



November 8, 2023

Frank J. Principe, Jr  
Chair, Maryland Commission on Transportation Revenue and Infrastructure Needs  
Annapolis, MD

**RE: Road Funding and Electric Vehicles**

Dear Chair Principe:

On behalf of the Alliance for Automotive Innovation<sup>1</sup> (Auto Innovators), thank you for the opportunity to provide the auto industry's perspective as the Commission considers the State's road funding needs and the appropriate taxation of electric vehicles (EVs).

According to recent data, in 2022, the number of EVs sold increased 62 percent from 2021, accounting for 7.03% of total new vehicle sales across the country.<sup>2</sup> This includes battery electric, plug-in electric, and fuel cell models. Automakers are investing heavily in EV manufacturing and battery production in the United States; \$110 billion plus by the end of the decade in multiple states. Globally, automakers have committed to investing \$1.2 TRILLION dollars<sup>3</sup> on electrification through 2030.

There will be 150 models<sup>4</sup> of electric vehicles for sale in the U.S. market by 2026, up from roughly 103 models available today. Our members recognize the pressure this transition – along with the continued rise in MPG ratings of traditional gas/diesel powered vehicles and the increased costs of highway construction generally – places upon state road infrastructure budgets that have historically been funded through state and federal gas tax revenues.

To address this concern, policymakers across the country have been forced to consider avenues outside of a gas tax to recoup revenues that otherwise would have been collected. The three potential revenue streams most commonly identified are: a flat annual registration fee on electric vehicles (EV); a tax based on the number of vehicle miles traveled (VMT) by an EV; or a tax based on the number of kilowatts of electricity (kWh) used to charge an EV.

While automakers were once among the loudest to protest additional registration fees placed upon EV owners, we have now come to believe that such fees are the most responsible path for states to follow. Much attention has been given to pilot programs to study ways to implement both VMT and kWh taxes. From a state's perspective, however, increased registration fees on EVs could be accomplished with little added administrative costs. It would also represent the fastest way to begin collecting revenue, and likely prove to be the most stable source of revenue year-to-year. That is not to say there are not policy considerations around an EV fee that deserve heed – including: challenges for

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<sup>1</sup> From the manufacturers producing most vehicles sold in the U.S., to autonomous vehicle innovators, to equipment suppliers, battery producers, and semiconductor makers – the Alliance for Automotive Innovation represents the full auto industry, a sector supporting 10 million American jobs and five percent of the overall economy. Active in Washington, D.C. and all 50 states, the association is committed to a cleaner, safer, and smarter personal transportation future. [www.autosinnovate.org](http://www.autosinnovate.org).

<sup>2</sup> <https://www.autosinnovate.org/posts/papers-reports/get-connected-2022-q4>

<sup>3</sup> <https://www.autosinnovate.org/posts/communications/The%20Future%20Is%20Electric%20Infographic>

<sup>4</sup> <https://www.autonews.com/white-paper/here-are-nearly-150-evs-plug-hybrids-headed-us-dealerships-through-2026>

consumers facing a new fee that must be paid all at once, as opposed to modest payments throughout the year like the gas tax; and the limitations to collect road usage revenue from out-of-state drivers who are utilizing the State's roadways – but these can be mitigated through thoughtful policy development. Despite these drawbacks, EV fees will prove to be the most appropriate resolution to the funding problems faced by the State, given the challenges with implementing both VMT and kWh taxes as discussed below.

While a VMT tax allows for collection of revenues in proportion to that vehicle's use of a public good – which is a basic premise of responsible taxation – the challenges that must be navigated to properly implement such a program far outweigh this one positive attribute. VMT taxes carry a much higher administrative burden on state officials to both correctly set rates and tabulate roadway usage. To avoid legal challenges on the ability of the State to apply a tax on miles driven outside the state, monitoring of a vehicle's location in real-time may be necessary, which introduces considerable privacy concerns during a period of heightened attention to government collection of personal information.

Additionally, like an EV fee, a VMT tax does not capture drivers crossing through the state from another state. And perhaps, most importantly, VMT taxes are generally disliked by the general public. In a survey<sup>5</sup> conducted by San Jose State University, roughly 61% opposed the idea of taxation based on miles traveled, with the highest cohort (40%) in the “strongly oppose” category. As the auto industry pushes toward a more electrified future, we have great concern that such a tax applied only to alternately fueled vehicles will add a substantial disincentive to consumers considering an EV purchase.

Shifting to kWh taxes, on a cursory review there are numerous arguments to support the adoption of such a tax. First off, it is most akin to the current gas tax, where consumers pay a tax on the volume of fuel used. It would also present some proportionality to the amount of road usage by that vehicle, and it would capture out-of-state drivers if they stopped to charge within the State. If one digs a bit deeper, however, it becomes clear that the problems with a kWh tax lie in the proper administration of the tax structure. To effectively apply this tax in a residential setting, the electricity used to charge an EV must be segregated from electricity used for other household purposes. There appear to be two ways to accomplish this, either through the installation of a sub-metered electrical panel in the home or with a network-connected charging system. Both options would add to the already considerable costs consumers face when installing a home charger, and asking consumers to pay more up front just to aid the government's collection of tax revenue is unlikely to be well received.

While a networked-connected charging system may be more of a viable option in the future, a very limited number of home chargers currently installed carry this capability, forcing early-adopters to pay to reinstall an updated system. Some have postulated that EVs will be able to track charging information in the future. If onboard systems were utilized to apply a tax, however, it would again introduce all the privacy challenges around GPS monitoring to offset out-of-state use as discussed above. Finally, given the lack of network-connected or sub-metered charging systems today and the changes that would be necessary at every electric utility in the state, this option for taxation probably has the longest delay before the State would receive any considerable revenues.

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<sup>5</sup> <https://transweb.sjsu.edu/sites/default/files/2208A-Agrawal-Nixon-Public-Opinion-Federal-Tax-Options-Transportation-Survey-Toplines.pdf>

In light of the above considerations, Auto Innovators members now support reasonable annual fees on EV owners to support the maintenance of roadway infrastructure. Should the State consider the application of a kWh tax we suggest limiting that tax only to the high-speed charging infrastructure (known as Level 3 or DC Fast Chargers) being installed along highway corridors to capture out-of-state drivers who are transiting on State roadways. We do not, however, support the application of a kWh tax on all non-residential chargers, as chargers at workplace or retail/grocery stores will be typically utilized by state residents who will likely already be paying an EV fee.

As the State considers how to address road funding issues related to EVs, we would offer a few ideas for consideration. First, to avoid the fee being a disincentive to the purchase of a new EV consider applying the fee at the time of reregistration, not the initial registration. The state collects far more in sales tax on an EV sale than it does from any possible EV fee. Secondly, while natural instinct would be to do a simple calculation based on average miles traveled and average fuel economy, it is important to recognize that EV buyers are probably transitioning from another high MPG vehicle. A more apt calculation is based on similarly situated vehicles or hybrids, or else a vehicle owner may be paying more in an EV fee than they otherwise may have paid in gas tax with their previous vehicle. While we do not suggest EV owners should get a free ride, we are very sensitive to a public perception that EV owners are being punished with new taxes and fees that drivers of traditional vehicles do not pay, and the possibility that such perception could holdback sales of this growing technology.

Thank you for your consideration of our views. If I can provide any further information, please feel free to contact me at [jfisher@autosinnovate.org](mailto:jfisher@autosinnovate.org).

Sincerely,



Josh Fisher  
Senior Director, State Affairs  
Alliance for Automotive Innovation

**From:** [Adeline Louie](#)  
**To:** [Train Commission](#)  
**Subject:** transportation funding  
**Date:** Thursday, December 07, 2023 10:38:58 PM

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As an EV owner, and someone who is very concerned about the state of climate change, I would like to add my 2 cents to the fray.

I understand that the state is looking for more transportation funding, and that EV owners have been considered a source. Arguing that EV owners are not paying their fair share of road repairs because they don't pay for gasoline, I think misses the point. EV owners are not belching CO2 and other GHG's into the air as are ICE drivers.

Just as utilities who produce dirty energy are forced to purchase sRECS to support producers of clean energy, I think ICE car owners should be taxed for continuing to spew GHG's. After all, that is the source of this whole problem, global warming due to GHG's. Tax ICE vehicles to discourage ownership and rebate EV's to encourage the shift to clean energy.

Since the general public believes that EV's are unaffordable, and a toy of the rich, government rebates notwithstanding, why would you wish to levy yet another cost on already hesitant buyers of EV's?

Don't offer them a carrot of government rebate, and then hit them on the nose with an EV tax.

Another reason to tax thru gasoline. The idea of a usage tax is easiest accomplished at the pump. No extra paper work, proving you drove a lot or a little. No extra manufacture and purchase of some plastic (fossil fuel product) gizmo to install in your car, creating yet another industry producing more GHG's. If you bought gasoline, it's a good guess you used the roads. (I will assume lawnmowers are going electric.)

Adeline Louie  
Kensington MD

**From:** [Jaclyn Hartman](#)  
**To:** [Train Commission](#)  
**Subject:** FW: another comment letter  
**Date:** Thursday, November 16, 2023 1:54:01 PM

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**From:** Antoine Thompson <[antoinethompson@gwrccc.org](mailto:antoinethompson@gwrccc.org)>  
**Sent:** Thursday, November 16, 2023 1:40 PM  
**To:** Jaclyn Hartman <[JHartman1@mdot.maryland.gov](mailto:JHartman1@mdot.maryland.gov)>  
**Subject:** another comment letter

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**From:** Luis MacDonald  
**Sent:** Thursday, November 9, 2023 12:06 PM  
**To:** Antoine Thompson <[antoinethompson@gwrccc.org](mailto:antoinethompson@gwrccc.org)>  
**Subject:** Recommendation for Maryland Commission on Transportation Revenue and Infrastructure Needs

## **Recommendation for Maryland Commission on Transportation Revenue and Infrastructure Needs**

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**Antoine,**

**As per your request during the GWRCCC Stakeholders meeting today, I offer the following recommendation:**

**Recommend that Maryland MDOT Motor Vehicle Administration Support and Implement New Fleet Electrification Leasing-as-a-Service titling and registration forms.**

**The current MVA process is not authorized, trained or funded to improve or efficiently administer the titling and registration needs of Fleet Electrification Leasing-as-a-Service for new Electric Vehicle technology in the State of Maryland.**

**Currently, MVA forms only recognize Owners Soundex/Driver's License Numbers. As a result, Leasing and Third-Party Financing is in a "Grey Area" that has limited and created customer service problems at MVA for both lessees and lessors.**

**The recommended changes at MVA to develop a Leasing-as-a-Service**

**process would require Maryland House and Senate to authorize new MVA regulations based on Hearings to address and resolve the current MVA problems with Leasing.**

**The adoption of MVA regulations for Fleet Electrification Leasing-as-a-Service would achieve significant progress toward the market development of Electric Vehicles and related State Revenue and Infrastructure Needs accordingly.**

**If you have any questions, please call us to schedule a Panel of Electric Vehicle Manufacturers and Leasing Industry Stakeholders and invite the MVA Administrator to address this issue at your next Maryland Commission Hearing.**

**Sincerely,  
Luis MacDonald  
President  
AutoFlexFleet  
Treasurer of GWRCCC**

**FYI - Below Email is One Example of an Electric Vehicle Manufacturer's Finance and Leasing Program being offered to Leasing Industry Stakeholders in the State of Maryland:**

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**Antoine M. Thompson  
CEO/Executive Director**

**Greater Washington Region Clean Cities Coalition (GWRCCC)  
2000 14<sup>th</sup> Street, NW | Suite 330 | Post Office Box 73402 | Washington, DC 20056  
(O) 202-671-1580 | (M)716.308.0945 | Email: [antoinethompson@gwrccc.org](mailto:antoinethompson@gwrccc.org)  
[www.gwrccc.org](http://www.gwrccc.org)**

**[Redacted]**

**From:** [Brendan Maltese](#)  
**To:** [Train Commission](#)  
**Subject:** EV Fees  
**Date:** Monday, December 11, 2023 2:29:08 PM

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Members of the TRAIN Commission,

I'm writing to urge you to **not** recommend an EV/hybrid registration fee, and instead adjust the registration fee for all vehicle types.

I understand what I believe to be the commission's intent to create a fee structure that collects a similar amount from all road users. I do not believe this is the right approach to take.

Vehicle registration fees should not be split by fuel type. The current structure of weight class should stay the same, because weight is the primary factor in road wear. Given that EVs are generally heavier, they are already paying a higher portion than similar gas cars. If the state needs to generate more revenue, all vehicle weight classes should be increased by a proportional rate.

As for the gas tax: The current system should remain in place. Taxing fuel is, in my opinion, a tax on pollution, and we should start treating it as such. It also is an incentive for EV adoption, which is a goal of the state.

If the state wishes to create a tax structure that charges users based on how much they use the roads, I suggest exploring a way to incentivize working close to home. A tax credit for living within X miles of your primary work location could be an example of this. This could help reduce commuting miles travelled, which would decrease peak traffic demand.

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Brendan Maltese  
410-980-5527

**From:** [Michael Matthews](#)  
**To:** [Train Commission](#)  
**Subject:** Gas tax revenue  
**Date:** Monday, December 11, 2023 3:01:54 PM

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To members of the TRAIN Commission:

Please do not penalize EV owners by adding a significant (> \$100) registration fee just for EVs as an attempt to make up for lost gas tax revenue. It would be far better to add a small (\$25?) additional registration fee for every vehicle owner, so as to not disincentivize owning an EV when everyone else is pushing for EV adoption, including the rest of your government.

The gas tax revenue can also then go towards paying health and environmental costs of legacy internal combustion engine vehicles, which is a cost that has not been adequately considered.

Thank you.

Michael Matthews



8 November 2023

Frank J. Principe, Jr.

Chair Maryland Commission on Transportation Revenue and Infrastructure Needs  
(TRAIN)

Chair Principe,

My name is Scott Wilson, and I currently drive an all-electric 2017 Chevy Bolt EV and 2013 Nissan Leaf. Our family has been driving EVs since 2012. I serve on the Maryland Zero Emission Electric Vehicle Infrastructure Council (ZEEVIC), and I'm also Vice President of the Electric Vehicle Association of Greater Washington DC (EVADC). The following comments are entirely on behalf of myself.

In light of the discussion at the Nov 6 TRAIN meeting regarding potential fees on EVs, PHEVs, and possibly hybrid cars, I think I can offer some perspective.

All cars pay into the Transportation Trust Fund (TTF) under "user pays, user benefits" via vehicle fees, titling taxes, and registration fees. Internal combustion engine (ICE) cars pay motor fuel taxes into the TTF which EVs don't. The TTF also has eight other revenue sources not directly from cars.

According to the Maryland Energy Administration study<sup>1</sup> requested by the legislature in 2021, and updated by MVA testimony at the first TRAIN meeting, the Maryland gas tax provides 24% of TTF funding (thus 76% of TTF funding is not affected by EVs). Total motor fuel taxes are about \$1B/yr. EVs are currently about 1.5% of registrations and are "costing" about \$19M annually to the TTF. Funding shortfalls are also due more broadly to increasing CAFE mileage standards. Per gallon gas taxes have always been a proxy for a road usage charge (RUC), but as CAFE standards are increasing, that proxy is breaking down, i.e. are high mpg hybrids "paying their fair share"?

As the proportion of EVs increases, we need to establish a mechanism to replace the "lost" motor fuel tax revenue.

As an EV driver, I have no problem paying my fair share of taxes or fees into the TTF. None of the hundreds of EV drivers I'm aware of are looking for a "free ride". The task is to determine what is fair.

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<sup>1</sup> A Report to the Senate Finance Committee and the House Environment and Transportation Committee in Accordance with House Bill 44, Chapter 670, Section 4 of the Session Laws of Maryland 2021 (MSAR# 13248)

There are several dimensions to think about before we implement flat EV fees.

### **Possible Strategies**

Plan A: Wait until MD reaches its stated goal of 300k EV registrations before implementing a revenue charge (which may turn out not to be an “EV fee”). One advantage would be avoiding disincentivizing people from buying EVs. It could even be framed as an incentive Maryland gives in addition to an excise tax credit. As we approached 300k registrations, we would then prepare an on-ramp to a revenue charge. The disadvantage would be it would be at an uncertain date. 300k EVs would be 5.5% of total registrations (5.4m), and “cost” the TTF \$41.5M. Could MD live with ~\$40M/yr less going into the TTF before acting?

Plan B: Implement an *appropriately structured* fixed EV fee. The biggest disadvantage of a flat EV fee is that it charges low-mile, infrequent drivers the same amount as high-mile, frequent drivers. It makes no distinction between elderly or LMI drivers and upper-income or suburban drivers, which has equity implications. ICE drivers don’t pay fixed annual gas taxes, they pay taxes in proportion to the amount of driving. As an EV driver, I should also be charged in proportion to the amount I drive.

There are additional aspects to trying to pick an amount for a flat fee. Flat fee models always use an assumed “average” mileage. What should we pick for an assumed mileage? At the Nov 6 meeting, MDOT displayed a table of average annual motor fuel tax payments with mileage ranges from 15 mpg to 45 mpg. 25 mpg was highlighted, however, the national CAFE average mileage is currently about 37 mpg.

The question we should be asking is, *what car would the EV driver have bought, had an EV not been available?* It’s very unlikely they would have bought an “average” 37 mpg ICE car. They would very likely be driving the highest mpg hybrid they could find, which currently gets 59 mpg. That would argue for making the assumed mileage around 59 mpg when determining a fee.

You should also be aware that EVs and PHEVs have an effective mpg rating (mpge), determined by the EPA. For example, the Dodge Hornet PHEV has an mpge of 77 mpg, and my Chevy Bolt has a mpge of 119 mpg. Other EVs are as high as 140 mpg. Shouldn’t these be considered when picking an assumed average mileage? The fact that there are so many possibilities underlines the difficulty in coming up with a single number.

Consumer Reports, in a report<sup>2</sup> cited in testimony, has a formula for computing a Maximum Justifiable Fee (MJF) for EVs. Based on the assumed mpg and the MD gas tax, the formula gives the following results for Maryland:

Assumed Average ICE	MJF
CAFE (36.9 mpg)	\$147
Highest mpg on market (59 mpg)	\$92
mpge of an EV (140 mpg)	\$38

The TRAIN Commission should consider inviting testimony from the report authors in order to more fully understand the intricacies of picking a flat EV fee.

Plan C (My Preferred Option): Between now and 300k registrations, begin to prepare the on-ramp to a revenue charge for EVs based on their proportionate use of the roads. The revenue charge should be a road usage charge (RUC) based on “user pays” taxation principles, the way the gas tax is currently structured. The more you drive, the more you pay, the less you drive, the less you pay.

The report<sup>3</sup> cited in testimony (issued under the National Governors Association chairmanship of Gov. Hogan ) has several options for RUCs, either by reading odometers (which was discouraged by transportation consultant Ed Regan at the first TRAIN meeting) or by using OBD devices. One big advantage would be that since it would be linked to the individual vehicle, it would finally allow for accurate computation of fees for heavier classes of vehicles, thus genuinely paying for “wear and tear”. It could even be a fee per pound of GVW.

An RUC could even be implemented for ICE cars, thus replacing the variable and declining (due to increasing mileage) gas-funded portion of the TTF with a more stable and predictable RUC-funded portion. ICE drivers could opt in and pay the RUC, while also getting a refund of gas taxes paid. The TRAIN Commission should consider inviting presentations from state transportation staff of Oregon, Utah, Pennsylvania, Virginia and/ or Washington, all of whom have implemented or have been extensively studying RUC

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<sup>2</sup> Rising Trend of Punitive Fees on Electric Vehicles Won’t Dent State Highway Funding Shortfalls but Will Hurt Consumers, 2019. <https://advocacy.consumerreports.org/wp-content/uploads/2019/09/Consumer-Reports-EV-Fee-analysis.pdf>

<sup>3</sup>National Governors Association White Paper: Planning for State Transportation Revenue in a Coming Era of Electric Vehicles <https://www.nga.org/wp-content/uploads/2020/02/White-Paper-Planning-for-State-Transportation-Revenue-in-a-Coming-Era-of-Electric-Vehicles.pdf>

programs<sup>4</sup>. The Oregon and Virginia programs have also robustly addressed privacy issues.

Maryland would not be adventuring into unexplored territory. The US Dept of Transportation has formed the Federal System Funding Alternative Advisory Board, which has just established a National Motor Vehicle Per-Mile User Fee Pilot<sup>5</sup> under the IRA. The Eastern Transportation Coalition (formerly the I-95 Corridor Coalition), of which Maryland is already a member, has an active mileage-based user fee (MBUF) research effort<sup>6</sup>. The TRAIN Commission should consider inviting presentations from the Coalition, which is located in College Park.

Rather than fix a bad EV revenue policy (i.e. flat EV fees), it would be better to design a good EV revenue policy upfront. There is a large menu of available options. Maryland has the chance to craft an EV revenue policy that balances actual road usage with encouraging EV adoption.

As an EV driver, I want nothing more than to pay my fair share.

Thank you for your time,

Scott Wilson  
Montgomery County, MD

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<sup>4</sup> <https://www.penndot.pa.gov/PennDOTWay/pages/Article.aspx?post=595>

<sup>5</sup> [https://ops.fhwa.dot.gov/bipartisan-infrastructure-law/docs/Response\\_on\\_vmt\\_pilot.pdf](https://ops.fhwa.dot.gov/bipartisan-infrastructure-law/docs/Response_on_vmt_pilot.pdf)

<sup>6</sup> <https://tetcoalitionmbuf.org/>

**From:** [Ken Yannacci](#)  
**To:** [Train Commission](#)  
**Subject:** TRAIN Comments  
**Date:** Tuesday, December 05, 2023 7:54:52 AM

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Good morning,

I hope this email finds you well. I want to thank the commission for all it does to keep our lives moving smoothly each day. I also thank you for taking the time to review my comments.

I wanted to share my comments on how I feel the revenue assessment and collection issue can be resolved. I feel the system needs to be overhauled for ALL vehicles.

My idea of how the system would work is as follows:

- Eliminate the Maryland fuel tax as a revenue source for the program (optional)
- Create a usage based system for ALL vehicles which will be default assess all vehicles at a very high mileage rate (e. g. 25,000 miles per year or greater)
- Create an opt in system where owners can choose to participate in a mileage based program. One way to achieve this is by utilizing the VEIP locations and kiosks to scan vehicles annually to track their mileage and usage. In cases where someone changes vehicles the odometer at the time of sale for both the old and new vehicle could be used to extrapolate their usage.

The fuel tax worked very well but with the move away from fossil fuels we need a new system that will provide a source of funds well into the future. It's also important to do it in such a way so as not to discourage consumers from purchasing Hybrid and full electric vehicles.

Thank you for your consideration,

Ken Yannacci

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Sent from my mobile device.