the Eastern Shore of Maryland. My home's existence and value is threated by rising sea levels. Action is required by my state legislators to protect me and my family from future harm, which has been clearly identified by U.S. scientists.

Respectfully,

Joseph Jankowski
Berlin, Maryland 21811

Clean Truck Testimony.pdf

Uploaded by: Joseph Tumfour

Position: FAV

February 25,2022

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

Position: Favorable

Joseph Tumfour supports HB 829.

This proposed legislation would require that the Maryland Department of Environment adopt the Advanced Clean Truck rule by December 1, 2022. This rule requires that vehicle manufacturers sell an increasing annual percentage of medium and heavy duty vehicles including pickup, delivery, and semi trucks as well as school buses between Model Year 2026 (for states that adopt in 2022) and 2035. These vehicles represent 10% of vehicles on the road but disproportionately contribute to 30% of carbon emissions, 45% of toxic nitrogen oxide emissions, and 57% of health harming particulate matter emitted by the entire transportation sector in the US.

This proposed legislation provides necessary steps that need to be taken to improve the many environmental issues that plague not only disadvantaged communities in Maryland, but the state of Maryland as a whole. I've had the honor and privilege to collaborate with the Chesapeake Climate Action Network (CCAN) during my time at the Johns Hopkins Bloomberg School of Public Health, where I was tasked from one of my courses to partner with community organizations and provide solutions and strategies to public health problems. With the guidance from the CCAN, my classmates and I were able to create factsheets targeting middle schoolers, high schoolers, and stakeholders respectively, and awareness about how heavy duty vehicles contribute to generating air pollutants such as particulate matter and sulfur dioxide. There are unfortunate health effects, such as pediatric asthma, that can be mitigated if the Advanced Clean Truck rule is in motion.

Under Section 177 of the Clean Air Act, states other than California are not allowed to set their own emissions standards. However, states can choose to follow and adopt vehicle standards that California has enacted. Maryland first adopted California's clean car standards for personal vehicle electrification through legislative action in 2007. Maryland has the opportunity to enact similar standards again and clean up large dirty diesel vehicles that continue to harm our health and exacerbate climate change.

This legislation would help Maryland follow through on its commitment for 30% of all medium and heavy duty vehicles sales to be electric by 2030 and could create high quality green jobs in the process. Maryland would also be included in the growing number of states adopting the Advanced Clean Truck Rule, including California, Massachusetts, New York, New Jersey, Washington, and Oregon.

We encourage a FAVORABLE report for this important legislation.

HB829_INFO_Tulkin

Uploaded by: Josh Tulkin

Position: FAV

Advanced Clean Trucks (ACT) Rule FAQ

[Many of these responses were derived from an NRDC article.](#) This contains a list of frequently asked questions about the ACT. These are meant for allies and advocates to better understand the rule. Maryland specific portions are specified. 🚚 ⚡

Contact: Kevin X. Shen, kshen@ucsusa.org. Last updated 2/23/22.

About the ACT

- Q: What other states have adopted the ACT?
- Q: Are buses included in the ACT?
- Q: Without a requirement to buy ZEVs or sustained incentive programs for purchasing ZEVs, will ACT economically harm manufacturers and the public?
- Q: Shouldn't this be something the federal government handles rather than leaving it to the states?
- Q: Won't manufacturers just leave our state to avoid the regulation? Truck operators too?
- Q: Will this affect the truck assembly plants in my state?
- Q: How will the ACT impact small businesses?
- Q: Why is my state using California's cost benefit analysis instead of conducting its own?
- Q: What are the benefits of the ACT in my state?

Electric Truck Technology

- Q: Are electric trucks available?
- Q: Do you have any real world examples of electric trucks in use?
- Q: Aren't ZEVs way more expensive than internal combustion vehicles?
- Q: How do fleet operators feel about electric trucks?
- Q: Is the timeline too ambitious?
- Q: Don't we need charging infrastructure first?
- Q: Can the grid handle it?

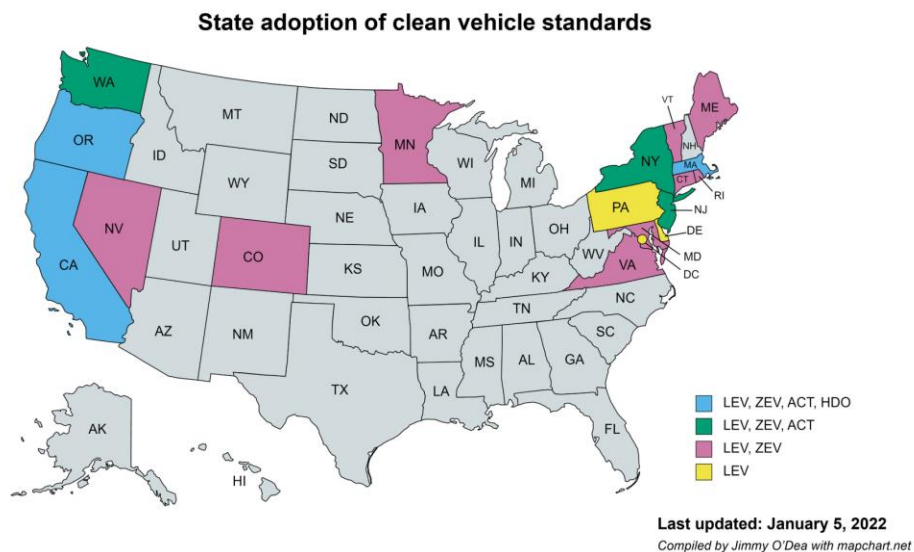
Other Policy Details and Complements

- Q: What is the large entity reporting requirement?
- Q: How about purchase mandates?
- Q: What about vehicle or charger incentives?
- Q: What other policies should we be considering?

About the ACT

Q: What other states have adopted the ACT?

A: Currently, California, Oregon, Washington, New Jersey, New York, and Massachusetts have adopted the ACT. Connecticut has legislation underway to give the agency authority to adopt the regulation. Other states are also considering the rule, with some discussions in Maine, Vermont, Rhode Island, Colorado, and Illinois. See <https://www.electrictrucksnow.com/states> and this map below.



Q: Are buses included in the ACT?

A: School buses are included in the sales requirements, while transit buses are not. School buses are exempt from the large entity reporting [requirement](#). Transit buses were exempted since they were accounted for in California's [Innovative Clean Transit rule](#).

Q: Without a requirement to buy ZEVs or sustained incentive programs for purchasing ZEVs, will ACT economically harm manufacturers and the public?

A: On the contrary—pent up demand for electric trucks is resulting in billions of dollars in preorders and driving massive investment from new manufacturing entrants such as Rivian, BYD, Arrival, and Tesla. The ACT simply ensures a minimum supply of ZEVs, while providing market certainty that can unlock additional investments. Moreover, in many states, incentive programs for ZEVs and supporting charging infrastructure do exist. Aside from the public health and climate benefits that the general public will enjoy from ZEVs, plugging in more electric trucks on

to the grid will help drive down electricity prices for all consumers, while fleets' fuel and maintenance cost savings can be reinvested and dispersed in local economies.

Q: Shouldn't this be something the federal government handles rather than leaving it to the states?

A: We should do both! But we can't wait for federal action. We need to immediately reduce our greenhouse gas and local air pollutants to avoid the worst of climate change and to remedy the environmental injustices that communities of color and low-income communities have faced for decades due to the freight industry. ACT is a critical policy tool that allows states to act now. Federal regulations also often have longer lead times and can be harder to fight for the same stringency. State policies can help push for a stronger federal rule.

Q: Won't manufacturers just leave our state to avoid the regulation? Truck operators too?

A: Truck manufacturers operate in a global market and the electric vehicle market is rapidly expanding in the U.S. and internationally. Multinational automakers would not be acting in their own business interest to "abandon an expanding market just to invest exclusively in a dying one" ([Parks and Portillo](#)).

Many electric trucks will be cost-effective for a truck fleet's bottom line by 2025, when this rule would take effect, so we don't expect fleet owners to go to other states to buy these trucks. Rather, we've heard plenty of support [from](#) truck fleets that they want electric trucks to be more available. Also, truck fleets make decisions on where to get their vehicles on a [number of other factors](#), including location of their headquarters, fleet facilities, expected duty cycles and level of local delegation. The ACT is not likely to change these purchase decisions on the fleet side, given that it acts on the manufacturers. And to the extent that it does, future regulations such as the Advanced Clean Fleets rule can require fleets to purchase these vehicles on a gradual timeline.

Q: Will this affect the truck assembly plants in my state?

A: The ACT would only affect truck assembly plants indirectly by promoting the market for electric trucks. This industry can result in a number of good, green jobs. The rule applies to the manufacturer as a whole but not at the level of each facility.

For example, Maryland has a [Volvo Mack Trucks assembly plant in Hagerstown](#) that employs around 1,800 people. So for instance, Volvo inc. would need to report the vehicle registration numbers of Volvo trucks in Maryland. Out of state companies that sell trucks in Maryland would have to as well. They would all need to sell the same increasing percentage of trucks that are zero emission each year. They would be required to report their vehicle registration numbers to the Maryland Department of Environment.

Q: How will the ACT impact small businesses?

A: The regulation doesn't require fleet operators to purchase the vehicles, only manufacturers to sell an increasing percentage of them. There is a complementary regulation in development called the Advanced Clean Fleet rule which only applies to big fleets that have over \$50M in annual revenue or over 50 vehicles, and therefore would not require small businesses to purchase them.

Q: Why is my state using California's cost benefit analysis instead of conducting its own?

A: When developing the ACT rule, California Air Resources Board (CARB) conducted a thorough cost benefit analysis such that other states would not necessarily need to expend additional resources to conduct their own. However, many states are conducting their own analysis as well as reviewing the latest reports from industry leaders, including the International Council on Clean Transportation, MJ Bradley & Associates, and CALSTART--all of which definitively show that the ACT rule will have a net positive impact in states across the U.S. We have ample evidence to support that this rule is economically feasible and beneficial, so any calls for further analysis are merely attempts to delay the adoption process.

Q: What are the benefits of the ACT in my state?

A: There have been several reports illustrating the benefits of the ACT and subsequent regulations. [UCS/MJ Bradley/NRDC](#) and [ICCT](#) have some of the most recent ones. The benefits accounted for in these studies include:

- **Climate** benefits through reduced greenhouse gas emissions from gas and diesel truck tailpipes
- **Health** benefits resulting from decreased tailpipe pollution, particularly from dangerous fine particulate matter (PM2.5) and nitrogen oxides (NOx), which can lead to the production of soot and smog. These pollutants result in exacerbated respiratory illnesses like asthma and bronchitis, cancers, cardiovascular issues that can lead to heart attacks, and even premature death.
- **Fleet** benefits given that the total cost of ownership of electric trucks will be lower than their diesel counterparts when this rule goes into effect in 2025. Though the upfront cost of these vehicles is higher, there are huge savings to fuel and maintenance costs throughout the vehicle's lifetime.
- **Utility/ratepayer** benefits given the overall increase in electricity demand can lead to downward pressure on rates (i.e. savings on our electric bills). Electric trucks can be also be charged outside of peak demand and can even contribute grid benefits through vehicle-to-grid integration (i.e. truck batteries as energy storage).

- **Jobs** benefits by the addition of jobs in battery and electric component manufacturing, charging infrastructure construction, electricity generation – many electricians and electrical engineers.

In Maryland the ACT would result in (ICCT):

- **178,000** more electric vehicles on the roads by 2050, around 48% of the total medium- and heavy-duty vehicle population.
- Cumulative emissions reductions from 2020-2050 of 69,640 short tons of NO_x, 613 short tons of PM_{2.5}, and 7.2 million metric tons of greenhouse gases.
- Based on health modeling of these numbers, the ACT would bring over **\$1.6 billion** in public health benefits to Maryland from 2020-2025, from avoiding over **230** hospital admissions and emergency room visits, **270** premature deaths, and **116,200** cases of minor illnesses.

And for those who are wary of the costs of this legislation, the costs of *doing nothing* are the same, but in reverse.

Electric Truck Technology

Q: Are electric trucks available?

A: Yes, and increasingly so. The zero emission MHDV market has undergone significant growth in the last two years, with fleets committing to electrification as well as vehicle manufacturers producing prototype vehicles and pilot fleets, announcing commercial launch dates, and taking commercial orders for electrified models. There are over [100 different models of trucks from over 30 manufacturers](#) either in production already or within the next 2 years, covering every truck class most duty cycles (i.e. use cases). By 2025, when this rule would take effect, [virtually all market segments could be fully mature](#), with rapid technological advancements made for even the most demanding duty cycles (e.g. long-haul).

Q: Do you have any real world examples of electric trucks in use?

A: Yes, the recent [Run on Less-Electric](#) demonstration project completed earlier this year collected operational data from real world electric truck fleets in several applications, including delivery vans, box trucks, port terminal tractors, and heavy-duty semi-tractor-trailers. The 13 companies that participated in the demonstration project found that electric trucks not only “perform[] better than recent diesel” models, but in the applications tested, did not inhibit operations due to range or refueling needs.

Q: Aren't ZEVs way more expensive than internal combustion vehicles?

A: It's true that the up-front cost of an electric truck is higher today than its comparable diesel option. However, over the lifetime of the vehicle, many electric trucks are currently competitive with diesel trucks due to fuel savings and lower maintenance costs (Parks and Portillo). Since batteries are the single most expensive components of a new electric truck, upfront costs are falling as battery prices continue to decline.

There have been multitudes of studies confirming the rapidly decreasing total cost of ownership, and the advantage of zero-emission trucks over diesel counterparts:

- O'Dea, Jimmy. 2019. *Ready for Work: Now Is the Time for Heavy-Duty Electric Vehicles*. Cambridge, MA: Union of Concerned Scientists.
<https://www.ucsusa.org/resources/ready-work>
- MJ Bradley, Union of Concerned Scientists, and Natural Resources Defense Council. *Trucks Pollution in the United States (2021-2022)*
<https://www.ucsusa.org/resources/truck-pollution-united-states>
- M.J. Bradley & Associates, *Medium- and Heavy-Duty Vehicles: Market Structure, Environmental Impact, and EV Readiness*, July 2021.
<https://www.mjbradley.com/sites/default/files/EDFMHDVEVFeasibilityReport22jul21.pdf>
- EDF and Roush Industries. *Technical Review of: Medium and Heavy-Duty Electrification Costs for MY 2027- 2030*. Feb 2022.
http://blogs.edf.org/climate411/files/2022/02/EDF-MDHD-Electrification-v1.6_20220209.pdf
- Americas Commercial Transportation Research, *Charging Forward*. 2022.
<https://www.truckinginfo.com/10161524/act-half-of-class-4-8-sales-to-be-bev-by-2035>

Q: How do fleet operators feel about electric trucks?

A: Electric trucks have many benefits for fleet operators themselves. Drivers have reported that they enjoy the lower interior and exterior noise levels, better acceleration (they're actually *fun* to drive!), simpler operation (there's only one pedal, no shifting needed), avoided difficulties in refueling (just plugging it in), no idling emissions, ease of charging at depots, no smells, less fatigue, and novelty and a positive brand image. See <https://nacfe.org/run-on-less-electric-report/>

Q: Is the timeline too ambitious?

A: After the ACT rule is adopted, manufacturers have two years to prepare before the rule goes into effect. The annual new sales requirements start low and ramp up gradually while new types

of electric trucks and buses continue to enter the market. The rule includes measures to help manufacturers comply with the new requirements, such as rewards for early action and flexibility mechanisms to count extra ZEV sales from one vehicle type toward meeting the standards for another type that is not progressing towards electrification as quickly.

Q: Don't we need charging infrastructure first?

A: States will need to continue building charging infrastructure to support a full transition to an electric truck fleet. But it doesn't need to happen overnight. And several states are already expanding charging networks to support existing transportation electrification targets. Across the nation, electric utilities are investing hundreds of millions of dollars on charging infrastructure, with an increasing number of truck and bus-specific programs. There's also over [\\$7.5 billion](#) in funding from the federal Bipartisan Infrastructure Law dedicated to EV charging infrastructure across the country. Companies are interested too—Daimler, NextEra, and BlackRock recently announced [\\$650 million](#) in funding for commercial vehicles.

Further, adopting the Advanced Clean Truck rule will give states leverage to secure more investments in charging infrastructure, especially higher-power charging stations that many heavy-duty trucks will need. And new infrastructure investments can support good, in-state jobs. ([Parks and Portillo](#)).

Q: Can the grid handle it?

A: Given the gradual phase-in of the rule, meeting the electric infrastructure needs for zero-emissions trucks is feasible. The charging needs of trucks adopted in the early years of the ACT rule can likely be met by existing grid infrastructure and vehicle-grid integration strategies that avoid the need for some distribution upgrades. Furthermore, adoption of the ACT rule will provide some certainty and a baseline trajectory for truck adoption around which electric utilities in the state can plan for and implement necessary grid upgrades and service extensions. That trajectory also provides a timeline for utilities, truck operators, and EV service providers to plan and install the chargers that will serve trucks adopted under the ACT rule.

Other Policy Details and Complements

Q: What is the large entity reporting requirement?

A: California's original ACT rule includes a one-time reporting requirement for fleet owners with 50 or more trucks. The information collected through this process will allow the state to develop policies and recommendations to equitably accelerate a large-scale transition to zero-emission

medium- and heavy-duty vehicle fleets. With this additional information on truck fleet operations, state officials can target zero-emission truck use to overburdened communities who most urgently need relief from transportation pollution.

The reporting requirement is also crucial to addressing truck driver misclassification, whereby truck drivers are wrongfully classified as independent contractors and forced to front operational and equipment costs. This financial burden ultimately leads to low compliance of pollution regulations because workers simply cannot afford to upgrade their equipment. Moving forward, information on trucking operations and industry practices will be pivotal in creating high-road labor standards that center both economic and environmental justice when addressing disparities.

Q: How about purchase mandates?

A: During the beginnings of discussion around this rule, there was pushback in CA on purchase mandates on the premise that “electric trucks aren’t available yet”. The ACT is meant to make these electric trucks available, and set the path for more electric truck policies in the future. In CA, they’re currently in the rulemaking process for the [Advanced Clean Fleets](#) rule, which would require zero-emission truck purchases for different vehicle classes.

Q: What about vehicle or charger incentives?

A: The ACT can also provide certainty for incentives programs to further encourage the market. In Maryland, there is a small \$1 million [Clean Fuels Incentive Program](#) that has helped with the purchase of some electric vehicles (e.g. school buses). The TEAM act ([HB894](#)), introduced by the MEA, would expand some of these incentive programs.

Q: What other policies should we be considering?

A: ACT is just one step of many in cleaning up our transportation sector and cleaning up the air for those who experience transportation pollution first and worst. The [Heavy Duty Omnibus](#) rule has been adopted by 3 other states and would reduce NOx emissions by over 90 percent by increasing the stringency of existing emissions standards. The [Advanced Clean Fleets](#) rule would require all medium and heavy duty truck sales to be zero-emission by 2040, and would require fleets to purchase these vehicles. An [Indirect Source Rule](#) could require warehouses themselves to decrease the pollutant emissions that they create, and has been implemented in the South Coast Air Quality Management District (around Los Angeles). All of these rules are complements to the ACT which can be implemented this year.

HB829_MDSierraClub_fav - 25Feb2022.pdf

Uploaded by: Josh Tulkin

Position: FAV



P.O. Box 278
Riverdale, MD 20738

Committee: Environment and Transportation
Testimony on: HB 829 – “Department of the Environment – Zero-Emission Medium and Heavy Duty Vehicles – Regulations (Zero-Emission Truck Act of 2022)”
Position: Favorable
Hearing Date: February 25, 2022

The Maryland Chapter of the Sierra Club strongly supports HB 829 and considers it to be one of our high priority bills this session. HB 829 would require the Maryland Department of the Environment to adopt the Advanced Clean Truck (ACT) Rule by the end of this year. The rule would require all manufacturers that sell medium and heavy-duty trucks and school buses in the state to sell an increasing annual percentage of zero-emission trucks and school buses beginning in Model Year 2026 and concluding in 2035. The rule would increase the percentage of new zero-emission trucks and school buses required to be sold each year at a pace that would be gradual and technologically feasible.

Transportation is the largest source of climate-damaging greenhouse gas (CO₂) emissions and a leading source of toxic air pollution that is hazardous to human health. Trucks account for 10% of the vehicles on the road but contribute 30% of greenhouse gas emissions and 57% of tiny particulate matter (PM_{2.5}) pollution emitted by the entire transportation sector in the U.S., along with high levels of nitrogen oxide (NO_x) and other pollutants. These toxic pollutants are linked to cancers, heart disease, asthma, other respiratory diseases, and premature death. Residential neighborhoods located near major roads, highways, and warehouses, which often are communities of color due to decades of discriminatory housing, face a disproportionate burden from transportation pollution, and the health of their residents has suffered more than the general populations because of this.

Electric trucks produce no tailpipe emissions and are increasingly available. There are over 100 models from more than 30 manufacturers that are currently on the market or will be before 2024.

Section 177 of the Clean Air Act allows California to set its own vehicle emission standards that are more strict than federal standards, but no other state is allowed to set its own emission standards. However, states can choose to follow and adopt California’s more strict vehicle emission standards, as Maryland and a number of other states have done. In 2020, California set the first-in-the-nation zero-emission standards for medium and heavy-duty trucks sold in their state through adoption of the ACT Rule. Since then, New York, New Jersey, Massachusetts, Oregon, and Washington have adopted the same ACT rule, and a number of other states are considering doing so, too.

Companies across the nation are increasingly demanding electric trucks and vans to help them meet their climate and pollution goals, and to save on the costs of fuel and maintenance. More than 70 major corporations that have large truck fleets, including IKEA and Nestle, signed a letter urging state governors to accelerate the growth of electric trucks by adopting the ACT Rule.

By requiring the electrification of school buses and large pickup trucks, drayage, delivery, and semi-trailer trucks sold in Maryland, the ACT Rule would be a crucial step in the effort to combat climate change and reduce the toxic air pollution that makes us sick. Passage of HB 829 would be good for our health and the environment. We urge a favorable report on this bill.

Brian Ditzler
Transportation Chair
Brian.Ditzler@MDSierra.org

Josh Tulkin
Chapter Director
Josh.Tulkin@MDSierra.org

Founded in 1892, the Sierra Club is America’s oldest and largest grassroots environmental organization. The Maryland Chapter has over 70,000 members and supporters, and the Sierra Club nationwide has over 800,000 members and nearly four million supporters.

Written Testimony for Maryland House - Environment

Uploaded by: Larissa Koehler

Position: FAV



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](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

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.

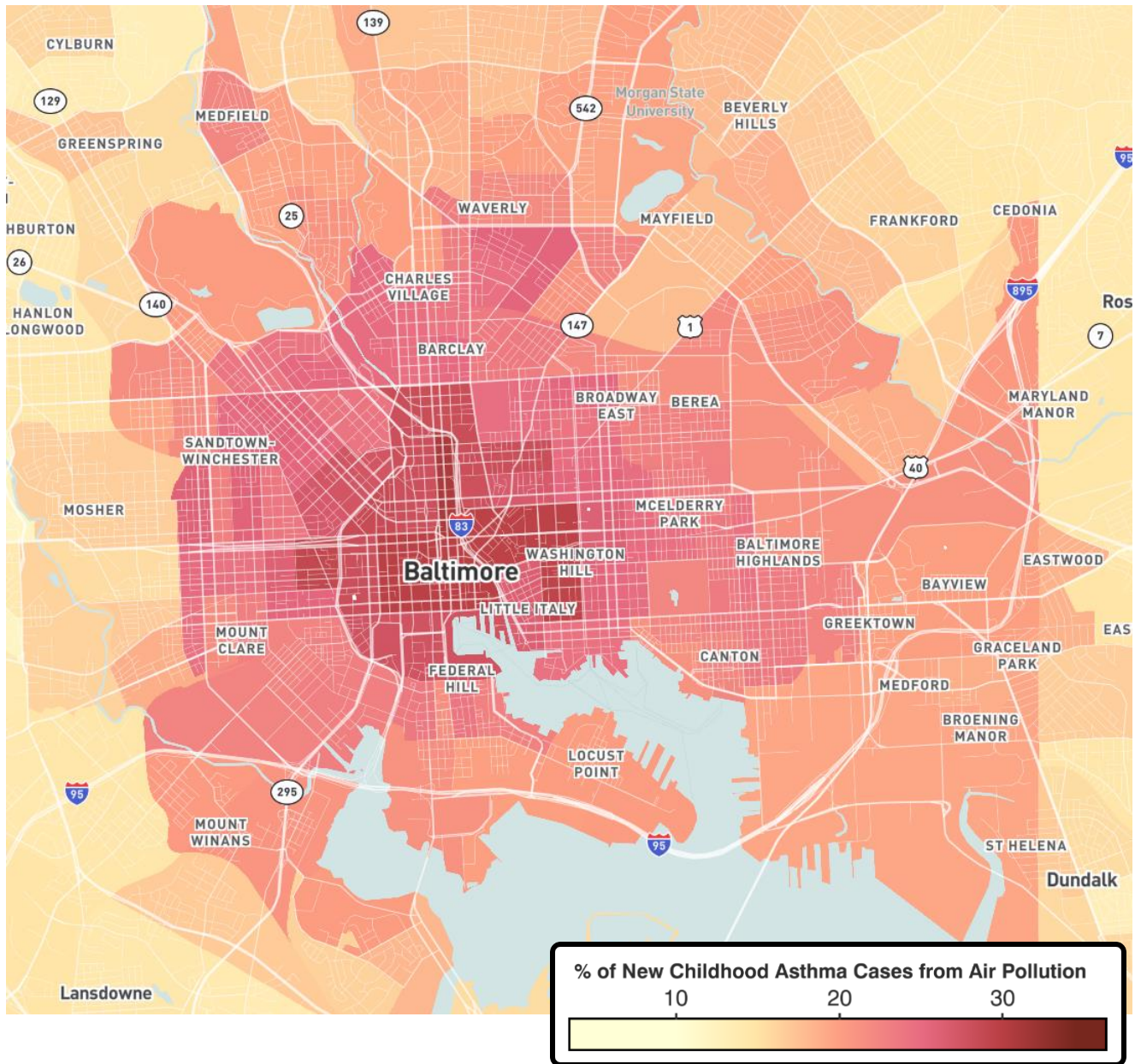
⁵ MJ Bradley and Associates, *Medium- and Heavy-Duty Vehicles – Market Structure, Environmental Impact, and EV Readiness* at 20 (Jul. 2021), <https://www.mjbradley.com/sites/default/files/EDFMHDVEVFeasibilityReport22jul21.pdf>.

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 Moheg, 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](https://doi.org/10.1016/S2542-5196(21)00255-2).

HB829_LarryBannerman_FAV.pdf

Uploaded by: Larry Bannerman

Position: FAV

February 25, 2022

Testimony on HB 829
Zero-Emission Truck Act of 2022

Education, Health, and Environmental Affairs/ Environment and Transportation

Position: Favorable

Larry Bannerman, lifelong resident of Turner Station, Md 21222

This proposed legislation would require that the Maryland Department of Environment adopt the Advanced Clean Truck rule by December 1, 2022. This rule requires that vehicle manufacturers sell an increasing annual percentage of medium and heavy duty vehicles including pickup, delivery, and semi trucks as well as school buses between Model Year 2026 (for states that adopt in 2022) and 2035. These vehicles represent 10% of vehicles on the road but disproportionately contribute to 30% of carbon emissions, 45% of toxic nitrogen oxide emissions, and 57% of health harming particulate matter emitted by the entire transportation sector in the US.

The Turner Station Conservation Teams and our community have fought alongside port agencies as well as environmental agencies in an effort to reduce truck traffic and emissions. At one point in 2018, there was a mile long backlog of idling trucks on Broening Highway. Through technological advances and innovation, that backlog no longer exists. That was a huge success! The Port of Baltimore (MPA), Ecologix, and local port agencies, have invited our community to each iteration of Dray Truck replacements. We wholeheartedly support these efforts to reduce emissions.

Under Section 177 of the Clean Air Act, states other than California are not allowed to set their own emissions standards. However, states can choose to follow and adopt vehicle standards that California has enacted. Maryland first adopted California's clean car standards for personal vehicle electrification through legislative action in 2007. Maryland has the opportunity to enact similar standards again and clean up large dirty diesel vehicles that continue to harm our health and exacerbate climate change.

This legislation would help Maryland follow through on its commitment for 30% of all medium and heavy duty vehicles sales to be electric by 2030 and could create high quality green jobs in the process. Maryland would also be included in the growing number of states adopting the Advanced Clean Truck Rule, including California, Massachusetts, New York, New Jersey, Washington, and Oregon.

We encourage a FAVORABLE report for this important legislation.

hb829, ZEV, state 2022.pdf

Uploaded by: Lee Hudson

Position: FAV



Delaware-Maryland Synod
Evangelical Lutheran Church in America
God's work. Our hands.

Testimony Prepared for the
Environment and Transportation Committee
on
House Bill 829
February 25, 2022
Position: **Favorable**

Mr. Chairman and members of the Committee, thank you for this opportunity to support a cleaner energy future via State purchasing. I am Lee Hudson, assistant to the bishop for public policy in the Delaware-Maryland Synod, Evangelical Lutheran Church in America. We are a faith community with three synods in every part of our State.

My community advocates for reductions of current and future greenhouse gas emissions through public policies that influence energy demand and consumption.

Lower emissions are feasible now with available technology. What is needed is expansion of demand for the product to achieve scale. Commercial demand for zero emission vehicles is presently strong, suggesting the public is making a supportive decision. Assisting market evolution toward zero emissions will hasten the investment needed for the desired—and we add, necessary—result. The State of Maryland, as one actor, can do its part by recruiting its purchasing power to increase ZEVs in its market.

House Bill 829 would adopt relevant standards in California's ACT policy to increase ZEVs in the State's vehicle fleets. We support this policy instrument and its goal and ask your favorable report.

Lee Hudson

Testimony - HB 829 - Zero Emission Truck Act.pdf

Uploaded by: Lee McNair

Position: FAV

February 23, 2022

Testimony: HB0829 - Zero Emission Truck Act of 2022

Organization: Cedar Lane Environmental Justice Ministry (CLEJM)

Submitter: Lee McNair, Co-Leader

Position: FAVORABLE

As a faith-based community, CLEJM believes we have a duty to heal the hurt done to both our environment and the people and other living beings in that environment. Among other actions we need to take, it is imperative that we reduce our GHG emissions. This bill - HB0829 - will help us reach our goals in that arena.

We, therefore, support this bill and urge a FAVORABLE report in committee on this vital legislation.

Thank you for giving us this opportunity to share our concerns with you.

GBA testimony clean trucks.pdf

Uploaded by: Meredith Chaiken

Position: FAV



February 25, 2022

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

Position: Favorable

Greater Baybrook Alliance supports HB 829.

This proposed legislation would require that the Maryland Department of Environment adopt the Advanced Clean Truck rule by December 1, 2022. This rule requires that vehicle manufacturers sell an increasing annual percentage of medium and heavy-duty vehicles including pickup, delivery, and semi-trucks as well as school buses between Model Year 2026 (for states that adopt in 2022) and 2035. These vehicles represent 10% of vehicles on the road but disproportionately contribute to 30% of carbon emissions, 45% of toxic nitrogen oxide emissions, and 57% of health-harming particulate matter emitted by the entire transportation sector in the US.

Brooklyn, Brooklyn Park, and Curtis Bay are disproportionately impacted by truck traffic in our residential neighborhoods. Hanover St - a main street with a mix of residences and local businesses - is clogged with trucks. It makes it dangerous for pedestrians and creates yet another hardship for our local businesses to stay and thrive. For example, we hosted an outdoor concert on a Sunday morning to create a covid-friendly community event that would also spur support for local businesses. Our concert was well attended, but residents had a difficult time enjoying the event with loud trucks whizzing by every few minutes, emitting pollution and noise. This is a constant hassle for families who live here and need to walk to the school, library, and other neighborhood spots every day.

Under Section 177 of the Clean Air Act, states other than California are not allowed to set their own emissions standards. However, states can choose to follow and adopt vehicle standards that California has enacted. Maryland first adopted California's clean car standards for personal vehicle electrification through legislative action in 2007. Maryland has the opportunity to enact similar standards again and clean up large dirty diesel vehicles that continue to harm our health and exacerbate climate change.

This legislation would help Maryland follow through on its commitment for 30% of all medium and heavy duty vehicles sales to be electric by 2030 and could create high quality green jobs in the process. Maryland would also be included in the growing number of states adopting the Advanced Clean Truck Rule, including California, Massachusetts, New York, New Jersey, Washington, and Oregon.

We encourage a FAVORABLE report for this important legislation.

WISE Testimony - Clean Truck Rule HB829.pdf

Uploaded by: Monica O'Connor

Position: FAV

February 24

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

Submitting Organization: WISE

Submitted by: Monica O'Connor, Legislative Liaison

Position: Favorable

Dear Members of the Committee,

Thank you for allowing our testimony today. WISE is an all-volunteer women-led group of advocates formed in Anne Arundel County, and has over 600 members. WISE urges you to vote favorably on HB829.

This proposed legislation would require that the Maryland Department of Environment adopt the Advanced Clean Truck rule by December 1, 2022. This rule requires that vehicle manufacturers sell an increasing annual percentage of medium and heavy duty vehicles including pickup, delivery, and semi trucks as well as school buses between Model Year 2026 (for states that adopt in 2022) and 2035. These vehicles represent 10% of vehicles on the road but disproportionately contribute to 30% of carbon emissions, 45% of toxic nitrogen oxide emissions, and 57% of health harming particulate matter emitted by the entire transportation sector in the US.

Under Section 177 of the Clean Air Act, states other than California are not allowed to set their own emissions standards. However, states can choose to follow and adopt vehicle standards that California has enacted. Maryland first adopted California's clean car standards for personal vehicle electrification through legislative action in 2007. Maryland has the opportunity to enact similar standards again and clean up large dirty diesel vehicles that continue to harm our health and exacerbate climate change.

This legislation would help Maryland follow through on its commitment for 30% of all medium and heavy duty vehicles sales to be electric by 2030 and could create high quality green jobs in the process. Maryland would also be included in the growing number of states adopting the Advanced Clean Truck Rule, including California, Massachusetts, New York, New Jersey, Washington, and Oregon.

We encourage a FAVORABLE report for this important legislation.

Zero Emission Truck bill.pdf

Uploaded by: nanci Wilkinson

Position: FAV

Committee: Education, Health, and Environmental Affairs / Environment & Transportation

Legislation: SB 0687/ HB 0829 Zero-Emission Truck Act of 2022

Organization: Environmental Justice Ministry Cedar Lane Unitarian Universalist Church

Position: Favorable

Hearings: February 24/25,2022

Dear Committee Chair and Committee Members,

Cedar Lane's Environmental Justice Ministry supports this proposed legislation that would require that the Maryland Department of Environment adopt the Advanced Clean Truck rule by December 1, 2022. This rule requires that vehicle manufacturers sell an increasing annual percentage of medium and heavy duty vehicles including pickup, delivery, and semi trucks as well as school buses between Model Year 2026 (for states that adopt in 2022) and 2035. These vehicles represent 10% of vehicles on the road but disproportionately contribute to 30% of carbon emissions, 45% of toxic nitrogen oxide emissions, and 57% of health harming particulate matter emitted by the entire transportation sector in the US.

As a faith community we hold justice and equity as a principle that guides the inherent worth and dignity of every person who is entitled to a safe, healthy and clean environment. The state of Maryland ranks 10th in the number of people with asthma, a respiratory disease that has among its causes dirty air.

Under Section 177 of the Clean Air Act, states other than California are not allowed to set their own emissions standards. However, states can choose to follow and adopt vehicle standards that California has enacted. Maryland first adopted California's clean car standards for personal vehicle electrification through legislative action in 2007. Maryland has the opportunity to enact similar standards again and clean up large dirty diesel vehicles that continue to harm our health and exacerbate climate change.

This legislation would help Maryland follow through on its commitment for 30% of all medium and heavy duty vehicles sales to be electric by 2030 and could create high quality green jobs in the process. Maryland would also be included in the growing number of states adopting the Advanced Clean Truck Rule, including California, Massachusetts, New York, New Jersey, Washington, and Oregon.

We encourage a FAVORABLE report for this important legislation HB 0829 and SB 0687.

Thank you.

Nanci Wilkinson

Environmental Justice Ministry

Cedar Lane Unitarian Universalist Church

HB829_Khanna-FAV.pdf

Uploaded by: Nishanth Khanna

Position: FAV



Committee: Economic Matters – Environment and Transportation

Testimony on: HB 829– Zero-Emission Truck Act of 2022

Position: Support

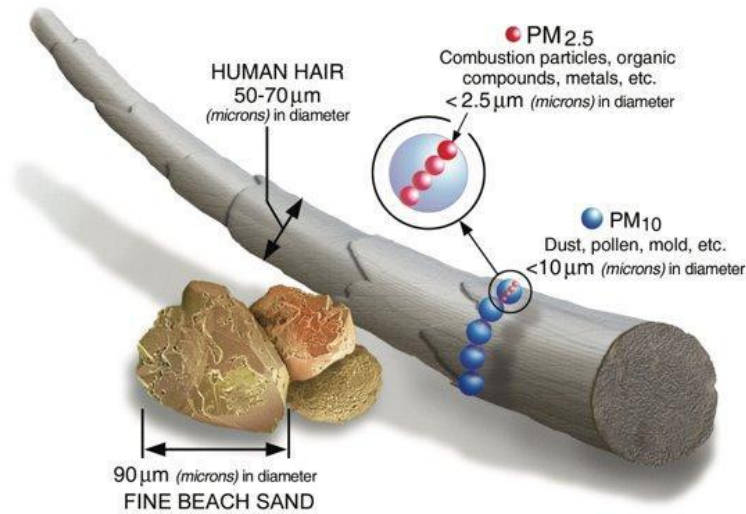
Hearing Date: February 25, 2022

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 asthma² and COPD³, and have also been shown to increase mortality related to COVID-19⁴. Diesel emissions are also a known human carcinogen⁵.

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 contributor⁶.

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,

Nishanth Khanna, M.D.
Board Member and Transit Policy Lead
Chesapeake Physicians for Social Responsibility
Nishanthkhanna@gmail.com

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.

HB-829_IndivisibleHoCoMD_FAV_PeterAlexander.pdf

Uploaded by: Peter Alexander

Position: FAV



HB829 Department of the Environment – Zero–Emission Medium and Heavy Duty Vehicles – Regulations (Zero–Emission Truck Act of 2022)

Testimony before

House Environment and Transportation Committee

February 25, 2022

Position: Favorable

Mister Chair, Mr. Vice Chair, and members of the Committee, my name is Peter Alexander and I represent the 750+ members of Indivisible Howard County. I am writing in support of HB829, The Zero–Emission Truck Act of 2022. We are grateful for the leadership of Delegate Love for sponsoring this bill.

Transportation is Maryland’s number one generator of greenhouse gas emissions which are causing global climate change. Trucks account for 10% of vehicles on the road but contribute 30% of carbon emissions and 57% of particulate matter (PM2.5) emitted by the entire transportation sector in the United States. Tailpipe emissions contribute to ozone and particulate (PM2.5) pollution resulting in failure to meet federal clean air standards for more than 80% of Maryland residents.

Fossil fuel-powered trucks are significant sources of pollutants other than greenhouse gases. Diesel exhaust contains more than 40 toxic air contaminants that in some cases can lead to decreased lung function and can cause and/or worsen diseases such as asthma and cancer.

The Clean Trucks Act of 2022 would require the Maryland Department of Environment to adopt the Advanced Clean Truck Rule by the end of 2022. This rule requires all manufacturers that sell trucks in the state to sell an increasing annual percentage of zero-emission trucks beginning in Model Year 2026 that varies by truck size. The rule increases sales targets at a pace that is gradual and technologically feasible.

If Maryland adopts the Advanced Clean Truck Rule, the state would avoid 7.2 million metric tons of cumulative carbon pollution between 2020 and 2050, the equivalent of emissions created from nearly 8 billion pounds of coal being burned. Over 70 major companies have signed a letter urging governors across the country to accelerate the growth of clean trucks by adopting the Advanced Clean Truck Rule.

Massachusetts, New York, New Jersey, Oregon and Washington joined California in 2021 by adopting the Advanced Clean Truck Rule, and more than a dozen other states have signed a joint memorandum of understanding committing to truck and bus electrification by 2050.

We respectfully urge a favorable committee report.

Peter Alexander, PhD
Woodbine, MD

HB829 - FAVORABLE_ Zero-Emission Truck Act of 2022

Uploaded by: Ramon Palencia-Calvo

Position: FAV



Kim Coble
Executive Director

February 25, 2022

2021 Board of
Directors

SUPPORT: HB829: Zero-Emission Truck Act of 2022

Lynn Heller, Chair
Mike Davis, Treasurer
The Hon. Virginia
Clagett
Candace Dodson Reed
Verna Harrison
Melanie Hartwig-Davis
The Hon. Steve Lafferty
Patrick Miller
Bonnie L. Norman
Maris St. Cyr
Katherine (Kitty)
Thomas

Mr. Chairman and Members of the Committee:

Maryland LCV strongly supports HB829: Zero-Emission Truck Act of 2022, and we thank Delegate Love for her leadership on this issue.

Maryland LCV works at the intersection of strong climate policy and environmental justice. This bill supports both of those interests.

In order to confront the growing threat of climate change, Maryland must continue to take bold steps to address the pollution coming from the transportation sector, which is the single largest contributor to our carbon emissions. Moving our state vehicles away from fossil fuel-reliant technologies and moving to zero-emission electric vehicles (which can be charged with clean, renewable energy) is critical to this effort. Trucks account for 10% of vehicles on the road, but contribute 30% of carbon emissions and 57% of particulate matter (PM2.5) emitted in the United States. People who are heavily exposed to PM2.5 and other toxic truck emissions like nitrogen oxides are at greater risk for developing asthma and many lung diseases like chronic obstructive pulmonary disease and lung cancer. Low income communities and communities of color disproportionately suffer the impacts of this diesel pollution.

Maryland LCV is especially invested in the inclusion of electric school buses in this legislation.

Every day over 650,000 children in Maryland ride to school on one of the State's approximately 7,200 diesel school buses. Every year, school buses in Maryland travel more than 128 million miles. Studies have shown that diesel pollutants concentrate inside a bus cabin, increasing children's exposure. A child riding inside of a diesel school bus may be exposed to as much as 15 times the level of toxic diesel exhaust as someone riding in a car. Diesel emissions are filled with carcinogens, particulate matter and soot that increases lifetime risk of cancer, incidents of asthma and heart disease. These effects are particularly dangerous for children because their lungs, heart, and other organs are still developing.

Children riding in zero-emission buses experience reduced exposure to air pollution, less pulmonary inflammation, more rapid lung growth over time and lower absenteeism compared to children riding in diesel buses, particularly those with asthma. In Maryland, approximately one in ten children suffer from asthma, and this rate is higher among minority groups. Asthma is a leading chronic illness among children in the United States, and it is also one of the leading causes of school absenteeism. In Maryland, 19.2 percent of parents reported that their child missed 1-2 days of school because of asthma and 9.7 percent said their child missed over seven days due to asthma.

Electric school buses are a proven technology. Here in Maryland, several school districts already have or are expecting to incorporate electric school buses to their fleets this year. Recent innovations, such as vehicle-to-grid (V2G) technology, coupled with the lower costs of operating and maintaining electric buses, have made them financially attractive for schools. One estimate puts the cost of operating electric school buses at about 19 cents per mile, compared to the 82 cents per mile cost of diesel buses.

The electrification of school buses has been a priority of Maryland LCV for many years, and is included in several important pieces of legislation this year, of which HB829 is one. This important bill works in concert with the provisions of the Electric School Bus Pilot Program (HB696).

Maryland LCV strongly urges a favorable report on this important bill.

CleanTruchs-HB829.pdf

Uploaded by: Richard Reis

Position: FAV

February 23, 2022

Testimony on HB 829
Zero-Emission Truck Act of 2022
Education, Health, and Environmental Affairs

Position: Favorable

Richard Reis, 103 W 39th St Apt A2, Baltimore MD 21210, supports HB 829

This proposed legislation would require that the Maryland Department of Environment adopt the Advanced Clean Truck rule by December 1, 2022. This rule requires that vehicle manufacturers sell an increasing annual percentage of medium and heavy-duty vehicles including pickup, delivery, and semi-trucks as well as school buses between Model Year 2026 (for states that adopt in 2022) and 2035. These vehicles represent 10% of vehicles on the road but disproportionately contribute to 30% of carbon emissions, 45% of toxic nitrogen oxide emissions, and 57% of health harming particulate matter emitted by the entire transportation sector in the US.

This pollution is personal as my wife and I live in Baltimore, a city burdened by high levels of pollution. There is significant truck traffic in front of our condominium. My daughter's family with her husband and their 2 young sons live very nearby and are affected by this pollution. My grandsons ride school buses emitting diesel pollution.

Under Section 177 of the Clean Air Act, states other than California are not allowed to set their own emissions standards. However, states can choose to follow and adopt vehicle standards that California has enacted. Maryland first adopted California's clean car standards for personal vehicle electrification through legislative action in 2007. Maryland has the opportunity to enact similar standards again and clean up large dirty diesel vehicles that continue to harm our health and worsen climate change.

This legislation would help Maryland follow through on its commitment for 30% of all medium and heavy-duty vehicles sales to be electric by 2030 and could create high quality green jobs in the process. Maryland would also be included in the growing number of states adopting California's standards, including Massachusetts, New York, New Jersey, Washington, and Oregon.

I encourage a FAVORABLE report for this important legislation.

HB 829 Support_ Transit Choices FINAL.pdf

Uploaded by: Robin Budish

Position: FAV



516 N. Charles Street, Suite 312 - Baltimore, Maryland 21201

February 23, 2022

Testimony on HB 829 –

Zero-Emission Truck Act of 2022

Environment & Transportation

Position: Favorable

Transit Choices supports HB 829.

This proposed legislation would require that the Maryland Department of Environment adopt the Advanced Clean Truck rule by December 1, 2022. This rule requires that vehicle manufacturers sell an increasing annual percentage of medium and heavy duty vehicles including pickup, delivery, and semi trucks as well as school buses between Model Year 2026 (for states that adopt in 2022) and 2035. These vehicles represent 10% of vehicles on the road but disproportionately contribute to 30% of carbon emissions, 45% of toxic nitrogen oxide emissions, and 57% of health harming particulate matter emitted by the entire transportation sector in the US.

The Advanced Clean Trucks rule presents an opportunity for state governments to accelerate medium- and heavy-duty electric vehicle adoption and reduce climate and air pollution in their state. Larger commercial vehicles tend to have an outsized impact on air quality compared with light-duty vehicles because trucks, vans, and buses often are powered by diesel fuel and emit more carbon pollution. The harmful effects of that pollution and the poor air quality it causes are disparately experienced by low-income neighborhoods and communities of color, which tend to be disproportionately located in industrial areas or along highways with large concentrations of trucks and vans transporting freight. We must meet the challenges of air pollution and climate change head on and take steps to help reduce harmful fossil-fuel emissions from this significant part of the transportation sector.

Under Section 177 of the Clean Air Act, states other than California are not allowed to set their own emissions standards. However, states can choose to follow and adopt vehicle standards that California has enacted. Maryland first adopted California's clean car standards for personal vehicle electrification through legislative action in 2007. Maryland has the opportunity to enact

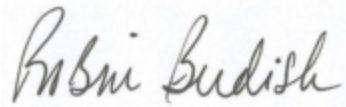
similar standards again and clean up large dirty diesel vehicles that continue to harm our health and exacerbate climate change.

This legislation would help Maryland follow through on its commitment for 30% of all medium and heavy duty vehicles sales to be electric by 2030 and could create high quality green jobs in the process. Maryland would also be included in the growing number of states adopting California's standards, including Massachusetts, New York, New Jersey, Washington, and Oregon.

We encourage a FAVORABLE report for this important legislation.

Thank you.

Sincerely,

A handwritten signature in cursive script that reads "Robin Budish". The signature is written in black ink on a light-colored background.

Robin Budish
Director

Phone: 410.340.4878

Email: robin@transitchoices.org

Love Testimony_HB 829_2022_DLH.pdf

Uploaded by: Sara Love

Position: FAV



THE MARYLAND HOUSE OF DELEGATES
ANNAPOLIS, MARYLAND 21401

February 25, 2022

**Sponsor Testimony for HB 829 – Department of the Environment – Zero–Emission
Medium and Heavy Duty Vehicles – Regulations (Zero–Emission Truck Act of 2022)**

Chair Barve, Vice Chair Stein, Members of the Environment and Transportation Committee:

As those of you on this Committee well know, in the state of Maryland, we have set ambitious goals to combat the drastic consequences of pollution. The current Greenhouse Gas Emissions Reduction Act Plan aims to reduce Greenhouse Gas (GHG) emissions by 50% no later than 2030, and includes decreasing discharges from transportation as a key element. With trucks contributing the most significant portion of GHG emissions from transportation, we must take action in this area to help make our bold environmental goals a reality. HB 829 does this by requiring the establishment of regulations regarding the sale of new zero-emission medium and heavy duty vehicles in our state.

The Context

Nationally, trucks and buses - usually fueled by diesel - account for 4% of vehicles on the road, but are responsible for nearly 25% of greenhouse gas emissions from transportation.¹ Truck emissions are the fastest growing source of greenhouse gas emissions.² Hazards from these emissions include soot or particulate matter (PM), oxides of nitrogen (NO_x), hydrocarbons (HC), carbon monoxide (CO), and other air pollutants (HAPs) and air toxics.³ They contribute significantly to serious human health and environmental effects.

Health studies show that exposure can affect the respiratory system, worsening asthma, allergies, bronchitis, and lung function, as well as increase the risk of heart problems, premature death, and lung cancer. According to EPA data, for the state of Maryland alone in 2023 these emissions will cause 186 deaths, 73 heart attacks, 5,814 respiratory illnesses, and 218 cases of increased risks for cancer, resulting in \$2,061,170,446 in monetized health damages per year.⁴

¹ <https://news.maryland.gov/mde/2020/07/14/hogan-administration-joins-multi-state-clean-truck-initiative/>

² <https://news.maryland.gov/mde/2020/07/14/hogan-administration-joins-multi-state-clean-truck-initiative/>

³ <https://www.epa.gov/diesel-fuel-standards/about-diesel-fuels>

⁴ <https://www.catf.us/deathsbydiesel/>

From an environmental perspective, these emissions contribute to the production of ground-level ozone which damages crops, trees, and other vegetation. They also produce acid rain, which affects soil, lakes and streams, and enters the human food chain via water, produce, meat, and fish. And, they contribute to climate change that impacts air and water quality, weather patterns, sea levels, ecosystems, and agriculture.⁵

Finally, in terms of social considerations, these emissions often occur in industrial or urban areas, contributing to health disparities and inequalities in frequently marginalized communities. Reducing emissions from medium and large-size vehicles through the sales of equal-size electric vehicles will improve air quality, protect people, improve the environment, and combat the effects of climate change *for all*.

In fact, recognizing the benefits of this transition, Governor Larry Hogan announced in July 2020 that he, along with the governors of 14 other states and the mayor of Washington, D.C., had signed an agreement to collaborate on increasing the number of electric medium- and heavy-duty vehicles — pursuing a goal of all sales of these vehicles being zero-emission models by 2050.⁶ The passage of HB 829 supports this goal, and is the next logical step.

What the Bill Will Do

HB 829 will mandate that the Department of the Environment (MDE) adopt regulations on or before December 1, 2022 establishing requirements for the sale of new zero-emission medium and heavy duty vehicles in the State. (There is one amendment in your packet - Medium duty vehicles are defined as weighing between 8,501 and 14,000 pounds, and heavy duty vehicles are defined as weighing 14,001 pounds or more). This Bill will encourage manufacturers and purchasers of medium and heavy-duty vehicles – including trucks and buses – to transition faster to zero-emission medium and heavy duty transport vehicles.

HB 829, the Zero–Emission Truck Act of 2022, is modeled after 2020 legislation passed in California to help the state meet its air quality and climate targets. California’s Advanced Clean Truck Regulation is part of their holistic approach to accelerate a large-scale transition of zero-emission medium-and heavy-duty vehicles. Beginning in 2024, the regulations require each truck manufacturer selling medium-and heavy-duty vehicles in the state to increase over time the number of electric versions of these vehicles sold.⁷ These regulations, the first in the world aimed at boosting sales of zero-emission trucks to regulate pollution from motor vehicles, have prompted many other states including Massachusetts, New Jersey, New York, Washington, and Oregon to adopt similar legislation.⁸

⁵ <https://www.epa.gov/dera/learn-about-impacts-diesel-exhaust-and-diesel-emissions-reduction-act-dera#:~:text=Environment%20%2D%20Emissions%20from%20diesel%20engines,%2C%20produce%2C%20meat%20and%20fish>

⁶ <https://news.maryland.gov/mde/2020/07/14/hogan-administration-joins-multi-state-clean-truck-initiative/>

⁷ <https://ww2.arb.ca.gov/resources/fact-sheets/advanced-clean-trucks-fact-sheet>

⁸ <https://www.scientificamerican.com/article/california-passes-historic-clean-truck-rule/>

Despite the many benefits of moving in California's direction, I fully acknowledge that the transportation sector is still recovering from the economic impacts of COVID – all while being counted on to help with supply chain issues – and may have concerns including:

- **Aren't EVs Expensive?:** While it is true that the up-front cost of an electric truck is higher today than its comparable diesel option, over the lifetime of the vehicle, many electric trucks are currently competitive with diesel trucks due to fuel savings and lower maintenance costs. Since batteries are the single most expensive components of a new electric truck, upfront costs are falling as battery prices continue to decline.
- **Will the Public Still Buy Without a State Sales Incentive Plan?:** Pent up demand for electric trucks is resulting in billions of dollars in preorders and driving massive investment from new manufacturing entrants.
- **Is the Timeline Too Ambitious?** The timeline in HB 829 is only the regulation adoption date. After the rule is adopted, manufacturers will likely have two years to prepare before it goes into effect. The annual new sales requirements start low and ramp up gradually while new types of electric trucks and buses continue to enter the market. This also gives Maryland time to build the necessary charging infrastructure.

In sum, the benefits of moving toward requirements for the sale of new zero-emission medium and heavy duty vehicles in the State, far outweigh any costs.

For all the foregoing reasons, I urge the Committee to adopt a favorable report of HB 829.

Sincerely,
Delegate Sara Love

Proposed Amend Sponsor HB829

Uploaded by: Sara Love

Position: FAV



HB0829/553224/1

AMENDMENTS
PREPARED
BY THE
DEPT. OF LEGISLATIVE
SERVICES

23 FEB 22
16:26:12

BY: Delegate Love

(To be offered in the Environment and Transportation Committee)

AMENDMENTS TO HOUSE BILL 829

(First Reading File Bill)

AMENDMENT NO. 1

On page 1, in line 21, strike “**26,001**” and substitute “**14,001**”.

AMENDMENT NO. 2

On page 2, in line 2, strike “**10,000**” and substitute “**8,501**”; and in line 3, strike “**26,000**” and substitute “**14,000**”.

HB0829-Fav Testimony POLICY FOUNDATION OF MARYLAND

Uploaded by: Sarahia Benn

Position: FAV



Policy Foundation of Maryland

Committee: Environment and Transportation

Testimony on: HB0829-Department of the Environment – Zero–Emission Medium and Heavy Duty Vehicles – Regulations (Zero–Emission Truck Act of 2022)

SPONSOR: Delegate Love

Organization: Policy Foundation of Maryland, MD Legislative Coalition

Person Submitting: Sarahia Benn (Executive Dir.)

Position: Favorable

Hearing Date: February 25, 2022 1PM

Mr. Chairwoman and Members of the Committee,

Thank you for allowing testimony today in opposition of HB0829. Policy Foundation of Maryland is a grassroots organization focused on State and County level legislation and policies that impacts Black, Brown, marginalized, low income communities and veterans affairs. Environmental legislation is of massive importance to these communities particularly due to how impacted these communities have been historically and currently.

HB0829's purpose would require that the Maryland Department of Environment adopt the Advanced Clean Truck rule by December 1, 2022. The rule requires that vehicle manufacturers sell an increasing annual percentage of medium and heavy duty vehicles including pickup, delivery, and semi trucks as well as school buses between Model Year 2026 (for states that adopt in 2022) and 2035. These vehicles represent 10% of vehicles on the road but disproportionately contribute to 30% of carbon emissions, 45% of toxic nitrogen oxide emissions, and 57% of health harming particulate matter emitted by the entire transportation sector in the US.

24 hours a day 18 wheelers powered by diesel spewing massive air pollution into Perryman Peninsula enter into Spesutia road spreading it everywhere and then

eventually exit. These diesel powered trucks carry Clorox and other hazardous items running right in the middle of this Blue collar, low to middle income Historical Community. Whether it's 6am, 9am, 12pm, 3pm, 5pm truck congestion is high and if a diesel powered truck breaks down in this small two lane community it creates unsafe traffic and roadway congestion to a point that pedestrians and home owners can not even commute in and out of their home roadways.

There are large backups from multi semi tractor trailers arriving and warehouse shift changes which seems to be continuously going on. This increased traffic makes trips in and out of the five surrounding communities unsafe and filled with diesel pollution. Add in all of this congestion diesel powered School buses that are filled with our Children.

Diesel exhaust is bad for everyone's health so imagine the impacts on a child's health? Exposure to diesel engine exhaust causes cancer; increases the risk of heart attack, stroke, and cardiovascular disease, exacerbates asthma and can lead to low weight. Children are especially vulnerable to air pollution because they breathe, on average, 50 percent more air per pound of body weight than adults and their lungs are still in the developmental phase.

Environmental asthma and other breathing issues have plagued my district as more and more diesel powered trucks motor down the streets of Perryman Peninsula and its five surrounding areas including Abingdon Woods and Edgewood. It is becoming its own silkwood circumstance and it's as if no one knows what's going on yet everyone knows something is going on and there has been a breach in the environment it's just being hidden from the greater public like most things in Harford.

In my district 34 we have many environmental issues brought about from excessive industrialization, excessive diesel trucks, and diesel school buses contributing damaging things to our environment such as sediment ponds near streams at the Chesapeake Bay. Some days seeing the rising gusts of diesel smoke come out the tailpipes of the school buses and the 18 wheelers in such close proximity near the school children really disturb me because as an educator I always have concern for the health of the future of Maryland. We need healthy kids to be able to focus to be able to prepare for their future and a healthy community but with this excessive pollution there is no way that many of them will.

This is why we at that Policy Foundation of Maryland and Voices Maryland support it so much. And we are asking that the General Assembly do as well. This legislation would help Maryland follow through on its commitment for 30% of all medium and heavy duty vehicles sales to be electric by 2030 and could create high quality green jobs in the

process which would contribute greatly to our economy.

For these reasons, I urge an **FAVORABLE REPORT** on **HB0829**.

Respectfully submitted,



Sarahia Benn
(Policy Foundation of Maryland, Maryland Legislative Coalition)

(Dedicated to Black History month)

“I think I did help,” she says, of her becoming a role model for other women. But they still gotta fight.”

[Gladys West](#)

Earthjustice Support Letter HB 829.pdf

Uploaded by: Susan Miller

Position: FAV



February 23, 2022
Chair Kumar P. Barve
Members of the Environment and Transportation Committee

Re: Earthjustice **Support** of HB 829: Department of the Environment – Zero-Emission Medium and Heavy Duty Vehicles – Regulations (Zero-Emission Truck Act of 2022)

Earthjustice¹ strongly supports the passage of HB 829. To achieve Maryland’s greenhouse gas (“GHG”) emissions reduction goals, Maryland must reduce and ultimately eliminate the pollution caused by the transportation sector. HB 829 is a vital step in achieving the commitment Maryland made when 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 climate and public health harms caused by Maryland’s reliance on gas and diesel vehicles.

BACKGROUND

On July 13, 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. States signing the MOU are: California, Connecticut, Colorado, Hawaii, Maine, Maryland, Massachusetts, New Jersey, New York, North Carolina, Oregon, Pennsylvania, Rhode Island, Vermont, and Washington.

New Jersey adopted the Advanced Clean Truck Rule on December 20, 2021, becoming the first state on the East Coast to do so. New York adopted the rule on December 30, 2021. The New Jersey and New York mandates require manufacturers of medium- and heavy-duty vehicles to participate in a program intended to increase the percentage of zero-emission vehicles sold in New York and New Jersey, beginning with Model Year 2025. With the rule’s adoption, both states have taken a significant step in reducing air pollution and protecting public health.

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.² If the Maryland Department of the Environment (“MDE”) fails to

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.

² 42 U.S.C. § 7507(2).

finalize the rules before December 31, 2022, Maryland will lose a compliance year and the rule's implementation will be delayed.

As noted above, New Jersey and New York adopted the Advanced Clean Truck Rule before the end of 2021. Because both states met Clean Air Act-related deadlines to issue the rules before the end of that year, these states can begin to enforce the rules, reduce air pollution, and protect public health earlier than they could have otherwise.

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.

ADOPTION OF THE CLEAN TRUCK RULE IS NECESSARY TO ACHIEVING 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 Greenhouse Gas Emissions Reduction Act of 2016 ("GGRA") calls for a reduction of emissions of 40% by 2030 (from 2006 levels). The Maryland Department of the Environment's ("MDE") 2030 GGRA Plan calls for the State to pursue a more ambitious goal of 50% reduction in emissions by 2030.

Meeting these goals requires a bold transformation in all sectors including transportation.

Maryland needs zero-emission technology in the transportation sector. Mobile sources and the fossil fuels that power them are the largest contributors to nitrogen oxides (NO_x) (which is the greatest contributor to ozone), greenhouse gas emissions, fine particulate matter (PM_{2.5}), and toxic diesel particulate matter.

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 NO_x 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.

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. 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. The MOU 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, at least 70 electric truck and bus models are on the market, and manufacturers are expected to make many more new models commercially available over the next decade.

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.

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.

AVAILABILITY OF EV MODELS

The MOU 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. The zero-emission truck and bus market is growing rapidly, with over a hundred models commercially available today. Dozens of manufacturers, including established original equipment manufacturers and startups new to the heavy-duty market, have announced plans to release commercially available zero-emission vehicles.

These models also have a lower total lifetime cost than gas or diesel power vehicles. The UC Berkeley School of Public Policy, 2035 transportation report³ focused on the feasibility, economic savings, and climate and health benefits of 100% ZE light-duty sales by 2030, and 100% ZE medium-and-heavy duty sales by 2035. The Appendix includes detailed cost breakdowns for 6 different vehicle classes (from Class 1 LDV to Class 7-8 HDT) and finds every truck class evaluated has (or will have prior to 2025) a lower lifetime cost per mile driven than its combustion equivalent.

In sum, adoption of the Advanced Clean Truck Rule 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 Delegate Love for her leadership on this important issue.

Earthjustice strongly urges a favorable report for HB 829.

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

Respectfully submitted,



Susan Stevens Miller
Senior Attorney, Clean Energy Program
Earthjustice
smiller@earthjustice.org

³ 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

LS22, HB829, CCAN Venable testimony.pdf

Uploaded by: Victoria Venable

Position: FAV

HB0829 - Zero-Emission Truck Act of 2022

Date: February 25, 2022

Committee: House Environment & Transportation Committee

Position: Favorable

Victoria Venable, Maryland Director - Chesapeake Climate Action Network Action Fund

On behalf of the Chesapeake Climate Action Network Action Fund, I urge a favorable report from the committee on **HB0829 - Zero-Emission Truck Act of 2022**. The CCAN Action Fund is the advocacy arm of Chesapeake Climate Action Network, a grassroots organization dedicated exclusively to fighting for bold and just solutions to climate change in the Chesapeake region of Maryland, Virginia, and Washington, DC. We support HB829 as a commonsense way to address the most polluting sector in Maryland - transportation - while addressing an environmental justice concern harming our most impacted communities.

Our state's Greenhouse Gas Inventory indicates that transportation is the greatest contributor to climate pollution in the state. Trucks account for 10% of vehicles on the road but [contribute 30% of carbon emissions](#), 45% of toxic nitrogen oxide emissions, and 57% of health-harming particulate matter emitted by the entire transportation sector in the US. To meet our greenhouse gas reduction goals, Maryland needs to transition as many vehicles to zero-emission vehicles as possible with a particular focus on highly polluting trucks and heavy-duty vehicles.

HB829 requires that the Maryland Department of Environment adopt the [Advanced Clean Truck rule](#) by December 1, 2022. This rule requires that vehicle manufacturers sell an increasing annual percentage of medium and heavy-duty vehicles including pickup, delivery, and semi-trucks as well as school buses between Model Year 2026 (for states that adopted in 2022) and 2035.

According to a [report by the International Council on Clean Transportation](#), if Maryland adopts the Advanced Clean Truck Rule, the state will avoid 7.2 million metric tons of cumulative carbon pollution between 2020 and 2050, the equivalent emissions created from nearly 8 billion pounds of coal being burned. This avoided pollution is particularly important because neighborhoods located near major roads and highways, and therefore bearing the greeted burden of this pollution, are often communities of color. We know that communities of color are already feeling disproportionate impacts from climate change and polluting industries. We must mitigate this burden by transitioning to zero-emissions vehicles.

This legislation would help Maryland follow through on its [commitment](#) for 30% of all medium and heavy-duty vehicles sales to be electric by 2030 and could create high-quality green jobs in the process. Thank you for your consideration of HB829. For all the reasons stated above, we urge a favorable vote from the committee.

CONTACT: Victoria Venable, Maryland Director
Victoria@chesapeakeclimate.org (301) 960-8824

HB 829 Kahn Tesla Fav

Uploaded by: Zach Kahn

Position: FAV

TESTIMONY REGARDING HB 829
being heard by the Maryland House Environment and Transportation Committee
on Friday, February 25, 2022 at 1:00 PM

Dear Chair Barve, Vice Chair Stein, and Members of the Committee:

Thank you for the opportunity to comment on HB829, Department of the Environment – Zero-Emission Medium and Heavy-Duty Vehicles - Regulations, which requires the Department of the Environment to adopt the Advanced Clean Truck (ACT) Regulation by the end of 2022. In 2021, California’s ACT Regulation was adopted by five additional states – Massachusetts, New Jersey, New York, Oregon & Washington – and several states are planning to adopt the regulation in 2022. As one of the initial signatories to the 2020 Multi-State Zero Emission Medium- and Heavy-Duty Vehicle Memorandum of Understanding, Maryland joined 15 other states and the District of Columbia in committing to make sales of all new medium- and heavy-duty vehicles in signatory jurisdictions zero emission vehicles by no later than 2050, including at least 30% of new truck sales by 2030. To have any chance of meeting its goals, truck operators in Maryland must have access to the newest models of zero emissions trucks in all classes on the market and the ACT is the key regulatory tool to ensure that these advanced vehicles are available to Maryland’s truck fleets. The ACT rule will encourage manufacturers to focus more time, energy, and resources on selling electric trucks to operators in the state. This will not only help accelerate the adoption of these trucks but will guarantee there is ample supply of electric trucks of all classes available in Maryland.

Tesla’s mission is to accelerate the world’s transition to sustainable energy. Moreover, Tesla believes the world will not be able to solve the climate change crisis without directly reducing air pollutant emissions—including carbon dioxide (CO₂) and other greenhouse gases (GHG)—from the transportation and power sectors. To accomplish its mission, Tesla designs, develops, manufactures, and sells high-performance fully electric vehicles and energy generation and storage systems, and installs, and maintains such systems. Tesla currently produces and sells four fully electric, zero emissions vehicles (ZEVs): the Model S sedan, the Model X sport utility vehicle (SUV), the Model 3 sedan, and the Model Y mid-sized SUV. Tesla will also be introducing a medium duty pickup truck, the Cybertruck, and a Class 8 heavy-duty truck, the Tesla Semi. The Tesla Semi will come in two models with ranges of 300 and 500 miles respectively and will demonstrate that an all-electric truck can meet virtually any duty cycle when paired with the megawatt charging system that Tesla and the industry is developing.

The ACT rule is not only an essential tool for addressing GHG and tailpipe emissions from the truck sector, it is also reasonable and warranted given the level of demand that can be observed in the marketplace. On the heavy-duty side, since unveiling the Tesla Semi in late 2017, a significant number of fleets with substantial freight needs have placed reservations for the truck, indicating broad industry demand for heavy-duty electric vehicles. These fleets will be deploying the Tesla Semi in a wide range of applications, including but not limited to, manufacturing, retail, grocery and food distribution, package delivery, dedicated trucking, rental services, intermodal, drayage, and other applications. Companies with operations throughout North America representing every major trucking sector and category of the economy have reserved the Tesla Semi, ranging from food service to logistics to retail.

The reason for this strong interest is clear – the economics of electrified heavy-duty vehicles are incredibly compelling for end-users. With the per mile operational costs being so much less expensive than that of diesel trucks, economic minded operators will maximize the use of their electric trucks and quickly expand the number of electric trucks in their fleets.

Tesla is not alone in its efforts to manufacture electrified medium and heavy-duty vehicles, with numerous other major manufacturers announcing plans to make zero emission Class 8 trucks.¹² A similar picture emerges in the context of electric pick-up trucks, with several major legacy and new automakers unveiling plans to manufacture electric pick-up trucks.³⁴ According to a report from CalStart,⁵ there will be nearly 200 models of zero emission medium and heavy-duty vehicle models in commercial production by the end of 2023 (several years before the ACT requirements would even come into effect for Maryland).

Strong consumer demand helps drive investments from vehicle manufacturers. Yet, strong regulations that set a clear direction for industry, such as the ACT rule, accelerate the pace of innovation and ensure the industry makes these vehicles available to consumers. As has been the case with the ZEV regulations on light-duty vehicles, EV model availability and supply is significantly more robust in states that adopted the ZEV rule, than in those that did not. In a similar vein, states that adopt the ACT should see more electric trucks models available to operators in those states compared to states that do not put a regulatory scheme in place. With growing demand and wide availability, supported by a strong regulatory framework, the broader industry could easily exceed the targets in the rule, giving momentum towards meeting state emission reduction goals.

Thank you for the opportunity to provide this testimony in support of SB687.

Zach Kahn
Senior Policy Advisor, Northeast

¹ “8 electric truck and van companies to watch in 2020”; Shane Downing, GreenBiz, January 13, 2020.

<https://www.greenbiz.com/article/8-electric-truck-and-van-companies-watch-2020>

² “Big Rigs Begin to Trade Diesel for Electric Motors”, Susan Carpenter, New York Times, March 19, 2020;

<https://www.nytimes.com/2020/03/19/business/electric-semi-trucks-big-rigs.html>

³ *Id.*

⁴ <https://www.ford.com/trucks/f150/f150-lightning/2022/>

⁵ <https://calstart.org/zero-emission-model-numbers-expected-double-2023/>

HB 0829_aadams_unfav.pdf

Uploaded by: Alexander Adams

Position: UNF

Hearing on the Proposed Maryland Zero-Emission Truck Act of 2022 (SB 0687 and HB 0829) and the Proposed Incorporation by Reference of California’s Advanced Clean Truck Rule

February 24-25, 2022

Written Testimony

Introduction

The Partners for a Zero Emission Vehicle Future (PZEVF) appreciates the opportunity to submit comments regarding Maryland’s proposed legislation to accelerate the deployment of medium-duty (MD) and heavy-duty (HD) zero-emission vehicles (ZEVs) in the State.

PZEVF is a growing coalition of stakeholders from across the transportation sector united by a commitment to minimize transportation emissions and support the adoption of medium- and heavy-duty ZEVs. We support Maryland’s interest in accelerating the adoption of zero-emission trucks to address the State’s air quality and climate change goals, but we believe that the adoption by reference of California’s Advanced Clean Truck regulation will not support their realization.

As you are no doubt aware, the EPA has announced plans to develop a “Clean Trucks Plan” which will reduce greenhouse gas (GHG) and criteria pollutant emissions through a series of rulemakings over the next three years. While the details of plan components still need to be defined, we would strongly urge the Maryland General Assembly to align its programs with those inherently more effective nationwide regulations. That nationwide federal program will advance the goals we all share to implement next tier emission-standards for conventionally fueled trucks, while also accelerating the deployment of ZEV trucks. To do that effectively, however, we need a nationwide strategy and significant federal and state infrastructure funding, all as part of a larger effort to address climate change. State-specific mandates, such as the ACT Rule, while directionally correct, are not well-suited to the scope of these issues, and may work to hinder, not accelerate, the deployment of ZEV trucks.

The manufacturers, purchasers and users of ZEV trucks all support the Assembly’s goals for clean air and a strong program to reduce greenhouse gas emissions. Moreover, we all acknowledge that ZEV trucks are and should be the future of the medium- and heavy-duty commercial vehicle market.

But in light of these national developments, and for the additional reasons detailed below, we respectfully request the Maryland General Assembly delay the proposed adoption of California’s Advanced Clean Truck (ACT) Rule and oppose HB829 (or SB687), until it can more fully analyze the state’s heavy-duty fleet and assess what complementary policies and programs would best address the obstacles to medium- and heavy-duty ZEV adoption in the state.

Cost Impact to Maryland’s Fleets and Businesses

The cost impacts specific to fleets and businesses located in the state have not been thoroughly assessed. According to the Maryland Motor Truck Association, there are over 20,000, primarily small and locally owned, trucking companies in the state and over 115,180 jobs in the trucking sector. Maryland is a very different state than California and the nuances of the state's trucking sector must be considered. The state cannot assume that what may work in California will work in Maryland. The Assembly and the Department of the Environment must study the real impacts to the trucking industry prior to moving forward with such a regulation.

Additionally, compared to conventionally fueled trucks, ZEV trucks currently have purchase prices that are 2-to-3 times higher than their diesel equivalents. California, even before the implementation of the ACT Rule, is dedicating over \$10 billion from budgets over the last two years for support of electric vehicle related initiatives. In addition, California's HVIP program has been in existence for more than 10 years, funding more than 7,000 advanced technology vehicles, and the state intends to dedicate hundreds of millions of dollars more in the coming years.

Maryland has no such funding available for medium- or heavy-duty trucks. And while it is true that the state will receive additional funding under federal actions such as the IIIA and potentially the Build Back Better plan, these funds will still be insufficient and will not be deployed in time to provide meaningful support for fleets to purchase required ZEV sales in early years of the ACT.

Insufficient Infrastructure and Investment for ZEV Charging and Refueling.

Maryland will also need to make significant investments to install and maintain the necessary heavy-duty ZEV-charging and refueling infrastructure that is virtually nonexistent today.

Maryland's Department of the Environment programs provide some financial and technical support through programs such as the Alternative Fuel Infrastructure Program (AFIP), but it is inadequate to support fleets in the state who are expected to install their own fueling system in support of the ACT's requirements. While Maryland is investing and has a long-term plan for light-duty vehicle charging infrastructure, that envisioned build-out is vastly different from the necessary heavy-duty vehicle charging infrastructure in terms of power needs, as well as station structure, equipment and needed square footage.

Maryland need only look to other states for examples of the substantial time, education, investment and coordination among affected stakeholders to achieve its goal of a zero-emission vehicle future. A recently released audit of New York Power Authority's Charge NY and EVolve NY programs found that despite more than \$250 million of planned investment the program failed to place charging ports in nearly half of all counties over the course of six years and did not complete any of the planned projects for Phase 1 of the EVolve NY Program by its deadline. In the report, NYPA officials cited supply chain challenges, permitting and utility interconnection timelines as factors impacting the rollout.

Maryland utilities will also need to make significant investments to support the electric grid's resiliency and ensure power is available to meet the increased demand throughout the regions where ZEV trucks will be in operation. California utilities have established and made available well-funded charging infrastructure incentive programs in anticipation of the California ACT Rule. This is all in addition to significant investment and effort needed to ensure the electric grid will have the power available to meet the increased demand throughout the regions where ZEV trucks will be in operation.

Premature ACT Adoption Undermines Maryland's Environmental Goals

Instead of accelerating fleet adoption of ZEVs, the premature adoption of California's ACT Rule in Maryland could hinder the emerging market for zero-emission commercial vehicles by asking fleets to incur charging and uptime challenges exceeding their risk tolerance. Though well-intentioned, this regulation could undermine the air quality and climate change benefits it purports to advance if fleets experience negative consequences, making the transition to ZEVs even longer than it might otherwise be.

Unlike the case of consumers purchasing light duty vehicles, heavy-duty fleets evaluate and purchase commercial vehicles based mainly on the certainty of a return on investment and total cost of ownership. Today's vehicle and battery prices, together with the uncertainty of electricity charging costs, charging structure buildout, and vehicle residual values makes users extremely hesitant to move to new technologies. It is also important to note that technologies are being tested in California and not in cold weather states. A state like Maryland reaches much lower temperatures that impact the operating capabilities of an electric truck. Extreme cold, such as negative temperatures that Maryland can experience, has significant impact on electric vehicles. Similar efficiency losses, or more, can be expected from much larger electric trucks. With these significant concerns, it is likely users will merely keep their older trucks on the road, which would undermine the emission reduction efforts of the state.

Imposing ZEV truck sales mandates while the state has insufficiently prepared to incentivize ZEV truck purchases and support ZEV truck use will signal that Maryland is not taking the necessary time to implement a viable ZEV truck strategy. Without a coordinated strategy, trucking fleets will be less likely to purchase ZEV trucks for the foreseeable future. That result is the exact opposite of our shared objective to accelerate the deployment of ZEV trucks.

A Better Path Forward

We believe that there is a better path forward to advance our common objectives:

- *Advocate for a National Approach:* Maryland, along with the other MOU states, should advocate for next-tier EPA regulations for heavy- and medium-duty trucks and should work to avoid the disparate state-by-state patchwork of ZEV-truck requirements that would disproportionately benefit the businesses in some states at

the expense of businesses in other states.

- *Invest in Incentives and Infrastructure:* Before adopting ZEV truck sales mandates, such as the ACT Rule, Maryland must prioritize the development of a viable and sustainable program to facilitate the purchase of ZEV trucks and infrastructure. Robust incentives must be established to offset all of the ZEV truck life-cycle costs that exceed current commercial vehicle costs, including: the higher purchase prices; the relative operational inefficiencies (*i.e.* it takes more ZEV trucks to perform the work of conventionally fueled trucks); the lower residual values; and the required investments in new maintenance facilities, training and parts inventories.

These concerns, along with the inherent benefits of coordinating around a nationwide Clean Trucks Plan, warrant a delay in the Assembly's adoption of the proposed ACT Rule and opposition to HB829 (or SB687) to allow for the implementation of a better roadmap toward a successful ZEV truck future.

We stand ready to partner with Maryland toward that goal.

Respectfully Submitted,

Partners for a Zero Emission Vehicle Future

American Truck Dealers

New Jersey Coalition of Automotive Retailers

American Trucking Associations

PACCAR

Cleanfleets.net

Trucking and Engine Manufacturers Association

Daimler Truck North America

Truck Renting and Leasing Association

Navistar

Volvo Group North America

Opposition of HB 829 - Department of the Environme

Uploaded by: Colby Ferguson

Position: UNF



Maryland Farm Bureau, Inc.

3358 Davidsonville Road • Davidsonville, MD 21035 • (410) 922-3426

February 25, 2022

To: House Environment & Transportation Committee

From: Maryland Farm Bureau, Inc.

Re: **Opposition of HB 829 - Department of the Environment – Zero-Emission Medium and Heavy Duty Vehicles – Regulations (Zero-Emission Truck Act of 2022)**

On behalf of our member families, I submit this written testimony opposing HB 829. This bill requires the Department of the Environment to adopt regulations on or before December 1, 2022, establishing requirements for the sale of new zero-emission medium and heavy-duty vehicles in the State. Heavy-duty vehicles are those that are rated over 26,000 pounds and medium are those rated at 10,001 to 26,000 pounds.

The challenge with this ambitious initiative is that the medium and heavy-duty truck market is nowhere near the light duty vehicle market. Currently, most options are in a concept phase. This bill pushes a market that is not ready yet. We don't see this bill effecting farm equipment but would affect road trucks used to haul commodities to and from the farm.

MARYLAND FARM BUREAU RESPECTFULLY OPPOSES HB 829

A handwritten signature in black ink, appearing to read 'Colby Ferguson'.

Colby Ferguson
Director of Government Relations

For more information contact Colby Ferguson at (240) 578-0396

HB829 - MD Motor Truck Association - Oppose.pdf

Uploaded by: Louis Campion

Position: UNF



Maryland Motor Truck Association

9256 Bendix Road, Suite 203, Columbia, MD 21045

Phone: 410-644-4600 Fax: 410-644-2537



HEARING DATE: February 25, 2022

BILL NO/TITLE: HB829: Department of the Environment – Zero-Emission Medium and Heavy Duty Vehicles – Regulations (Zero-Emission Truck Act of 2022)

COMMITTEE: House Environment & Transportation Committee

POSITION: Oppose

Maryland Motor Truck Association recognizes the continued need to lower greenhouse gas emissions from the transportation sector. **The trucking industry is fuel neutral**; however, we must have access to a readily available and affordable fuel supply that meets our operational needs so that we can deliver the food, clothing, medical supplies and other products that citizen's need. Electric trucks do not currently meet those criteria and are unlikely to do so in accordance with the timetable mandated in HB829.

The passage of HB829 will require that the state of Maryland mirror California's Advanced Clean Trucks rule. This mandates an increasing percentage of medium and heavy duty trucks sold in the state to be zero-emission vehicles beginning in 2024. Under the Clean Air Act, states are prohibited from setting their own emissions standards, with the exception of California. States must follow federal standards; however, if California deviates from the federal standards, other states may choose to adopt **identical standards**. Because there is no current federal standard governing zero emission trucks, Maryland would have no choice but to adopt California's standard. This means that Maryland would be automatically opted into future California standards, even if they do not represent the best interests of our state's citizens.

As noted above, electric vehicles are not yet a feasible alternative for most of the trucking industry – particularly in the heavy duty sector. Here are a few of the issues that have yet to be solved.

- Model availability – there are six major heavy duty truck manufacturers in the U.S. In a survey of those six, very few models are currently available for sale. Others are still being tested in pilot programs. Even among those that are offering vehicles, the lead time is in excess of one year to obtain the vehicle. While other manufacturers have garnered headlines about their electric trucks, actual production has yet to occur and is frequently delayed. For example, Tesla's electric semi-truck was announced in 2017, with a release date of 2019; however, none of these vehicles have yet been produced.
- Battery range and charge time – current battery ranges among the heavy duty manufacturers are projected between 150 to 250 miles. This is sufficient for local medium delivery trucks but falls well below the needs of most heavy duty regional or long-haul operations. Charge time is roughly two hours. A traditional diesel-powered tractor trailer can travel 2,000 miles on a single fill up and takes less than 15 minutes to fill up.
- Electric grid capacity – there are tremendous differences in power needed to charge a truck versus a car. This challenge cannot be overstated. Recently one trucking company with approximately 150 trucks in Joliet, IL attempted to outfit its terminal for electric vehicles. The company's application was denied by the city because the power required was greater than the rest of the city's daily use.
- Cost – by all accounts, the cost for a new electric truck is two to three times higher than the cost of a traditionally powered vehicle. This does not include charging equipment or grid infrastructure, which can be hundreds of thousands of dollars. California has attempted to overcome this by offering massive financial incentives in the billions of dollars to assist with this conversion. A single heavy duty electric tractor is eligible for a rebate of \$120,000.
- Reliability – a January 2022 report by CALSTART that was commissioned by the California Air Resources Board found that, "over 60% of the zero emission trucks that have been deployed in the United States are believed to be currently non-operational."
- Infrastructure – there are approximately 1,200 stations in Maryland for electric vehicle charging. MMTA is not aware of a single site that provides charging for trucks. The lead time for buildout of a private charging facility is 12 to 18 months.

- Additional trucks will be needed to deliver the same amount of freight – there is a 6,000 lbs. to 7,000 lbs. loss in payload with an electric truck because of the weight of the battery. This means that it will require one additional truck on the road for every six truck shipments to deliver the same amount of cargo.

Maryland is recognized primarily as a pass-through state for trucking. Most truck traffic on our roads originated in another state and is destined for a location out of Maryland. Without a federal solution, the impact of this legislation on greenhouse gas emissions reductions will be minimal as trucks traveling through Maryland will still be burning fossil fuels. Federal action to reduce GHGs from trucks is happening, but few people are aware of the tremendous activity that has occurred in recent years.

- Over the last 12 years, emissions from heavy duty diesel trucks and buses have been reduced by:
 - 99% for NOx
 - 98% for particulate matter
- It now takes 60 new trucks to equal the same emissions from one truck 30 years ago. The environmental impact was the equivalent of eliminating pollution from 13 million rigs.

Greenhouse gases have also been improved. The federal government implemented Phase 1 of its GHG reduction plan for trucks with model years 2014 – 2018. We are now in Phase 2, which runs until 2027.

- New commercial trucks being manufactured today reduce fuel consumption and GHGs by approximately 20% when compared to a truck manufactured just in 2010.
- Going forward, three additional rounds of increasingly stringent federal engine and vehicle GHG emissions standards are slated for new commercial trucks sold nationwide.
- Newly manufactured trailers will also be subject to increasingly stringent federal greenhouse gas emissions standards for the first time.
- By 2027, commercial trucks will further reduce fuel consumption and greenhouse gas emissions by an additional 25%. Improvements to trailers will provide an extra 9% reduction.

To that end, MMTA encourages a multi-faceted strategy that includes:

- A focus on infrastructure buildout backed by financial incentives for both trucks and charging stations. This is crucial to the large-scale adoption of ZEVs.
- An approach that considers all fuel options – including some continuation of fossil fuel use, such as clean diesel, natural gas, and biofuels as bridge fuels while other technologies are enhanced to meet the operational needs of the trucking industry. Both biodiesel and renewable diesel fuel are capable of significantly reducing greenhouse gas emissions without the major infrastructure investment that is required for other fuel sources.
- Bid preferences on state contracts for motor carriers that are partners in the Environmental Protection Agency’s SmartWay program and have taken steps to reduce their greenhouse gas emissions voluntarily.

Maryland is not California, which has the fifth largest economy in the world. We also do not have the pollution challenges it does. For example, in 2020, California had 157 days when it exceeded the federal ozone standard. Maryland had three such days. Getting to a ZEV truck future will be best achieved through a national program that will reduce greenhouse gases, rather than Maryland putting California in charge of our state’s trucking fuel and equipment policies. Yes, ZEV trucks are coming, but it does not make sense to adopt a policy that cannot be achieved in our state.

For the reasons noted above, MMTA asks for an unfavorable report on HB829.

About Maryland Motor Truck Association: Maryland Motor Truck Association is a not-for-profit trade association representing the trucking industry since 1935. In service to its 1,000+ members, MMTA is committed to supporting and advocating for a safe, efficient and profitable trucking industry across all sectors and industry types, regardless of size, domicile or type of operation.

For further information, contact: Louis Campion, (c) 443-623-4223

HB 829 MDCC Department of the Environment - Zero-E

Uploaded by: Maddy Voytek

Position: UNF



LEGISLATIVE POSITION:

Unfavorable

House Bill 829

Department of the Environment – Zero-Emission Medium and Heavy Duty Vehicles – Regulations (Zero-Emission Truck Act of 2022)

House Environment and Transportation Committee

Friday, February 25, 2022

Dear Chairman Barve and Members of the Committee:

Founded in 1968, the Maryland Chamber of Commerce is the leading voice for business in Maryland. We are a statewide coalition of more than 5,500 members and federated partners working to develop and promote strong public policy that ensures sustained economic recovery and growth for Maryland businesses, employees, and families.

House Bill 829 requires the Department of Environment to adopt California's Air Resources Board Vehicle Standards by December 1 of this year. These regulations will establish requirements for the sale of new zero-emission medium and heavy-duty vehicles (ZEV) in the state. Under this, auto manufacturers will be required to produce a certain number of ZEVs each year. That number is based on the total number of cars sold in California by the manufacturer.

The Maryland Chamber of Commerce understands the goal of this legislation and many of our members are working toward emission reduction goals. However, ZEV truck adoption is a very complex process and requires cooperation across key stakeholders. ZEV trucks use completely different chargers and there are zero public charging stations as of today. The batteries are 5x more expensive and the chargers are 4x more expensive. Additionally, successful deployment of ZEV trucks requires cooperation between manufacturers of both the vehicles and chargers, energy providers, component suppliers and dealerships. Lastly, preparation for such an endeavor takes *at least* 12 months.

Truck buying is a unique process, in that you don't buy a new truck off a dealer's lot. Instead, you work with a dealer on specifications and price, and they place an order from a manufacturer and then deliver the vehicle to the purchaser. Ultimately, many companies that require these trucks will take their business out of state to jurisdictions that are able to order what they need. This further hinders Maryland's economy which is already struggling to recover from the impacts of the COVID-19 pandemic.

With these concerns in mind, the Maryland Chamber of Commerce respectfully requests an **unfavorable report** on **HB 829**.

HB0829_UNF_NWRA_Zero-Emission Truck Act of 2022.pd

Uploaded by: Pam Kasemeyer

Position: UNF

Maryland-Delaware Solid Waste Association

a chapter of the

**National
Waste & Recycling
AssociationSM**

Collect. Recycle. Innovate.

TO: The Honorable Kumar P. Barve, Chair
Members, House Environment and Transportation Committee
The Honorable Sara Love

FROM: Pamela Metz Kasemeyer
J. Steven Wise
Danna L. Kauffman

DATE: February 25, 2022

RE: **OPPOSE** – House Bill 829 – *Department of the Environment – Zero-Emission Medium and Heavy Duty Vehicles – Regulations (Zero-Emission Truck Act of 2022)*

The Maryland Delaware Solid Waste Association (MDSWA), a chapter of the National Waste and Recycling Association, is a trade association representing the private solid waste industry in the State of Maryland. Its membership includes hauling and collection companies, processing and recycling facilities, transfer stations, and disposal facilities. MDSWA and its members **oppose** House Bill 829.

While MDSWA recognizes the need to continue to address greenhouse gas emissions, the requirements for electric trucks reflected in House Bill 829 are not achievable under the mandates reflected in this legislation. While MDSWA members have made significant investments in transitioning to alternative fuels to address the need to lower emissions, the electrification of waste collection vehicles is still in its infancy from a technological standpoint as the mechanics of a waste collection vehicle are more complex than many other medium and heavy-duty vehicles which also have electrification challenges. It will be virtually impossible for the waste and recycling collection vehicles to comply with these requirements and therefore MDSWA requests an unfavorable report.

For more information call:

Pamela Metz Kasemeyer
J. Steven Wise
Danna L. Kauffman
410-244-7000

HB 829_MAA_UNF.pdf

Uploaded by: Rachel Clark

Position: UNF

CHAIRMAN:
Rob Scrivener
VICE CHAIRMAN
Brian Russell

MARYLAND ASPHALT ASSOCIATION



SECRETARY:
David Slaughter
TREASURER:
Jeff Graf
PRESIDENT:
G. Marshall Klinefelter

February 25, 2022

Delegate Kumar P. Barve, Chair
Environment and Transportation Committee
251 House Office Building
Annapolis, MD 21401

RE: HB 829 – UNFAVORABLE – Department of the Environment – Zero-Emission Medium and Heavy Duty Vehicles – Regulations (Zero-Emission Truck Act of 2022)

Dear Chair Barve and Members of the Environment and Transportation Committee:

The Maryland Asphalt Association (MAA) is comprised of 18 producer members representing more than 47 production facilities, 24 contractor members, 24 consulting engineer firms and 41 other associate members. We proactively work with regulatory agencies to represent the interests of the asphalt industry both in the writing and interpretation of state and federal regulations that may affect our members. We also advocate for adequate state and federal funding for Maryland's multimodal transportation system.

House Bill 829 would require the Department of the Environment to adopt regulations establishing requirements for the sale of new zero-emission medium and heavy duty vehicles by December 1, 2022. The regulations adopted may update existing regulations and incorporate the California Air Resources Board's vehicle standards.

While we appreciate the Sponsor's intent with this legislation, HB 829 has a largely negative impact on our members and the transportation industry as a whole. We unfortunately cannot support legislation that adds a significant financial burden onto our industry. The COVID-19 pandemic has already caused us to take a large financial hit with the delay of many projects. This bill toes the line of overregulation by dictating the purchase actions of companies using medium and heavy duty vehicles. These vehicles already meet the standards required by the Federal Clean Air Act, and this additional regulation is not only burdensome, but unnecessary.

We appreciate you taking the time to address this important issue, and we urge an unfavorable report on House Bill 829.

Thank you,

Marshall Klinefelter
President
Maryland Asphalt Association

HB 829_MTBMA_UNF.pdf

Uploaded by: Rachel Clark

Position: UNF



February 25, 2022

Delegate Kumar P. Barve, Chair
Environment and Transportation Committee
251 House Office Building
Annapolis, MD 21401

RE: HB 829 – UNFAVORABLE – Department of the Environment – Zero-Emission Medium and Heavy Duty Vehicles – Regulations (Zero-Emission Truck Act of 2022)

Dear Chair Barve and Members of the Environment and Transportation Committee:

The Maryland Transportation Builders and Materials Association (“MTBMA”) has been and continues to serve as the voice for Maryland’s construction transportation industry since 1932. Our association is comprised of 200 members. MTBMA encourages, develops, and protects the prestige of the transportation construction and materials industry in Maryland by establishing and maintaining respected relationships with federal, state, and local public officials. We proactively work with regulatory agencies and governing bodies to represent the interests of the transportation industry and advocate for adequate state and federal funding for Maryland’s multimodal transportation system.

House Bill 829 would require the Department of the Environment to adopt regulations establishing requirements for the sale of new zero-emission medium and heavy duty vehicles by December 1, 2022. The regulations adopted may update existing regulations and incorporate the California Air Resources Board’s vehicle standards.

While we appreciate the Sponsor’s intent with this legislation, HB 829 has a largely negative impact on our members and the transportation industry as a whole. We unfortunately cannot support legislation that adds a significant financial burden onto our industry. The COVID-19 pandemic has already caused us to take a large financial hit with the delay of many projects. This bill toes the line of overregulation by dictating the purchase actions of companies using medium and heavy duty vehicles. These vehicles already meet the standards required by the Federal Clean Air Act, and this additional regulation is not only burdensome, but unnecessary.

We appreciate you taking the time to address this important issue, and we urge an unfavorable report on House Bill 829.

Thank you,



Michael Sakata
President and CEO
Maryland Transportation Builders and Materials Association

HB 0829_tfrench_unfav.pdf

Uploaded by: Timothy French

Position: UNF

SB 0687/HB 0829
Timothy A. French (tfrench@clpchicago.com)
Truck and Engine Manufacturers Association
Unfavorable

**Hearing on the Proposed Maryland Zero-Emission Truck Act of 2022 (SB 0687 and HB 0829)
and the Proposed Incorporation by Reference of California's Advanced Clean Truck Rule**

February 24-25, 2022

Written Testimony

My name is Tim French, testifying on behalf of the Truck and Engine Manufacturers Association. EMA represents the world's leading manufacturers of medium-duty and heavy-duty trucks and truck engines — the types of commercial vehicles that would be covered under the proposed Zero-Emission Truck Act and the resultant incorporation by reference of California's Advanced Clean Trucks (ACT) Rule. EMA actively participated in the underlying California rulemaking process, and we appreciate the opportunity to present our testimony today.

EMA and its members fully support a conversion of the commercial trucking fleet to ZEVs, and agree that 2045 is a reasonable target date for the broad deployment of ZEV trucks wherever feasible. EMA members are spending billions of dollars toward that end, and already are producing ZEVs for some applications. However, to bring about our shared vision for the future, a comprehensive and coordinated state and federal strategy is required to develop and implement the widespread deployment of ZEV trucks, not the adoption of stand-alone state-specific ZEV-truck sales mandates.

To ensure the successful deployment of ZEV trucks on an accelerated timeline, very large public investments will be required **up-front**, not after ZEV-sales mandates are put in place. More specifically, a critical first step in accelerating the deployment of ZEV trucks – **before** the

incorporation by reference of the increasing sales mandates under CARB's ACT program – is the establishment of a comprehensive program to invest in and develop the robust infrastructure necessary to recharge or refuel ZEV trucks. Maryland can and must be a leader in those broad-based **up-front** efforts which, for trucks, will involve longer planning and installation timelines, greater demands on the State's electricity grid, and significantly larger public investments than for passenger cars.

In addition, it must be acknowledged that the cost of a ZEV-truck is currently 2-3 times higher than for a conventionally-fueled truck. That is very significant, since, under the CARB ACT Rule at issue, there is no obligation whatsoever that any fleet operator buy any of the higher-priced ZEV products that EMA's members would be obligated to sell in increasing numbers if the Zero-Emission Truck Act is adopted. As a result, and as another critical first step **before** mandating an opt-in to CARB's ACT Rule, Maryland will need to provide sustained incentive funding to offset the significantly higher price differential for ZEV trucks. Otherwise, the assumed increasing purchases of ZEV trucks will simply not occur. In addition, Maryland should set an example by requiring the purchase of ZEV trucks for a portion of all of the State's purchases of new heavy-duty vehicles going forward.

Given the size and nature of the challenges to develop and provide for the comprehensive infrastructure build-out and the significant purchase incentives required for any viable ZEV-truck deployment initiative, federal leadership and action is needed. The Biden Administration is providing that leadership. Within the next month, and on top of the ZEV-funding dollars allocated under the recent Infrastructure Bill, the Biden Administration, through U.S. EPA, will be proposing new advanced emission requirements for heavy-duty and medium-duty trucks, which "low-NO_x" regulations will be finalized before the end of this year. Those low-NO_x requirements

will be followed by new lower greenhouse gas (GHG) standards, that will accelerate the growing deployment of ZEVs. Maryland should be a leader in advocating for those **nationwide** Clean Trucks programs. Without that coordinated push for federal standards, there is a significant risk that disparate state-specific ZEV-sales mandates will undermine the fully integrated strategy that is needed to accelerate the deployment of ZEV trucks, resulting in potentially significant adverse impacts on Maryland's ability to meet its emissions-reduction targets.

In light of what we will see from U.S. EPA in the coming weeks, the adoption of the Zero-Emission Truck Act should, at the very least, be deferred until such time as all stakeholders can evaluate the steps that the federal government will be taking to build toward a ZEV-based future for the commercial trucking industry. Then the Legislature, along with the other relevant state agencies and stakeholders, can supplement those federal efforts, if still necessary, in a truly coordinated manner to leverage and accelerate ZEV-truck deployments as appropriate in Maryland. Not waiting to see what the federal government will do could short-circuit those national efforts, not advance them.

Deferral also makes sense to allow the Legislature to fully assess all of the CARB regulations that Maryland would need to adopt to maintain a program "identical" to CARB's, something required under the federal Clean Air Act. More specifically, CARB will be significantly revising the ACT Rule next year to require 100% ZEV-truck sales by 2040 (or even earlier), and CARB's Advanced Clean Fleets Rule is being delayed until the end of 2022. Maryland should wait for California to finalize all of the other elements of its medium-duty and heavy-duty truck program. Without understanding all of the actual costs, benefits and consequences of incorporating all of the relevant CARB rules, the Legislature cannot properly assess the impacts of mandating that Maryland follow California's regulatory path.

In sum, the proposed Zero-Emission Truck Act would put the cart before the horse. For ZEV-truck sales mandates to work, the purchasers of heavy-duty trucks must be willing to buy those trucks. If the ZEV-truck recharging/hydrogen-refueling infrastructure is not in place in a widespread manner, and if sufficiently-large purchase incentives are not in place and available, truck purchasers will not buy the ZEV trucks that manufacturers would be obligated to sell. The net result would be a fundamental imbalance in the ZEV-truck market in Maryland, and the establishment of unworkable mandates that would more likely frustrate, not foster, the emerging market for ZEV trucks. Faced with non-viable sales mandates, ZEV-truck manufacturers are more likely to be pushed out of the Maryland market than they are to be pulled into it. Again, putting the cart before the horse is not a sound basis for public policy decisions of this magnitude.

Thank you for the opportunity to submit testimony on this matter.

HB0829 (SB0687) - LOI - Department of the Environm

Uploaded by: Landon Fahrig

Position: INFO



TO: Members, House Environment and Transportation Committee
FROM: Mary Beth Tung – Director, MEA
SUBJECT: HB 829 - Department of the Environment – Zero-Emission Medium and Heavy Duty Vehicles – Regulations (Zero-Emission Truck Act of 2022)
DATE: February 25, 2021

MEA Position: Letter of Information

It is likely that **House Bill 829 will put Maryland businesses at an economic disadvantage when compared to their counterparts in surrounding states.**

The bill will require the Department of the Environment to adopt regulations establishing sales requirements for the sale of zero-emission, medium- and heavy-duty (MHD) vehicles in Maryland, and permissively incorporates the California standards. Those standards require an escalating percentage of sales to be zero-emission vehicles (ZEVs). While these are laudable goals, the Maryland Energy Administration (MEA) notes that one aspect of Maryland's unique geography is its limited footprint. **A person seeking to purchase a MHD vehicle can very easily do so in a neighboring state**, as it seems unlikely that each of those states will adopt similar regulations.

MEA strongly supports the development of markets for the adoption of ZEVs including MHD vehicles, as evidenced by its existing Clean Alternative Fuels Program and its departmental bill, the TEAM Act, that is before this committee.

Until a time where there is greater parity between Maryland and its neighbors, it may be appropriate for the state to reject mandates and continue to pursue incentives for MHD ZEV adoption.

MEA asks the committee to consider these remarks when rendering its report.

HB 829 LOI.pdf

Uploaded by: Tyler Abbott

Position: INFO



February 25, 2022

The Honorable Kumar P. Barve, Chair
Environment and Transportation Committee
House Office Building, Room 251
Annapolis, Maryland 21401

Re: House Bill 829- Zero Emission Medium and Heavy-Duty Vehicles Regulations (Zero-Emission Truck Act of 2022)

Dear Chair Barve and Members of the Committee:

The Maryland Department of the Environment (MDE or the Department) has reviewed HB 829- *Zero Emission Truck Act of 2022* and would like to provide some information related to this bill.

MDE agrees that the ability to expand the use of Zero Emission Vehicles (ZEVs) have an important role in helping Maryland achieve the state's air quality and climate goals. In Maryland and the northeast region, medium and heavy-duty (MHD) trucks are the second leading contributor to both nitrogen oxides (NOx) and greenhouse gas (GHG) emissions. Maryland's current Greenhouse Gas Reduction Act (GGRA), signed into law by Governor Hogan in 2016, has the goal of reducing GHG emissions by 40% from 2006 levels by 2030. Maryland has made a lot of progress over the past few decades towards clean air. Maryland is now in attainment with all criteria pollutant national ambient air quality standards, except for ground level ozone. Emissions of NOx are the leading contributor to ground level ozone. To achieve the GGRA goals and attain the federal ozone standards, reductions from MHD trucks will be needed and electrification of this sector is one of the best reduction strategies. To help advance electrification of MHD trucks, Maryland joined sixteen other states and the District of Columbia in signing a MHD ZEV Memorandum of Understanding (MOU). Under this MOU, a ZEV sales goal was established that by 2030 at least 30% of all MHD trucks sold in the MOU states would be ZEVs. To achieve this goal, a multi-state MHD ZEV Action Plan is being developed to aid both public and private entities in accelerating ZEV deployment in the region. The Action Plan is expected to be completed in summer 2022.

HB 829 will require MDE to adopt regulations establishing requirements for the sale of new MHD ZEVs in the state by December 01, 2022. These regulations can incorporate by reference the California Air Resources Board's vehicle standards, otherwise known as the California Advanced Clean Truck Rule (ACT). If ACT is incorporated in Maryland, it would require certain manufacturers of MHD trucks to sell ZEVs as an increasing percentage of annual truck and bus sales in Maryland. ZEV sales targets would be phased-in beginning in MY 2025 and increase through MY 2035, remaining constant thereafter. Adopting the ACT rule will have challenges. MHD ZEVs currently cost significantly more than conventionally powered MHDs trucks. Adequate recharging infrastructure will also be needed to support these trucks. In addition, vehicle availability could be an early concern. As with all new technologies and markets we do expect these challenges to be overcome as the market evolves. Additionally, adopting the regulations requires an extensive stakeholder and public process prior to adoption. It typically takes MDE one to two years to go through the regulatory process and adopt regulations. Meeting the bill's deadline for adopting regulations by December of 2022 would be very difficult.

Page 2

Thank you for your consideration. As this is an important issue, the Department is open to having future discussions with the bill sponsor. We will continue to monitor HB 829 during the Committee's deliberations, and I am available to answer any questions you may have. Please feel free to contact me at 410-260-6301 or tyler.abbott@maryland.gov.

Sincerely,

A handwritten signature in black ink, appearing to read "Tyler Abbott", written over a horizontal line.

Tyler Abbott

cc: The Honorable Sara Love
George "Tad" Aburn, Director, Air and Radiation Administration