Rising Trend of Punitive Fees on Electric Vehicles Won't Dent State Highway Funding Shortfalls but Will Hurt Consumers

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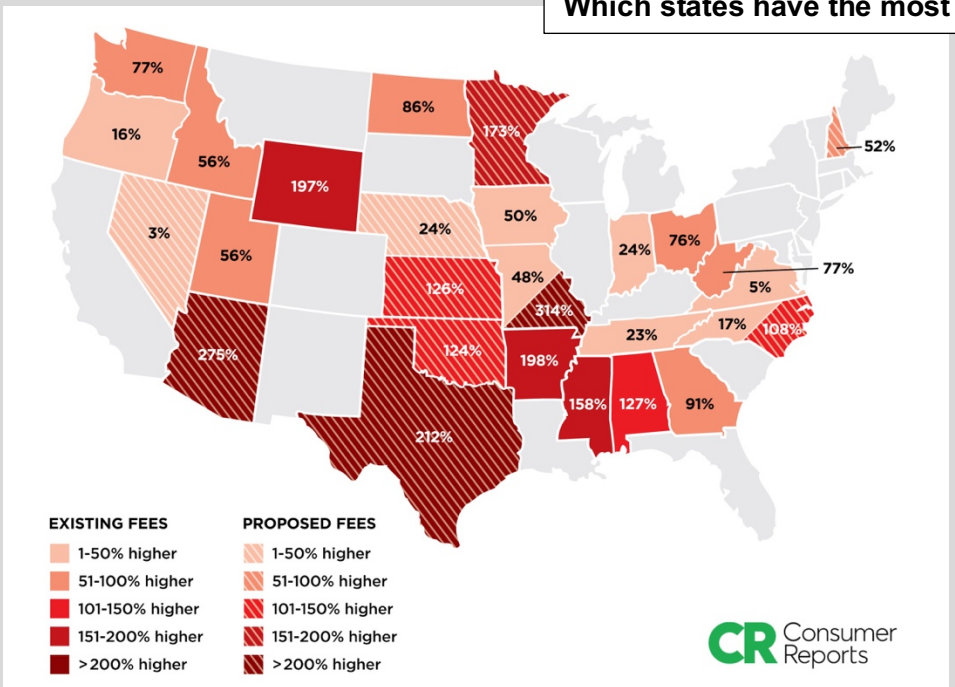
Abstract

Some state legislatures have sought special annual fees from owners of electric vehicles (EVs) to make up for declining gas tax revenues, caused primarily by the effects of inflation and further accelerated by improving national fleetwide automotive fuel economy. This paper compares existing and proposed EV fees with the gas taxes paid by the average new gasoline vehicle to determine whether they are placing an additional tax burden on EV owners compared to non-EV owners, then estimates the effectiveness of EV fees at increasing highway funding revenues.

Key Findings

- *Owners of an electric vehicle in some states could be forced to pay double, triple, or even quadruple the amount that owners of new gas-powered vehicles pay in gas taxes.*
    - *Seven of eight electric vehicle fees instituted or increased so far in 2019 will be extremely punitive by 2025, meaning they not only far exceed gas tax-equivalent levels in those states, but also may unfairly discourage electric vehicle adoption.*
    - *At least twelve states have proposed new or increased electric vehicle fees this year that have not yet passed; ten of the twelve proposed fees will require EV drivers to pay more than new gasoline powered vehicles by 2025.*
    - *Of states that already have electric vehicle fees, the percentage that require EV drivers to pay more than new gas-powered vehicles will increase from 42 percent to 69 percent between 2020 and 2025.*
- *Proposed electric vehicle fees will not make a dent in declining revenues, generating only an average of 0.04 percent of current state highway funding, and only increasing to 0.3 percent by 2025.*

Which states have the most punitive EV Fees



About this Map:

Existing and proposed EV fees in 26 states are up to 3x higher than the annual gas tax would be for the average new car in 2025.

Introduction

Electric vehicle (EV) sales have been increasing in recent years[1] as buyers recognize the numerous consumer, public health, and environmental benefits they can provide.[2] EVs generally score well on Consumer Reports' road tests, with their quick acceleration making them fun to drive, and typically receive high marks in owner satisfaction surveys.[3] They can also save consumers money with lower fuel and maintenance costs.[4] Automakers increasingly recognize the benefits of EVs as well and have committed to investing at least $300 billion worldwide over the next five to ten years to develop and manufacture EVs.[5]

However, as their popularity has increased, EVs have come into the crosshairs of state legislators seeking to make up for sagging gas tax revenues. Over time, decades of inflation and the greatly improved gas mileage being achieved by conventional gasoline-powered vehicles have reduced the amount of money that states can raise through gas taxes.[6] Rather than increasing gas taxes or raising funds for infrastructure through other effective means, some lawmakers are instituting flat annual fees on EVs.

It is only fair that electric vehicle drivers should contribute to road construction and maintenance. And they already do: The gas tax is only a small portion of the revenues collected by a state for the purpose of building and maintaining roads, and EV drivers contribute to these purposes through other funding streams. As illustrated in Figure 1, in 2016—the latest year for which data is currently available—state gas taxes accounted for less than 29 percent of state revenues that went to highway funding (see Appendix A for a specific breakdown for each individual state). Other large sources of funding of road maintenance and construction included registration fees, tolls, and many other sources of tax revenue earmarked for highway funding, most of which are also paid by EV drivers. In addition, in most states, EV drivers are already paying a variety of taxes on the additional electricity they use.

This paper defines a maximum justifiable EV fee compared with existing gas taxes, and looks at the existing and proposed EV fees across the country to determine whether they can be justified on the basis of parity or whether they are creating an added burden on EV owners. It then estimates how much revenue these fees will raise in 2019 and 2025.

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[1] https://advocacy.consumerreports.org/research/electric-vehicle-sales-hit-new-peak-in-2018-but-a-lot-of-room-for-continued-growth/.
[2] https://advocacy.consumerreports.org/press_release/evsurvey2019/.
[3] https://www.consumerreports.org/cars/tesla/model-s/2019/road-test/?pagestop, https://www.consumerreports.org/cars/tesla/model-3/2019/road-test/?pagestop, https://www.consumerreports.org/cars/chevrolet/bolt/2019/road-test/?pagestop.
[4] https://www.energy.gov/eere/electricvehicles/saving-fuel-and-vehicle-costs, https://theicct.org/publications/update-US-2030-electric-vehicle-cost.
[5] Reuters. "*VW, China Spearhead $300 Billion Global Drive to Electrify Cars,"* January 10, 2019, https://www.reuters.com/article/us-autoshow-detroit-electric-exclusive/exclusive-vw-china-spearhead-300-billion-global-drive-to-electrify-cars-idUSKCN1P40G6.

[6] https://www.nrdc.org/experts/max-baumhefner/simple-way-fix-gas-tax-forever.

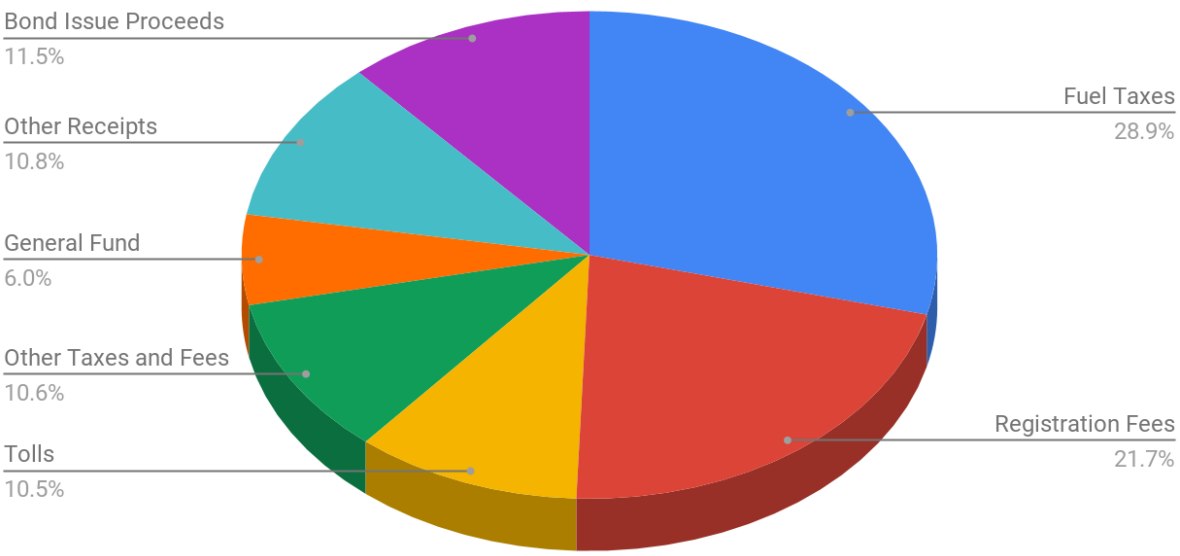

Figure 1. State highway funding by source for 2016.[7]

Approach

Defining a Maximum Justifiable EV Fee

For states that decide to institute an EV fee, there is no single answer to the question of what an appropriate EV fee should be. Though EV fees should be determined relative to the gas tax paid by a conventional vehicle, there has yet to be a consensus upon what fuel economy that comparison should be based. The Natural Resources Defense Council makes a strong case that the fee should be based upon the EPA-rated miles per gallon equivalent (MPGe).[8] Others within the policy community suggest that comparing EVs with some of the most efficient gasoline vehicles (e.g., Toyota Prius) is appropriate. These approaches can be useful for states that want to align their tax and fee structure to reward superior vehicle efficiency.

Rather than advocating for a single approach, the purpose of this analysis is to define a "maximum justifiable fee" (MJF) as the highest level that an EV fee could be set in a given state and still be expected to provide the same highway funding revenue as the average new gasoline vehicle. There are certainly strong rationale for setting EV fees lower than the MJF,

[7] Office of Highway Policy Information, tables HF-10 and SDF, https://www.fhwa.dot.gov/policyinformation/statistics/2016/hf10.cfm, https://www.fhwa.dot.gov/policyinformation/statistics/2016/sdf.cfm.
[8] https://www.nrdc.org/experts/max-baumhefner/simple-way-fix-gas-tax-forever.

such as encouraging EV adoption and investment or reducing pollution, but any fee higher than the MJF cannot be justified in terms of raising highway funding revenue, relative to what gasoline-powered vehicles are paying. Because most EVs that will be on the road in the near term will be new or relatively new, they should be compared with other new vehicles rather than the full existing vehicle fleet. Thus, the fleet average CAFE standards for new vehicles is an appropriate metric on which to base the comparison. Any EV fee set at a level that is higher than the gas tax paid by the average new conventional gasoline-powered vehicle would disadvantage EV owners, and thus cannot be justified on the basis of fairness.

The MJF will vary by state. It is calculated for each state using the equation below:

MJF = Average Vehicle Miles Traveled/Fuel Economy Standard x State Gas Tax

For the fuel economy standard in this equation, two values are used in this study. These are the expected average new-vehicle fuel economy based upon existing fuel economy and greenhouse gas standards for model year 2020 and model year 2025.[9] Including 2025 allows for analysis of how the MJF is likely to change over time as the fuel economy of conventional internal combustion engine (ICE) vehicles continues to improve.

EV Fee Classification

Using the maximum justifiable fee, we classify all existing and proposed EV fees as either "punitive" or "non-punitive" depending on whether they are above or below the MJF, respectively. We further differentiate punitive fees by labeling fees that force EV drivers to pay at least 50 percent more than the average new internal combustion engine vehicle as "extremely punitive."

Estimating EV Fee Revenues

Revenues generated from EV fees are estimated both for the current EV fleet and projecting the number of EVs in each state by 2025. The current EV fee revenues were estimated by multiplying the cumulative number of EVs that had been sold in a given state through 2018, according to the Alliance of Automobile Manufacturers.[10] This value was then compared with the

[9] Based upon the existing EPA GHG and NHTSA CAFE standards for 2020 and the existing GHG and augural CAFE standards for 2025. Specific values were estimated from tables 1-7-1-12 of EPA and NHTSA's Preliminary Regulatory Impact Analysis for the SAFE rule, https://www.nhtsa.gov/sites/nhtsa.dot.gov/files/documents/ld_cafe_co2_nhtsa_2127-al76_epa_pria_181016.pdf.
The standards were then adjusted to account for the fact that fuel economy standards are based upon an EPA test cycle that does not reflect real-world driving. Values were adjusted down 20 percent to account for the difference between test cycle and real-world performance, consistent with what appears on new-vehicle window stickers.

[10] https://autoalliance.org/energy-environment/advanced-technology-vehicle-sales-dashboard/.

total state spending on highway and road projects in 2016 and adjusted for inflation.[11] To project EV fee revenues in 2025, some conservative assumptions were made. Future EV sales were estimated based upon Bloomberg New Energy Finance's projection that EVs will account for 11 percent of the market in the U.S. by 2025.[12] The distribution of EV sales by state was assumed to stay the same as it was in 2018. State highway spending was assumed to stay the same as 2016 in real terms but is adjusted for inflation based upon the average consumer price index (CPI) over the past 20 years.[13]

Results

Figures 2 and 3 show the ratio of the existing (Figure 2) and proposed (Figure 3) EV fees to the maximum justifiable fee for each state in both 2020 and 2025 (see Appendix B for state-by-state details). They are color coded to show which fees are non-punitive, punitive, and extremely punitive. From these two figures, we can see a few trends that are moving toward overcharging EV drivers relative to ICE vehicles. The first is that over time, as fuel economy improves, EV-only fees will become much more punitive. The number of existing fees that are punitive increases from 42 percent to 69 percent between 2020 and 2025, respectively. Furthermore, the number of existing fees that are extremely punitive increases from 15 percent in 2020 to 46 percent in 2025. This means that EV drivers in 12 states will have to pay at least 50 percent more than the average new ICE vehicle in 2025.

The other clear trend is that most of the proposed fees are even more punitive than the existing fees. A full two-thirds of the proposed fees are punitive, and seven of the eight punitive proposals are extremely punitive. By 2025, 83 percent of the proposed fees will be punitive. This is also reinforced by the existing fees that have been passed or increased so far in 2019. As yet, eight states[14] have passed or increased EV fees this year, and of those new fees, seven of them will be extremely punitive by 2025. This trend signals a dramatic increase in punitive fees that would also be likely to have a negative effect on consumer choice and access to the benefits of EVs.

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[11] Including only state revenues, not including federal transfers. Data on state revenues from the Federal Highway Administration, form SF1, https://www.fhwa.dot.gov/policyinformation/statistics/2016/sf1.cfm.
Inflation calculations based upon the consumer price index, https://www.minneapolisfed.org/community/financial-and-economic-education/cpi-calculator-information/consumer-price-index-and-inflation-rates-1913.

[12] Bloomberg New Energy Finance Electric Vehicle Outlook 2018 (no longer available online).

[13] Average CPI from 1999 to 2018 was 2.2 percent, https://www.minneapolisfed.org/community/financial-and-economic-education/cpi-calculator-information/consumer-price-index-and-inflation-rates-1913.

[14] Alabama, Arkansas, Illinois, Iowa, North Dakota, Ohio, Washington, and Wyoming.

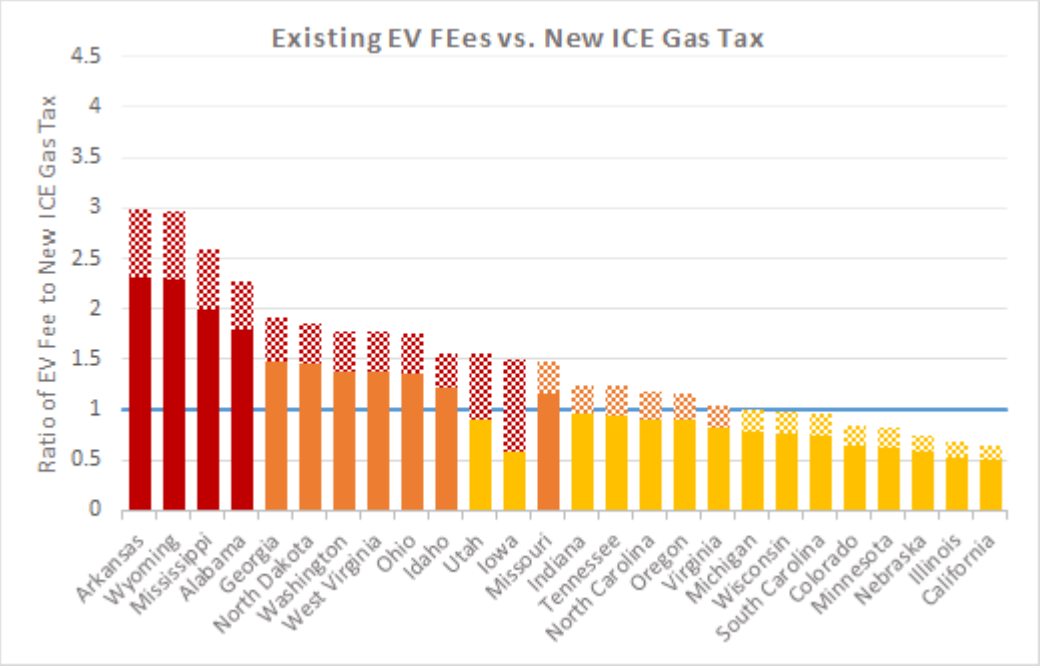

Figure 2. Ratio of existing fees to the MJF. MJF = 1 (blue line). Solid sections of the bar represent ratio in 2020. The checkered sections represent the increase in the ratio by 2025. yellow = non-punitive, orange = punitive, red = extremely punitive

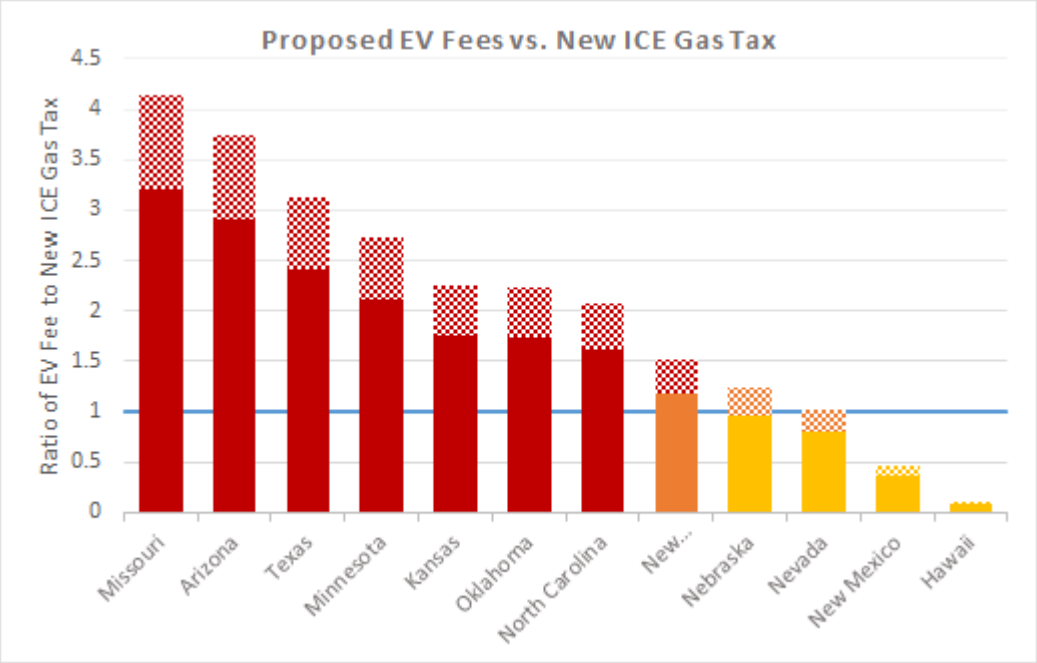

Figure 3. Ratio of proposed fees to the MJF. MJF = 1 (blue line). Solid sections of the bar represent ratio in 2020. The checkered sections represent the increase in the ratio by 2025. yellow = non-punitive, orange = punitive, red = extremely punitive

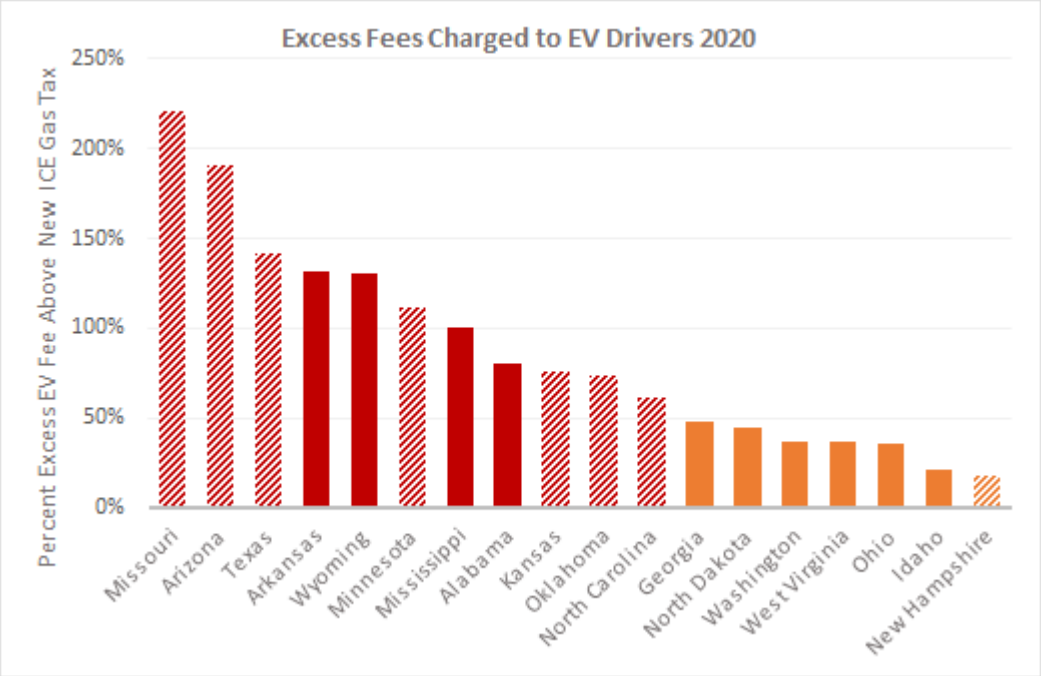

Figure 4. Percentage more that an EV driver will pay than the average new ICE vehicle in 2020. solid bar = existing fee, diagonal stripes = proposed fee

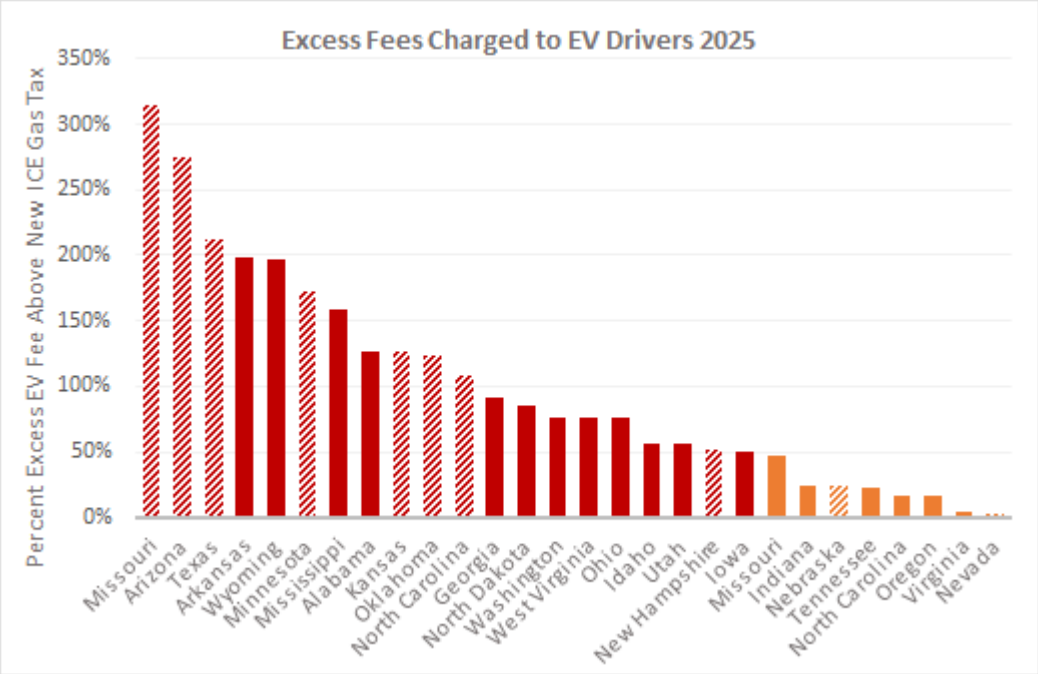

Figure 5. Percentage more that an EV driver will pay than the average new ICE vehicle in 2025. solid bar = existing fee, diagonal stripes = proposed fee

Figures 4 and 5 put the existing and proposed punitive fees on the same scale to show just how excessive some of the proposed fees really are, and how much worse they are than most of the

existing fees. These graphs show how much more (in percentage terms) an EV driver will spend on fees than the average new ICE vehicle diver will pay in gas taxes. These figures show that EV drivers in some states could be forced to pay double, triple, or even quadruple what ICE drivers have to pay in gas taxes.

Putting some of the highest fees into further context, the existing fees in Arkansas and Wyoming force EV owners to pay the equivalent of the gas tax paid by a vehicle that gets 13 miles per gallon. The highest proposed fees are in Missouri and Arizona, which would force EV buyers to pay the equivalent of the gas tax paid by vehicles that get 9 and 10 miles per gallon, respectively.

EV Fee Revenues

Putting aside the appropriateness of the levels of EV fees, there remains a question as to whether or not they are effective in achieving their goal of helping to close gaps in state highway budgets. On average, EV fees currently generate 0.04 percent of current state highway revenues[15] in states where they have already been instituted. Proposed EV fees, of which two-thirds have been proposed at levels the analysis defines as extremely punitive, will also generate only an average of 0.04 percent of the current state highway funding. Looking out to 2025, even with rapid EV growth,[16] existing and proposed EV fees will generate only an estimated average of less than 0.3 percent of the expected state highway revenues.

Discussion

The results show that the trend on EV fees increasingly disadvantages EV owners, while raising very little revenue to support highway construction and maintenance. Of the eight newly passed or increased EV fees so far in 2019,[17] seven of them will be extremely punitive by 2025. In addition, all but two of the proposed fees will be punitive by 2025.

Even when EV fees are below the maximum justifiable fee, they are far from an ideal solution. For one, they apply uniformly to all vehicles regardless of the number of miles traveled, so an EV used for a short urban commute and driven only a few thousand miles a year pays the same as an EV used by a rideshare company and driven thousands of miles a month. The nature of flat fees is that they are inherently unfair to low-use consumers. EVs are also still a small portion of the vehicles on the roads, so these fees will not generate anywhere near enough revenue to fill the gap left by decades of underspending on our roads, with the resulting potholes and worn bridges.[18] At best, EV fees will generate an average of 0.3 percent of state highway funding

[15] Including only state revenues, not including federal transfers. Data on state revenues from the Federal Highway Administration, form SF1, and adjusted for inflation, https://www.fhwa.dot.gov/policyinformation/statistics/2016/sf1.cfm.
[16] This analysis assumes that EVs achieve an 11 percent market share by 2025.
[17] As of August 2, 2019, Alabama, Arkansas, Illinois, Iowa, North Dakota, Ohio, Washington, and Wyoming have passed new or updated EV fees in 2019.
[18] The American Society of Civil Engineers rated America's infrastructure at a D+ in 2017, giving a rating of D to America's roadways and citing a $800 billion backlog in capital investment needs,

revenue by 2025, an amount of revenue that won't do much to make up for the continued erosion of gas tax revenue from the combination of inflation and improving fuel economy.[19] Furthermore, EV fees can also act as a deterrent to EV adoption. Research from the University of California, Davis used stated and revealed preference methods to estimate the effect of EV fees on sales and found that instituting an EV fee is likely to have a measurable impact on EV adoption, at least in the short run.[20]

States that want to encourage EV adoption in order to help meet emissions reduction goals and spur innovation can consider avoiding EV fees altogether at minimal cost over the near term. If lawmakers decide that EV fees are the right policy for their state, they could phase in the fees slowly over several years or tie them to certain targets related to EV market share to help minimize the potential for the fees to suppress the rate of EV adoption. They can also look to other road-funding approaches that are more uniformly applied to all vehicles.[21]

There is no doubt that states need to find ways to raise more revenue to pay for transportation projects and maintenance. As they look to do so, it makes sense to consider EVs and make sure that as they grow in market share, EV drivers contribute to funding the infrastructure that they use. However, in order for funding mechanisms to be tied to actual road costs, they should take into account actual road usage, consider direct impact in terms of road damage and congestion, and not punish cleaner vehicles that make up a small portion of the market. The current and proposed EV fees fall well short on most or all of these accounts.

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https://www.infrastructurereportcard.org/,
https://www.infrastructurereportcard.org/wp-content/uploads/2017/01/Roads-Final.pdf.

[19] https://www.nrdc.org/experts/max-baumhefner/simple-way-fix-gas-tax-forever.

[20] https://escholarship.org/uc/item/62f72449#main.

[21] For example, a vehicle miles-traveled fee as is currently being tested in Oregon,
http://www.myorego.org/;
congestion pricing, https://ops.fhwa.dot.gov/publications/congestionpricing/sec2.htm;
or more complex strategies,such as the indexed energy user fee proposed by David Greene,
https://www.sciencedirect.com/science/article/pii/S1361920911000630.

Appendix A - State Highway Funding Sources[22]

State	Gas Tax	Registration Fees	Tolls	General Fund	Other Revenue[23]	Bonds
Alabama	60.7%	16.1%	0.0%	17.9%	5.3%	0.0%
Alaska	4.7%	5.9%	6.1%	49.3%	9.7%	24.4%
Arizona	34.2%	21.4%	0.0%	0.5%	43.8%	0.0%
Arkansas	42.9%	17.2%	0.0%	5.2%	34.7%	0.0%
California	34.9%	42.8%	3.1%	1.0%	11.3%	6.9%
Colorado	27.0%	47.6%	6.7%	11.3%	3.9%	3.4%
Connecticut	22.3%	10.6%	0.0%	4.7%	18.6%	43.9%
Delaware	5.1%	8.0%	14.5%	4.2%	45.9%	22.4%
Dist. of Col.	0.9%	3.5%	0.0%	68.5%	0.0%	27.1%
Florida	25.9%	19.2%	24.3%	0.0%	20.5%	10.1%
Georgia	65.6%	4.4%	0.6%	19.7%	7.1%	2.6%
Hawaii	31.5%	66.7%	0.0%	0.0%	1.8%	0.0%
Idaho	50.8%	36.2%	0.0%	0.0%	6.9%	6.1%
Illinois	17.5%	19.2%	24.4%	13.6%	2.7%	22.6%
Indiana	50.5%	17.6%	0.6%	7.3%	24.0%	0.0%
Iowa	37.6%	56.7%	0.0%	3.4%	2.3%	0.0%
Kansas	14.3%	6.9%	12.2%	0.0%	66.6%	0.0%
Kentucky	37.0%	36.6%	0.0%	0.4%	12.7%	13.3%
Louisiana	65.4%	16.2%	1.9%	0.0%	6.7%	9.7%
Maine	45.4%	19.2%	33.9%	0.0%	1.5%	0.0%
Maryland	14.2%	19.4%	29.2%	4.6%	17.3%	15.3%
Massachusetts	12.2%	4.1%	11.2%	14.8%	32.9%	24.8%
Michigan	37.0%	39.7%	1.9%	7.8%	11.2%	2.3%
Minnesota	16.3%	14.1%	0.0%	24.9%	27.5%	17.2%
Mississippi	48.2%	20.1%	0.0%	0.0%	9.1%	22.6%
Missouri	48.9%	22.1%	0.0%	0.2%	28.8%	0.0%

[22] https://www.fhwa.dot.gov/policyinformation/statistics/2016/sf1.cfm.

[23] Other revenue includes any other taxes and fees that are set aside for highway funding, including sales taxes, lodging taxes, severance taxes, tobacco taxes, and other revenue sources, such as leasing rights of way for cell towers.

Montana	39.8%	41.5%	0.0%	0.0%	18.1%	0.6%
Nebraska	40.7%	11.1%	0.0%	6.0%	42.2%	0.0%
Nevada	34.1%	29.2%	0.1%	0.0%	10.9%	25.7%
New Hampshire	33.7%	13.3%	32.9%	2.9%	16.5%	0.7%
New Jersey	4.8%	11.0%	36.1%	1.9%	29.4%	16.8%
New Mexico	35.4%	47.8%	0.0%	7.7%	9.1%	0.0%
New York	9.7%	10.3%	24.8%	8.0%	28.4%	18.7%
North Carolina	49.4%	21.2%	0.6%	0.0%	28.8%	0.0%
North Dakota	32.1%	19.5%	0.0%	48.4%	0.0%	0.0%
Ohio	49.4%	22.9%	8.2%	0.3%	11.5%	7.8%
Oklahoma	10.6%	17.3%	10.2%	0.0%	61.9%	0.0%
Oregon	43.2%	46.5%	0.0%	5.7%	4.6%	0.0%
Pennsylvania	31.0%	9.7%	13.0%	13.3%	11.7%	21.3%
Rhode Island	15.8%	10.4%	8.2%	17.1%	2.7%	45.9%
South Carolina	41.1%	22.4%	1.0%	25.6%	9.9%	0.0%
South Dakota	51.6%	1.2%	0.0%	0.0%	47.1%	0.0%
Tennessee	57.0%	26.2%	0.0%	0.0%	16.7%	0.0%
Texas	28.9%	20.8%	10.2%	0.0%	27.9%	12.2%
Utah	26.6%	12.3%	0.1%	6.8%	54.2%	0.0%
Vermont	29.4%	48.7%	0.0%	15.3%	6.6%	0.0%
Virginia	17.1%	24.7%	1.8%	5.0%	44.0%	7.5%
Washington	32.1%	15.9%	7.1%	0.0%	32.4%	12.6%
West Virginia	48.7%	36.5%	11.4%	1.9%	1.5%	0.0%
Wisconsin	36.7%	24.5%	0.0%	5.0%	6.0%	27.7%
Wyoming	30.3%	19.0%	0.0%	14.3%	36.4%	0.0%
Average	**29.0%**	**21.6%**	**10.5%**	**6.0%**	**21.4%**	**11.5%**

Appendix B - Ratio of EV Fees to the Maximum Justifiable Fee (MJF)

State	Existing or Proposed EV Fee	Ratio Existing or Proposed to MJF 2020	Ratio Existing or Proposed to MJF 2025
Alabama	$200[24]	1.80	2.27
Arizona	$198[25]	2.91	3.75
Arkansas	$200[26]	2.32	2.98
California	$100[25]	0.50	0.64
Colorado	$50[25]	0.65	0.84
Georgia	$214[25]	1.48	1.91
Hawaii	$15[25]	0.08	0.11
Idaho	$140[25]	1.21	1.56
Illinois	$100[27]	0.53	0.69
Indiana	$150[25]	0.96	1.24
Iowa	$65[28]	0.58	1.50
Kansas	$150[25]	1.76	2.26
Michigan	$135[25]	0.78	1.00
Minnesota	$75[25]/250[29]	0.63/2.12	0.82/2.73
Mississippi	$150[25]	2.00	2.58
Missouri	$75/$210[25]	1.15/3.21	1.48/4.14
Nebraska	$75/$125[25]	0.58/0.97	0.75/1.24
Nevada	$100[25]	0.80	1.03

[24] Increases by $3/year starting in 2023, https://whnt.com/2019/03/13/rebuild-alabama-act-adds-new-registration-fee-for-ev-and-hybrid-drivers/.
[25] Atlas EV Hub, "EV Fees and Gas Taxes," https://www.atlasevhub.com/materials/laws-regulations-and-legislation/.
[26] https://www.arkansasonline.com/news/2019/mar/05/house-advances-governor-s-plan-on-road-/.
[27] https://www.chicagotribune.com/business/ct-biz-illinois-ev-fee-hike-20190603-story.html.
[28] Increases to $130 in 2022, https://www.thegazette.com/subject/news/government/iowa-house-votes-to-add-fee-for-electric-vehicle-registration-20190417.
[29] https://www.twincities.com/2019/02/20/republican-led-tax-on-hybrid-and-electric-cars-would-be-highest-in-u-s/.

New Hampshire	$111[25]	1.18	1.52
New Mexico	$25[25]	0.37	0.47
North Carolina	$130/$230[30]	0.91/1.61	1.17/2.08
North Dakota	$120[31]	1.45	1.86
Ohio	$200[32]	1.36	1.76
Oklahoma	$150[25]	1.74	2.24
Oregon	$110[25]	0.90	1.16
South Carolina	$60[25]	0.74	0.96
Tennessee	$100[25]	0.95	1.23
Texas	$200[33]	2.42	3.12
Utah	$90[34]	0.91	1.56
Virginia	$64[25]	0.82	1.05
Washington	$225[35]	1.37	1.77
West Virginia	$200[25]	1.37	1.77
Wisconsin	$100[25]	0.77	0.99
Wyoming	$200[25]	2.30	2.97

[30] https://www.newsobserver.com/news/politics-government/article230983743.html.
[31] https://bismarcktribune.com/news/local/govt-and-politics/burgum-signs-bill-imposing-new-fees-for-electric-hybrid-vehicle/article_23fa778a-3c38-5931-8008-6be048050475.html.
[32] https://www.cleveland.com/datacentral/2019/04/see-how-much-ohios-gas-tax-increase-will-cost-you.html.
[33] https://www.houstonchronicle.com/business/energy/article/Texas-other-states-look-to-boost-fees-on-EV-s-13877118.php.
[34] Increases to $120 in 2021, https://afdc.energy.gov/laws/12063.
[35] https://www.opb.org/news/article/washington-state-tax-credit-electric-vehicle-purchases/.

Appendix C - EV Fee Revenue Projections

	Existing Fee - Current % of Revenue[36]	Proposed Fee - Current % of Revenue	Existing Fee - 2025 % of Revenue[37]	Proposed Fee - 2025 % of Revenue
Alabama	0.02%		0.14%	
Arizona		0.13%		0.85%
Arkansas	0.01%		0.06%	
California	0.23%		1.46%	
Colorado	0.03%		0.17%	
Georgia	0.24%		1.51%	
Hawaii		0.04%		0.24%
Idaho	0.01%		0.09%	
Illinois	0.02%		0.16%	
Indiana	0.03%		0.16%	
Iowa	0.00%		0.04%	
Kansas		0.02%		0.14%
Michigan	0.02%		0.13%	
Minnesota	0.01%	0.05%	0.09%	0.30%
Mississippi	0.00%		0.03%	
Missouri	0.02%	0.05%	0.11%	0.32%
Montana				
Nebraska	0.01%	0.01%	0.04%	0.07%
Nevada		0.04%		0.28%
New Hampshire		0.03%		0.21%
New Jersey				
New Mexico		0.00%		0.03%
North Carolina	0.03%	0.05%	0.17%	0.29%

[36] Based upon existing EV registrations in each state through December 2018 multiplied by the value of the EV fee divided by 2016 state highway spending adjusted using the CPI to $2018, https://autoalliance.org/energy-environment/advanced-technology-vehicle-sales-dashboard/.

[37] Calculation based upon projecting EV sales based upon optimistic BNEF projections of EVs reaching 11 percent of market share by 2025, assuming relative state EV market share stays the same as 2018, and considering state highway funding requirements increasing at a rate of 2.2 percent/year based upon the average CPI over the past 20 years.
Bloomberg New Energy Finance Electric Vehicle Outlook 2018 (no longer available online).

North Dakota	0.00%		0.01%	
Ohio	0.03%		0.21%	
Oklahoma		0.02%		0.13%
Oregon	0.12%		0.78%	
Rhode Island	0.00%			
South Carolina	0.01%		0.06%	
Tennessee	0.03%		0.22%	
Texas		0.04%		0.28%
Utah	0.04%		0.23%	
Virginia	0.01%		0.08%	
Washington	0.18%		1.17%	
West Virginia	0.01%		0.03%	
Wisconsin	0.02%		0.12%	
Wyoming	0.01%		0.06%	
Average	**0.04%**	**0.04%**	**0.28%**	**0.26%**