



# **Funding the Road Ahead**

## Policies and Principles for Transportation Funding

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## Executive Summary

Funding roads in the U.S. has become increasingly difficult due to rising road construction costs, reduced revenues from state and federal gas taxes, and policymakers' reluctance to raise the federal gas tax and to reform an outdated funding model. The federal gas tax, unchanged since 1993, has lost roughly 81% of its purchasing power, driven largely by increases in the costs to build and repair roads. The cost of building and maintaining public roads has increased not only due to inflation but also due to limited staffing capacity of government agencies and limited competition in government construction contracts, leaving critical infrastructure in disarray.

As cleaner, more fuel-efficient vehicles enter the market, further eroding revenues based on gas consumption, Congress will face increasing pressure to explore alternatives to the federal gas tax. In response to a rapidly shifting vehicle fleet, state lawmakers are also struggling with how to maintain road funding revenues while experimenting with new revenue collection strategies. Policymakers must also reevaluate the continued system of subsidizing heavy-duty vehicle travel if these vehicle classes are going to pay closer to their fair share relative to their impact on road deterioration.

This paper lays out a set of five key principles that policymakers should consider when evaluating the equity and viability of proposed road funding approaches. It then reviews five prominent road funding strategies—annual taxes on electric vehicle (EV) registrations, pay-per-mile charges (vehicle miles traveled fees), taxes on public EV charging, toll roads, and General Fund transfers—and evaluates their impact on consumers and their alignment with CR's policy principles. By using this set of principles as a guide, policymakers can better design transportation funding strategies that deliver revenue stability while improving equity and limiting negative impacts on consumers or other vulnerable populations.

Throughout this paper, it will become clear that there is no perfect suite of policies that can adequately address all principles put forward, and it will be up to policymakers to weigh the benefits and drawbacks of each funding approach. To illustrate the imperfections across funding approaches, we have created a matrix weighing the alignment of each policy principle to the primary funding strategies discussed in this paper.

# Funding the Road Ahead: Policies and Principles for Transportation Funding



**Table 1: Policy Principles Matrix**

	Proportional User Payments	Fairness Between Consumers and Commercial Vehicles	Ease of Collection	Privacy Protections	Revenue Stability
<b>Fuel Excise Tax</b>	Directly captures vehicle usage and indirectly captures weight and pollution. Does not capture EVs.	Varies by locale.	Low cost of collection, established system of collecting.	No significant privacy concerns.	Politically difficult to increase tax rate when not indexed to inflation. Not resilient to evolving fleet dynamics.
<b>EV Registration Fees</b>	Does not consider individual driving habits. Typically does not consider differential impacts of different types of vehicles.	Can offer fairness among vehicle types when calibrated appropriately.	Relatively easy collection process at the state level.	No significant privacy concerns.	Can be stable with the appropriate measures.
<b>Vehicle Miles Traveled Fees</b>	Most accurately captures individual driving habits and impact on deterioration of infrastructure, especially when other vehicle attributes are considered in rates.	Can offer fairness between consumer and commercial vehicles when calibrated correctly.	Ease of collection varies based on collection strategy policymakers choose to implement (GPS tracking vs. non-GPS tracking vs. odometer reading).	Potential privacy concerns vary based on collection strategy policymakers choose to implement (GPS tracking vs. non-GPS tracking vs. odometer reading).	Stable revenue collecting strategy subject to policymakers adjusting pricing model for inflation.
<b>Public EV Charging Taxes</b>	Adverse impacts on individuals who cannot charge at their home.	Adverse impacts on commercial vehicles that cannot charge at fleet site.	Unclear directions on who must carry the burden of collecting the taxes.  Easy tax collection from consumer perspective.	No significant privacy concerns.	Revenue stability depends on the buildout of future charging infrastructure and utilities' ability to track home charging.
<b>Tolls</b>	If executed well, can capture individual driving habits and impact on public infrastructure and even be adjusted dynamically to account for congestion.	Fairness between consumers and commercial vehicles is dependent on location and level of tolls.	Collection is relatively easy with technology like E-ZPass, but signing up can be a slight burden for some consumers.	Potential privacy concerns vary based on technology used for collection.	Revenue stability depends on future infrastructure and urban planning, and is vulnerable to shifts in driver behavior.
<b>General Fund</b>	Completely disconnected from infrastructure usage and impact.	Effective corporate taxes are much lower than taxes paid by working Americans.	High ease of collection within existing tax collection process.	No significant privacy concerns.	Revenue is not stable, but dependent on economic factors. Requires regular intervention by policymakers to appropriate funds.

## Introduction

Highway infrastructure in the U.S. plays a foundational role in supporting and expanding commerce and mobility opportunities for consumers across the country. However, a variety of policy shortcomings have led to a substantial decline in the government's ability to properly maintain this critical infrastructure, such as persistent funding gaps in the Highway Trust Fund (HTF). According to the American Society of Civil Engineers (ASCE), in 2025 the U.S. received grades of D+ and C for road and bridge infrastructure, respectively.<sup>1</sup>

Established in 1956, the HTF is the federal government's primary program responsible for collecting and distributing revenues for highway infrastructure development and maintenance.<sup>2</sup> One of several sources of revenue is the federal gas tax, which has been in place since 1932.<sup>3</sup>

In 2006, the Department of Transportation (DOT) first warned that a funding deficit was looming for the HTF as the gas tax remained flat.<sup>4</sup> In 2008, Congress authorized a one-time \$8 billion infusion from the General Fund to fill the shortfall, after a rise in gas prices and the onset of the Great Recession caused people in the U.S. to drive less, leading to a reduction in gas tax revenues.<sup>5</sup> Since then, repeated shortfalls have led to the federal government delivering over \$275 billion from the General Fund to backfill the HTF, including approximately \$118 billion coming from the Infrastructure Investment and Jobs Act (2021).<sup>6</sup> Regardless of these temporary fixes to the HTF, the Congressional Budget Office projects the HTF will be depleted by 2028 unless new funding is provided or the revenue system is restructured to be more sustainable.<sup>7</sup>

Under current laws, state and local governments are responsible for the operation and maintenance of highways. To fulfill this responsibility, road funding is appropriated differently across various levels of government around the country.

At the state level, policymakers deploy a variety of strategies to raise revenues for road infrastructure projects. States typically fund infrastructure projects through similar sources, including some combination of state fuel excise taxes, vehicle registration fees, General Fund

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<sup>1</sup> "A Comprehensive Assessment of America's Infrastructure," *American Society of Civil Engineers*, 2025.

<sup>2</sup> Highway Revenue Act of 1956, Pub. L. No 84-627, section 209.

<sup>3</sup> "When did the Federal Government begin collecting the gas tax?" *U.S. Department of Transportation Federal Highway Administration*, 2023, [www.fhwa.dot.gov/infrastructure/gastax.cfm](http://www.fhwa.dot.gov/infrastructure/gastax.cfm).

<sup>4</sup> "Options to Stabilize the Highway Trust Fund," *Bipartisan Policy Center*, February 2026, [bipartisanpolicy.org/issue-brief/options-to-stabilize-the-highway-trust-fund](http://bipartisanpolicy.org/issue-brief/options-to-stabilize-the-highway-trust-fund).

<sup>5</sup> "Improved Solvency Mechanisms and Communication Needed to Help Avoid Shortfalls in the Highway Account," *U.S. Government Accountability Office*, 2009, [www.gao.gov/products/gao-09-316](http://www.gao.gov/products/gao-09-316).

<sup>6</sup> "Funding and Financing Highways and Public Transportation Infrastructure Under the Infrastructure Investment and Jobs Act," *Congressional Research Office*, 2023, [www.congress.gov/crs-product/R47573](http://www.congress.gov/crs-product/R47573).

<sup>7</sup> "The Status of the Highway Trust Fund: 2023 Update," *Congressional Budget Office*, October 2023, [www.cbo.gov/system/files/2023-10/59634.pdf](http://www.cbo.gov/system/files/2023-10/59634.pdf).

subsidies, local bonds, and/or tolls on roads and highways. State gas taxes account for about 30% of total funding sources at the state level, according to CR's analysis of 2016 data.<sup>8</sup>

More recently, some states have experimented with establishing alternative revenue sources. Options include a vehicle miles traveled (VMT) fee, which can approximately track an individual vehicle's usage on public roads,<sup>9</sup> and taxes on new types of fueling, such as electric vehicle (EV) charging,<sup>10</sup> which can provide similar benefits and challenges to traditional gasoline excise taxes.

## What Has Led to Unsustainable Transportation Infrastructure Costs?

While a fuel tax has remained the federal government's primary method of collecting public dollars for road infrastructure projects, a reluctance to increase that federal gas tax rate, combined with shifting market conditions, has led to a decline in the federal government's ability to adequately fund infrastructure projects nationwide.

Three key factors have affected the purchasing power of the gas tax over that time: increases in the cost to build and repair transportation infrastructure, increases in average fleet fuel economy, and sales of new EVs. Of these three factors, increases in the cost to build highways have had by far the most significant impact, reducing the purchasing power of the gas tax by 77%. Increases in average fuel economy—and the consequent decrease in fuel sold—have contributed to a 15% reduction in gas tax revenue collected per mile driven, while sales of new EVs have contributed another 2% reduction. These three factors combined for a total of 81% erosion in the purchasing power of the gas tax.<sup>11</sup> For more details on these impacts and the calculations presented above, see Appendix.

The federal government's reluctance to increase the federal gas tax rate has diminished the DOT's ability to successfully complete federal infrastructure projects or to fill infrastructure funding gaps for states and local governments, while deferred maintenance increases safety and reliability risks on roadways and bridges. National assessments indicate that more than 22,000 bridges are susceptible to damage from extreme weather, raising the likelihood of restrictions, closures, and costly emergency repairs that can disrupt travel and commerce.<sup>12</sup> These shortfalls have also contributed to the lack of maintenance and degradation of our

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<sup>8</sup> Chris Harto, Shannon Baker-Branstetter, "Rising Trend of Punitive Fees on Electric Vehicles Won't Dent State Highway Funding Shortfalls but Will Hurt Consumers," *Consumer Reports*, September 2019, [advocacy.consumerreports.org/wp-content/uploads/2019/09/Consumer-Reports-EV-Fee-analysis.pdf](https://advocacy.consumerreports.org/wp-content/uploads/2019/09/Consumer-Reports-EV-Fee-analysis.pdf).

<sup>9</sup> "The Current Status of State VMT Fees," *Eno Center for Transportation*, August 2023, [enotrans.org/article/the-current-status-of-state-vmt-fees](https://enotrans.org/article/the-current-status-of-state-vmt-fees).

<sup>10</sup> "Revenue or Roadblock? Impacts of Electric Vehicle Charging Taxes," *Atlas Public Policy*, September 2025, [atlaspolicy.com/revenue-or-roadblock-impacts-of-electric-vehicle-charging-taxes-state-specific-fact-sheets](https://atlaspolicy.com/revenue-or-roadblock-impacts-of-electric-vehicle-charging-taxes-state-specific-fact-sheets).

<sup>11</sup> See Appendix.

<sup>12</sup> "A Comprehensive Assessment of America's Infrastructure," *American Society of Civil Engineers*, 2025.

roadways, leaving 39% of major roads in the country in poor condition, according to the ASCE.<sup>13</sup> Driving on deteriorated roads costs motorists \$167 billion annually, or \$725 per driver, in the form of additional repairs, accelerated vehicle degradation, and increased fuel consumption.<sup>14</sup>

There also remains a question about how to manage commercial vehicles and their impact on road infrastructure relative to their contributions to the road funding system. While commercial vehicles provide a general benefit to the consumer base, they are also responsible for a disproportionate share of road damage compared with passenger vehicles.<sup>15</sup> Researchers have compared the impact of an 80,000-pound truck and a 4,000-pound car and found that the truck does about 300 times more damage per mile than the passenger vehicle.<sup>16</sup> Despite accounting for only 11% of miles traveled on our roads annually, estimates show that heavy-duty trucks are responsible for at least 91% of the wear and tear on these roads.<sup>17</sup>

Commercial vehicles pay into the same tax structures as passenger vehicles, through the collection of registration fees and excise taxes on fuel. Although commercial vehicles overall pay significantly more per mile than passenger vehicles, they still pay much less than their proportional impact on the system.

Under the current road funding system, the heavy-duty trucking industry is not contributing revenues at a level equivalent to the damage they are creating on public roads and highways.<sup>18</sup> Any attempt to recalibrate road funding approaches must also ensure that the commercial trucking industry's impacts on our transportation system are appropriately considered. Taxpayers and passenger vehicle owners should not be forced to subsidize the trucking industry.

## Policy Principles

As gas tax revenues continue to decline and governments explore new ways to fund infrastructure, policymakers should weigh both the immediate and long-term impacts on consumers. Any future funding models should work for both the drivers who pay into the system and the governments that collect revenues, and should adapt as costs change over time.

To account for the many factors policymakers must consider in deciding how to fund our nation's roads and bridges, CR has developed a set of policy principles that can be used to evaluate

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<sup>13</sup> Ibid.

<sup>14</sup> "Key facts about the U.S. surface transportation system," *TRIP National Transportation Research Group*, January 2025, [tripnet.org/wp-content/uploads/2020/04/TRIP\\_Fact\\_Sheet\\_NATL.pdf](https://tripnet.org/wp-content/uploads/2020/04/TRIP_Fact_Sheet_NATL.pdf).

<sup>15</sup> "Analysis of car and truck pavement impacts," *FPIInnovations*, October 2018.

<sup>16</sup> Ibid.

<sup>17</sup> "Trucks Cause the Lion's Share of Road Damage—and Their Industry Wants You to Keep Paying for It," *Union of Concerned Scientists*, October 2025, [blog.ucs.org/dave-cooke/trucks-cause-the-lions-share-of-road-damage-and-their-industry-wants-you-to-keep-paying-for-it](https://blog.ucs.org/dave-cooke/trucks-cause-the-lions-share-of-road-damage-and-their-industry-wants-you-to-keep-paying-for-it).

<sup>18</sup> Ibid.

various funding strategies to ensure that they are equitable, sustainable, and protective of consumer rights.

## **Policy Principles for Road Funding Strategies**

1. **User pays proportional to impact:** Any user fees should reflect the actual impact a user or vehicle has on the system. This includes, but is not necessarily limited to, contributions to wear and tear, congestion, pollution, and crash risk. Users who drive more, operate heavier or more polluting vehicles, or contribute disproportionately to congestion or safety risk should pay more. Policymakers should also work to actively manage demand and incentivize projects that offer alternative modes, like transit, carpooling, or cycling, that reduce congestion and wear and tear.
2. **Fairness between consumer and commercial vehicles:** Consumers should not be forced to subsidize commercial road users through inequitable funding schemes. Commercial vehicles are often much larger and heavier, and they travel far more miles than personal vehicles. While essential to the economy, these fleets also place a heavy strain on our transportation resources, and owners should pay accordingly for their use of these shared resources.
3. **Ease of collection:** User-related fees or taxes should be simple for drivers to pay, without imposing unnecessary administrative burdens. Administering agencies should be transparent to their constituency as to how the cost is generated, how to understand these costs, and options for reducing their tax burden.
4. **Privacy protection:** Any usage-based system should be designed to minimize the amount of consumer data collected and retained for effective program administration. Any commission responsible for the collection of such data should establish comprehensive cybersecurity and privacy protections based on existing reputable cybersecurity and privacy frameworks.
5. **Revenue stability:** Solutions should maintain revenue stability as vehicle fleets and fuel types change, with automatic adjustments tied to fluctuating road construction and materials costs, as well as to general inflation.

## **Core Revenue Approaches**

As policymakers grapple with a future where vehicles on the road use less gasoline, or no gasoline at all, they have primarily focused on five revenue collection strategies beyond the traditional gasoline excise tax: electric vehicle registration fees, vehicle miles traveled fees, electric vehicle charging taxes, toll roads, and General Fund spending.

## Electric Vehicle Registration Fees

EV sales nationwide have been rising in recent years as buyers recognize the consumer, public health, and environmental benefits they can provide.<sup>19</sup> However, because EVs do not consume gasoline, and therefore do not contribute to fuel excise taxes, policymakers have looked to identify ways to ensure that these vehicles pay their fair share for their use of the system. While a variety of revenue collection methods exist, the most common one policymakers have turned to is annual EV registration fees.

States typically collect these fees as an annual surcharge on top of general vehicle registration fees to replace lost fuel tax revenues from EVs. Today, 41 states impose special registration fees for EVs, with the cost to EV owners varying across the country.<sup>20</sup>

While EV registration fees can be a simple way to collect revenue from EVs, previous CR analyses have shown that many states have enacted punitive fees disproportionate to what drivers of an internal combustion engine vehicle would pay in gas taxes.<sup>21</sup>

Additionally, many states that have already implemented EV fees have included fees for plug-in hybrid electric vehicles (PHEVs) or hybrid vehicles, despite the fact that these vehicles also contribute to the gas tax system.

While EV registration fees have some drawbacks, collecting the fee at the time of registration allows government agencies to avoid additional collection or administrative costs. Providing vehicle owners the option to pay fees in installments throughout the year rather than as one lump sum could ease some of the financial burden on lower-income and fixed-income EV owners, including older drivers.

EVs have not played a significant role in the downward trajectory of federal or state transportation infrastructure revenues, nor can they currently make a significant contribution to reversing those declines. Today, EVs are responsible for an estimated 2% of miles driven on U.S. roads,<sup>22</sup> but widespread EV adoption will eventually force a complete redesign of how we fund highway infrastructure.

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<sup>19</sup> “Hybrid-Electric, Plug-in Hybrid-Electric and Electric Vehicle Sales, *Bureau of Transportation Statistics*, [www.bts.gov/content/gasoline-hybrid-and-electric-vehicle-sales](http://www.bts.gov/content/gasoline-hybrid-and-electric-vehicle-sales).

<sup>20</sup> “State Electric Vehicle Fees,” *American Road and Transportation Builders Association*, September 2025.

<sup>21</sup> “Rising Trend of Punitive Fees on Electric Vehicles Won’t Dent State Highway Funding Shortfalls but Will Hurt Consumers,” *Consumer Reports*, September 2019, [advocacy.consumerreports.org/wp-content/uploads/2019/09/Consumer-Reports-EV-Fee-analysis.pdf](http://advocacy.consumerreports.org/wp-content/uploads/2019/09/Consumer-Reports-EV-Fee-analysis.pdf).

<sup>22</sup> “The Truth Is Out There: The Cost of Roads Is Bankrupting the Highway Trust Fund, Not Electric Vehicles,” *Union of Concerned Scientists*, April 2025, [blog.ucs.org/dave-cooke/the-truth-is-out-there-the-cost-of-roads-is-bankrupting-the-highway-trust-fund-not-electric-vehicles](http://blog.ucs.org/dave-cooke/the-truth-is-out-there-the-cost-of-roads-is-bankrupting-the-highway-trust-fund-not-electric-vehicles).

## **Policy Principles Applied to Electric Vehicle Registration Fees**

EVs offer consumers an opportunity to reduce their transportation costs compared with those of comparable gas vehicles because EVs cost less to both fuel and maintain.<sup>23</sup> EV fees have disproportionate impacts that can hinder future adoption, particularly in nontraditional EV owning communities, denying households most in need of reducing transportation expenses the opportunity to do so. For one, EV fees are charged as a lump sum fee, unlike traditional gas taxes, which are spread out over the course of the year, meaning that consumers who choose to drive an EV will need to account for the burden of an additional large annual expense, potentially serving as a deterrent for lower-income prospective EV owners.

Policymakers choosing to adopt EV fees must be mindful of unintended consequences. For example, prospective EV owners already face many barriers when considering the purchase of a new clean vehicle. Inequitable EV fees add another market force that could steer consumers away from making sustainable, environmentally conscious choices.

In a 2023 nationally representative CR survey of 9,030 U.S. adults, respondents who said they would not “definitely” get an EV if they were to get a vehicle today were most likely to say vehicle fueling infrastructure, vehicle range, and the costs associated with EV ownership (from up-front costs to maintenance) were attributes holding them back from getting one.<sup>24</sup> By establishing an additional hurdle in the form of an EV fee, research has shown that 11% of consumers would reconsider their decision to purchase an EV and choose to purchase a comparable gas vehicle.<sup>25</sup> While EV drivers will need to contribute to road funding, reducing the amount these vehicle owners pay early on in the development of this new technology can offset some of the temporary hurdles early adopters face as the ecosystem surrounding these vehicles matures.

Additionally, flat registration fees fail to capture actual road usage, treating all drivers equally regardless of how much strain they put on the system. This can inadvertently affect members of vulnerable communities, such as older drivers, who tend to drive a lot less on average but might benefit greatly from the economic benefits that EVs can provide.<sup>26</sup> Similarly, lower-income people in the U.S., on average, drive their vehicles significantly fewer miles per year than

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<sup>23</sup> “Electric Vehicle Ownership Costs: Today’s Electric Vehicles Offer Big Savings for Consumers,” *Consumer Reports*, October 2020, [advocacy.consumerreports.org/wp-content/uploads/2020/10/EV-Ownership-Cost-Final-Report-1.pdf](https://advocacy.consumerreports.org/wp-content/uploads/2020/10/EV-Ownership-Cost-Final-Report-1.pdf).

<sup>24</sup> “Battery Electric Vehicles and Low Carbon Fuel: A Nationally Representative Multi-Mode Survey,” *Consumer Reports*, 2023, [article.images.consumerreports.org/image/upload/v1701451301/prod/content/dam/surveys/Consumer\\_Reports\\_BEV\\_LCF\\_National\\_June\\_July\\_2023.pdf](https://article.images.consumerreports.org/image/upload/v1701451301/prod/content/dam/surveys/Consumer_Reports_BEV_LCF_National_June_July_2023.pdf).

<sup>25</sup> “Assessing Alternatives to California’s Electric Vehicle Registration Fee,” *University of California Institute of Transportation Studies*, December 2018, [ucits.org/projects/assessing-alternatives-to-californias-electric-vehicle-registration-fee](https://ucits.org/projects/assessing-alternatives-to-californias-electric-vehicle-registration-fee).

<sup>26</sup> “Average Annual Miles per Driver by Age Group,” *U.S. Department of Transportation Federal Highway Administration*, last modified May 31, 2022, [www.fhwa.dot.gov/ohim/onh00/bar8.htm](https://www.fhwa.dot.gov/ohim/onh00/bar8.htm).

higher-income drivers.<sup>27</sup> Flat annual fees do not ensure that users pay proportionally to the impact they have on transportation infrastructure, and are likely to place an outsized burden on lower-income and older people who own EVs.

If policymakers do choose to establish or maintain EV fees, they should structure the fees in a way that would enable revenue stability measures to ensure that fees remain viable not only as vehicle fleets and fuel types change but also as inflation rises. To do this, policymakers should consider indexing EV fees to gasoline taxes to ensure that they both adjust in tandem as external factors fluctuate.

### Vehicle Miles Traveled Fees

Some states have launched voluntary pilot programs and conducted case studies to explore charging vehicle owners for their direct impact on road infrastructure in the form of a vehicle miles traveled (VMT) fee, also known as a road usage charge.<sup>28</sup> A VMT program employs various tracking methods to measure the distance a vehicle drives over a set period, usually a year, and then applies a per-mile fee for the vehicle owner to pay into road infrastructure accounts, as opposed to a traditional gas tax.

To accurately track an individual vehicle's miles traveled, a VMT program typically uses either odometer readings or specialized tracking software. For odometer readings, individuals are typically required to submit annual readings at the time of vehicle re-registration, and the collecting state agencies then approximate a fee based on the miles driven over the course of the previous year.

An alternative method to measure VMT is to use a plug-in GPS tracking device or, in newer vehicles, tap into onboard telematics data that monitors the vehicle's miles traveled. Using plug-in GPS tracking devices and onboard telematics enables more efficient capture of an individual's driving habits and even a vehicle's true use of roads within a state boundary. However, GPS monitoring would also increase administrative costs and require robust protections to minimize privacy concerns. States also have the ability to provide plug-in non-GPS devices to collect vehicle mileage, although without GPS operability these devices would not be able to accurately capture whether an individual's miles traveled took place within a given state.

### Policy Principles Applied to VMT Fees

VMT fees are an intriguing solution for policymakers because they offer the ability to ensure individual vehicles contribute proportionally based on the impact they have on the system. By

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<sup>27</sup> "National Household Travel Survey," *U.S. Department of Transportation Federal Highway Administration*, 2022. See example 3-8, [www.fhwa.dot.gov/policyinformation/nhts.cfm](http://www.fhwa.dot.gov/policyinformation/nhts.cfm).

<sup>28</sup> "Summary of RUC Exploration in RUC America States," *RUC America*, October 2024, [rucamerica.org/documents/rucreports/RUC%20America\\_RUC%20Exploration\\_Summary%20Document\\_FINAL.pdf](http://rucamerica.org/documents/rucreports/RUC%20America_RUC%20Exploration_Summary%20Document_FINAL.pdf).

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incorporating factors such as individual vehicle weight, VMT fees could potentially capture both the miles an individual vehicle travels on the road and the direct impact their vehicle has on the road based on weight.

These fees could be a more equitable alternative to flat registration fees because they can reflect how much and where an individual vehicle is driven, while not accounting for vehicle or fuel type or powertrain.

As policymakers consider VMT policies and strategies for assigning a dollar value to an individual vehicle mile traveled, they should also include directives to index this dollar value to external factors, such as inflation statistics and total VMT, thus ensuring that the revenue collection stream remains stable for years to come.

While often seen as a more unique strategy, a variety of issues arise when attempting to implement VMT fees, ranging from collection to privacy concerns.

Considering that a VMT fee would require individual vehicle owners to submit their odometer readings, the process can be more burdensome than simply having a state passively collect gas taxes. VMTs would require ample oversight to ensure timely and accurate reporting. Additionally, odometer readings cannot accurately account for the number of miles that an individual drives their vehicle outside of the state, where a separate transportation infrastructure tax system may be in place (such as EV charging taxes), risking the potential for double taxation of those miles traveled.

Additionally, a VMT fee that solely assesses the same cent-per-mile cost on all vehicles benefits heavier vehicles, which cause a disproportionate amount of road damage, while removing the incentive for people to buy, and drive, more efficient vehicles. This trade-off can ultimately be to the detriment of low-income and rural consumers, who would be penalized for commutes that are unavoidable. While the traditional gas tax incentivizes these consumers to use more efficient vehicles to minimize their tax burden, a flat cent-per-mile tax would increase the cost of their commute without offering an alternative to minimize their tax liability.

While plug-in GPS tracking devices can more accurately track a vehicle's mileage than odometer readings, consumers may be hesitant to adopt this method because of privacy concerns about individual driving data. Policymakers can address such privacy concerns by establishing strong regulatory protections. When policymakers consider the adoption of GPS-tracking devices, CR strongly recommends that they include protections that limit data collection to the minimum required for program administration and that such data is not used for any other purposes. Further, any commission responsible for the collection of such data should establish comprehensive privacy protections based on existing reputable privacy and cybersecurity frameworks.

## **EV Charging Taxes**

An EV charging tax is another way that states are collecting revenues from EVs and plug-in hybrids. Currently established in 10 states, with more states actively considering proposals, an EV charging tax is similar to a traditional gas tax in that it collects taxes on electricity use at public charging stations.<sup>29</sup>

EV charging taxes, like traditional motor fuel taxes, can also generate revenue from out-of-state drivers.

However, there are some critical differences in the ways EV owners charge their cars that should be considered. Today, approximately 80% of EV owners in the U.S. charge their vehicles at home.<sup>30</sup> When EV owners charge at home, utility companies typically do not have the ability to separate EV charging from the rest of their home electricity usage, meaning that it would be difficult, or nearly impossible, to tax home charging unless each home charger is separately metered.

### **Policy Principles Applied to EV Charging Taxes**

EV owners who charge away from their home are already paying higher energy costs because service providers charge higher rates to cover overhead costs, such as charger installation and maintenance. A tax on public EV charging places the tax burden primarily on consumers who do not have access to home charging. It also creates a potential dual penalty for consumers without home charging: They face both higher charging costs and added taxes on public charging, while consumers who are able to charge at home receive lower charging costs and lower tax rates.

Further, because of the current state of charging infrastructure across the country, the collection of EV charging taxes could prove burdensome to consumers, government agencies, and EV charging providers. For example, agencies administering the fees would need to establish clear weights-and-measures regulations, which could add compliance costs for charging providers, who could then pass these additional costs onto consumers, further increasing the cost gap between home charging and public charging.

While policymakers have attempted to bring more symmetry across the EV charging industry, from payment methods to port types, there is still much to be done to ensure greater alignment. For example, some EV charging stations, particularly older, non-networked ones, may not be capable of accurately measuring individual vehicle energy usage during charging, making it difficult to properly assign tax rates to a vehicle.

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<sup>29</sup> "Electric Vehicle Charging Station Fees," *American Road and Transportation Builders Association*, 2025.

<sup>30</sup> "Trends in electric vehicle charging," *International Energy Agency*, 2024, [www.iea.org/reports/global-ev-outlook-2024/trends-in-electric-vehicle-charging](http://www.iea.org/reports/global-ev-outlook-2024/trends-in-electric-vehicle-charging).

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Some EV charging companies, retailers, and employers have established programs in which they provide free EV charging services to employees, customers, and other consumers. By levying additional taxes on EV charging providers, these entities would be less inclined to offer free charging services without the ability to pass the tax burden on to individual consumers for their usage.

Another concern associated with this funding strategy is the risk of double taxation. When policymakers consider the adoption of EV charging taxes, it must not be in a vacuum but rather in the context of the existing revenue collection policies a state might already have. For example, in states that have already adopted EV registration fees, an EV charging tax would tax owners twice: at the point of registration and at the point of fueling. CR recommends against policies that administer dual fees to specific consumer segments, and urges policymakers who choose to adopt both tax structures to carefully calibrate these structures so as not to overtax drivers of cleaner and more fuel-efficient vehicles beyond what is paid by drivers of their comparable gasoline counterparts.

While an EV charging tax can be an equitable way to address the lack of transportation infrastructure funding coming from cleaner, more fuel-efficient vehicles, it can also create inequities in the market, putting a greater tax burden on vehicle owners who do not have access to home charging services. If implemented, policymakers must consider how EV charging taxes would interact with other tax structures, in addition to solutions to ensure that consumers who primarily charge their vehicle at home are not avoiding their tax burden.

### Tolls

Tolling is a common funding collection method used in over 30 states.<sup>31</sup> A toll is the collection of payment in exchange for the ability to drive on a given road, and can be managed either publicly or privately.

Similar to a VMT fee, tolls offer the ability to charge vehicles for their road usage and impact on transportation infrastructure, and can also monitor individual vehicle characteristics, such as vehicle class, which have a greater impact on road deterioration.

In some regions, policymakers have used tolling systems to implement congestion price controls in high-use corridors.

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<sup>31</sup> "About the Industry," *International Bridge, Tunnel and Turnpike Association*, [www.ibtta.org/about-industry](http://www.ibtta.org/about-industry).

Research showing the popularity of toll roads is, at best, mixed, and public support for tolling varies, particularly considering factors such as where the toll is placed, what the toll funds, and whom the toll benefits.<sup>32 33 34</sup>

### Policy Principles Applied to Tolls

If implemented meticulously, tolls can capture an individual vehicle's driving impact and assign a proportional value to how much they contribute to road deterioration.

Additionally, tolls offer policymakers an opportunity to establish additional transportation policies, such as congestion pricing, where tolls can fluctuate in certain areas as a way to discourage vehicle traffic in particular high-traffic corridors, especially during rush hour. By establishing variable pricing, or congestion pricing, tolls offer an incentive for individuals to seek out alternative transportation options, such as carpooling or public transportation, which can result in more efficient use of existing infrastructure, reducing the need to build additional road infrastructure to serve the same overall demand.

Depending on how broadly tolls are implemented throughout urban areas or regions, they have the potential to introduce some inequities. Drivers who need to travel to specific locations that are most easily accessible by toll roads face a much higher burden than drivers whose normal travel patterns tend to avoid toll roads. This can be especially burdensome to lower-income people if tolls are concentrated more heavily in areas where they live.

Ease of collection for toll roads can vary by jurisdiction. Traditionally, toll roads have involved the physical collection of funds at a booth, although recent technological developments have shifted toward the use of in-vehicle transponders or license plate readers. These technologies have made it easier for jurisdictions to collect revenues for toll roads and have improved the consumer experience.

Tolls as a road funding strategy do not typically offer any significant privacy concerns for consumers, although previously discussed technologies, such as in-vehicle transponders, can raise privacy concerns for some consumers. CR recommends that any policy advocating for the use of in-vehicle transponders to collect revenues for toll roads include protections to ensure the collection of only the information necessary to bill a customer for the use of the road.

Revenue stability elements of toll roads vary based on a variety of factors, including additional infrastructure development and urban planning elements. The stability of revenue for toll roads is dependent on, among other things, surrounding infrastructure, such as whether vehicles are

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<sup>32</sup> "Compilation of Public Opinion Data on Tolls and Road Pricing," *National Cooperative Highway Research Program*, 2008, [www.nationalacademies.org/publications/14151](http://www.nationalacademies.org/publications/14151).

<sup>33</sup> David Weinreich et al., "Making Tolling Transparent: Analyzing Processes Used to Allocate and Distribute Toll Highway Revenue in Multiple States," *U.S. Department of Transportation*, 2019, [rosap.nhtl.bts.gov/view/dot/54414](http://rosap.nhtl.bts.gov/view/dot/54414).

<sup>34</sup> "Consider public opinion when implementing tolling or road pricing initiatives," *Intelligent Transportation Systems Joint Program Office*, March 2014, [www.itskrs.its.dot.gov/2014-I00676](http://www.itskrs.its.dot.gov/2014-I00676).

forced to take toll roads or if there are other options, and local planning, namely, how policymakers and builders plan for the development of neighborhoods surrounding toll roads.

### General Fund

In order to make up for the shortfalls in transportation infrastructure revenue collection, many policymakers have supplemented their road funding by tapping into General Fund dollars, which come from a variety of other sources, such as income taxes, sales taxes, property taxes, and corporate taxes.

Whether by deliberate choice or failed revenue projections, almost every state has tapped its general fund or other revenue sources that are unrelated to road use to address current infrastructure needs.<sup>35</sup>

### Policy Principles Applied to General Fund Allocation

Using general fund revenues to pay for infrastructure projects and maintenance can be part of a comprehensive transportation funding solution because it accounts for the public good that infrastructure provides overall. Regardless of vehicle ownership or driving habits, all consumers benefit from a good public infrastructure system, so using general fund dollars can be an acceptable strategy to fill gaps in infrastructure funding. While this approach can result in less robust transportation funding levels over time, accessing general fund dollars for infrastructure projects can minimize collection costs by spreading the administrative burden of collecting revenues throughout the entire tax collection process, rather than having it focused at the individual vehicle level.

While also true for the other alternatives, a drawback with consistently accessing general fund dollars is that revenue collection can fluctuate over time because of changing market conditions and can affect competing policy priorities. Whereas a state may have revenue surplus one year and have the ability to appropriate funds for infrastructure projects, poor market conditions can lead to budget deficits and a government's inability to set aside general fund dollars for transportation infrastructure. This lack of consistent funding makes it difficult for planning agencies to properly establish long-term strategies for improving transportation infrastructure.

While utilizing general fund dollars can serve as a public good to all, it can also inequitably benefit high-mileage drivers, who will not be paying proportionally to their impact on the road. Additionally, individuals who do not own a vehicle would ultimately be subsidizing drivers when there is no mechanism to reward positive contributions to the system, such as utilizing public transportation.

Similarly, corporations, which benefit from lower effective tax rates relative to individual taxes, would receive additional benefit from utilizing general fund spending for highway infrastructure

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<sup>35</sup> "Road Taxes and Funding by State, 2025", *Tax Foundation*, March 2025, [taxfoundation.org/data/all/state/state-road-taxes-funding](https://taxfoundation.org/data/all/state/state-road-taxes-funding).

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funding, as they make up a bulk of the heavy-duty vehicles traveling on the road today. Without meaningful changes to corporate tax structures, particularly focused on those who rely on the heavy-duty industry, consumers would be further subsidizing the impact of commercial vehicles on our transportation infrastructure.

### Summary

As shown in Table 1, each funding approach offers certain benefits and challenges when being weighed against CR’s policy principles for road funding strategies.

No matter which mix of policies lawmakers enact, we urge policymakers to adopt an approach that best balances CR’s principles, allows for adjustment based on federal policy changes, and ensures all vehicles are assessed equitably for their impacts on road transportation infrastructure, regardless of vehicle type or class.



**Table 1. Policy Principles Matrix**

	Proportional User Payments	Fairness Between Consumers and Commercial Vehicles	Ease of Collection	Privacy Protections	Revenue Stability
<b>Fuel Excise Tax</b>	Directly captures vehicle usage and indirectly captures weight and pollution. Does not capture EVs.	Varies by locale.	Low cost of collection, established system of collecting.	No significant privacy concerns.	Politically difficult to increase tax rate when not indexed to inflation. Not resilient to evolving fleet dynamics.
<b>EV Registration Fees</b>	Does not consider individual driving habits. Typically does not consider differential impacts of different types of vehicles.	Can offer fairness among vehicle types when calibrated appropriately.	Relatively easy collection process at the state level.	No significant privacy concerns.	Can be stable with the appropriate measures.
<b>Vehicle Miles Traveled Fees</b>	Most accurately captures individual driving habits and impact on deterioration of infrastructure, especially when other vehicle attributes are considered in rates.	Can offer fairness between consumer and commercial vehicles when calibrated correctly.	Ease of collection varies based on collection strategy policymakers choose to implement (GPS tracking vs. non-GPS tracking vs. odometer reading).	Potential privacy concerns vary based on collection strategy policymakers choose to implement (GPS tracking vs. non-GPS tracking vs. odometer reading).	Stable revenue collecting strategy subject to policymakers adjusting pricing model for inflation.
<b>Public EV Charging Taxes</b>	Adverse impacts on individuals who cannot charge at their home.	Adverse impacts on commercial vehicles that cannot charge at fleet site.	Unclear directions on who must carry the burden of collecting the taxes. Easy tax collection from consumer perspective.	No significant privacy concerns.	Revenue stability depends on the buildout of future charging infrastructure and utilities' ability to track home charging.
<b>Tolls</b>	If executed well, can capture individual driving habits and impact on public infrastructure and even be adjusted dynamically to account for congestion.	Fairness between consumers and commercial vehicles is dependent on location and level of tolls.	Collection is relatively easy with technology like E-ZPass, but signing up can be a slight burden for some consumers.	Potential privacy concerns vary based on technology used for collection.	Revenue stability depends on future infrastructure and urban planning, and is vulnerable to shifts in driver behavior.
<b>General Fund</b>	Completely disconnected from infrastructure usage and impact.	Effective corporate taxes are much lower than taxes paid by working Americans.	High ease of collection within existing tax collection process.	No significant privacy concerns.	Revenue is not stable, but dependent on economic factors. Requires regular intervention by policymakers to appropriate funds.

## Conclusion

The core challenge is straightforward: The way the U.S. pays for its transportation infrastructure no longer matches how people drive, what they drive, or what it actually costs to build and maintain transportation infrastructure. A stagnant gas tax, rising construction costs, more efficient and electric vehicles, and an undertaxed heavy-duty trucking sector have combined to erode the Highway Trust Fund and strain state and local budgets. Without structural reform, consumers will continue to face a “hidden tax” in the form of deteriorating roads and related safety risks, higher vehicle repair costs, and lost time in congestion.

Policymakers should prioritize a suite of strategies that improve both equity and long-term viability. This includes calibrating EV fees so they do not exceed what comparable gasoline drivers pay; piloting privacy-protective VMT programs; ensuring heavy-duty trucks pay closer to their true impact; avoiding double taxation of EV drivers when considering whether to levy charging taxes; adopting toll pricing policies with equity guardrails; and treating general fund spending as a backstop, not a primary funding source. Across all approaches, indexing fees to inflating road construction costs, while attempting to bring them down, and conducting regular consumer-focused reviews will help maintain revenue stability without repeated political battles. By intentionally assembling a balanced mix of policies guided by the principles we have set forth, lawmakers can create a fairer, more durable transportation funding system that meets the needs of consumers and communities nationwide.

## Appendix: Analysis of Changes in Federal Gas Tax Purchasing Power

The federal gas tax of 18.4 cents per gallon has remained constant since 1993.<sup>36</sup> Three key factors have affected the purchasing power of the gas tax over that time: increases in the cost to build and repair transportation infrastructure, increases in average fleet fuel economy, and sales of new electric vehicles.

The Department of Transportation (DOT) tracks changes in the cost to build highways with a tool called the National Highway Construction Cost Index (NHCCI).<sup>37</sup> The DOT only started tracking the NHCCI in 2003. Prior to the creation of the index, the DOT used another metric to track highway construction costs called the Bid Price Index.<sup>38</sup> By combining these two indexes, we calculate that the purchasing power of the gas tax has declined by 77% between 1993 and 2025.

In order to assess the impact of fuel economy on gas tax revenues, the average on-road fleet fuel economy is needed. While the Environmental Protection Agency tracks the sales of new vehicles sold in any given year,<sup>39</sup> no such easy metric is available for the entire vehicle fleet. However, the Energy Information Administration (EIA) models the vehicle fleet for its Annual Energy Outlook (AEO). According to an analysis by the EIA, the 2025 version of the AEO estimates that average fleet fuel economy was 19.6 mpg in 1995 and 23.0 mpg in 2025.<sup>40</sup> This change in average fuel economy implies a 15% reduction in fuel consumption per mile since 1993, which would translate directly into a 15% reduction in gas tax collected per mile driven.

Electric vehicle owners do not pay the gas tax. Plug-in vehicles, including battery-electric vehicles (BEVs) and plug-in hybrid electric vehicles (PHEVs), have accounted for around 10% of new vehicle sales in recent years.<sup>41</sup> However, new vehicle sales represent a small portion of the overall vehicle fleet. The Alliance for Automotive Innovation estimated that as of the second quarter of 2025, BEVs and PHEVs accounted for about 2% of the total U.S. light-duty vehicle fleet.<sup>42</sup> Thus, EV sales to date are responsible for only about a 2% reduction in gas tax revenues.

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<sup>36</sup> “Many states slightly increased their taxes and fees on gasoline in the past year,” *U.S. Energy Information Administration*, February 2026, [www.eia.gov/todayinenergy/detail.php?id=67165](http://www.eia.gov/todayinenergy/detail.php?id=67165).

<sup>37</sup> “National Highway Construction Cost Index,” *U.S. Department of Transportation Federal Highway Administration*, [www.fhwa.dot.gov/policy/otps/nhcci](http://www.fhwa.dot.gov/policy/otps/nhcci).

<sup>38</sup> “Price Trends for Federal-Aid Highway Construction,” *U.S. Department of Transportation Federal Highway Administration*, [www.fhwa.dot.gov/programadmin/pricetrends.cfm](http://www.fhwa.dot.gov/programadmin/pricetrends.cfm).

<sup>39</sup> “The EPA Automotive Trends Report,” *U.S. Environmental Protection Agency*, February 2026, [www.epa.gov/automotive-trends](http://www.epa.gov/automotive-trends).

<sup>40</sup> “Annual Energy Outlook 2025,” *U.S. Energy Information Administration*, April 2025, [www.eia.gov/outlooks/aeo](http://www.eia.gov/outlooks/aeo).

<sup>41</sup> “Get Connected: Electric Vehicle Quarterly Report,” *Alliance for Automotive Innovation*, 2025, Get Connected Electric Vehicle Quarterly Report.

<sup>42</sup> *Ibid.*

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Combining the three factors together gives a total of an 81% overall reduction in the effective purchasing power of the gas tax since 1993. While increases in fuel economy and the sale of electric vehicles are contributing incrementally to road funding gaps, the vast majority of the shortfall is driven by the large increase in the cost of building and repairing roads. These results are summarized below in Table 2.

**Table 2:** Summary of Impacts to Gas Tax Purchasing Power Since 1993

<b>Factor</b>	<b>Reduction in Gas Tax Purchasing Power</b>
Increased Road Construction Costs	77%
Improved Fuel Economy	15%
Electric Vehicles	2%
<b>Total</b>	<b>81%</b>