Testimony of Advanced Energy United
Pennsylvania House of Representatives Transportation Committee
Public Hearing on Electric Vehicle Fees
May 1, 2023

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On behalf of Advanced Energy United, I want to thank Chairman Neilson, Republican Chairman Benninghoff, members of the Committee and staff for inviting testimony on this important issue. Advanced Energy United ('United') is a national business association that includes a wide range of advanced energy companies, seeking to make the energy systems of both Pennsylvania and the United States more clean, reliable, affordable, and secure. United advanced energy businesses provide a broad array of products and services to meet energy needs, including energy efficiency, energy storage, demand response, natural gas electric generation, solar, wind, hydro, nuclear, electric vehicles (EVs), and EV charging equipment.

As a business association, United is focused on reducing barriers to the adoption of advanced energy. Our goal is to open markets to new technologies and boost job growth in Pennsylvania, which ranks in the top quarter of states in advanced energy employment.[1] Transportation electrification is just one of several advanced energy industries that contributes to economic growth here in the Commonwealth. In Pennsylvania alone, electric transportation-related economic activity accounts for over $434 million annually.[2] United's member companies in the transportation sector, in addition to manufacturing all variations of EVs (from light-duty passenger vehicles to electric school buses and large heavy-duty commercial vehicles), manufacture and deploy EV charging infrastructure, provide grid integration solutions, manage EV charging, operate EV fleets, and provide a host of supporting technologies and software services for both individuals and businesses. As EV adoption increases and we continue to see a buildout of charging infrastructure, Pennsylvania will see higher levels of job

[1] https://e2.org/wp-content/uploads/2021/04/E2-2021-Clean-Jobs-America-Report-04-19-2021.pdf
[2] https://electrificationcoalition.org/wp-content/uploads/2021/07/Pennsylvania-EV-Policy-Landscape-Dec-2020.pdf

creation and economic activity. To allow for this continued economic growth, we must take action to remove market barriers and promote competition.

In today's testimony, I would like to address a couple of issues regarding EV fees, specifically the benefits that EVs provide to Pennsylvania, how EV owners are already contributing to infrastructure funding in the Commonwealth, and the importance of a fair and equal EV fee that will not create a market barrier to the advanced energy industry.

Today, EVs have the potential to provide a broad range of benefits for both Pennsylvania and its residents, including economic and employment growth; electric grid benefits, including broad-based cost savings for all electric customers (regardless of whether they own an EV); reductions in air pollution; and public health benefits. Last year, the American Lung Association released a study on the health and climate benefits of zero-emission transportation.[3] They found that under a scenario where all passenger vehicle sales are 100% clean energy powered EVs by 2035, Pennsylvania could see over $87 billion in public health benefits, while avoiding 7,940 premature deaths and 735,000 lost workdays. Additionally, Pennsylvania's electric grid stands to benefit from the ancillary services that EVs provide as we encourage adoption.[4] One of the most notable ancillary services provided by EVs is their ability to 'discharge" electricity back to the grid, which, when coordinated in larger groups, can be aggregated into 'operating reserves' capable of stabilizing the grid and helping to avoid blackouts at times of peak consumption. We continue to strongly advise the Public Utility Commission (PUC) to consider and adopt strategies like this for Pennsylvania's electric utilities in a permanent way.

In addition to the health and grid management benefits that EVs can provide, they also serve as an affordable mode of transportation and help to bring energy costs down for all ratepayers, regardless of EV ownership. EVs create downward pressure on electricity rates by spreading out the sunk costs of existing utility infrastructure investments across a greater number of kilowatt hours generated to fuel EVs.[5] Overall, transportation electrification will serve as a catalyst in Pennsylvania for creating jobs, spurring economic activity, and improving our climate and public health. As policymakers, however, it is important to make sure that market barriers and fees on EVs do not present an excessive burden for the industry or consumers.

Pennsylvania, like many states across the U.S., is facing a transportation infrastructure funding dilemma – to the tune of an $8 billion funding deficit. As we face this issue and confront options for closing the gap, legislative proposals have been put forth to impose unreasonable flat fees of as much as $380 per year for a light-duty passenger EV, with the assumption that this is the answer to our

[3] https://www.lung.org/getmedia/13248145-06f0-4e35-b79b-6dfacfd29a71/zeroing-in-on-healthy-air-report-2022.pdf
[4] https://www.switch-ev.com/knowledgebase/vehicle-to-grid
[5] https://www.kbb.com/car-news/study-your-neighbors-ev-is-lowering-your-electric-bill/

dilemma. In reality, imposing flat fees on EVs would not only interfere with a developing market, but would do little to resolve the funding deficit our Commonwealth faces. Under the current gas tax rate, a Pennsylvanian driving an efficient internal combustion engine (ICE) with 39 MPG and driving the average vehicle miles traveled annually in Pennsylvania of 11,445 miles, would pay roughly $179 per year in their gas tax payments, or less than half of a proposed EV fee of $380 per year. As pointed out by University of Pittsburgh professor George Dougherty, Jr., if all 63,000 current EV drivers in the Commonwealth paid a $380 fee (as is proposed in at least two bills), Pennsylvania would raise approximately $24 million, or less than 1% of the state's deficit.[6] These flat fees represent insufficient attempts to compensate for the transportation funding deficit that Pennsylvania currently faces, and impose a disproportionate tax burden on EV owners, ultimately hindering our ability to support the EV market.

To be clear, EV drivers **should** contribute fairly to their use of Pennsylvania's roads and infrastructure, just like everyone else, and EV drivers already do contribute in several ways. Just like drivers of traditionally fueled vehicles, EV drivers contribute funds to state programs via registration fees and tolls. EV drivers also pay taxes on the electricity they consume for their vehicles – a tax that drivers of traditional vehicles do not pay. Additionally, while upfront prices of EVs are declining, the average price remains higher than that of a traditional vehicle, meaning the Commonwealth is generating greater sales tax revenue through these purchases.

Given the existing contributions that EV owners make to transportation infrastructure here in Pennsylvania, policymakers seeking to collect additional fees from EV drivers must determine what amount is fair. EV owners today still face many barriers when purchasing a vehicle, from the higher upfront cost to a lack of adequate charging infrastructure on Pennsylvania's roads. The Commonwealth has already taken a few steps to address some of these challenges. Namely, the Department of Environmental Protection (DEP) has set up the Alternative Fuel Vehicles Rebate Program, which last year provided Pennsylvanians with over 2,400 rebates for a total of $3.6 million for the purchases of new or used battery electric vehicles or plug-in hybrids.[7]

While these steps are helping Pennsylvanians to make the transition to cleaner forms of transportation, experiences in other states have shown that placing excessive fees on EVs can significantly impact what would otherwise be a booming market. Research has shown that placing a $100 registration fee on EVs, much less than the $380 fee that has been proposed numerous times, has the potential to slow the adoption of such vehicles by as much as 20% over the first few years.[8] In 2015, Georgia eliminated its state EV tax credit and replaced it with a $200 annual registration fee. In

[6] https://www.thecentersquare.com/pennsylvania/article_005db0aa-bec1-11ed-8ebb-430c09d8b5d0.html
[7] https://files.dep.state.pa.us/Energy/OfficeofPollutionPrevention/StateEnergyProgram/PAElectricVehRoadmapBookletDEP5334.pdf
[8] https://escholarship.org/uc/item/62f72449#main

the first year and a half after the tax credit was repealed and the new fee was imposed, sales of EVs fell by roughly 80%.[9] Pennsylvania should not undercut efforts to promote the development of new markets by implementing poorly devised fees at such an early stage in the market's development.

One great example of a policy option that could be replicated in Pennsylvania, supporting both market development and closing the gap in infrastructure funding, would be Colorado's SB 260, the "Sustainability of the Transportation System" solution. With this law, Colorado both indexed its gas tax to inflation and instated a comparable EV fee. The legislation indexed the existing $50 registration fee to national highway construction cost index inflation and phased in an additional road usage equalization fee that increases over time on a 10-year schedule, which began at $4 last year and will top out at $96 in 2032. Additionally, to ensure a level playing field between EVs and ICE vehicles, the bill included provisions stipulating mid-point implementation reviews. All funds collected through this program will be put toward the state's transportation infrastructure.

To ensure fair taxation among EV drivers in the Commonwealth, United recommends that Pennsylvania calculate an annual fee for EV drivers equivalent to what they would be charged if they paid the state's gas tax. This formula would be calculated by taking the average annual mileage driven by the appropriate vehicle class, as reported to the U.S. Department of Transportation[10], divided by the U.S. Environmental Protection Agency's miles-per-gallon-equivalent (MPGe)[11] rating of the EV in question, and then multiplied by the state's gas tax rate.[12] The equation is shown below:

Annual Fee = (Average Vehicle Miles Traveled by Class ÷ MPGe) x Gas Tax

This simple solution can be administered easily, paid upon vehicle registration or inspection, preserves the incentive to buy alternative fuel vehicles, and maintains fairness in our taxing system. This formula is also flexible, in that if the gas tax changes, the formula would change accordingly, without additional statutory changes. In terms of implementation, United strongly recommends that Pennsylvania adopt the formula itself, as opposed to a flat fee calculated using this formula, as the flat fee would quickly become outdated and create a target for debate every legislative session.

This formula presents a fair, non-arbitrary, flexible, and simple solution for the Commonwealth to guarantee parity of fees amongst all drivers, both EV owners and ICE owners. Given the benefits that EVs provide to both drivers and ratepayers, in addition to the economic development and employment

[9] https://www.utilitydive.com/news/georgia-electric-vehicle-sales-shrink-80-in-wake-of-tax-credit-repeal/434092/
[10] https://www.fhwa.dot.gov/policyinformation/statistics/2020/vm1.cfm
[11] https://www.epa.gov/fueleconomy/text-version-electric-vehicle-label
[12] https://www.revenue.pa.gov/Tax%20Rates/Pages/MFT%20Rates.aspx

that this industry brings to the Commonwealth, it is in Pennsylvania's best interest to not put the brakes on this market now.

To conclude, the EV market is an exciting opportunity for the Commonwealth, presenting options for economic growth, cleaner air, and more efficient modes of transportation. Pennsylvania must do its best to ensure a level playing field for these new technologies to allow the industry and market to continue its path of development. Therefore, United recommends against a flat fee, and instead for the adoption of the preceding formula-based tax that ensures EV owners pay their fair share without unduly burdening the 63,000 and growing EV owners in Pennsylvania, or hindering the EV market and industry. That way, the expansion of EVs can bring substantial value to the residents of Pennsylvania, and advanced energy will continue to bring new jobs and economic growth to the Commonwealth.

Thank you for your time and consideration.

For any questions or further discussion, please contact Nicholas Bibby, Policy Principal, at nbibby@advancedenergyunited.org or 202-380-1950 ext. 3059.