



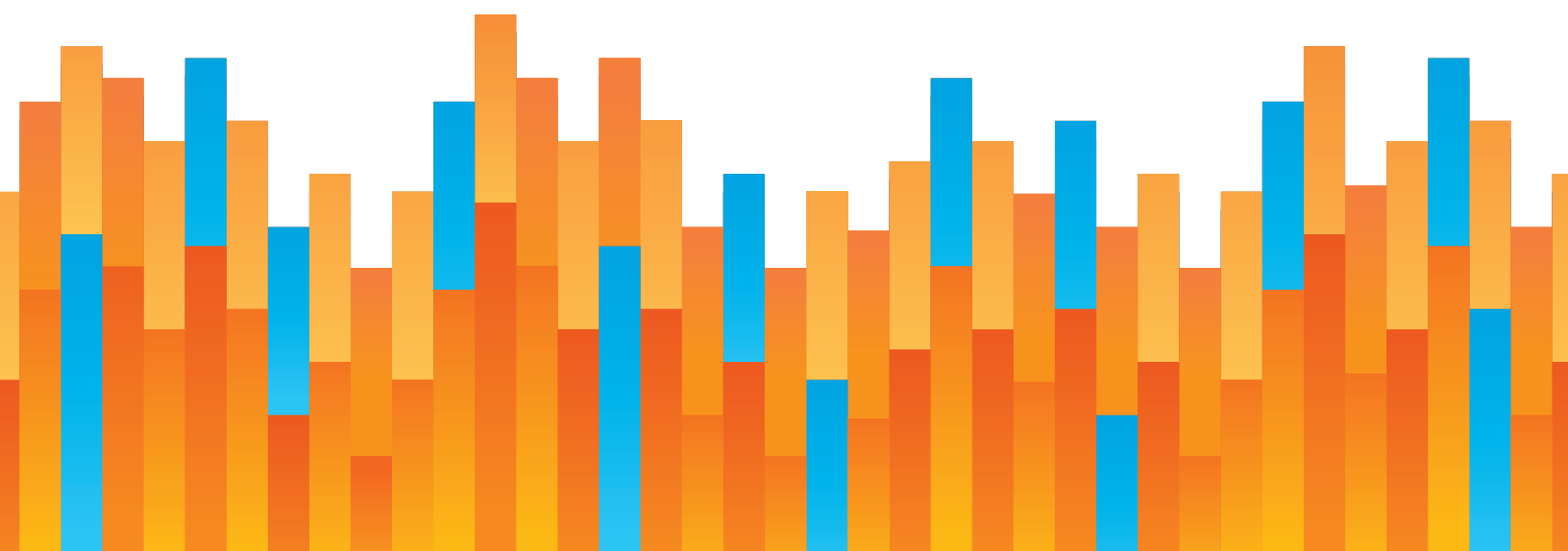
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# INTERSTATES FIRST: WHY ROAD USER CHARGES SHOULD BEGIN WITH LIMITED-ACCESS HIGHWAYS

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by Robert W. Poole, Jr.

April 2025





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## PART 1

# WHY HIGHWAY FUNDING NEEDS TO CHANGE

Since 1919, motor fuel taxes have been the principal source of state highway funding, and since the 1956 legislation authorizing the federal Highway Trust Fund, revenue from federal gasoline and diesel taxes has been the principal source of federal highway funding, as well.

Yet the transportation community has concluded that this funding source is not sustainable long term. One reason is ever-increasing vehicle fuel-economy improvements. Today's personal vehicles go more than twice as far on a gallon of gas as did similar vehicles when federal Corporate Average Fuel Economy standards began in 1975. Real-world miles per gallon (mpg) was just above 12 in 1975 but had increased to 24.9 in 2023.<sup>1</sup> Another reason is the ongoing increase in electric propulsion, either full-time via batteries (and occasionally hydrogen) or part-time via hybrid propulsion.

In the early years of the 21<sup>st</sup> century, Congress asked the Transportation Research Board of the National Academies to conduct a study of the long-term viability of fuel taxes as a transportation funding source. The author of this policy brief was one of 14 members of the

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<sup>1</sup> "Highlights of the Automotive Trends Report," U.S. Environmental Protection Agency, 2024, 3.

expert panel charged with this year-long study.<sup>2</sup> It concluded that the likelihood of long-term sustainability was doubtful, due to already-evident increases in vehicle fuel-efficiency and the potential of non-petroleum propulsion sources.

The report recommended increased use of tolling in the near term and research into road-use metering and per-mile charging. It favored retaining the users-pay/users-benefit principle and looking into alternative means of supporting urban transit.



*After reviewing a wide array of alternatives, the commission concluded that charging vehicles per mile traveled (rather than gallons consumed) would be the fairest way to charge for roadway use.*



Congress subsequently appointed a national commission to research the best means of eventually replacing per-gallon fuel taxes. After reviewing a wide array of alternatives, the commission concluded that charging vehicles per mile traveled (rather than gallons consumed) would be the fairest way to charge for roadway use.<sup>3</sup> Since then, the replacement has been referred to as a Mileage-Based User Fee (MBUF) in the eastern United States and as a Road Usage Charge (RUC) in the western states.

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<sup>2</sup> Rudolph G. Penner (Chair), *The Fuel Tax and Alternatives for Transportation Funding*, Transportation Research Board, 2006.

<sup>3</sup> Robert D. Atkinson (Chair), *Paying Our Way: A New Framework for Transportation Finance*, Report of the National Surface Transportation Infrastructure Financing Commission, February 2009.

## PART 2

# WHAT'S THE CURRENT SITUATION?

Since the publication of those two major reports in the first decade of this century, the anticipated decline in fuel tax revenue has begun. Congress has continued to approve increased miles-per-gallon (mpg) requirements for new motor vehicles (and, more recently, for trucks), and federal and state subsidies for hybrids and fully electric vehicles have spurred the sales of such vehicles.

In June 2024 the Congressional Budget Office released a 10-year forecast of federal gasoline tax receipts, projecting that they would decrease by between 1.3% and 1.5% per year going forward to FY2034. From \$25.3 billion in FY24, the total would decline to \$16.2 billion in FY34.<sup>4</sup> Currently, diesel tax receipts do not show a corresponding decline, since stringent mpg regulations are only beginning to affect heavy trucks. Figure 1 and Table 1 show the projected decline in federal gas tax receipts.

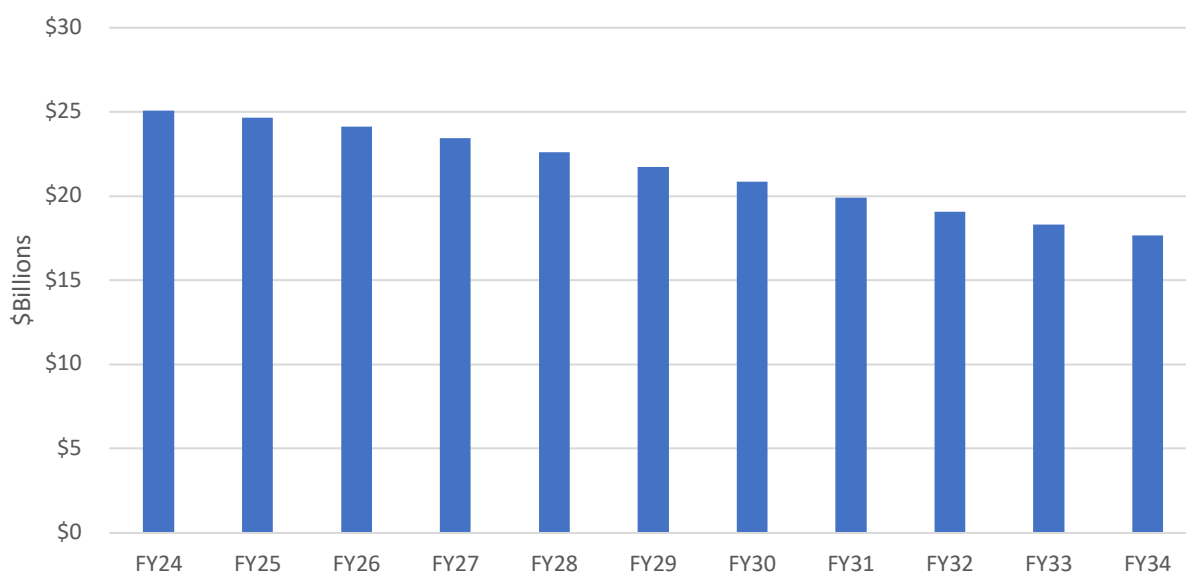
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<sup>4</sup> Jeff Davis, “New Forecast Shows . . . Long-Term Bad News for Highway Trust Fund,” Eno Center for Transportation, 9 February 2024.

**TABLE 1: FORECAST OF FEDERAL GAS TAX RECEIPTS**

| Year | Billions of Dollars | Percent Change Previous Year |
|------|---------------------|------------------------------|
| FY24 | \$25.092            | N/A                          |
| FY25 | \$24.673            | -1.7%                        |
| FY26 | \$24.114            | -2.3%                        |
| FY27 | \$23.442            | -2.8%                        |
| FY28 | \$22.617            | -3.5%                        |
| FY29 | \$21.748            | -3.8%                        |
| FY30 | \$20.859            | -4.1%                        |
| FY31 | \$19.920            | -4.5%                        |
| FY32 | \$19.069            | -4.3%                        |
| FY33 | \$18.327            | -3.9%                        |
| FY34 | \$17.668            | -3.6%                        |

Source: Congressional Budget Office: The Budget and Economic Outlook 2024-2034,  
<https://www.cbo.gov/publication/59710>

**FIGURE 1: FORECAST OF FEDERAL GAS TAX RECEIPTS**

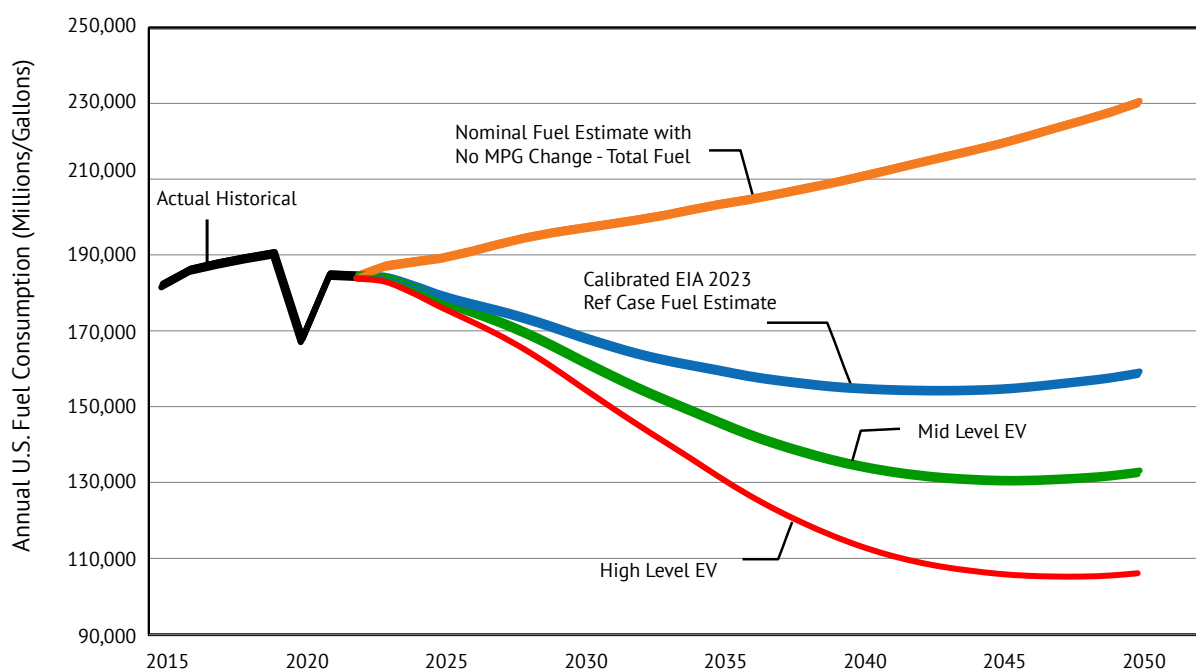
Federal gasoline and diesel tax rates have not increased since 1993, and the amount of driving per capita peaked in 2004; the decrease in vehicle-miles of travel since then has contributed to the decline in gas tax revenue.<sup>5</sup>

<sup>5</sup> Jeff Davis, "VMT Back to Pre-COVID Level In 2023, But Still Lags Per Capita," Eno Center for Transportation, 9 February 2024.

State gas tax revenues have not declined as sharply as federal gas tax revenues because most states have increased their gas tax rate at least once since the most recent federal fuel tax increase in 1993.<sup>6</sup> Yet decreases are now showing up in state gas tax revenues, which are projected to decline significantly over the next several decades. Thus far, most of the decline in fuel tax revenue has been due primarily to fuel economy increases, rather than electric vehicle use.

Transportation consultant Edward Regan has made state-specific gas tax revenue projections for a number of individual states, as well as combined projections including federal gas tax revenues plus a 50-state average of gas tax revenues. Figure 2 is a recent example.

**FIGURE 2: PROJECTED U.S. FEDERAL PLUS STATE GAS TAX REVENUE THROUGH 2050**



Source: "U.S. Total Gasoline Retail Sales," US Energy Information Administration, <https://www.eia.gov/dnav/pet/hist/leafhandler.ashx?n=p&s=a103600001&f=m>, "New Energy Outlook," Bloomberg New Energy Finance, <https://about.bnef.com/new-energy-outlook/>

<sup>6</sup> "Highway Statistics 2022," Federal Highway Administration Office of Highway Policy Information, October 2023. [fhwa.dot.gov/policyinformation/statistics/2022/mf121t.cfm](https://fhwa.dot.gov/policyinformation/statistics/2022/mf121t.cfm)



## PART 3

# CONCERNS ABOUT PER-MILE CHARGING

Most Americans are likely not aware of the coming decline in fuel tax revenues—and the potential impact on U.S. roadways and on road users of reduced funding. One often-cited concern is fairness to rural residents, who have argued that MBUFs/RUCs will cost them more than urban drivers due to the longer distances they drive.

But this contention has been studied via a number of state per-mile charging pilot projects. Rural residents tend to drive older vehicles that use more fuel per mile traveled than urban vehicles, on average. Every pilot project has found that rural residents would be made slightly better off than urban residents by a shift from per-gallon taxes to per-mile charges.<sup>7</sup> While these findings remove the rural/urban unfairness question from the debate, several valid road users' concerns remain and need to be addressed.

The first is privacy. Of those who have heard the term MBUF or RUC, it is most likely from a media story discussing the threat of being “tracked” by some kind of “Big Brother” device in their personal vehicle.<sup>8</sup> The concern about privacy and aversion to being “tracked”

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<sup>7</sup> RUC America, “Update and Expansion of Financial Impacts of RUC on Urban and Rural Households,” Final Report, RUC America, September 2022.

<sup>8</sup> Peter Kasperowicz, “Government Wants to Tax Drivers by the Mile. This Bill from Darrell Issa Could Stop It,” Fox News, 2 February 2023.

wherever and whenever one drives is the most serious concern about charging per mile driven rather than per gallon used.

A second concern is that any new highway user charge would be a new tax, added on to the existing (but gradually shrinking) gas tax. Anti-tax groups in Arizona and California have attacked proposals for a per-mile charge on that basis, calling it a “mileage tax” that might be enforced by a transponder in every vehicle, or a tracking app on every smart phone.<sup>9</sup> Activist groups in San Diego had a valid point on “double taxation,” since their regional government did propose adding a mileage charge in addition to the state gas tax.

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*A third concern is the cost of collection.*

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A third concern is the cost of collection. The gas tax is collected from 1,322 wholesalers, most of whom serve gas stations, which pass the tax cost along to customers when they fill up.<sup>10</sup> Estimates of the collection cost of fuel tax is about 2% of the revenue collected.<sup>11</sup> So how much does it cost a typical motorist per month for the *collection* of the gas tax?

Here is a hypothetical example. With the average state gas tax of 33 cents/gallon<sup>12</sup> and the 19 cents/gallon of federal tax, the average total is 52 cents/gallon in tax. Assume the personal vehicle gets 25 mpg (the 2023 vehicle average detailed in Part 1) and is driven 12,000 miles per year. That works out to 480 gallons per year, and at 52 cents/gallon, the annual fuel tax bill is \$250/year. For 12,000 miles driven per year, that amounts to 2.1 cents/mile in tax. And the cost of collection, at 2% of the revenue collected, is \$5.00 per year or 42 cents/month.

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<sup>9</sup> Travis Dale, “On Top of the Highest Gas and Car Taxes in the Nation, California Democrats Now Want to Impose a Costly Mileage Tax on All Drivers,” KOGO News Radio, 1 February 2022, “Arizona Voters Deserve the Opportunity to Stop the Orwellian Vehicle Miles Tax,” Arizona Free Enterprise Club, 22 March 2024.

<sup>10</sup> “A Practical Analysis of a National VMT Tax System,” American Transportation Research Institute, March 2021, 15.

<sup>11</sup> Ibid.

<sup>12</sup> Federal Highway Administration Office of Policy Information, “Highway Statistics 2022, Tax Rates on Motor Fuel,” October 2023.

In various state MBUF/RUC pilot projects, each involving several thousand drivers, the cost of the technology in the vehicle plus the back-office costs to manage the technology and the data used in charging each vehicle owner are very high. But a statewide program involving all motorists would lead to what economists call “economies of scale.” That means both technology costs and staff costs would be spread over millions of vehicles. But can these economies of scale lower the collection cost sufficiently?

Nate Bryer of consulting firm WSP presented an analysis of RUC collection costs at a 2024 transportation conference.<sup>13</sup> His estimated collection cost per vehicle, assuming a newly developed in-vehicle device plus staff, data, and software, worked out to cost \$9.65/month per vehicle in a low-volume state and \$4.25/month in a high-volume state. Either is much more than the 42 cents collection cost/month for gasoline, estimated above.

As the program goes forward, the three valid concerns about MBUF/RUC must be addressed by policy: privacy, double taxation, and cost of collection (compared with the gas tax). To begin the transition to per-mile charging, the U.S. needs a plan that addresses all three concerns.

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<sup>13</sup> Nate Bryer, “Costs of a RUC Program,” IBTTA Baltimore Meeting, 2024. ([ibtta.org/sites/default/files/documents/2024/Baltimore/Nate\\_Bryer.pdf](https://ibtta.org/sites/default/files/documents/2024/Baltimore/Nate_Bryer.pdf))

## PART 4

# USER-FRIENDLY PRACTICES

This section details the privacy, fair taxation, and users-pay aspects of a potential MBUF/RUC program.

**Privacy:** First, to deal with privacy concerns, the plan must not collect or store information about the details of trips, which can be considered highly personal. Privacy provisions should be enacted into law, as Oregon has done for its first mainstream RUC program, with the approval of civil liberties organizations.<sup>14</sup>

**Fair Taxation:** Second, the plan must clearly replace the relevant fuel tax and in no case should there be charges per mile in addition to the fuel tax. Motorists must not be charged twice for the same trip.

**Users-Pay/Users-Benefit:** Third, the plan should restore the users-pay/users-benefit approach, which was the basis of the original state fuel taxes, beginning with Oregon's in 1919. That was also the original premise of the 1956 federal fuel tax dedicated solely to building the Interstate Highway System, as enacted by Congress. The increasing popularity of electric and hybrid vehicles has led to gas-fueled vehicles paying a greater portion of the

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<sup>14</sup> ORS 319.915, Maureen Bock, email to Robert Poole, 9 January 2025. ([oregonlegislature.gov/bills\\_laws/ors/ors319.html](https://oregonlegislature.gov/bills_laws/ors/ors319.html))

tax intended to maintain highways that all drivers use. The greater the proportion of electric and hybrid vehicles, the more unequal the tax structure becomes. The change in highway funding from per-gallon to per-mile is a once-in-a-century opportunity to restore the very sound principle that those who use, and thereby damage, roads should pay for their upkeep.

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*The increasing popularity of electric and hybrid vehicles has led to gas-fueled vehicles paying a greater portion of the tax intended to maintain highways that all drivers use.*

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The program should also be transparent about where the revenue goes, so that the customers (who pay the new user fee) can hold the appropriate government agency accountable for delivering a high-value service in exchange for paying the per-mile charge. For example, under today's state fuel tax systems, road users pay a tax allocated to the state transportation agency, but the revenue also pays for much of county and city roads. Those paying the fuel tax have no idea which roads they are paying for, or whom to hold accountable for their condition or performance.

One set of existing highways mostly exemplifies these sound practices. Toll roads charge fees based on the type of vehicle (car, bus, heavy truck, etc.) and distance traveled. The revenues are dedicated to the capital and operating costs of the toll road or toll-road system, except for the roughly dozen large toll operators that divert a portion of their toll revenue to transit.<sup>15</sup>

<sup>15</sup> Robert W. Poole, Jr., *Rethinking America's Highways*, University of Chicago Press, 2018, Chapter 7, 125-127.

## PART 5

# THE BEST WAY TO BEGIN THE TRANSITION TO PER-MILE CHARGING

At this early stage in the transition from charging per gallon to charging per mile, the general assumption is that the process would begin with vehicles that do not currently pay fuel taxes (e.g., electric vehicles) or with all vehicles at once. But since we have not solved the problem of an affordable technology that can differentiate limited-access highways from local roads, that approach is premature.

The alternative proposed in this paper is to begin the transition with just one category of roads: limited-access highways. These include Interstate highways and freeways, which are the most promising roads for per-mile charging at this point. In contrast with other roads and highways, there are only a few places to get on and get off a limited-access highway. That makes it easy to charge users from the point of entry to their point of exit, facilitating per-mile charging.

Since only the entry and exit points need to be equipped to identify the vehicle, the cost of collection is modest—as low as 5% of the revenue generated for today's transponder

tolling.<sup>16</sup> That is an order of magnitude less than the type of technology discussed by Nate Bryer (in Part 3), which must function correctly on every type of street and road. Twenty-first-century tolling is limited to a subset of roadways that have defined entry and exit points, so inexpensive transponders are sufficient. In terms of beginning the transition to per-mile charging, federal highway data show that limited-access highways handle about one-third of all vehicle-miles of travel.<sup>17</sup> Hence, converting all limited-access highways would represent a major shift from per-gallon taxes to per-mile charges.

The U.S.' current tolled limited-access highways include Interstates and non-Interstate turnpikes. They use several 21<sup>st</sup>-century methods to identify vehicles where they enter and exit the roadway. Identifying the vehicle is essential to having the correct party pay for the road use. The most common method is a transponder (such as E-ZPass) that is read electronically at the entrance and exit point. Transponder users may be billed after use or may have a prepaid account that is debited for each trip. The miles traveled is simply the distance between the entry point and the exit point.

Those without transponders are typically charged via imaging the vehicle's license plate. This method of charging can also be linked to a prepaid account, or the road user can be billed periodically. Any method that involves billing costs the road operator significantly more, and in many cases results in an additional collection charge as part of the bill.

Several other 21<sup>st</sup>-century tolling options are available to give road users a choice. In Europe, road users can purchase "vignettes," usually a sticker good for a certain number of days or miles within a certain time period. Those stickers would be imaged at the roadway entry and exit point of the user's trip.<sup>18</sup> For users without credit cards or bank accounts, several U.S. toll operators enable unbanked customers to prepay tolls using cash at kiosks in convenience stores and other locations. These systems include Auto Expreso in Puerto Rico, SunPass in Florida, and FasTrak in San Francisco.<sup>19</sup>

<sup>16</sup> Daryl S. Fleming, et al., "Dispelling the Myths: Toll and Fuel Collection Costs in the 21<sup>st</sup> Century," Reason Foundation, November 2012

<sup>17</sup> Federal Highway Administration, Office of Policy Information, Highway Statistics 2022, Table VM-202, 5 March 2024.

<sup>18</sup> Baruch Feigenbaum, "Michigan Seeks to Mandate Cash Tolling," *Surface Transportation Innovations*, February 2025.

<sup>19</sup> Daryl S. Fleming, "Providing Electronic Toll Collection to the Unbanked and Underbanked," Reason Foundation, August 2021.

## PART 6

# A MODEL FOR FUEL TAX REFUNDS

One potential drawback of starting with limited-access highways is that, under current federal and state law, fuel taxes are charged on all U.S. roads, including toll roads. That is “double taxation,” and it is inherently unfair. To meet the user-friendliness outlined in Part 4, federal and state governments would have to offer fuel tax refunds paid for the miles traveled on the highways with per-mile charges.

Two toll roads could potentially provide a model for a serious effort to eliminate this kind of double taxation: the Massachusetts Turnpike and the New York Thruway. Both offer refunds of certain state motor vehicle taxes to those who apply for such refunds.<sup>20</sup> Trucking companies using those toll roads appear to be the primary customers that take advantage of those refunds.

One company that provides toll-management services to truck fleets—Fleetworthy (formerly Bestpass)—handles filing for refunds/rebates for each fleet that subscribes to its services. It obtains tolled miles from carriers that use its services either via GPS (if so equipped), paper trip reports, or toll statement information. It obtains state-specific fuel tax

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<sup>20</sup> “DOR Motor Fuel Excise,” Commonwealth of Massachusetts, 5 Feb. 2024, Department of Taxation and Finance, New York State, 15 Apr. 2015.



information from the International Fuel Tax Agreement (IFTA), which handles these data for the trucking industry. Massachusetts offers state fuel tax refunds for users of the Turnpike, while the New York Thruway offers refunds of its state Highway Use Tax (HUF).<sup>21</sup>

A similar approach could be used for personal vehicles for states that implemented per-mile tolling on their Interstates while state fuel taxes remained in place. The toll system software would handle calculation of the state fuel tax refunds. The software would know the make and model year of each vehicle, and a lookup table of its EPA highway mpg figure would enable calculating the fuel used for the miles driven on the limited-access highway. That fuel amount multiplied by the state fuel tax rate would yield the fuel tax refund amount. Fuel tax refunds would be provided for all customers, including those using alternatives to transponders.

Would state governments agree to provide fuel tax refunds for those using the newly priced freeways and Interstates? The author of this brief analyzed that question by developing a quantitative model of a mid-size state that converts each of its Interstates, one at a time, to per-mile charges and bonds the revenue to finance reconstruction and selective widening of those Interstates over several decades.<sup>22</sup> The model showed that, because state fuel tax revenue would no longer be needed to maintain its Interstates, the state's other roadways would get much or all the (admittedly decreasing) fuel tax revenue, causing other state roadways to come out ahead over the assumed 30-year period modeled. That is partly because the rate charged per mile on limited-access highways would be somewhat more than the rate charged on other roads that are still being paid for by fuel taxes. Limited-access highways are more costly to build, maintain, expand, and rebuild.

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<sup>21</sup> Daniel Mathias, Fleetworthy, email to Robert Poole, 20 December 2024.

<sup>22</sup> Robert W. Poole, Jr., “Tolling Value Proposition for Trucking and State Departments of Transportation,” *Transportation Research Record*, Vol. 2677(2), 2023.

For example, the Interstate system is in need of major investments to rebuild and modernize most of it. In a report requested by Congress, a special committee of the Transportation Research Board carried out a detailed study of the condition and needs of the Interstate highways.<sup>23</sup> That report discussed the possibility of financing some or all of the reconstruction based on per-mile charges.

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<sup>23</sup> Norman R. Augustine (Chair), *Renewing the National Commitment to the Interstate Highway System*, Transportation Research Board, 2019 ([nap.edu/catalog/25334/renewing-the-national-commitment-to-the-interstate-highway-system-a-foundation-for-the-future](https://nap.edu/catalog/25334/renewing-the-national-commitment-to-the-interstate-highway-system-a-foundation-for-the-future))

## PART 7

# THE BENEFITS OF THE “INTERSTATES FIRST” APPROACH

As previously discussed, starting the MBUF/RUC transition with limited-access highways uses only proven, widely used 21<sup>st</sup>-century technology, for which privacy concerns have been far less than for MBUF/RUC proposals. Assuming that states and the federal government agree to refund taxes on the fuel used on those specific highways, this approach would demonstrate that the new per-mile charge is a replacement for fuel taxes, not a “new tax” in addition to fuel taxes.

And if the new per-mile charges are based on the users-pay/users-benefit approach, all the revenue would be dedicated to the highways that implement the new per-mile charging system. This would set a precedent for the subsequent conversion of other roads and highways a decade or two later, once affordable (and privacy-respecting) technology is available for use in collecting per-mile charges on non-limited-access roadways.

The trucking industry has generally opposed conversion of highway funding from fuel taxes to per-mile charges, especially when some organizations advocate that long-distance

trucking should be singled out to go first.<sup>24</sup> Under the approach proposed in this paper, only long-distance trucks that use Interstates and other limited-access highways would join with buses and motorists in being charged per-mile on that portion of the U.S. highway system.

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*Trucking companies have actively participated in several MBUF truck pilot projects that tested per-mile charging on long-distance highways.*

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Trucking companies have actively participated in several MBUF truck pilot projects that tested per-mile charging on long-distance highways. The most recent such pilot project encompassed 49 states and four Canadian provinces. Using a recently formed Motor Carrier Working Group, trucking industry experts helped devise the per-mile charging formula used in that pilot project.<sup>25</sup> As they proposed, the charge was based on truck weight and miles traveled, as the fairest approach.

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<sup>24</sup> Robert T. Atkinson, “Why Congress Should Enact a Mileage-Based User Fee for Heavy Trucking,” Information Technology & Innovation Foundation, April 2024.

<sup>25</sup> New World Consulting, “Mileage-Based User Fee 2022 International Truck Pilot,” 12 September 2023.

## PART 8

# FEDERAL LEGISLATION TO ENABLE INTERSTATES FIRST

The federal surface transportation program and the highway user taxes that fund it must be reauthorized, typically every four or five years, depending on the duration of the most recent reauthorization legislation. In the upcoming 2026 surface transportation reauthorization, the framework for Interstates First could be adopted.

The starting point would be the existing three-state Interstate System Reconstruction and Rehabilitation Pilot Program (ISRRPP) that allows a state to rebuild one Interstate segment with per-mile tolling. (Currently, states need to seek federal approval to use the program). The existing program would need to be opened up to all 50 states and made applicable to all of a state's Interstate highways (as well as its other limited-access highways).

Besides expanding the scope of this voluntary program, Congress would, ideally, also provide refunds of federal fuel taxes for all miles driven on the newly charged highways. Each participating state would have to agree to likewise provide rebates of state fuel taxes to vehicle operators on those highways. The legislation would also need to address interoperability of the per-mile charging among participating states, including the ability to

recover revenue from motorists or truckers from other states that evade paying the new per-mile charges.

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The trucking industry already uses two clearinghouses that deal with cross-border relationships for trucks: the International Fuel Tax Agreement (IFTA) for fuel taxes and the International Registration Plan (IRP) for truck registration.<sup>26</sup> Those clearinghouses took part in the international truck pilot project discussed in Part 7. They are well-placed to assist truck operators with the new per-mile charges on converted Interstate highways.

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<sup>26</sup> Ibid. 46-53.

## PART 9

# WHAT STATES WOULD NEED TO DO

Depending on how Congress defines the above program, states interested in taking part would have to apply for participation in the expanded program and agree to comply with its terms, including providing refunds of state fuel taxes to those using the limited-access highways on which the state implemented per-mile charging.

States that already have a state toll agency could authorize it to be in charge of implementing the conversion of specific limited-access highways. States without a toll agency would have the option to seek proposals for long-term public-private partnerships for specific highways, comparable to what is in place for the Chicago Skyway, the Indiana Toll Road, and several toll roads in Puerto Rico. For each highway in need of reconstruction and/or modernization, the state department of transportation (DOT) would generally be in charge of managing the procurement of a long-term design-(re)build-finance-operate-maintain (DBFOM) concession.

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*States without a toll agency would have the option to seek proposals for long-term public-private partnerships for specific highways....*

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It should be noted that over the past decade a number of states have commissioned detailed studies of using toll finance to rebuild and modernize their long-distance Interstate highways. Each study found that using toll finance was technically feasible. Several studies examined political feasibility as well. These include a four-state study of rebuilding I-70 with dedicated truck lanes (Missouri, Illinois, Indiana, and Ohio),<sup>27</sup> Connecticut's Interstates,<sup>28</sup> Indiana's Interstates,<sup>29</sup> Michigan's Interstates,<sup>30</sup> Minnesota's Interstates,<sup>31</sup> and Wisconsin's Interstates.<sup>32</sup> Opening the program to all of a state's Interstates is consistent with the studies the above-listed states have carried out. This suggests that if more-favorable federal legislation were enacted, some states might be willing to pioneer such a conversion to per-mile charging.

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<sup>27</sup> HNTB and Wilbur Smith Associates, "I-70 Dedicated Truck Lanes Feasibility Study, Phase 2", 2011.

<sup>28</sup> CDM Smith, "Connecticut Tolling Options Evaluation Study," Connecticut Department of Transportation, November 2018.

<sup>29</sup> HNTB, "Statewide Interstate Tolling Strategic Plan," Indiana Department of Transportation, November 2018.

<sup>30</sup> HNTB and CDM Smith, "Michigan Statewide Tolling Study: Strategic Implementation Plan," Michigan Department of Transportation, 21 December 2022.

<sup>31</sup> WSP and HNTB, "Minnesota Tolling Study Report," Minnesota Department of Transportation, January 2018.

<sup>32</sup> HNTB, "Feasibility of Interstate Tolling: Policy Report," Wisconsin Department of Transportation, 30 December 2016.



# ABOUT THE AUTHOR

**Robert W. Poole, Jr.** is director of transportation policy and the Searle Freedom Trust Transportation Fellow at Reason Foundation, a national public policy think tank based in Los Angeles.

His 1988 policy paper proposing supplemental privately financed toll lanes as congestion relievers directly inspired California's landmark private tollway law (AB 680), which authorized four pilot projects including the highly successful 91 Express Lanes in Orange County. Over two dozen other states have enacted similar public-private partnership legislation. In 1993 Poole oversaw a study that introduced the term HOT (high-occupancy/toll) Lane, a concept which has become widely accepted since then.

Poole has advised the Federal Highway Administration, the Federal Transit Administration, the White House Office of Policy Development and National Economic Council, the Government Accountability Office (GAO), and the California, Florida, Georgia, Indiana, Texas, Utah, Virginia, and Washington State Departments of Transportation. He served 18 months on the Caltrans Privatization Advisory Steering Committee, helping oversee the implementation of AB 680. He was appointed by Gov. Pete Wilson as a member of California's Commission on Transportation Investment in 1995-96.

Poole is a member of the board of the Public-Private Partnerships (P3) division of ARTBA and an emeritus member of the Transportation Research Board's Managed Lanes Committee. From 2003 to 2005, he was a member of the TRB's special committee on the long-term viability of the fuel tax for highway funding. In 2008 he was a member of the

Study Committee on Private Participation in Toll Roads, appointed by Texas Gov. Rick Perry. In 2010 he was a member of the Washington State DOT's Expert Review Panel on the proposed Eastside Managed Lanes Corridor. Also in 2010, he served as a transportation policy advisor on the transition team of Florida Gov. Rick Scott.

Poole is the author of dozens of policy studies and journal articles on transportation issues. His book, *Rethinking America's Highways*, was published by the University of Chicago Press in 2018. Poole's popular writings have appeared in national newspapers, including *The New York Times* and *The Wall Street Journal*; he has also been a guest on such programs as "Crossfire," "Good Morning America," and "Huffington Post," as well as ABC, CBS and NBC News, NPR, and PBS. He produces the monthly e-newsletter *Surface Transportation Innovations*. *The New York Times* has called him "the chief theorist for private solutions to gridlock."

Poole received his B.S. and M.S. in mechanical engineering at MIT and did graduate work in operations research at NYU.

