Statement of Jeff Davis, Senior Fellow, Eno Center for Transportation

Before the Subcommittee on Highways and Transit, Committee on Transportation and Infrastructure, U.S. House of Representatives

"Running on Empty: The Highway Trust Fund" – October 18, 2023

Chairman Crawford, Ranking Member Norton, and members of the Subcommittee, my name is Jeff Davis and I am a Senior Fellow at the Eno Center for Transportation, a nonpartisan think tank founded by traffic pioneer William Phelps Eno in 1921 to carry on his work increasing the safety and flow rate of vehicular traffic. We are a 501(c)(3) nonprofit organization that now studies all modes of transportation up and down the federalist chain of government. I have been studying the Highway Trust Fund since 1996, and I sat through the markups of the 1998, 2005, 2012, and 2015 surface transportation laws in this very room.

A federal trust fund is a visibility exercise – a special account on the receipts side of the federal budget used to segregate the proceeds of a specific tax on a specific group so that funding can be provided from that account for programs benefitting that specific group, or alleviating problems caused by that group.

The Highway Trust Fund is part of the "user-pay, user-benefit" tax principle which has dominated state transportation funding since the early 20th century and which was first adopted by the federal government after World War II. Federal aviation (1970), inland waterway (1978), and harbor maintenance (1986) programs have since been put on the user-pay system with their own dedicated excise taxes and trust funds. (See a full history of the user-pay system and its involvement in transportation in Appendix B of this testimony.)

The Highway Trust Fund was created by Congress on July 1, 1956 to reassure the House members who had defeated the 1955 Interstate highway bill that the increased taxes levied by the revised 1956 legislation would be held separately from general revenues and would only be spent on specific highway programs. After Congress killed the 1972 highway bill, the Trust Fund was opened to mass transit spending as well, at local option, in 1973 and on a permanent by establishing a Mass Transit Account in 1982.

From its inception on July 1, 1956, through August 31, 2023, the Trust Fund has received $1.392 trillion in normal receipts:

- $869 billion in gasoline and gasohol excise taxes;
- $293 billion in diesel and special motor fuel taxes;
- $114 billion in new truck, tractor and trailer sales taxes;
- $39.8 billion from the Heavy Vehicle Use Tax on heavy trucks;
- $30.6 billion from the excise tax on heavy vehicle tires;

- $4.9 billion in other taxes that have since been repealed; and
- $39.8 billion in interest on balances and safety penalties.

During that same period, the Trust Fund has paid out $1.537 trillion in outlays – $1.33 trillion from the Highway Account and $207 billion from the Mass Transit Account.[1]

$1.392 trillion in receipts minus $1.537 trillion in spending leaves a cumulative "user-pay" deficit of $145 billion, which Congress has met by providing almost $276 billion in transfers from the General Fund and the Leaking Underground Storage Tank Trust Fund since 2008. The last tranche of bailouts was $118 billion in the bipartisan 2021 infrastructure law.

Table 1

Special Transfers to the Highway Trust Fund by Acts of Congress

Special General Fund Transfers to the Highway Trust Fund, 2008 to Present

(Billions of Dollars -Showing the Effects of Joint Committee Sequestration in FY 2014)

			Highway Account			Mass Transit Account			HTF
Public Law	Enacted	Effective	Enacted	Sequest.	Net Total	Enacted	Sequest.	Net Total	Net Total
PL 110-318	9/15/08	9/15/08	8.017		8.017	0.000		0.000	8.017
PL 111-46	8/7/09	8/7/09	7.000		7.000	0.000		0.000	7.000
PL 111-147	3/18/10	3/8/10	14.700		14.700	4.800		4.800	19.500
PL 112-141	7/6/12	10/1/12	6.200		6.200	0.000		0.000	6.200
PL 112-141	7/6/12	10/1/13	10.400	-0.749	9.651	2.200	-0.158	2.042	11.693
PL 113-159	8/8/14	8/8/14	7.765		7.765	2.000		2.000	9.765
P.L. 114-41	7/31/15	7/31/15	6.068		6.068	2.000		2.000	8.068
P.L. 114-94	12/4/15	12/4/15	51.900		51.900	18.100		18.100	70.000
P.L. 116-159	10/1/20	10/1/20	10.400		10.400	3.200		3.200	13.600
P.L. 117-58	11/15/21	11/15/21	90.000		90.000	28.000		28.000	118.000
Total, GF to HTF			**212.450**	**-0.749**	**211.701**	**60.300**	**-0.158**	**60.142**	**271.843**

Leaking Underground Storage Tank Trust Fund Transfers to the Highway Trust Fund

(Billions of Dollars -Showing the Effects of Joint Committee Sequestration in FY17 and FY18)

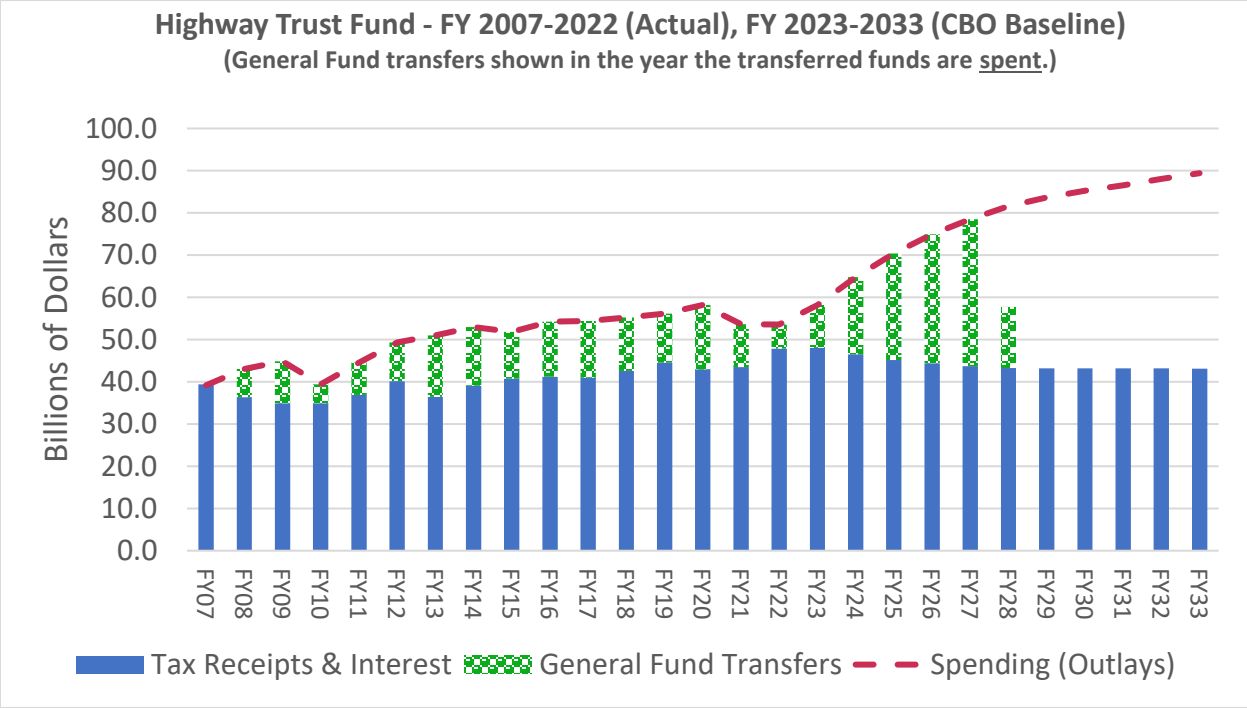
			Highway Account			Mass Transit Account			HTF
Public Law	Enacted	Effective	Enacted	Sequest.	Net Total	Enacted	Sequest.	Net Total	Net Total
PL 112-141	7/6/12	7/6/12	2.400		2.400	0.000		0.000	2.400
PL 113-159	8/8/14	8/8/14	1.000		1.000	0.000		0.000	1.000
P.L. 114-94	12/4/15	12/4/15	0.100		0.100	0.000		0.000	0.100
P.L. 114-94	12/4/15	10/1/16	0.100	-0.007	0.093	0.000		0.000	0.093
P.L. 114-94	12/4/15	10/1/17	0.100	-0.007	0.093	0.000		0.000	0.093
Total, LUST to HTF			**3.700**	**-0.014**	**3.687**	**0.000**		**0.000**	**3.687**

Total GF & LUST Transfers to HTF	**216.150**	**-0.762**	**215.388**	**60.300**	**-0.158**	**60.142**	**275.529**

The $272 billion in General Fund bailouts were all deficit spending and, when spent out of the Trust Fund as outlays, added to the national debt. As of last week, the Treasury was having to pay 3.875 percent in interest on new 10-year notes and 4.125 percent interest on new 30-year bonds to finance that ongoing deficit spending.

The Congressional Budget Office currently projects the last of those bailouts to spend out in the middle of 2028, and the prognosis thereafter is much worse because of the spending increases provided by the 2021 bipartisan infrastructure law, the IIJA:

Figure 1



Data sources: FHWA Table FE-1; CBO May 2023 HTF baseline forecast.

CBO projects that after 2028, at baseline (current law plus inflation) spending levels, the Trust Fund will have a $40 billion revenue shortfall in 2029, and that shortfall will rise steadily each year until it reaches $46 billion per year in 2032, the last year of the forecast.

How did this happen?

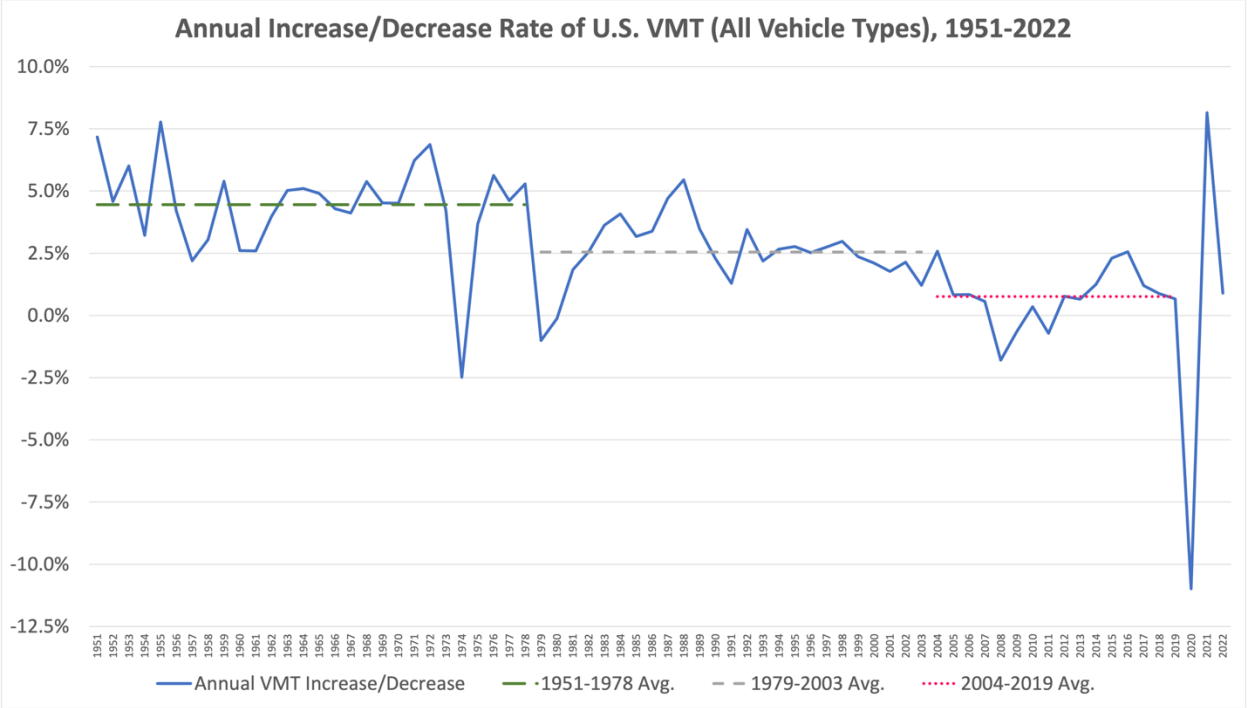
Three reasons.

HOW WE GOT HERE

1. The annual rate of increase in total vehicle-miles declined

From 1950 to the late 1970s, total VMT (vehicle miles-traveled) in the United States increased at an average of 4.5 percent per year, keeping pace with inflation and doubling every 16 years. (VMT growth even kept pace with inflation throughout this time.) Slow shifts in demographics and changes in driver behavior after the 1970s oil shocks led to a slowdown in the rate of VMT increase, down to an average of 2.5 percent per year from 1979 to 2003. At that rate, VMT doubles every 30 years. Then, the VMT increase rate dropped significantly in the early 2000s – from 2004 to 2019, the rate of increase only averaged 0.8 percent per year, a rate at which it would take 90 years for VMT to double.

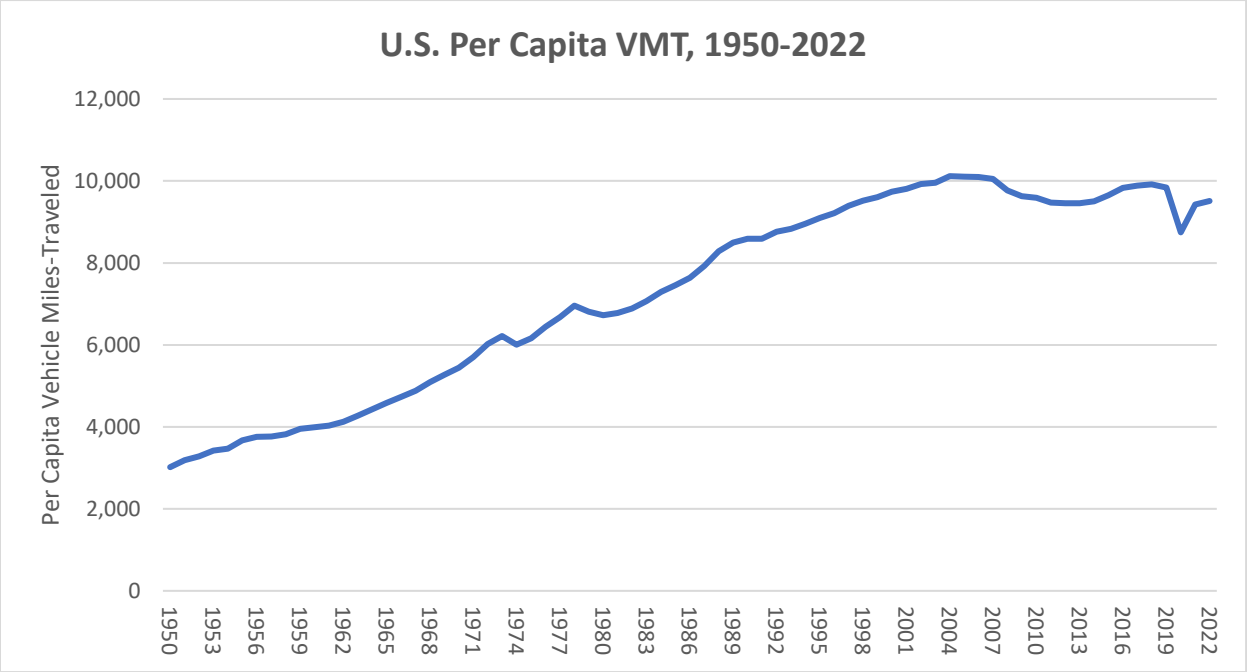
Figure 2



Data sources: FHWA Table VM-201 in Highway Statistics Summary to 1995, and the December 2022 Traffic Volume Trends.

There was, of course, a great deal of population growth in the U.S. after World War II, but after you control for population, VMT per capita peaked in 2004 and, in 2019, was at a level 2.7 percent below 2004.

Figure 3



Data Sources: For VMT, FHWA Table VM-201 in Highway Statistics Summary to 1995, and the December 2022 Traffic Volume Trends. For population: Census Bureau resident population estimates.

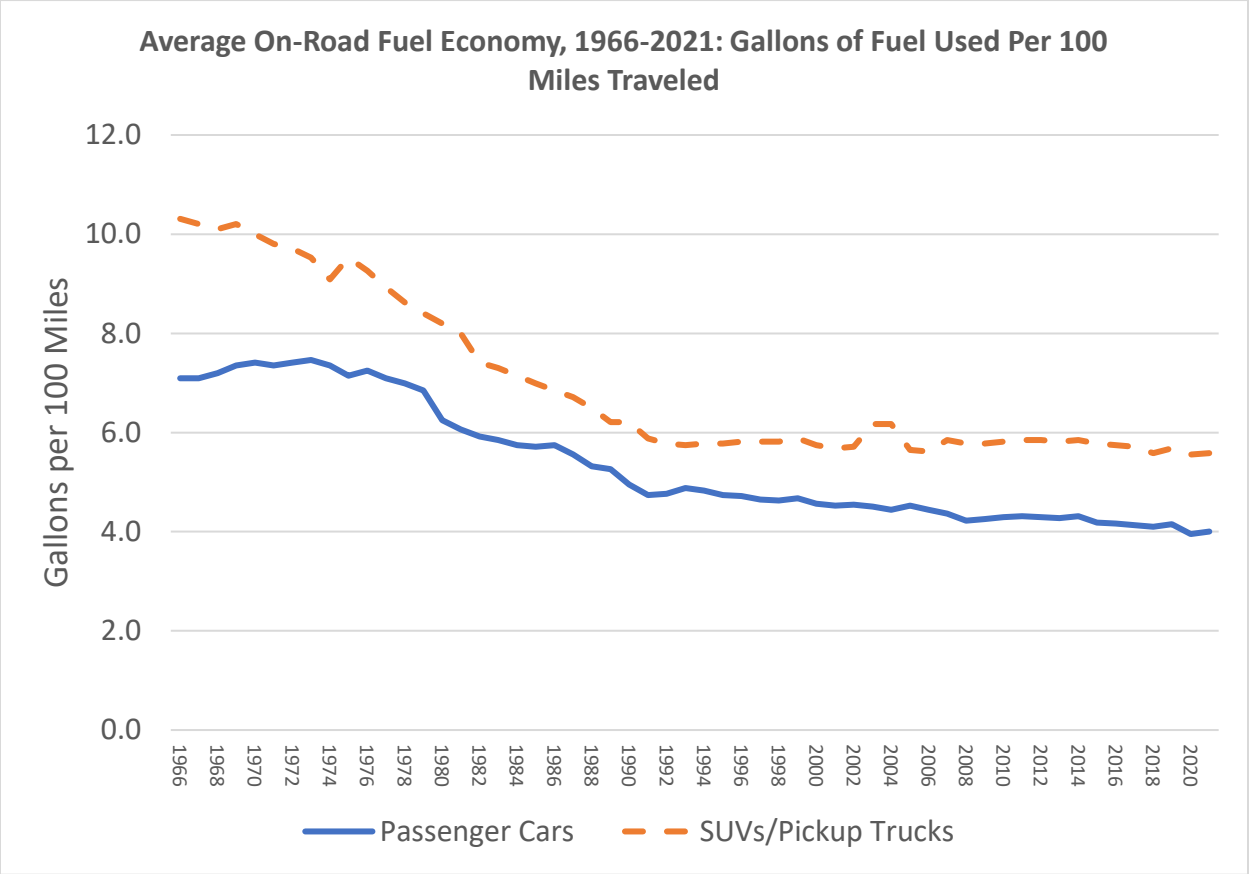
Over the next 30 years, the Federal Highway Administration predicts that car/light truck/SUV VMT will increase by an average of 0.56 percent per year, single-unit heavy truck VMT will increase by an average of 3.37 percent per year, and combination truck VMT will increase by an average of 1.90 percent per year. Total average VMT growth for all vehicle types is projected to be 0.73 percent per year, a rate at which it would take VMT 99 years to double.[2]

2. The number of gallons of fuel used per mile driven dropped significantly

In the aftermath of the 1973-1974 OPEC oil shock, Congress enacted energy policies included new Corporate Average Fuel Economy (CAFE) standards to force automakers to make more fuel-efficient cars. After a long plateau in those standards, new environmental policies in the 2000s caused an increase in these CAFE standards to fight global warming. These have led to a significant increase in average mileage achieved by new light-duty vehicles sold, as the chart below shows.

If you invert the miles per gallon fraction, you get gallons per mile, which directly corresponds with fuel tax income to the Trust Fund. In 1976, the average passenger car on the road burned 7.2 gallons of gasoline for every 100 miles driven. Today, the average passenger car on the road only burns 4.0 gallons of gas every 100 miles. For SUVs and pickups, fuel efficiency has increased from 9.3 gallons per hundred miles in 1976 to 5.6 gallons per hundred miles today.

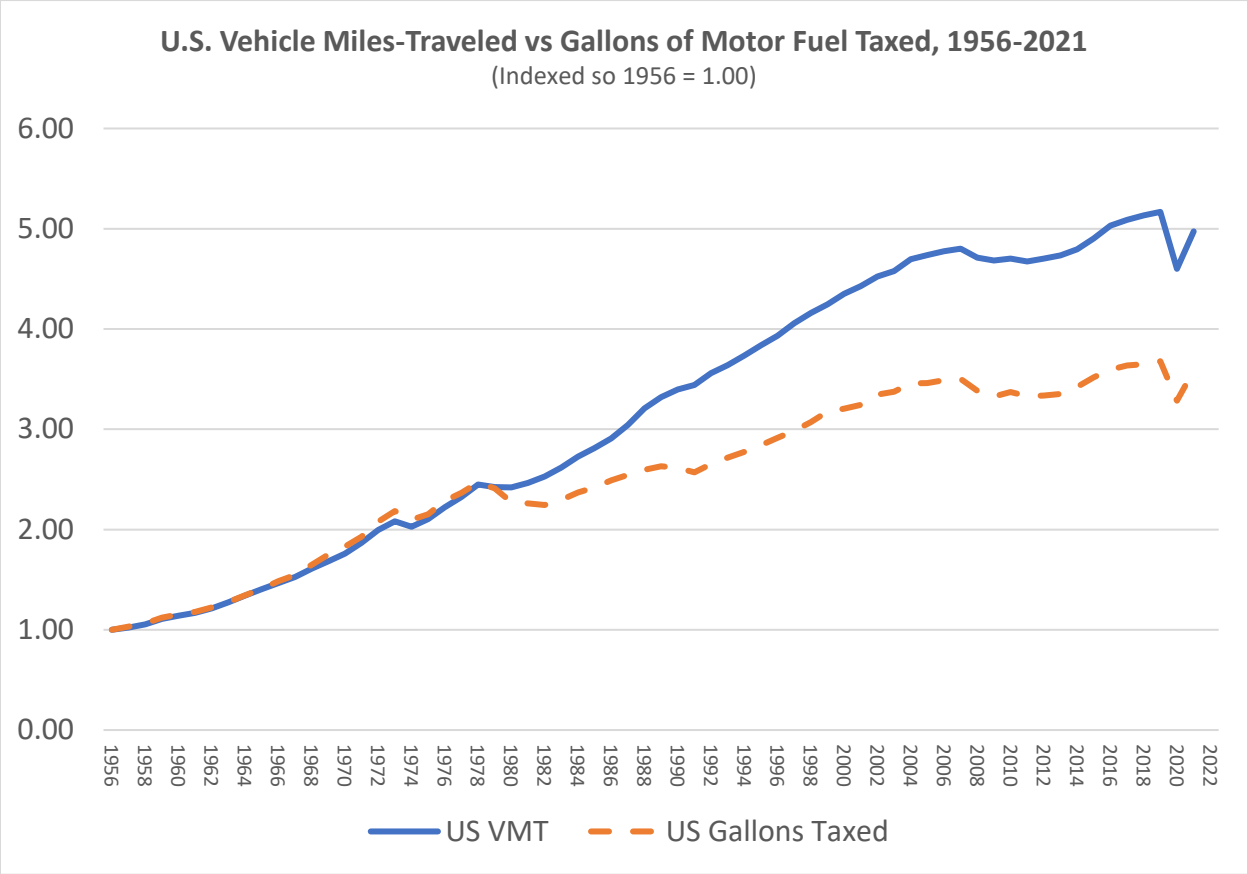
Figure 4



Data source: U.S. Energy Information Administration, Monthly Energy Review (September 2023), Table 1.8, Motor Vehicle Mileage, Fuel Consumption, and Fuel Economy

Before CAFE, gallons of fuel taxed were an almost-perfect proxy for VMT. After CAFE, they have been diverging significantly, as shown in the chart below. (And bear in mind that the rate of increase of VMT has been declining for much of this time, as mentioned above.)

Figure 5



Data sources: For VMT: FHWA Table VM-201 in Highway Statistics Summary to 1995 and the December 2022 Traffic Volume Trends. For gallons: FHWA Table MF-202 in Highway Statistics 2021.

It became a feature of federal energy and environmental policy to reduce the number of gallons of fossil fuel used on roadways. But it was still federal transportation policy to fund highways and transit based on the number of gallons of fossil fuel used on roadways. In effect, the separate federal policies have been at war with each other since the 1970s, and although it took a while, the Highway Trust Fund eventually paid the price.

This trend is set to accelerate significantly in the future, with the aggressive new CAFE standards and separate EPA GHG emission standards proposed by the Biden Administration, involving assumptions of tremendous adoption rates of electric vehicles, which pay no taxes into the Highway Trust Fund. Looking beyond the ten-year CBO horizon, a July 2023 study from the MIT Mobility Initiative and the JTL Transit Lab estimates that EV adoption will cause total gasoline tax receipts in the U.S., at current law tax rates, to drop by almost two-thirds over the next 25 years.[3]

3. Congress failed to cut spending or increase tax rates to compensate for these trends

With the underlying commodity being taxed (gallons of motor fuel used per year) decreasing because of slowing VMT growth and increasing fuel efficiency, Congress and several Presidents had the options of increasing the tax rates on motor fuel, or increasing other taxes, or reducing Trust Fund spending to match tax receipts.

They did none of those things.

Instead, Congress kept enacting, and Presidents kept signing, multi-year authorization bills that pulled spending farther and farther ahead of Trust Fund tax receipts.

Table 2

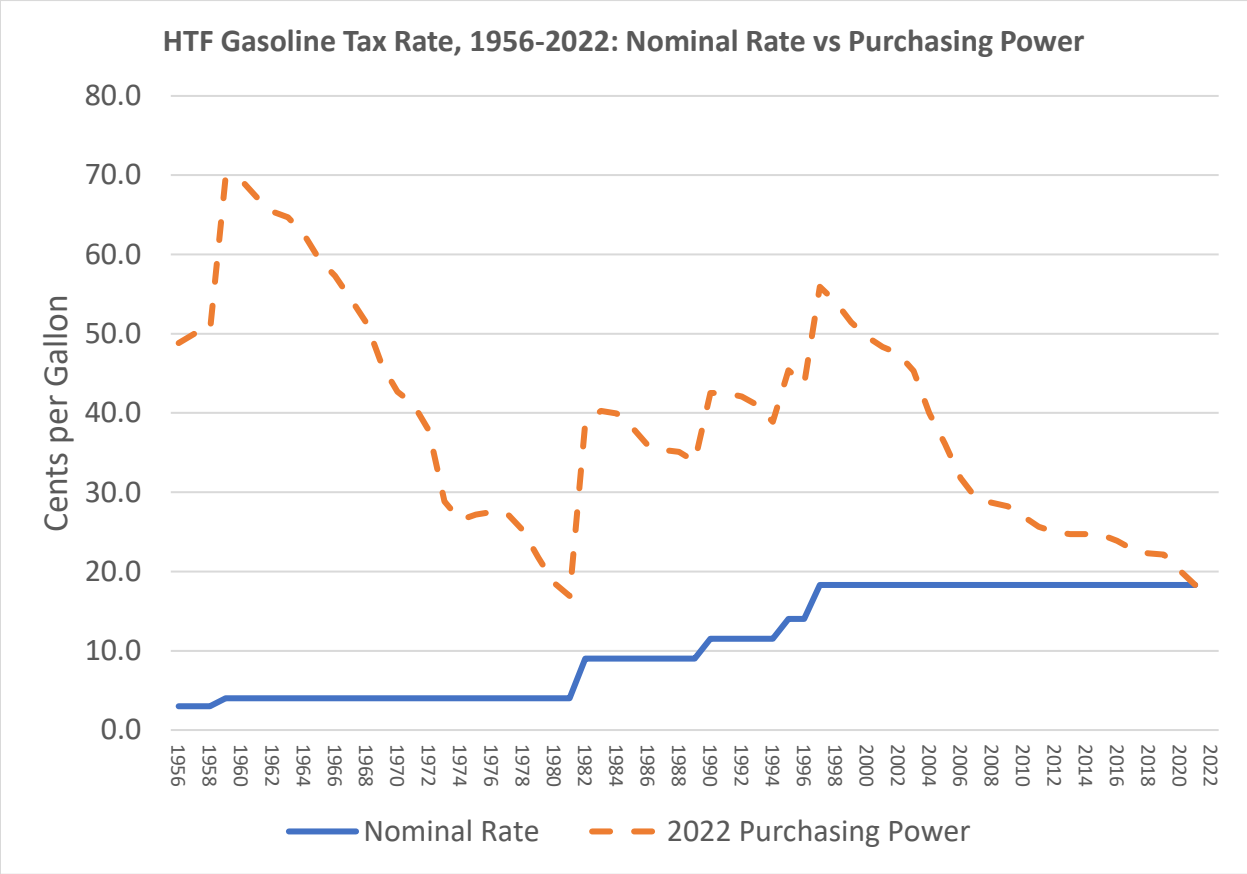
Relation of New HTF Contract Authority to HTF Receipts and Interest, by Reauthorization Act

(Billion Dollars)

Last/Peak Year of	New HTF Contract Authority	New HTF Tax Receipts & Interest	New CA As Percent of New Receipts/Int
ISTEA (FY 1997)	$24.5	$25.3	97%
TEA21 (FY 2002)	$41.2	$32.6	126%
SAFETEA-LU (FY 2009)	$52.2	$35.0	149%
MAP-21 (FY 2014)	$50.8	$39.1	130%
FAST (FY 2020)	$58.7	$42.7	137%
IIJA (FY 2026)	$80.0	$44.4	180%

And, to make matters worse, the purchasing power of the dollars raised by the Trust Fund's excise taxes declines each year due to inflation. The federal gasoline tax was set at 3 cents per gallon by the 1956 Act and raised to 4 cents per gallon in 1959, after the Trust Fund first ran out of money. In terms of purchasing power, that 4 cents per gallon in 1960 was worth 70 cents per gallon in 2022 buying power, steadily declining to today's 18.3 cents per gallon:

Figure 6



Nominal tax rates converted using NIPA Table 5.9.4, line 40, Price Indexes for Gross Government Fixed Investment by Type – State and Local Government Spending on Highways and Streets, Sept. 29, 2023 Revision.

WHAT TO DO NOW

Policymakers need to ask and answer three questions, in order – the first philosophical, the second strategic, and the third tactical.

1. Philosophical question – should the federal government retain the user-pay system for surface transportation?

Although the user-pay paradigm served U.S. surface transportation well in the past, and continues to finance the world's safest aviation system, most of our OECD peer nations no longer use a centralized user-pay fund for their national surface transportation programs. The U.K. abandoned user-pay for roads in 1937 (though they been talking about bringing it back lately). The Eno Center produced a report in 2014 called *How We Pay for Transportation: The Life or Death of the Highway Trust Fund* that analyzed how several peer nations fund their road networks, though some of the information may now be outdated.[4]

In their new book *The Drive for Dollars: How Fiscal Politics Shaped Urban Freeways and Transformed American Cities* (Oxford U. Press, 2023), Professors Brian Taylor, Eric Morris, and

Jeffrey Brown credit federal and state user-pay road funds, reliant primarily on gasoline taxes, with the tremendous economic productivity and safety gains that stem from today's well-developed freeway system. But they also note that because the federal and state highway bureaus were so well funded, and cities were not, the user-pay model is also responsible for urban freeways being built by state engineers over the objections of city planners in many cities, with all the problems that caused.

Right now, we have the worst of both worlds. We are pretending that the Highway Trust Fund is still solvent on a user-pay, user-benefit basis, and continue to give Trust Fund programs a privileged place in the budget process. But the reality is that the Trust Fund is only projected to be 82 percent self-sufficient this year (fiscal 2024), with that solvency dipping rapidly until the Trust Fund is only 60 percent self-sufficient in the last year of the IIJA (fiscal 2026), and dipping below 50 percent self-sufficient in 2031.[5]

That bears repeating – at current tax rates and IIJA spending levels, CBO forecasts that every other dollar being outlaid by the Trust Fund will be from a general fund transfer or other non-user source in just eight years.

From a truth-in-budgeting perspective, the choice seems clear: it's time to either mend, or end, the Highway Trust Fund. Either cut spending and/or increase user revenues to the point that they meet once again, or abolish the Trust Fund, devote the five existing user taxes back to the General Fund, and have highway, mass transit, and highway and motor carrier safety funding fight it out with all other programs through the budget process.

Either of those outcomes would be more honest than maintaining a purported user-pay trust fund by simply printing dollars as needed to keep the Trust Fund afloat, depositing those dollars as needed into the Trust Fund, and using the "intragovernmental transfer" budget loophole to avoid having to budget for the bailouts.

Neither option would be easy. (The option for a relatively painless off-ramp from this situation passed us by circa 2010 or 2011.) Real revenue increases are always politically painful, and spending cuts of the magnitude required here would also be severely painful. But retaining the user-pay Trust Fund option would allow this committee to retain its privileged place in the transportation decision-making process.

Before 2021, I would have told you that the "abolish the Trust Fund" scenario would leave the authorizing committees out of the funding process and put the Appropriations Committees in complete control. But in 2021 and 2022, Congress used the budget reconciliation process to order this committee and its Senate counterparts, among others, to produce general fund mandatory budget authority for things like mass transit, Amtrak, airports, and new Federal Highway Administration grant programs.

It would be complicated, but a budget process could be established to allow this committee and the Appropriations Committee to split duties for funding these programs out of general revenues. However, given the difficulty of getting eight-way unanimity between House and Senate Budget, Appropriations, tax-writing, and transportation policy committees to establish such a process, draconian spending cuts and/or huge tax increases might be an easier political lift.

2. Strategic question – if the federal government keeps the user-pay system, what share of surface transportation programs should users pay, and which specific programs should users pay for, versus general taxpayers?

The 2018 budget caps deal and the IIJA have combined to increase significantly the annual General Fund support for the four modal administrations traditionally supported by this subcommittee. In the last pre-COVID fiscal year, the General Fund provided 11 percent of the total funding for the highway, transit, and safety administrations. In the just-ended fiscal year, the General Fund provided 22 percent of a greatly increased total funding level.

Table 3

HTF/GF Support for Surface Bill Modes, FY 2019 and FY 2023

Millions of dollars of budget authority.

	Fiscal 2019	Fiscal 2023		Fiscal 2019	Fiscal 2023
FHWA HTF	46,007.6	59,503.5	FMCSA HTF	665.8	873.7
FHWA GF	3,250.0	12,872.2	FMCSA GF	0	134.5
GF Percent	6.6%	17.8%	GF Percent	0.0%	13.3%
NHTSA HTF	762.3	1,546.5	FTA HTF	9,939.4	13,634.0
NHTSA GF	204.0	531.7	FTA GF	3,520.9	7,584.5
GF Percent	21.1%	25.6%	GF Percent	26.2%	35.7%
TOTAL HTF	**57,375.1**	**75,557.7**			
TOTAL GF	**6,974.9**	**21,122.9**			
GF PCT.	**10.8%**	**21.8%**			

The decisions as to which programs to fund from the Trust Fund and which to fund from the General Fund have been made on a somewhat ad hoc basis over the years, and the decisions made by the IIJA were made without this committee's input. If Congress decides to retain a solvent user-pay Trust Fund to support some surface transportation programs, which ones are more appropriately supported by highway users and which by general revenues?

If Congress were to examine these programs from the ground up and ask, which kinds should be supported by the dedicated user-pay revenue stream and which should be supported by general revenues, some decision options include:

- ***Capital programs vs operations and maintenance.*** Across most modes of infrastructure, the tradition is for the federal government to concentrate on capital funding, while state and local government partners focus on operational and maintenance funding. For example, the Airport and Airway Trust Fund is governed by statues that give the FAA's capital programs and airport grants priority over FAA operations for Trust Fund dollars. If Congress were to act to split up current Trust Fund programs and give a portion to general revenues, they might use this principle as a guide.

- ***Long-term vs short-term planning horizons.*** It certainly makes sense to reserve scarce user-pay funding secured with a long-term revenue stream to fund the projects that take the longest to build or which have the longest planning horizons. Consider, then, if Congress continues to fund mass transit from the Trust Fund, how incongruous it is that the Capital Investment Grant (CIG) program funds all the big new transit system extensions that take the longest to plan and build, but that is the only FTA program authorized to be reliant solely on annual appropriations. This makes a mockery of the "full funding grant agreements" signed by FTA and project sponsors, which are replete with boilerplate language reminding people that a FFGA is not a contract and does not actually require the federal government to provide any money, ever. These programs were formerly funded out of the Trust Fund in recognition that multi-year funding was preferable for projects that take six to ten years to construct. On the highway side, Congress could likewise choose to fund the longest lead-time projects from the Trust Fund while leaving routine resurfacing and other quickly completed projects from general revenues.
- ***National vs state/regional.*** Support from the general fund traditionally goes to programs for the general welfare. User-pay programs are generally biased towards going where the users are. An honestly budget general fund component of surface transportation funding in the future should be isolated from any mention of, or connection to, how much money a state pays in user taxes. The donor-donee debate (currently obsolete because of Trust Fund solvency – see Appendix A to this testimony) must never apply to general fund programs.
- ***Relative benefit to user-taxpayer.*** The other half of the user-pay model has always been user-benefit (the user pays for programs that give him or her direct benefit, and in this instance, the user of the roads pays for construction and upkeep of those roads). Using user fees to pay for programs that only give indirect benefit to users, like mass transit (at best, it decreases the congestion faced by road users to some degree) has always been controversial. A fundamental redesign of the system could address that.

When taking current Trust Fund programs out of the Trust Fund, Congress could keep those programs federal and transfer them to the General Fund, or they could shift the burden to state or local governments. In recent decades, some in Congress have felt that, post-Interstate, there was no more need for a large federal transportation program, and have sought to "devolve" most of that duty to the states, abolishing federal programs while lowering federal excise taxes at the same time.

Setting aside the philosophical and policy aspects of devolution, the fundamental problem has always been math. Highway Trust Fund programs are among the slowest-spending in government. If we had shut down the entire Trust Fund, permanently, 18 days ago at the start of the fiscal year, and put a permanent end to all its programs (no new projects, contracts, or grants, ever, and fire everyone), CBO says that the Trust Fund would still have to pay $130 billion over the next decade just to pay off all of the contracts and grants that were signed prior to October 1, 2023.

At a current user tax yield of around $43 billion per year, that means that you would have to maintain the current federal taxes at their current rates for three full years after you devolve all the programs to the states. But the states, having balanced budget requirements, would have to raise their own taxes immediately to take over their share of the programs, leading to three-year transition period of double taxation, which would certainly be noticed by motorists.

(The same math also applies to any effort to downsize Trust Fund programs to make them fit within current tax rates – you have to cut the rate of new contracts being signed several years before you see significant reductions in the cash going out the door.)

The most important thing is that, in any future system where Trust Fund user taxes and General Fund resources both pay for surface transportation, the General Fund money must be appropriated outside of, and in addition to, the Highway Trust Fund instead of being transferred into the Trust Fund and making the user-pay imbalance worse.

At the end of this process, the goal is to get to a number – the amount of money that needs to be received in user taxes or fees from system users each year in order to pay for the Trust Fund programs that remain at the end of this reevaluation. The third question can then be asked and answered and those user receipts raised. (Alternatively, if one answers the third question before the second question, the Trust Fund revenue number would then govern the decisions made in answer to the second question.)

3. Tactical question – if the federal government keeps the user-pay system, and if the amount we want to raise from system users exceeds the forecast of proceeds from current tax rates, how should we raise user revenues in the future?

Current projections are for the number of gasoline taxed for the Trust Fund to steadily decline over the next decade at an average rate of 1.4 percent per year. Diesel fuel receipts should fare a little better because increased freight trucking volume will offset more fuel-efficient trucks to some degree.

Table 4

CBO May 2023 Baseline Forecast for Gallons of Motor Fuel Taxed for the HTF

	FY23	FY24	FY25	FY26	FY27	FY28	FY29	FY30	FY31	FY32	FY33
Gasoline - billion gallons	136.7	135.6	134.2	131.9	129.6	127.7	125.7	124.0	122.4	120.9	119.3
Change from prior year		-0.8%	-1.0%	-1.7%	-1.7%	-1.5%	-1.5%	-1.4%	-1.3%	-1.3%	-1.3%
Diesel - billion gallons	44.3	44.5	45.4	46.1	46.5	46.7	46.9	46.9	46.9	46.8	46.5
Change from prior year		+0.6%	+2.1%	+1.3%	+1.0%	+0.5%	+0.3%	+0.2%	-0.1%	-0.3%	-0.5%

These rates of decline are not yet to the point where an increase in the motor fuels tax rates could capture significant revenue, though projections indicate that returns will diminish rapidly in the 15 to 30-year timeframe. (There are, of course, severe political problems with increasing motor fuel taxes, on both sides of the aisle.)

Motor fuel taxes have always been a proxy for vehicle miles traveled. It is a simple matter to take the latest FHWA data on average miles traveled and fuel efficiency, cross it with current

federal fuel tax rates, and deduce how many cents per mile that different types of vehicle are currently paying into the Highway Trust Fund. (The year in question being 2021, the average distance numbers may still be slightly COVID-depressed.)

Table 5

2021 Average Vehicle-Miles, Fuel Consumed, MPG, HTF Fuel Taxes, and Cent-per-Mile Equivalents

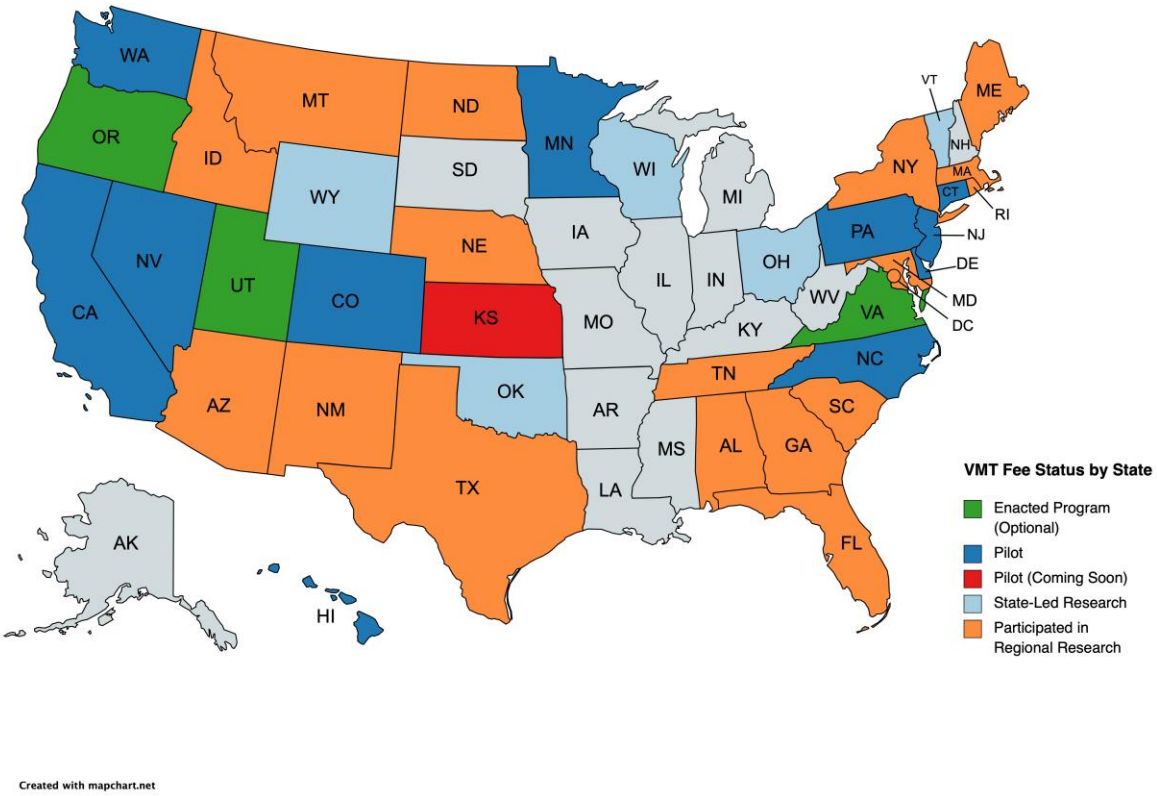
	Light-Duty Vehicles			Trucks With 6+ Wheels		
	Wheelbase Under 121 in	Wheelbase Over 121 in.	All LDVs	Single-Unit (Gasoline)	Single-Unit (Diesel)	Combination Trucks
Vehicle-Miles	10,566	11,335	10,746	12,285	12,285	62,157
Gallons of Fuel	420	632	470	1,643	1,643	10,427
Avg. MPG	25.2	17.9	22.9	7.5	7.5	6.0
HTF Fuel Taxes	$76.86	$115.66	$86.01	$300.67	$399.25	$2,533.76
Cent-per-Mile Eqv.	0.73¢	1.02¢	0.80¢	2.45¢	3.25¢	4.08¢

Data source: FHWA Table VM-1 in Highway Statistics 2021.

The most-discussed idea for retaining the user-pay paradigm while transitioning away from motor fuel taxes is some sort of fee charging individual vehicles for their miles-traveled, called a VMT fee (alternately called a mileage-based user fee (MBUF), or a road user charge (RUC)).

As Director Strickler has mentioned, there has already been significant interest in this idea at the state level, with Oregon taking the lead in testing back in 2001 and now having its own permanent program where motorists can choose to pay by the mile instead of by the gallon. Hawaii, Utah, and Virginia now also have permanent VMT fee programs, while several other states are currently testing pilot programs or conducting research.

Figure 7



At the federal level, the IIJA mandates that DOT and Treasury must carry out a pilot project testing a VMT fee in all 50 states, the District of Columbia, and Puerto Rico, and provides $50 million for that purpose. The pilot program must include both personal vehicles and commercial trucks, and volunteers will have their mileage fees deposited in the Highway Trust Fund. The Eno Center recently issued a report, *Driving Change: Advice for the National VMT-Fee Pilot*, which reviews the various state (and international) efforts and suggests some best practices for DOT to follow in establishing the program.

States have given DOT a wealth of options from which to choose – having miles measured by vehicle telematics; by on-board diagnostic (OBD) port boxes that can either have GPS info or just mileage; by an app on the driver's cell phone that can either have GPS or just mileage; or by periodic odometer readings. And they have multiple options for reporting the miles and paying the fees, including at the pump, or with state income taxes, or other kinds of periodic filings.

Figure 8

Technology Used in Passenger Vehicle Pilots						
	In-Vehicle Telematics	OBD-II (GPS)	OBD-II (no GPS)	Mobile App (GPS)	Mobile App (No GPS)	Manual
Oregon		■	■	■		■
Minnesota	■				■	
Colorado		■	■		■	■
Washington		■	■	■	■	■
California	■	■		■	■	■
Utah	■	■	■	■		
Hawaii		■	■			■
Virginia	■	■	■			
Nevada						■
Delaware		■	■			
Pennsylvania		■	■			

However, DOT is almost two full years behind schedule in establishing the pilot program, raising questions about whether or not information from the program will be available to Congress when it comes time for the IIJA to be reauthorized in 2026.

A VMT fee is attractive for several reasons. It its most basic form, it records how many miles were driven, and that can be combined with vehicle axle-weight to be a good measure of wear-and-tear incurred on roads. If measured by GPS, it could also allow proper cost allocation between federal, state, and local roads. And if the system has interactive electronics in the car, it could be combined with local options such as tolls, congestion or cordon pricing, and dynamic time-of-day pricing. The fee structure could also take into account personal considerations and give lower rates to low-income drivers or to rural drivers.

However, any transition from motor fuel taxes to a similarly broad-based user-tax system must recon with collection costs. From a federal level, motor fuel taxes are fantastically easy to administer, since they are levied at the refinery or wholesale tank farm. CBO has estimated that there are only 1,300 or so points of collection, and it doesn't take much IRS manpower to collect estimated taxes twice monthly, process quarterly returns, and do audits and make corrections, all to bring in around $35 billion per year in federal receipts.

Retaining user-pay but switching from fuels to cars or drivers involves going from about 1,300 points of collection to either drivers (233 million in 2021) or vehicles (278 million in 2021). Either way, this is around a 200,000-fold increase in the number of points of collection. In addition, many people drive cars who don't file income taxes, and don't have bank accounts, and may even lack smartphones, making compliance difficult. Congress has yet to hear from the IRS as to how much the administrative cost would be to run such a program.

In the interim, there are other sources of user revenue that could be addressed. There has been much discussion of electric vehicles (EVs), which currently pay nothing into the Highway Trust Fund yet use federal-aid roads just like taxpaying, fuel-burning vehicles.

A federal registration charge for EVs has the same problem that all registration fees have - a car that drives 2,500 miles per year pays the same as a car that drives 25,000 miles per year, even though one has ten times the road use as the other. A mileage tax on EVs, if set at the same approximate level that an internal combustion vehicle of the same axle-weight pays per mile in fuel taxes, would be the fairest outcome but has the same implementation problems as the VMT fee listed above.

Senator Cornyn has proposed a tax on EV batteries dedicated to the Trust Fund. There have been other proposals to tax the electricity used to charge EV and dedicate those proceeds to the Trust Fund, which is easy enough at commercial charging stations, but is currently somewhere between very expensive and impossible for the majority of charging, which currently takes place in a private home.

All methods of raising Trust Fund money from EVs, however, run up against the sheer incongruity that is the left arm of Uncle Sam paying people $7,500 up front to buy new EVs (through the IRA tax credits) while the right arm of Uncle Sam takes a hundred bucks or so out of that $7,500 back each year for road user charges into the Highway Trust Fund.

A July 2023 study from the MIT Mobility Initiative and the JTL Transit Lab suggests that any motor fuel tax replacement revenue source be evaluated through two "lenses": "a **performance lens** and an **efficiency lens**. The performance lens considers (i) ease of administration, (ii) resistance to easy evasion, (iii) stability over time, and (iv) fairness. The efficiency lens considers how well or poorly certain revenue alternatives address key negative externalities of vehicular mobility: (i) traffic congestion, (ii) road wear and tear, (iii) safety and (iv) emissions."[6]

The summary tables 6 and 7 of that report are too long to reprint here, but variable VMT fees at the regional/national level, and variable tolls (called, for some reason, Road User Charges in the MIT/JTL report even though that is very confusing to the RUC Coalition people who use that name for their VMT fee) at a local level, score best on both the performance assessment and the efficiency assessment.

The IIJA directed the Federal Highway Administration to conduct the first highway cost allocation study since 1997. When complete, the information from that study could be used to set an axle-weight based vehicle fee in such a way that it fairly captures the costs incurred by various kinds of vehicles.

But all potential new revenue sources run up against the same problem: replacement level is not enough in an insolvent fund. Current tax rates only bring in $43 billion per year in receipts. Trust Fund spending was around $60 billion in the fiscal year that finished last month and will be around $75 billion in 2026. Simply replacing current Trust Fund revenue levels will not be nearly enough unless you also cut Trust Fund spending significantly. Dollars going out have to equal dollars going in.

Thank you for the opportunity to testify, and I look forward to your questions. (My written testimony also includes two appendices – five myths about the Highway Trust Fund, and a brief history of the user-pay concept as applied to U.S. transportation.)

APPENDIX A: FIVE MYTHS ABOUT THE HIGHWAY TRUST FUND

Myth #1: Mass transit gets 20 percent of Trust Fund spending, or the Mass Transit Account gets 20 percent of Trust Fund revenues.

Reality: Not even close.

In 1982, a political deal was struck whereby urban legislators would vote for a huge 5 cent-per-gallon gasoline and diesel fuel tax increase demanded by highway interests (taking the total from 4 cents per gallon to 9 cents per gallon, more than doubling the tax rate), in exchange for 1 cent of the tax increase – 20 percent – going to a new Mass Transit Account in the Highway Trust Fund.

This 80-20 split of fuel tax increases was retained when the 5 cent gas/diesel tax increase from the 1990 budget deal was eventually deposited in the HTF, and was also retained when the 4.3 cent fuels tax increase from the 1993 budget deal was eventually deposited in the Trust Fund.

Table 6

HTF Gasoline Increases After 1959

Year	Increase	80% to HA	20% to MTA
1982	5 cents	4 cents	1 cent
1990	5 cents	4 cents	1 cent
1993	4.3 cents	3.44 cents	0.86 cent
TOTAL	**14.3 cents**	**11.44 cents**	**2.86 cents**

HTF excise taxes have not been increased since 1993. However, the taxes that were in existence prior to 1982 are all still retained in the Highway Account, and none of that money goes to the Mass Transit Account. This includes the 12 percent sales tax on new heavy trucks and tractor-trailers, which is the only one of the Trust Fund taxes that is a percentage of a sales price, which means it is the only one of the Trust Fund taxes that is effectively indexed for inflation.

As a result, Mass Transit Account tax receipts have never come close to being 20 percent of total Trust Fund tax receipts. Over the last 20 years, the average has hovered around 13 percent of total Trust Fund tax receipts – not 20 percent. In the most recent year we have full records, the Mass Transit Account only got 12.3 percent of total Trust Fund tax revenues.

Table 7

HTF Net Excise Tax Revenues (Billion $$)

	HA	MTA	Total	MTA Pct.
FY03	28.962	4.762	33.724	14.1%
FY04	29.785	4.926	34.711	14.2%
FY05	32.893	4.984	37.877	13.2%
FY06	33.672	4.858	38.530	12.6%
FY07	34.270	5.111	39.381	13.0%
FY08	31.323	5.043	36.366	13.9%
FY09	30.135	4.809	34.944	13.8%

FY10	30.150	4.811	34.961	13.8%
FY11	31.961	4.922	36.883	13.3%
FY12	35.143	5.003	40.146	12.5%
FY13	31.800	4.648	36.448	12.8%
FY14	34.066	4.965	39.031	12.7%
FY15	35.740	5.049	40.789	12.4%
FY16	36.032	5.162	41.194	12.5%
FY17	35.699	5.286	40.985	12.9%
FY18	37.265	5.322	42.587	12.5%
FY19	38.267	5.307	43.574	12.2%
FY20	37.458	5.198	42.656	12.2%
FY21	37.933	5.425	43.358	12.5%
FY22	40.865	5.748	46.613	12.3%

Mass transit started off receiving money from the General Fund of the Treasury, and even after transit started getting money from the Highway Trust Fund as well, the General Fund continued to play a significant part in supporting transit program funding.

Over the 1983-2003 period (the spans of the 1982, 1987, 1991 and 1998 multi-year transportation funding authorization laws), total funding authorizations for mass transit programs averaged 19.7 percent of total funding authorizations for highway and highway safety programs, from all sources.

This started out as a coincidence – if there was a plan to have an 80-20 split of total authorizations, no one ever mentioned it at a committee hearing or on the House floor or Senate floor prior to 2002. The earliest reference we can find to an 80-20 split of funding was a statement by the Surface Transportation Policy Project in a September 2002 House hearing, noting that "We are at the point where the relative distribution of roughly 80/20 split may have to be revised to meet the rising needs for transit capital."

Bizarrely, even as the Mass Transit Account's share of total actual tax receipts in the Trust Fund keeps declining, Congress continues to increase the Mass Transit Account's share of new spending authority. Getting 18.1 percent of the spending while only getting 12.3 percent of the dedicated revenues means that the Mass Transit Account is much more insolvent, on a percentage basis, than the Highway Account.

Table 8

HTF Mass Transit Account Share of Total HTF Contract Authority, by Reauthorization Law

1982	1987	1991	1998	2005	2012	2015	2021
STAA	STURAA	ISTEA	TEA21	SAFETEA	MAP-21	FAST	IIJA
6.9%	8.2%	13.0%	14.5%	15.2%	16.9%	17.4%	18.1%

Myth #2: Many states are still "donor states" that have paid more tax dollars into the HTF Highway Account than they have received in highway funding.

Reality: Not anymore.

This was once true, but since the Trust Fund went broke in 2008 and became dependent on general fund bailouts, it has ceased to be true for all states save one. From its inception in 1956 through September 2021, states had paid an estimated $1.090 trillion in taxes into the Highway Account (or the entire Trust Fund before the establishment of a Mass Transit Account) and had received a total of $1.31 trillion in highway funding (apportionments and allocations) drawn from the Account. The 50 states, collectively, have drawn $222 billion more from the Account than they have paid in excise taxes.

Table 9

Cumulative HTF Tax Payments July 1, 1956-December 31, 19823, and HTF Highway Account Tax Payments January 1, 1983-September 30, 2021, Compared to FHWA Apportionments and Allocations From the Fund/Account Over the Same Period

State	Billion Dollars In	Billion Dollars Out	Surplus/ Deficit	Ratio	State	Billion Dollars In	Billion Dollars Out	Surplus/ Deficit	Ratio
Alabama	21.56	25.61	4.06	119%	Montana	5.16	13.42	8.26	260%
Alaska	2.65	16.82	14.17	634%	Nebraska	8.72	10.12	1.40	116%
Arizona	19.98	22.58	2.60	113%	Nevada	7.82	10.64	2.81	136%
Arkansas	14.11	16.87	2.77	120%	New Hampshire	4.50	5.99	1.49	133%
California	108.08	121.70	13.63	113%	New Jersey	30.29	33.76	3.48	111%
Colorado	15.64	18.67	3.03	119%	New Mexico	9.66	12.49	2.83	129%
Connecticut	11.17	19.40	8.23	174%	New York	46.19	62.15	15.96	135%
Delaware	3.02	5.59	2.57	185%	North Carolina	32.79	33.56	0.77	102%
Dist. of Col.	1.19	6.20	5.01	523%	North Dakota	4.34	8.96	4.63	207%
Florida	54.82	58.61	3.80	107%	Ohio	43.28	45.74	2.46	106%
Georgia	38.18	40.80	2.61	107%	Oklahoma	18.23	19.66	1.43	108%
Hawaii	2.74	7.69	4.95	281%	Oregon	13.58	17.34	3.75	128%
Idaho	5.96	9.81	3.84	164%	Pennsylvania	43.89	57.44	13.55	131%
Illinois	40.70	47.79	7.09	117%	Rhode Island	2.88	7.70	4.82	268%
Indiana	28.81	29.94	1.13	104%	South Carolina	19.44	19.93	0.49	103%
Iowa	14.26	16.49	2.24	116%	South Dakota	4.23	9.34	5.11	221%
Kansas	12.15	14.00	1.85	115%	Tennessee	26.04	28.10	2.06	108%
Kentucky	19.33	22.15	2.82	115%	**Texas**	**100.45**	**98.42**	**-2.03**	**98%**
Louisiana	18.90	24.86	5.96	132%	Utah	9.29	11.69	2.40	126%
Maine	5.62	6.65	1.03	118%	Vermont	2.47	6.69	4.22	271%
Maryland	18.93	23.19	4.26	123%	Virginia	29.93	34.07	4.15	114%
Massachusetts	19.52	26.56	7.04	136%	Washington	20.20	26.67	6.47	132%
Michigan	35.49	37.02	1.53	104%	West Virginia	7.93	16.25	8.32	205%
Minnesota	18.77	22.83	4.06	122%	Wisconsin	20.84	24.06	3.22	115%
Mississippi	14.46	17.01	2.54	118%	Wyoming	5.10	9.01	3.91	177%
Missouri	27.10	30.55	3.45	113%	**50-State Total**	**1,090.36**	**1,312.60**	**222.24**	**120%**

Data source: FHWA Table FE-221, Highway Statistics 2021.

The exception was Texas, which still had a $2 billion lifetime deficit as of the end of 2023. But the IIJA's funding levels are so disconnected from Trust Fund tax payments that Texas is gaining between $1 billion and $1.5 billion per year. So the Lone Star State may already have crossed the 100 percent rate of return line – and if they haven't, they most certainly will by the end of the IIJA.

Former donor state advocates will be quick to point out that the above table, and its FHWA source data, does not take into account the Mass Transit Account, and because mass transit apportionments are based on ridership and the extent of existing transit systems, and this is

undoubtedly true. But the Mass Transit Account is more properly viewed as the price charged by urban legislators to continue their share of funding a program of that primarily benefits suburban and rural areas.

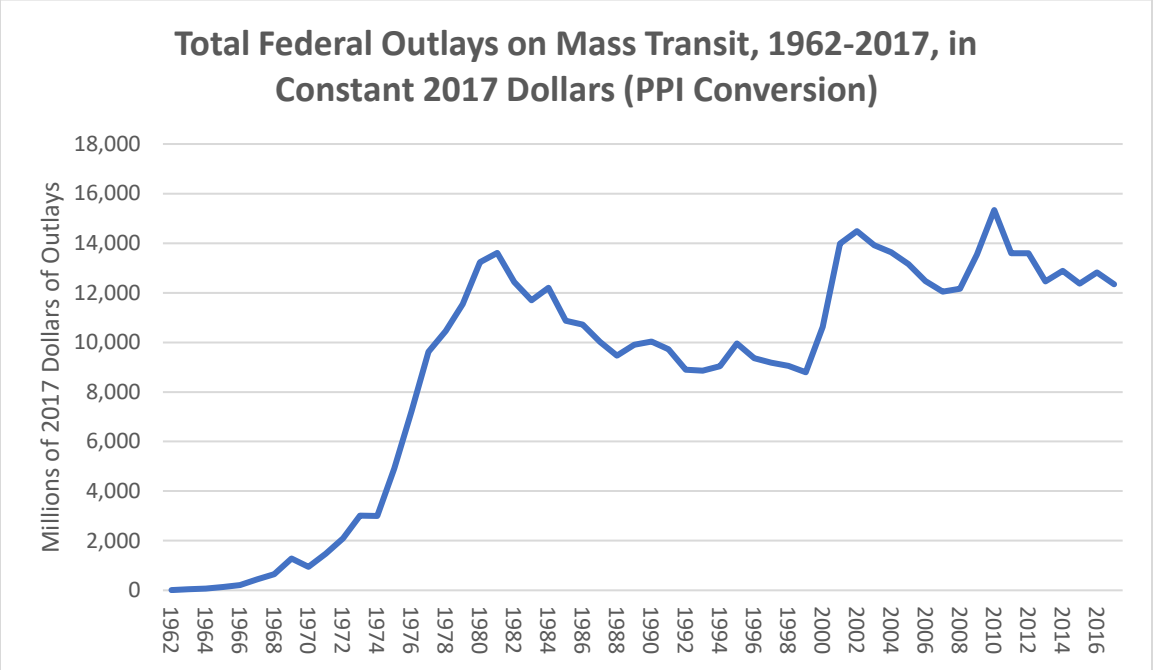
And, while in the past, the Federal Transit Administration did not make it easy to find state-by-state funding totals, they have started to do so in fiscal 2023. As it turns out, Texas got $663 million in mass transit formula apportionments in 2023 and has only been paying around $600 million into the Highway Account.

Myth #3: Giving mass transit a dedicated fuel tax revenue stream and establishing a Mass Transit Account resulted in more money for mass transit.

Reality: Not really.

The law creating the Mass Transit Account was signed in January 1983. The Congressional Budget Office's incredibly helpful report *Public Spending on Transportation and Water Infrastructure: 1956 to 2017* totaled all federal outlays on mass transit for every year and converted those to constant 2017 dollars using the producer price index for government transportation spending. The results, shown below, are surprising.

Figure 9



Data source: CBO Table W-8 in the Supplemental Tables download for their report Public Spending on Transportation and Water Infrastructure: 1956 to 2017.

According to CBO, federal spending on mass transit peaked in 1981 at $13.6 billion – before the creation of the Mass Transit Account – then declined and did not surpass that peak again for 20 years before declining again due to the early 2000s construction cost inflation and then one last spurt to the 1981 level during the peak of 2009 ARRA stimulus spending in fiscal 2010.

While the COVID bailouts and then the IIJA have certainly pushed mass transit outlays well beyond these levels starting in 2020, the inescapable conclusion of this chart is that, once mass transit got its own revenue stream, the Appropriations Committees stopped working as hard to give mass transit annual appropriations.

Myth #4: If you just get rid of mass transit, bike paths, and other "non-traditional" uses of Trust Fund money, current tax rates will be enough to pay for road and bridge needs.

Reality: Not anymore.

While this was arguably true years ago, the mammoth funding increases under the IIJA mean that even core highway funding spending is now vastly outpacing user tax revenues.

Assume that, once the IIJA ends in fiscal 2026, Congress decides to throw the Federal Transit Administration out of the Trust Fund. And the Federal Motor Carrier Administration and the National Highway Traffic Safety Administration. And then, Congress also decides to either abolish all of the "non-traditional" Federal Highway Administration programs or turn them over to the General Fund as well.

Even if you did all that, a comparison of FY 2026 IIJA contract authority levels for FHWA programs with CBO's forecast of FY 2026 Trust Fund tax receipts shows that new spending is still $11.4 billion above user tax receipt levels:

Table 10

Will Simply Removing Mass Transit and Non-Traditional FHWA Programs from the Highway Trust Fund Solve the Spending to User Tax Receipt Imbalance? Not Anymore…

(Million $$)	IIJA FY 2026 Enacted C.A.	Remove "Non-Traditional"	Remaining Enacted C.A.
Federal Highway Administration			
Formula Programs			
National Highway Performance Program	30,783.8		30,783.8
Surface Transpo. Block Grant Program	13,478.3		13,478.3
Transportation Alternatives	1,497.6	-1,497.6	0.0
Highway Safety Improvement Program	3,245.9		3,245.9
Rail-Highway Grade Crossing Program	245.0		245.0
Congestion Mitigation & Air Quality	2,745.6	-2,745.6	0.0
Metropolitan Planning	474.2	-474.2	0.0
National Highway Freight Program	1,487.2		1,487.2
Carbon Reduction Program	1,335.3	-1,335.3	0.0
PROTECT Resiliency Grants (Formula)	1,518.4	-1,518.4	0.0
Ferry Boats and Terminal Facilities	118.0		118.0
Non-Formula Programs			
SAFETEA-LU Allocated Safety Set-Aside	3.5	-3.5	0.0
TIFIA Credit Subsidies	250.0		250.0
Tribal Transportation Program	628.0		628.0
Federal Lands Transportation Program	456.0		456.0
Federal Lands Access Program	309.0		309.0
Territorial & Puerto Rico Highway Program	237.0		237.0
INFRA Grants (Nat. Signifc. Freight/Hwy.)	900.0		900.0
FHWA Administrative Expenses	531.4		531.4
Discertionary Bridge Program	700.0		700.0
Congestion Relief Program	50.0	-50.0	0.0
Charging and Alt-Fuel Refueling Grants	700.0	-700.0	0.0
Rural Surface Transportation Grants	500.0		500.0
PROTECT Resiliency Grants (Competitive)	300.0	-300.0	0.0
Reduce Truck Emissions at Port Facilities	50.0	-50.0	0.0
Nat. Signif. Fed. Lands and Tribal Projects	55.0		55.0
Highway Research, ITS, and BTS	502.0		502.0
Wildlife Crossings Pilot Program	80.0	-80.0	0.0
Prioritization Process Pilot Program	10.0	-10.0	0.0
Reconnecting Communities Pilot Program	105.0	-105.0	0.0
Emergency Relief (Statutory 23 U.S.C. 125)	100.0		100.0
Total Contract Authority, FHWA	**63,396.1**	**-8,869.6**	**54,526.5**
CBO May 2023 Baseline Estimates			
FY 2026 HTF Tax Receipt Estimates From:			
18.3 cpg gasoline and gasoline blendstocks	24,129.0		24,129.0
24.3 cpg highway diesel fuels	11,192.0		11,192.0
Other motor fuels	248.0		248.0
12% New truck-tractor-trailer sales tax	5,350.0		5,350.0
Heavy tire tax	712.0		712.0
Heavy Vehicle Use Tax	1,532.0		1,532.0
Total HTF Tax Receipts (Highway & Transit Accounts)	**43,163.0**		**43,163.0**
NEW SPENDING EXCEEDS USER TAX RECEIPTS BY:	**20,233.1**		**11,363.5**

Getting the FHWA budget, by itself, down to the $43-ish billion per year forecast for current law highway user tax receipts would involve significant cuts in real asphalt, concrete, and steel-using road and bridge construction and maintenance, even if Congress had the political will to get rid of the rest of the programs currently receiving Trust Fund moneys.

Myth #5: Diesel fuel is federally taxed at a rate 6 cents higher than gasoline because trucks do more damage to roads and bridges than cars.

Reality: That's not the reason.

In the Highway Revenue Act of 1982, Congress tried to solve two problems. The Highway Trust Fund needed more revenues, and the revenue structure needed to be changed to reflect the May 1982 Highway Cost Allocation Study so the tax burden was distributed fairly.

The law solved the revenue problem by increasing gasoline and diesel taxes from 4 cents per gallon to 9 cents per gallon, and it solved the cost allocation problem with a massive increase in the annual Heavy Vehicle Use Tax (HVUT), particularly on vehicles weighing over 70,000 pounds which do, by far, the most damage to roads and bridges. Under the new law, the annual HVUT paid by the owner of an 80,000-pound truck would increase almost twelvefold, from $162 per year to $1,900 per year.

Truckers, particularly owner-operators, were not happy about this, and staged nationwide protests throughout 1983. Eventually, in 1984, as part of a larger tax bill, Congress lowered the maximum HVUT to $550 per year (where it remains to this day). The Joint Committee on Taxation estimated that this cut in the HVUT would cost the Treasury $2.1 billion over five years, so the same law increased diesel fuel taxes by six center per gallon, raising $2.2 billion over that same period and making the HVUT reduction deficit-neutral.

The 6-cent diesel differential, still in place today, actually makes truck cost allocation worse, not better, because it spreads the tax burden across all diesel-using vehicles, regardless of wait, and away from the 70,000-plus pound trucks that do so much damage to roads and bridges.

APPENDIX B: THE USER-PAY PARADIGM

THEORIES OF TAXATION

For centuries, there were two competing philosophical theories around which a just tax structure could be based. The first was to tax based on the taxpayer's ability to pay taxes (e.g. higher taxes for those with greater wealth or greater income); and the second was to tax based on the governmental benefits received by the taxpayer.

The two ideas were not always in opposition, as this debate dates back to the days before governments spent significant money on programs specifically benefitting the poor who lacked the ability to pay significant levels of tax. Adam Smith conflated the two in his First Maxim of Taxation: "The subjects of every state ought to contribute towards the support of the government, as nearly as possible, in proportion to their respective abilities; that is, in proportion to the revenue which they respectively enjoy under the protection of the state."[7]

According to a recent NBER paper, ability taxation and benefit taxation began to diverge in the 1800s, with John Stuart Mill advocating ability taxation on its own, and later when Erik Lindahl (and, 35 years later, Paul Samuelson) took benefit taxation into the field of pricing public goods.[8] The pricing of public goods was later incorporated into the larger field of "public choice theory" by the work of James M. Buchanan beginning in 1962.

A related idea to benefit taxation was popularized by economist Arthur Pigou in 1928, who explored taxes levied to collect the costs of "spillovers," or "externalities" – defined as "costs borne or benefits enjoyed by one party due to activities of another party where no voluntary exchange or market transaction occurs."[9] The most widespread use of this principle has been in taxes to capture the effects of pollution.

An influential Congressional Budget Office report used the overall rubric of "user charges" to describe four different types of governmental income:

- ***Benefit-based taxes*** (if formally linked to spending accounts for programs specifically benefitting those taxpayers);
- ***Pigouvian liability-based taxes*** (if formally linked to spending accounts for programs specifically remediating the liabilities caused by those taxpayers);
- ***Actual "user fees"*** (fees paid for goods or services provided by the government, consumed voluntarily, and not shared by other members of society); and
- ***"Regulatory fees"*** (charges for the exercise of the government's power to regulate).[10]

In the United States, this user-pay paradigm has seen particularly wide use in the field of transportation spending.

USER-PAY POLICIES AT THE STATE AND LOCAL LEVEL

The user-pay paradigm for transportation originally began at the level of state government. However, as a 1954 study noted, "History reveals that no carefully worked out theory anteceded the adoption of user taxation as we know it today. The theoretical foundation, such as it is, was built after the framework was erected."[11]

The idea of the users of a transportation facility paying for the use of that facility has been active at the state and local level since the Founding. The official history of the federal highway program recounts that, in the late 1780s, "there was widespread agitation for State assistance to help maintain the principal roads. The debt-burdened State governments met this challenge by appealing to private capital for the funds to build better highways. They chartered private turnpike companies, conferring on them authority to build roads and charge tolls to the public for their use."[12]

Along with canals (which also charged tolls), the toll turnpike road dominated intercity travel until supplanted by the railroads starting in the 1830s. The railroads were like the turnpikes in that governments gave right-of-way to private companies in exchange for the private companies building infrastructure, but they differed in that with the railroads, the act of transportation itself was also carried out by the railroad company, so that the public user was paying for both the infrastructure access and the transportation activity thereupon, instead of only paying for infrastructure access under the turnpike model.

(Throughout the 19th Century, local roads were maintained by a "statute labor" system, which one could call "user-do" instead of "user-pay." Every able-bodied man in a county was required to spend a certain number of days in a year working on a road crew to maintain the roads in their area.)

The advent of the automobile in the late 19th Century, in combination with the other elements of the "Good Roads Movement," created significant pressure on states to provide better roads. At this time, the primary source of state revenue was the property tax, which was also the major source of road funding.[13]

(This explains the "sliding scale" that increases the federal share of the cost of federal-aid highway projects in states where the federal government owns a high percentage of the land. That provision was enacted in 1921, when many states still paid for a majority of their road spending with property taxes. Yet somehow, the provision has remained in law long after all states switched from property taxes to the user-pay model, where the sliding scale (still codified in section 120 of title 23, United States Code) makes much less sense.)

The drive for states to raise general revenues from a new economic sector, and the need to increase spending on roads so they could support automobiles, eventually came together into a user-pay system. But it happened in stages. Mid-century historians broke the various auto-centric taxes and fees into three "structures."

First structure – taxing the existence of vehicle itself. The first state to require that automobiles be registered, and to pay a registration fee, was New York in 1901, with a one-time perennial fee. By 1915, all states had enacted some sort of auto registration fee.[14]

The best early history of the fees noted that in the beginning, the fees charged for the one-time-only registrations were so low that "little attention was given to the collection of revenue. After 1909, however…The growth of the revenue idea is apparent from the increase in the average rates, from the tendency to make the licenses annual instead of permanent, and, indirectly, from the attempt to secure a just distribution, evident in the graduation on the basis of horsepower."[15]

A 1913 snapshot showed that most states varied the amount of the registration fee based on the horsepower of the vehicle's engine, following the British practice (more horsepower being more expensive, making it a progressive tax, and engine horsepower also being a good proxy for the Pigouvian externality of the dust stirred up by the vehicle's operation). Four states even had lower registration fees for electric vehicles because of their lower top speeds.[16]

States quickly began to dedicate their registration fees to the state road fund – by 1916, 42 of the 48 states dedicated at least part of their registration fees to highway purposes.[17] But the use of the fees to pay for roads created a "free rider" problem, which begat resentment of out-of-state motorists. Some states enacted interstate registration reciprocity with other states, but others did not.

For example, "New York had full reciprocity with 15 other states but not with New Jersey. As a result, thousands of New Yorkers who had their summer homes on the Jersey coast had to register their machines for the full year in both States."[18]

And things could get more aggressive: “General resentment and widespread resistance [to interstate registration requirements] occasioned the flaring up of so-called ‘border tag wars’ in various sections of the country…a funeral cortege, corpse and all, enroute to the place of interment in a State of non-registration was arrested and held until the drivers could be tried and fined and the hearse and the automobiles licensed and tagged.”[19]

Growth in the number of vehicles, and the money generated by annual registration fees, was exponential. In 1910, nationwide fee receipts totaled $2 million. Ten years later, they had increased 45-fold, to $102 million. Ten years after that, the 1930 receipts totaled $356 million. (The number of registered vehicles only increased 18-fold from 1910-1920 and almost threefold to 1930, as the average amount of registration fee per vehicle climbed from $4.88 in 1910 to $12.49 in 1920 to $15.48 in 1930.)[20]

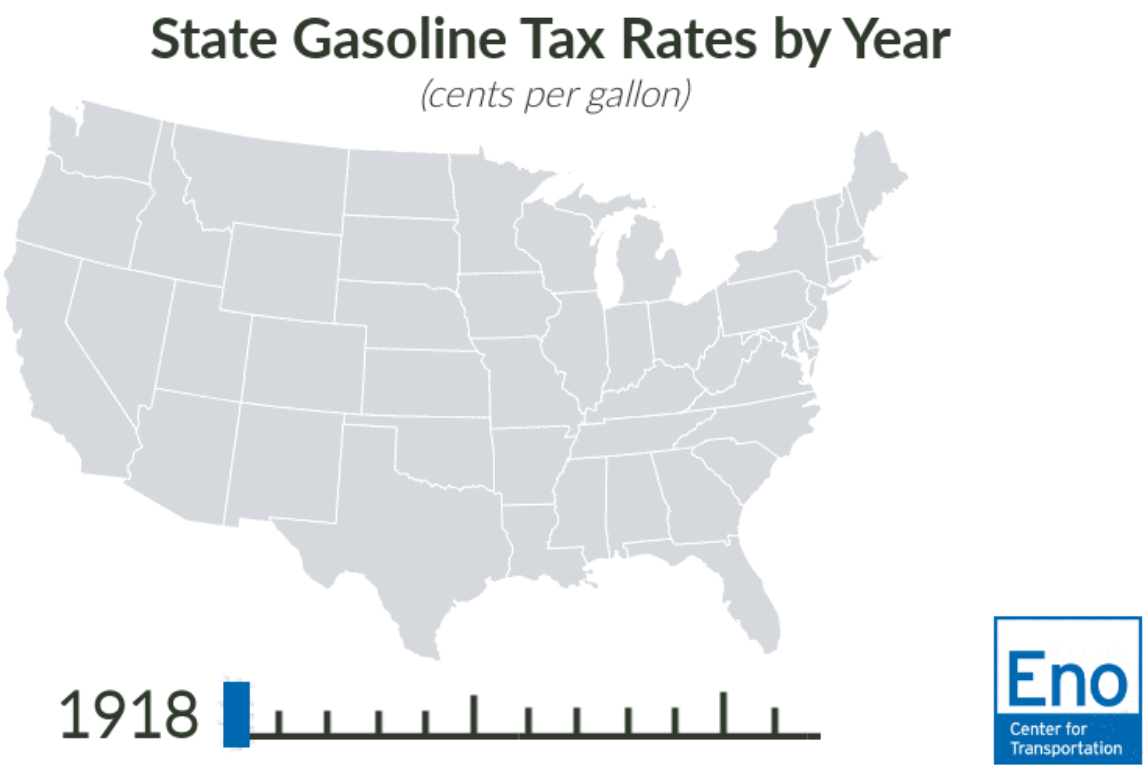
Second structure – taxing the fuel on which the vehicle runs. The federal government taxed gasoline, along with other lamp and lantern fuels, briefly during the Civil War, and Congress debated taxing gasoline as a motor fuel several times during the 1914-1918 period, but nothing ever came of it.[21]

The first taxation of gasoline as a motor fuel was left to Oregon, in February 1919, when they levied a 1 cent-per-gallon gasoline tax, levied at the wholesale level, as part of the means to pay for a new $10 million bond issuance for road construction.[22]

Two other Western states, New Mexico and Colorado, adopted similar gasoline levies so quickly after Oregon that it is unlikely that one state inspired another, and in both instances, the gas taxes went into the state road fund. Later that year, the road commissioners of the three states traveled to the annual meeting of the American Association of State Highway Officials in Kentucky and sold all the other state highway officials on the wonder of their new revenue source, after which, according to one historian, “There can be no doubt that all highway officials present were cognizant of the possibilities of a gasoline tax by the time they returned home, and state highway officials continued to be the chief source of gasoline tax agitation.”[23]

From then on, states adopted gasoline taxes remarkably quickly. At the end of 1919, only the aforementioned three states had adopted such taxes. Five years later, at the end of 1923, 31 states and the District of Columbia had adopted gasoline taxes. By the end of 1929, only a decade after Oregon went first, New York became the last holdout state to levy a state gasoline tax. The levels at the end of 1929 ranged from two cents per gallon to six cents per gallon.[24]

Figure 10



A 1924 study indicated that, in the states that had already enacted motor fuel taxes, in most instances they enhanced, and did not replace, motor registration revenue (half of the gasoline tax states had also increased registration fees since taxing gasoline, while only 13 percent of the gasoline tax states had lowered registration fees.)[25]

During the Great Depression, massive unemployment and stock market crashes severely reduced income tax revenues at the same time that deflation and defaults were hurting property taxes. But gasoline tax receipts by states remained remarkably robust, to the point that states began to divert more of their gasoline tax revenue to non-highway purposes. The federal Hayden-Cartwright Act of 1934 provided that any state would lose one-third of its annual federal highway funding if it diverted any additional gasoline tax revenue away from highways after June 30, 1935.[26] (This provision actually stayed on the books until being repealed in July 1998.)

At present, there is a wide discrepancy in state gasoline tax levels. Including all types of taxes (excise and sales) and fees, the American Petroleum Institute's most recent calculation is that the state (and local, averaged out) taxes range from a low of 15.13 cents per gallon in Alaska to a high of 68.15 cents per gallon in California.[27]

Many states expanded their motor fuel tax laws to include diesel fuel and other fuels early on. However, diesel-powered trucks on highways were largely a post-WWII phenomenon (a 1954 study found that only 13 percent of combination trucks were diesel-powered, and a negligible share of other trucks, but 55 percent of commercial buses were already running on diesel).[28] So

the revenues from (and attention paid to) diesel as a highway tax revenue source were *de minimis* until after the war.

A 1946 study commissioned for the California legislature found that "the ton-miles of operation per gallon of fuel were 57 percent greater for diesel trucks than for gasoline-powered trucks." As a way to treat both classes of trucks fairly (from the user-pay point of view), the report recommended that from then on, the diesel tax be increased to a level 50 percent higher than the gasoline tax, whatever the gasoline tax rate happened to be. (This was the original source of the idea that diesel tax rates should be higher than gasoline tax rates – not because commercial trucks do more damage to roads than smaller cars, but as a way to even out the per-mile tax burden between kinds of trucks.)[29]

The federal government did not begin to track the use of diesel fuel on highways until 1949, but in that year, they estimated that about 75 gallons of gasoline were used on U.S. roads for every gallon of diesel similarly used. By 1959 the ratio had only dropped to 24 to 1, and to 13 to 1 by 1969. In 2021, the ratio of gasoline (and gasohol) to diesel (and other special fuels) use on American highways was 2.85 to 1.[30]

Today, state taxes on diesel fuel tend to be higher than the taxes on gasoline, but the discrepancy is now justified as part of higher tax rates on the trucking sector. The American Petroleum Institute estimates that state and local diesel taxes on highway use of diesel fuel range from a low of 15.08 cents per gallon in Alaska to a high of $1.00 per gallon in California.[31]

Third structure – taxing the use of the vehicle. If the first structure was taxing the existence of the vehicle itself, and the second structure was taxing the fuel used by the vehicle, the third structure was taxing the use of the vehicle. A groundbreaking 1968 study, *The Role of Third Structure Taxes in the Highway User Tax Family*, found that:

"…fuel consumption does not adequately reflect costs occasioned by vehicles of different types and weights. The registration tax based on the gross weight of the vehicle may be graduated in its application; however, the tax does not reflect the variation in mileage by the same vehicle from year to year nor the variation in mileage by different vehicles of the same type and gross weight. On the other hand, a third-structure tax , for example one based on weight and mileage, if a significant part of the total highway-user tax system, could counteract the (alleged) shortcomings of the other two imposts. It is because of this that many jurisdictions impose some type of third-structure tax."[32]

As of 1946 (the first year that *Highway Statistics* was published), 16 states and the District of Columbia levied some kind of weight-mile tax on commercial vehicle operation. 11 states also taxed the gross income of motor carrier companies specifically, and 13 states also issued annual weight-based taxes on motor carrier vehicles.[33]

By 1965, the number of states levying gross receipts taxes had dropped from 11 to 6, and the number of states using some kind of weight-mile tax formula had dropped by one. 4 states taxed freight movement by the ton-mile, 7 states taxed by the weight-mile of the truck, 2 states levied an axle-mile tax, and 2 others had a flat vehicle-mile truck tax rate.[34]

Since then, the federal deregulation of trucking in 1980, and the 1991 requirement for interstate cooperation in motor carrier fuel tax collection, crediting, and reciprocity, have led most states to abolish their third structure taxes. (This is also due to persistent opposition from the trucking industry over the years. The industry has consistently supported concentrating state trucking taxes into the first two structures – annual registration and motor fuels – for ease of compliance.)

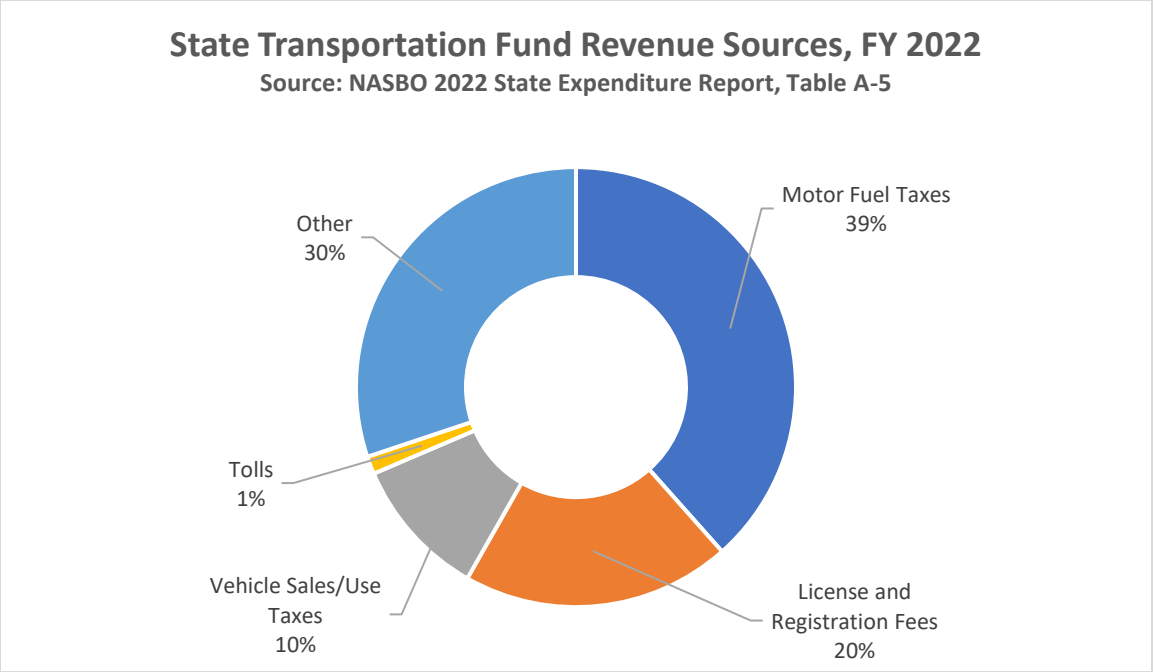
Four states still levy weight-distance taxes on motor carrier operation.

- *Kentucky* – All motor carriers operating in Kentucky with a combined license weight of 60,000 pounds or more must pay a flat rate of 2.85 cents per mile.[35]
- *New Mexico* – All motor carriers operating in New Mexico with a declared gross vehicle weight of 26,000 pounds or more must pay a weight distance tax ranging from 1.1 cents per mile for trucks at the bottom end of the weight range to 4.4 cents per mile over 78,000 pounds. Discounted rates are charged for one-way hauls with empty return.[36]
- *New York* – All commercial vehicles operating in New York must pay a graduated weight-mile tax with multiple possible measures of weight (gross weight or unladen weight). The rates vary from 0.84 cents per mile for the lightest trucks (gross weight of 18,000 pounds) to 5.46 cents per mile for 80,000 pound trucks, plus 0.28 cents per ton or fraction of a ton per mile over 80,000 pounds. The state law gives discounted rates to trucks hauling wood products or dairy products.[37]
- *Oregon* – All commercial vehicles operating in Oregon with a registered weight over 26,000 pounds must pay a graduated weight-mile tax ranging from 7.2 cents per mile for trucks barely over 26,000 pounds to 23.7 cents per mile for trucks at 80,000 pounds. For trucks over 80,000 pounds, an axle-weight computation is used that tops out at 33.3 cents per mile.[38]

Unfortunately, the Federal Highway Administration has ceased updating Table MV-2 in its *Highway Statistics* Series, which lists annual state tax receipts from various motor carrier taxes, after the 2009 edition, leaving the official record vacant. But back in 2009, receipts from the four state weight-mile taxes were: Kentucky $76.9 million; New Mexico $81.3 million; New York $98.7 million, and Oregon $196.2 million.

The National Association of State Budget Officers estimated that, in fiscal year 2022, state governments paid for 74 percent of their transportation spending (excluding the pass-through proceeds of federal grants) with funds taken from a dedicated transportation fund, with the remaining 26 percent split roughly evenly between state general fund appropriations and bond proceeds.[39]

Figure 11



FEDERAL USER CHARGE POLICY

The federal government began levying user charges at the Founding, in the form of postal fees (paid by the recipient until the advent of sender-purchased postage stamps in the 1840s).[40] By 1900, postal user charges still represented 15 percent of total federal revenues (and paid for all Post Office Department expenses).[41]

In 1918, some national parks began charging parking revenues.[42] In January 1940, President Roosevelt proposed small public admissions fees for parks, national forests, and historic monument in order to offset the cost of park roads, trails, and facilities. He also suggested charging the public for the cost of federal aid to maritime transportation ("dredged channels, buoys, lighthouses, lifesaving stations, and so forth"). Roosevelt wrote that "It would seem reasonable that some portion of these annual expenditures should come back in the form of small fees from the users of our lakes, channels, harbors and coasts."[43]

World War II interrupted the development of the user-pay paradigm at the federal level, but in January 1947, President Truman was the first to propose a general user charge principle: "the Government should receive adequate compensation for certain services primarily of direct benefit to limited groups." Like Roosevelt, Truman singled out the field of transportation: "For example, I believe that a reasonable share of the cost to the Federal Government for providing specialized transportation facilities, such as airways, should be recovered."[44]

In April 1951, the House Subcommittee on Independent Offices Appropriations included, in its fiscal 1952 spending bill, a general provision expressing the sense of Congress that government work done for a specific person or group should be "self-sustaining to the full extent possible," and that the President should levy "fair and equitable" fees, charges and prices to do so.

Interestingly, the appropriations bill went through the House and Senate floor with no mention whatsoever of this provision during debate. The bill was signed into law on August 31, 1951.[45]

That language, as modified, remains on the books today, expressing the "sense of Congress that each thing of value provided by an agency…to a person…is to be self-sustaining to the extent possible."[46]

This law was implemented quickly by the Bureau of the Budget via the issuance of Circular A-25 in November 1953, requiring federal agencies to charge fees for licensing, registration, and related activities (including Civil Aeronautics Board, Civil Aviation Administration, Interstate Commerce Commission, and Coast Guard certification and inspection services), and again in January 1954 with Circular A-28, requiring agencies to charge for copying, certification, and search of records.[47]

In 1957, the Eisenhower Administration decided to build on this principle and requested, in Budget Bureau Bulletin 58-3, that all federal agencies draft legislation allowing them to "recover full costs for Government services which provide a special benefit." The Budget Bureau then issued a new version of Circular A-25 in September 1959 (and folded the old Circular A-28 into it), which provided additional guidance, including on the question of whether specific user fees should be fungible with general revenues or earmarked for a specific spending program.[48]

Every President from Franklin Roosevelt through Joe Biden has endorsed the user-pay principle in general, and endorsed specific user-pay rationales for certain transportation charges, taxes and fees, in their annual budget messages.

Office of Management and Budget Circular A-25 governing user charges was last amended in 1993 and is still active. Section 7c of the current version mentions the operational differences between a user fee and a user tax: "Excise taxes are another means of charging specific beneficiaries for the Government services they receive. New user charges should not be proposed in cases where an excise tax currently finances the Government services that benefit specific individuals. Agencies may consider proposing a new excise tax when it would be significantly cheaper to administer than fees, and the burden of the excise tax would rest almost entirely on the user population (e.g., gasoline tax to finance highway construction). Excise taxes cannot be imposed through administrative action but rather require legislation. Legislation should meet the same criteria as in Section 7b; however, it is necessary to state explicitly the rate of the tax."[49]

In fiscal year 2022, the Office of Management and Budget estimated that the federal government took in $572 billion in user charges, which, by OMB definition, does not include those excise taxes (such as those supporting the Highway Trust Fund) that are used in lieu of user fees.[50]

NOMENCLATURE AND THE CONSTITUTION

In public debate, the term "user fee" has often been used to describe a benefit-based or liability-based excise tax. Politically, this is understandable, but constitutionally, it is usually incorrect. The Constitution has two clauses that have led federal courts, and Congress itself, to set strict standards for what is a "bona fide" user fee.

Origination Clause. Article I, Section 7, Clause 1 provides that the Senate may not originate "Bills for raising Revenue" – only the House of Representatives may do so. But the Supreme Court held in 1897 (and reaffirmed in 1990) that "a bill creating a discrete governmental program and providing sources for its financial support is not a revenue bill simply because it creates revenue…"[51]

The most recent prominent example of a Senate-originated user fee is the aviation security fee charged to all enplaning air passengers to defray a portion of the Transportation Security Administration's screening costs. The fee was originated in a Senate bill that became law in 2001.[52]

The Origination Clause is enforced by the House of Representatives far more often than it is enforced by the courts.[53]

In the past, the Speaker of the House of Representatives, together with the House Parliamentarian, have expressed that the House's own enforcement of the Origination Clause (the "blue slip" rejection of Senate revenue bills) "will continue to be viewed broadly to include any meaningful revenue proposal that the Senate may attempt to originate." But the same announcement also listed specific criteria for House committees other than Ways and Means to write their own bona fide user fees.[54]

Export Clause. Article I, Section 9, Clause 5 provides that "No Tax or Duty shall be laid on Articles exported from any State." But the courts have ruled that this clause does not apply to bona fide user fees.

The most statement by the Supreme Court was in 1998, when the Court invalidated the Harbor Maintenance Tax (a levy of 0.125 percent of the cargo moving in and out of U.S. seaports, deposited in the Harbor Maintenance Trust Fund, and to be used to defray Army Corps of Engineers costs for harbor dredging) as it was applied to exports.

The Court held that because the tax was based on the value of the cargo (not the "size and tonnage of the vessel, the length of time it spends in port, and the services it requires"), it did not "correlate reliably with the federal harbor services used or usable by the exporter" and was thus a tax, not a bona fide user fee.[55]

The Federal gasoline excise tax is not a user fee under these standards for several reasons. (It is labeled a "tax" in statute; it is part of the Internal Revenue Code; it is levied "upstream" at the refinery, causing non-highway users to have to pay the tax and then apply for a refund or a tax credit, and when first levied in 1932, it was not formally linked to road spending.) But a charge on vehicle mileage could, conceivably, be structured as a bona fide user fee.

CLASSIFYING, AND ACCOUNTING FOR, FEDERAL USER FEES AND TAXES

The federal budget essentially has two separate sets of books – one for the spending side of the budget, and the other for the receipts side. The sum totals of the two sets of books are compared on a daily, monthly, and annual basis to determine the size of the federal deficit (or surplus). All accounts in the federal budget, generally speaking, are classified as either spending accounts or receipt accounts.[56]

From the first centralized federal budget in 1921 through late 1960s, user fees were shown on the receipt side of the budget (except for those the Post Office and, later, government-owned corporations like the Tennessee Valley Authority, which were netted against total department/corporation spending). That earlier treatment was overruled by the 1967 final report of the President's Commission on Budget Concepts, which still governs budget practice today.

The Commission recommended that "For purposes of summary budget totals, receipts from activities which are essentially governmental in character, involving regulation or compulsion, should be reported as receipts. But receipts associated with activities which are operated as business-type enterprises, or which are market-oriented in character, should be included as offsets to the expenditures to which they relate."[57]

The most recent President's Budget explains: "Offsetting collections and offsetting receipts are recorded as offsets to spending so that the budget totals for receipts and (net) outlays reflect the amount of resources allocated by the Government through collective political choice, rather than through the marketplace… Offsetting receipts and offsetting collections are recorded in the budget in one of two ways, based on interpretation of laws and longstanding budget concepts and practice. They are offsetting collections when the collections are authorized to be credited to expenditure accounts. Otherwise, they are deposited in receipt accounts and called offsetting receipts."[58]

But that still leaves out excise taxes like those used to defray federal highway and transit spending. After describing how the purchase of postage stamps to defray part of the cost of delivering a letter should qualify as a bona fide user fee and be treated as negative spending, the Commission's report said:

"A different treatment is indicated, however, in the exercise of the Government's sovereign tax powers for the collection of highway excise taxes. The proceeds of such tax collections are earmarked for highway construction [via the Highway Trust Fund]. Even though the taxpayer may regard such excise taxes as a 'price for services rendered,' the individual taxpayer's contributions are not in any direct way related to the particular highway services provided by the Government. The Federal Government retains complete allocative authority over the collected taxes and the taxpayer may never use the resource constructed or provided by the Government out of the highway excise taxes earmarked for the general purpose of highway construction. Accordingly the collection of highway excise taxes and the expenditures for highway construction should not be netted in the budget."[59]

Whereas true user fees can be applied directly to an account or agency budget on the spending side of the budget, defraying some or all of their expenses and reducing the net level of spending, this is not possible for benefit-based and liability-based taxes, which must be kept on the receipts side of the budget, because they are based on the sovereign power of the government to raise revenue. The only way to link tax receipts to a specific spending account, program or agency is through the creation of a trust fund – a visibility exercise to link a specific tax with specific spending programs over multiple years.

FEDERAL EXCISE TAXES AS PROXIES FOR ROAD USE

FEDERAL EXCISE TAXES RELATING TO ROAD USAGE

The 20th Century saw three great waves of new federal excise taxes:

- 1917-1919: to prepare for and wage World War I and pay down war debt.
- 1932: to balance the budget at the start of the Great Depression under President Hoover.
- 1941-1945: to prepare for and wage World War II.

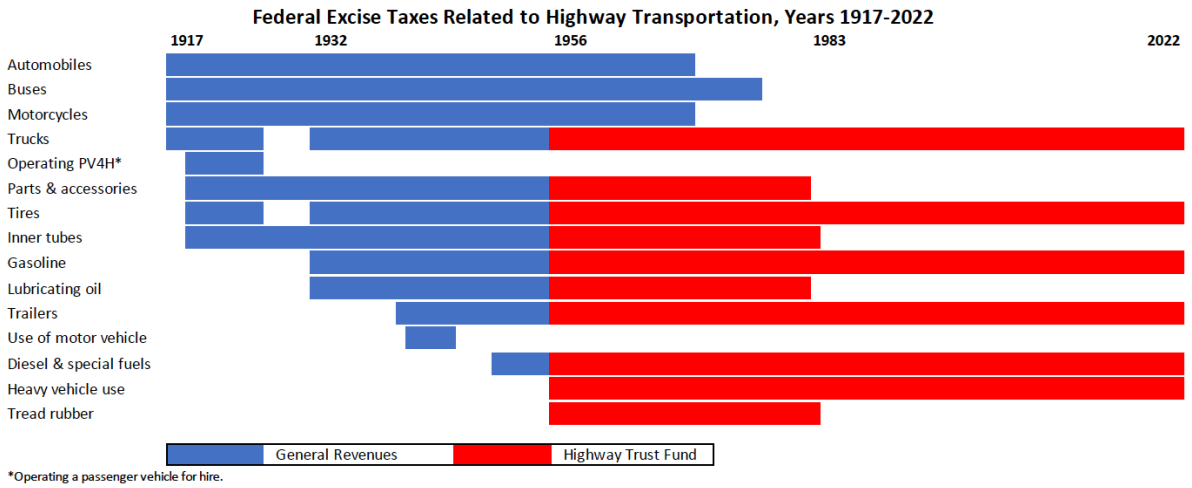
The "user-pay" paradigm never entered into any of these debates. Most of the excise taxes were viewed by Congress as ways to raise revenues on items that were not "essentials of life." The gasoline tax, first levied in 1932, was a tax on an essential, but it was so essential that the state gasoline tax receipts were holding up much better than income taxes during the Great Depression, and there was nothing else Congress could think of to raise the level of revenues they thought necessary.

Congress has levied fifteen separate excise taxes related to road use over the years – thirteen on products, and two on the act of using public roads. They are listed by the year of their initial levy. Not all of these taxes were redirected from the General Fund to the Highway Trust Fund in 1956.[60]

- ***Automobiles (1917)*** – a sales tax on the manufacturer's sales price of a new automobile, ranging from 3 percent to 10 percent. Never attributed to HTF; repealed in 1971.
- ***Buses (1917)*** – a sales tax on the manufacturer's sales price of a new bus, ranging from 3 percent to 10 percent. Never attributed to HTF; repealed in 1978.
- ***Motorcycles (1917)*** – sales tax on the manufacturer's sales price of a new motorcycle, ranging from 3 percent to 10 percent. Never attributed to HTF; repealed in 1971.
- ***Trucks (1917)*** – includes both single-unit trucks and the tractor portion of a combination vehicle – sales tax on the manufacturer's sales price of a new truck, ranging from 3 percent to 12 percent. Repealed from 1926 and then reinstated in 1932. Attributed to HTF beginning July 1, 1956; still on the books at 12 percent.
- ***Operating or renting passenger automobiles for hire (1919)*** – annual occupational tax paid per vehicle, based on passenger capacity ($10 per year per vehicle for up to 7 passengers and $20 per year per vehicle for over 7 passengers). Repealed in 1926.
- ***Parts and accessories for automobiles and trucks (1919)*** – manufacturer's excise tax of between 2.5 and 8 percent. Attributed to HTF starting in 1966; repealed in 1983.
- ***Tires (1919)*** – manufacturers excise tax originally levied on all tires at a rate between 2.5 and 5 percent of price and then repealed in 1926. Levied again in 1932 as a weight-based tax on all tires starting at 2.25 cents per pound and eventually increasing to 10 cents per pound. Starting in 1983, tires weighing less than 40 pounds are exempt from tax and a graduated weight-based tax is in place for heavier tires. Attributed to the HTF since 1956; still on the books.
- ***Inner tubes (1919)*** – manufacturers excise tax originally levied on all tubes at a rate between 2.5 and 5 percent of price and then repealed in 1926. Reinstated in 1932 as a weight-based tax ranging from 4 to 10 cents per pound over time. Attributed to the HTF starting in 1956; repealed in 1984.

- ***Gasoline (1932)*** – manufacturers excise tax ranging from 1 cent per gallon to 18.4 cents per gallon over time. Now includes gasohol. Attributed to HTF starting in 1956; still on the books at 18.4 cpg, of which 18.3 cpg goes to the HTF.
- ***Lubricating oil (1932)*** – manufacturers excise tax on all types of lubricating oil 1932-1978 and highway oil use only from 1978-onward, ranging from 4 to 6 cents per gallon. Dedicated to the HTF starting in 1966; repealed in 1983.
- ***Trailers (1941)*** – manufacturers excise tax on trailers for highway use ranging over time from 5 percent to 12 percent of original price. Attributed to HTF starting in 1956; still on the books at 12 percent.
- ***Use of a motor vehicle on public highways (1942)*** – a flat $5 annual tax on the use of a motor vehicle, paid by the registrant. Repealed in 1946.
- ***Diesel and special fuels (1951)*** – manufacturers excise tax varying from 2 to 24.4 cents per gallon. Now also include biodiesel. Attributed to HTF starting in 1956; currently on the books at 24.4 cpg, of which 24.3 cpg goes to the HTF.
- ***Heavy vehicle use (1956)*** – annual tax on the use of a motor vehicle over 26,000 pounds gross weight. Taxes are weight-based and currently capped at $550 per year. Dedicated to the HTF from its inception, still on the books today.
- ***Tread rubber (1956)*** – manufacturers excise tax varying from 3 to 5 cents per pound. Attributed to HTF starting in 1956; repealed in 1984.

Figure 12



[1] Source: FHWA Table FE-210 in *Highway Statistics 2021* for FY 1957-2021; Treasury Table TF-6 in the March 2023 *Treasury Bulletin* for FY 2022; and FHWA Table FE-1 on the FHWA website for part of FY 2023.

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