

The Road Ahead

Why Florida Should Shift from Per-Gallon Gas Taxes to Per-Mile Charges— and How to Do It



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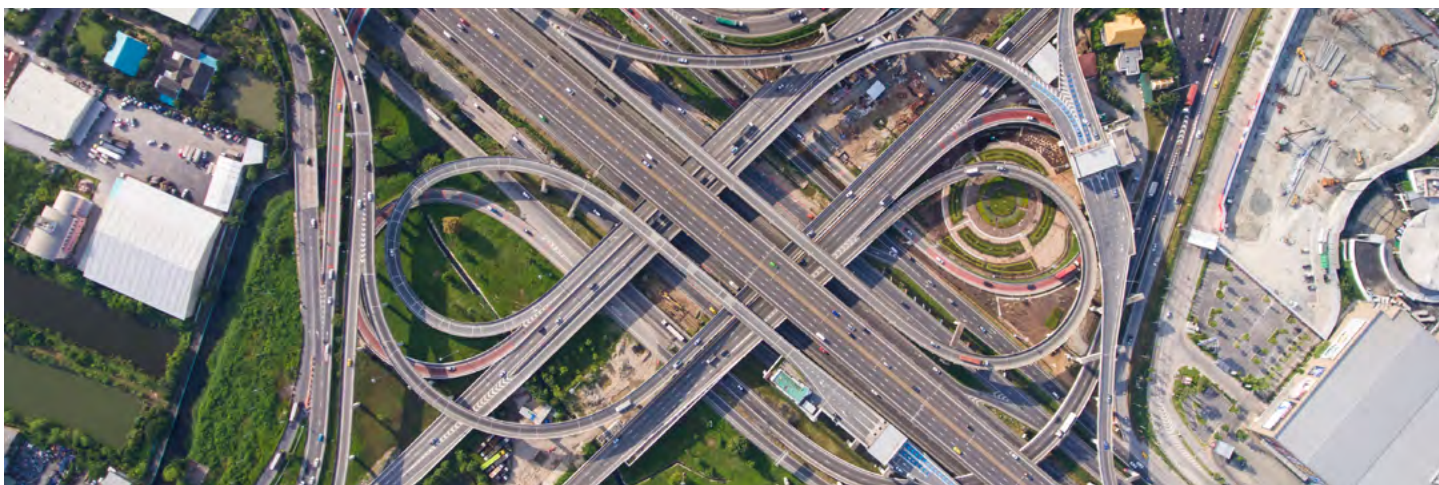
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Introduction

Florida's road network depends heavily on per-gallon taxes on gasoline and diesel fuel. The gas tax was invented in Oregon in 1919, and within a decade it was adopted by all of the then-48 states. Nearly all states dedicated the revenue from these fuel taxes to the construction and maintenance of their roadway systems, as Florida also did. The first federal fuel tax was adopted during the Great Depression as a general revenue source. Dedicating federal fuel tax

revenues to highways did not occur until the 1956 legislation to pay the majority of the cost to construct the Interstate Highway System. The increased federal gasoline and diesel taxes became the primary source of funding for the newly-created Highway Trust Fund (HTF). Ever since then, states have received annual federal highway (and some other transportation) funding from the HTF, to supplement what they raise from their state fuel taxes.

Unfortunately, this funding system is threatened with a long-term decline in revenue. The



reason is that long-standing federal policies are focused on reducing the use of petroleum-based fuels over time. In response, auto companies continually increase new-vehicle fuel economy, and are now making major investments in electric vehicles, which use no petroleum.

This problem was first studied by a special committee of the Transportation Research Board of the National Academy of Sciences in 2005. (The author of this brief was a member of that committee). It concluded that fuel taxes would not remain viable as the primary highway funding source for the 21st century.¹ In response, Congress appointed a national commission to look into how surface transportation should be funded in the longer term. After considering a large number of alternatives, the Commission concluded that (1) the original users-pay/users-benefit principle should be retained and (2) the best way for users to pay would be a charge per mile driven, rather than per gallon consumed. It also recommended that the new mileage-based user fees (MBUFs) should be the *replacement* for fuel taxes, rather than being charged in addition to them.²

In the decade since that Commission report, Congress has authorized federal funding for state departments of transportation (DOTs) to carry out a number of pilot projects, under which motorists and truckers operate their vehicles under a simulated mileage-based user fee (MBUF) charging mechanism. Most of those pilots have taken place in western states, plus Minnesota. The only pilot projects in the eastern half of the country have been carried out by the I-95 Corridor Coalition.³ Florida has not participated in any of these pilots.

This policy brief focuses on how Florida policymakers might address this looming highway-funding problem. First, it provides estimates of the likely shrinkage of fuel-tax revenues over the next 30 years. Then it discusses the general lack of understanding among some policymakers and especially the general public

about the shrinking-fuel-tax problem and the potential per-mile charging alternative. Following that, the brief suggests a policy framework for how such a system might be developed for Florida. And it suggests a first implementation step that would build on systems already in place on portions of the state's major highways.

Florida's Fuel Tax Revenues Will Decline Sharply

Both federal fuel tax receipts and Florida's have begun what is expected to be a long-term decline over the next three decades. In fiscal year 2019, a period of robust economic growth, federal gas tax receipts declined by nearly one percent.⁴ Florida's decrease in gas-tax receipts led in 2019 to a reduction in Florida DOT's five-year work program.⁵ Generally speaking, diesel tax receipts have held up fairly well thus far, since trucks have not had to cope with as stringent new-vehicle fuel-economy mandates as passenger vehicles. However, increased truck fuel-economy regulations are being developed by the Environmental Protection Agency, and all major truck manufacturers are developing heavy-duty electric trucks. Consequently, future diesel tax revenues should also decline.

In recent years, transportation researchers have estimated the extent and rate of decline likely to take place, both nationwide and here in Florida. This brief draws in part on a policy paper by Ed Regan of the transportation consulting firm CDM Smith. That paper quantifies both national and Florida-specific increases in passenger vehicle fuel efficiency, changes in gallons of gasoline sold, and the resulting changes in gas-tax revenue.⁶ This brief makes use of the Florida-specific findings in that document.

Regan's analysis relies on two national forecasts, applied to the specifics of Florida. One is a projection by the federal government's Energy Information Administration (IEA) of the fuel efficiency of

the entire passenger vehicle fleet, as new, high-miles-per-gallon (mpg) vehicles are purchased and replace older low-mpg vehicles, between now and 2050. From this it is possible to compute future gasoline gallons consumed and then fuel tax revenue. The other is a projection of the market penetration of electric vehicles, developed by Bloomberg New Energy Finance, which would lead to further reduction in gasoline gallons sold (and hence gas-tax revenue).

Regan’s analysis then applies these forecasts to Florida, based on projections of Florida’s population from the University of Florida’s Bureau of Economic and Business Research,⁷ and Federal Highway Administration projections of per-capita vehicle miles of travel (VMT).

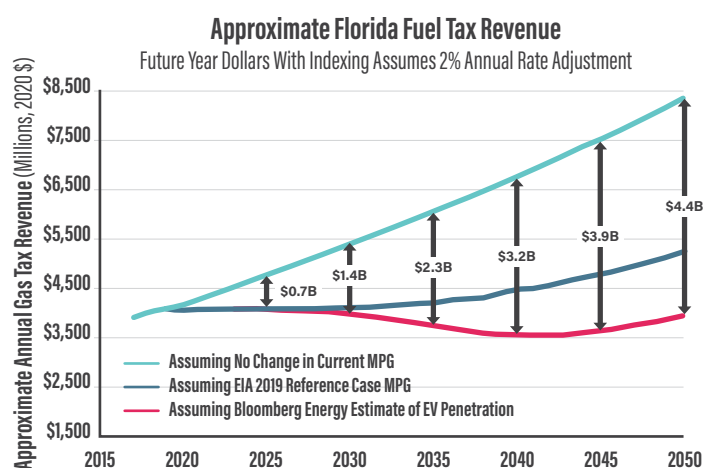
Florida has three separate state taxes on gasoline:

- The basic rate statewide
- The State Comprehensive Enhanced Transportation System (SCETS) tax
- Taxes collected by the state for local use, which vary considerably by county.

The first two, which generate the majority of the total gas-tax revenue, are indexed for inflation. The average total state gas tax rate, across all Florida counties, is 36.7 cents/gallon.

Assuming that indexation remains in place, and without any other changes in the current rates per gallon, the resulting fuel tax revenue from 2020 to 2050 is shown in Figure 1.

FIGURE 1: Projected Florida Fuel Tax Revenue



Source: CDM Smith 2020 White Paper

The red (top) line in the figure is the revenue that would be generated if fuel economy remained constant. The green line below it is the reduced revenue under the current federal Corporate Average Fuel Economy (CAFE) standards, which mandate ongoing increases in new-vehicle mpg through 2025. Below that is the

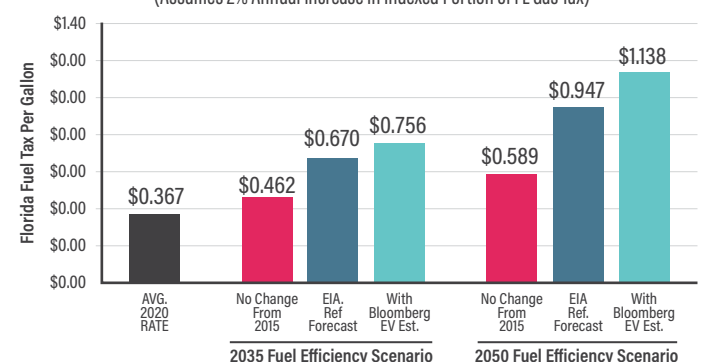
blue line, which adds the impact of projected electric vehicle sales, which further reduces gasoline sales and hence gas-tax revenue. As can be seen, under the latter scenario, Florida’s annual gas-tax revenue would be \$2.4 billion less than a status-quo projection by 2040 and \$2.8 billion less by 2050. Not included are potential corresponding reductions in federal highway grants, due to the same factors affecting federal gas-tax revenue.

What is depicted in Figure 1 is probably a conservative projection, for several reasons. It is likely that Congress will mandate further increases in new-vehicle fuel-economy for the years after 2025, which will further reduce gallons sold and hence gas-tax revenue. In addition, by the 2030s it is widely expected that electric trucks will begin taking market share from diesel-fueled trucks, further reducing overall fuel-tax revenue.

If Florida legislators wanted to increase gas tax rates per gallon to offset the lost revenue projected in Figure 1, how high would those rates have to be? Regan’s white paper makes those calculations – the results are shown in Figure 2.

FIGURE 2

Estimated Florida Tax Rates Per Gallon Needed to Offset Fuel Efficiency Losses
(Assumes 2% Annual Increase in Indexed Portion of FL Gas Tax)



Source: CDM Smith White Paper, 2020

By 2035, today’s average total rate of 36.7 cents/gallon would have to be raised to 67 cents/gal. just to offset the decline from the EIA forecast, or to 75.6 cents/gal. to also offset the Bloomberg EV estimate. And by 2050, those rates would need to be higher still, at 94.7 cents and \$1.138/gallon, respectively.

Those very large increases in gas taxes would leave the growing population of electric vehicles still paying nothing toward the cost of maintaining, widening, and rebuilding Florida’s highways as those roadways experience 25 to 39 percent more traffic over the next three decades. The growing inequity of that outcome is one of the reasons many transportation experts favor replacing the per-gallon tax with a per-mile charge.

What Americans Currently Think About Mileage-Based User Fees (MBUFs)

Unfortunately, many Americans have a negative impression of per-mile charges. When asked by survey researchers about possible future highway funding sources, only about one-quarter of the public sees this as a good idea. One reason for this may be mass-media articles that portray the idea as the government mandating a box in every vehicle that “tracks” when and where everyone travels. Some characterize this as “Big Brother in your car.” Some taxpayer groups are convinced that a per-mile charge would not *replace* the gas tax, as intended, but would be added on top of it, as “yet another tax.” And because some anti-car/anti-highway people have proposed that this be a *high tax* on every mile driven, to discourage driving, Americans who appreciate the freedom made possible by cars and driving are inclined to see the switch to being charged per mile as a threat to their mobility.

Perhaps in reaction to these types of concerns, over the past 10 years, de-facto state policy in Florida prevented any serious discussion of per-mile charging, which may account for why Florida never asked to participate in any of the federally-supported MBUF pilot projects.

That was unfortunate, because the pilot projects produced much better understanding of what a mileage-based user fee system would be like, as opposed to the caricatures presented by many opponents. Nearly all the pilot projects:

- Gave participants a choice of several methods to record their miles traveled, and for how those miles would be reported to the government.
- Did not “track” or report the time and place of every trip made.
- Used commercial companies to handle the reporting of miles to the government.
- Calculated what participants would have paid and compared that to the state gas tax they had actually paid for the miles driven during the test.
- Made clear that a state MBUF would *replace* the state fuel tax, not be charged in addition to it.
- Made use of stringent privacy protections for the mileage information collected.

Several of the pilot projects actively recruited public officials to be among the participants, which gave those officials first-hand experience with how it worked, and how it differed from opponents’ characterizations. In general, most participants in the pilot projects came away with a positive view of the case to switch to per-mile charges.⁸

Some state DOTs may have unintentionally set back the progress of getting the public to understand the need for this transition to per-mile charging. That’s because they have focused solely on fixing the looming revenue shortfall, rather than on any other benefits. When average people hear that the government needs more revenue, they tend to reach for their wallets. To be sure, the revenue shortfall is very real, but it would be far wiser to reframe the issue, offering motorists and trucking companies a genuine value proposition for making a major switch in highway funding.

In a recent Reason Foundation policy paper,⁹ this author suggested two elements of such a value proposition:

- Fix all the shortcomings of the 100-year-old gas tax, not just its coming revenue shortfall; and,
- Begin the transition with something that offers large, visible benefits to highway users.

The next two sections of this brief expand those ideas.

Fixing All the Gas Tax's Shortcomings

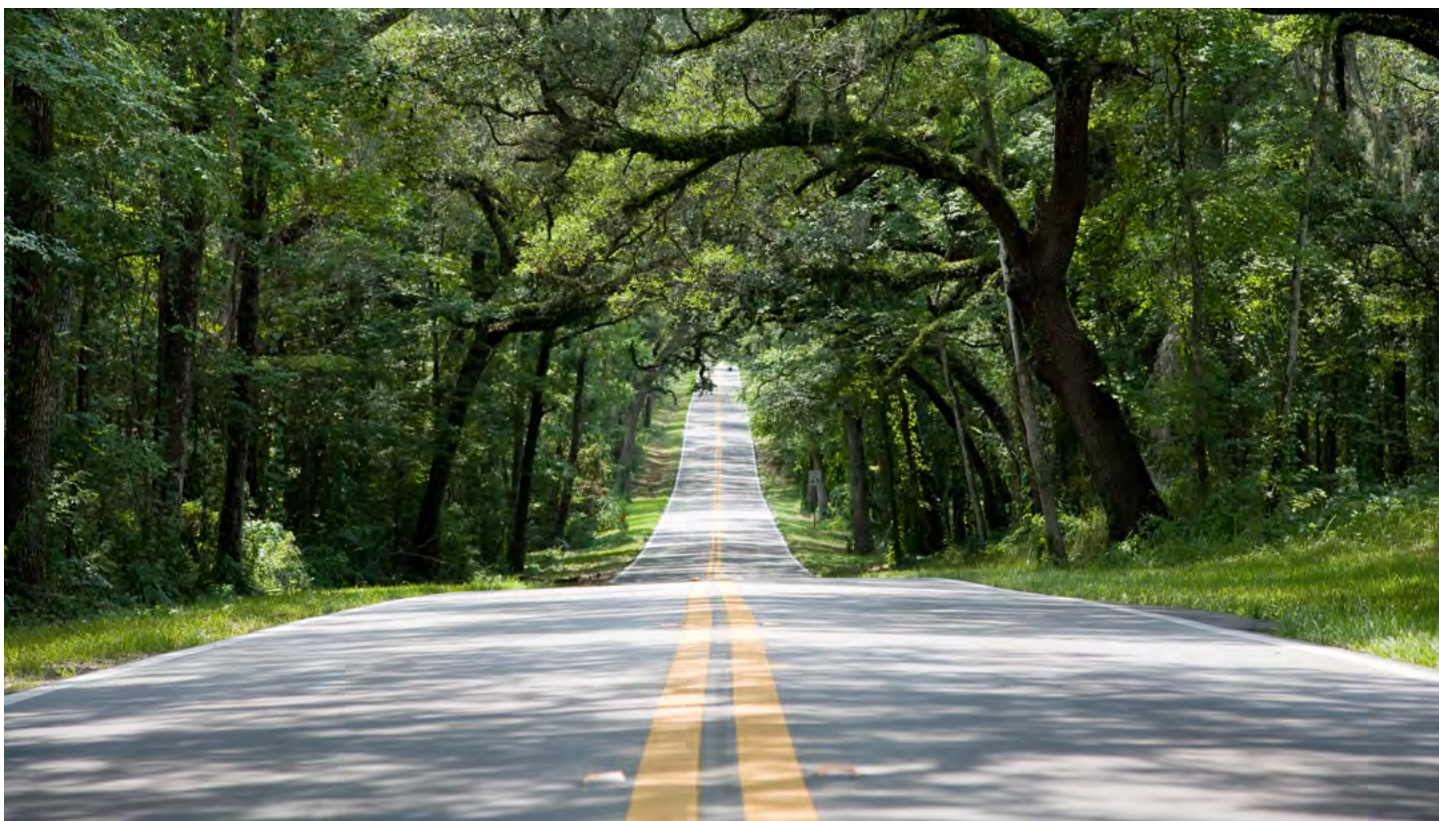
Most proposals to replace the gas tax with a per-mile charge focus only on its declining revenues, since an increasingly large fraction of vehicles will be using less or zero gasoline in coming decades. But this hundred-year old tax has five other shortcomings. If Florida and other states are going to replace it with a better funding source (which will be a challenging undertaking), it makes sense to see if the MBUF can be designed to fix the other shortcomings, as well. Here is a brief explanation of the other five shortcomings.

GAS TAXES DON'T KEEP PACE WITH ROADWAY NEEDS.

The majority of Florida’s gas-tax revenue comes from the inflation-indexed portions. But all that does is adjust the tax rate to the average increase in the cost of living. In a fast-growing state like Florida, a larger fraction of highway budgets needs to be spent on widening existing corridors, rebuilding aging ones, and additional maintenance due to higher traffic loads. Charging all vehicles per mile driven will keep pace with the growth in Florida’s population, tourism, and roadway travel.

GAS TAXES ARE NOT TRANSPARENT.

When you pay for other vital infrastructure (electricity, water, telecommunications, etc.), you get a bill from the provider that reports how much you used, the rate per amount of use, and the total you owe. You know what you used and the basis on which you are charged, and you know who the provider is. With high-



ways and other roads, how much you have paid and the identity of the provider are obscure. In *Rethinking America's Highways*, a table shows that several years ago the average U.S. household paid just \$46 per month in federal plus state gas taxes—far less than it pays for any of the other utilities (e.g., for electricity the national average was \$107 per month). Further, Americans have no idea who provides which roadways and therefore whom to hold accountable for highway problems. Many people think the Interstate highways are owned by the federal government, rather than the states. Moreover, Florida has what some observers characterize as the nation's most complicated and convoluted gas tax.¹⁰ It's no wonder that Floridians have no idea what they pay in gas taxes, or who is responsible for which roadways.

GAS TAXES ARE A ONE-SIZE-FITS-ALL METHOD OF CHARGING.

In Florida, the average state gas tax works out to 1.8 cents/mile. That is the same whether someone drives solely on local streets and roads or mostly on expressways and other major highways. The cost of building and maintaining expressways is about twice that much but, at the same time, 1.8 cents/mile is more than is needed for local streets and two-lane rural roads. With this way of paying for roads, the people who use rural and local roads pay more than those roads cost, while those who use expressways pay less than they cost. That is not equitable.

GAS TAXES ARE NO LONGER DEDICATED TO USER BENEFITS.

The original state gas taxes were based on the premise that highway users paid and highway users benefitted. Gas-tax revenues were accounted for in highway *trust funds* and used solely to build, maintain, expand, and rebuild highways. The same principle was followed in 1956 when the federal gas tax was authorized and the dedicated Highway Trust Fund was established, solely to help states build the new Interstate highways. But over the last 40 years, that principle has been seriously breached. Today, about 23 percent of the federal Highway Trust Fund is used for non-highway purposes.¹¹ And Florida DOT uses gas tax money for a broad array of transportation purposes, including local transit, fish & wildlife conservation, agricultural emergency eradication, and aquatic weed control. Florida diverts a total of 13.6 percent of its motor fuel tax revenue.¹² Diversions of highway user-tax money encourage people to see the gas tax as “just another tax” that they don't want increased.

GAS TAXES ARE TAXES, NOT TRUE USER FEES.

When you pay your electric bill, phone bill, or water bill, you know that what you are paying is the charge for the services you have used—and no more. Utility bills are true user fees, spent solely on the capital and operating costs of the utility in question. But gas taxes can be spent on anything a legislature decides is a good

thing. A revenue source such as this meets the legal definition of a tax, not a user fee. This is one of the gas tax's biggest faults.

Instead, let's imagine starting with a clean sheet of paper to design a per-mile charge that addresses all the above shortcomings, making it more like paying a utility bill than the current tax. It would have the following attributes:

- A true user fee, paid only by those who use roadways and spent only on roadways.
- Equitable to all users, with different rates for major highways (Interstates, expressways), and other roadways.
- Transparent, making it clear which provider is responsible for which roadways.
- Subject to periodic increases, when justified by increased operating and capital costs, via a public process similar to rate-setting for other utilities.

Starting the Transition via Major Highway Improvements

Agencies such as Florida DOT (FDOT) are understandably concerned about the looming decline in gas-tax revenues, and legislators will share that concern once they come to understand the magnitude of this problem. However, taxpayers and voters in 21st-century America tend to be hostile to calls for increasing government revenue. Already, in some states where MBUF pilot programs have been carried out, some grass-roots groups have attacked the idea as threatening “yet another tax increase.”

FDOT and others concerned about the future of Florida's highways should not make revenue shortfalls the primary rationale for the needed transition from per-gallon taxes to per-mile charges. Rather, the focus should be the need for major investment in the state's aging highway system, which must be upgraded to cope with the state's projected population growth over the next three decades.

The core of Florida's highway system is the limited-access highways: long-distance Interstates and toll roads, plus the urban expressway systems in the Jacksonville, Miami, Orlando, and Tampa metro areas. Portions of this system have been financed and are being maintained and expanded based on toll revenues. This gives Florida an advantage over many other fast-growing states with a smaller share (or none) of their highways *self-funded* this way, rather than depending on shrinking gas-tax revenue. But Florida's *non-tolled* Interstates exceed 1,400 route-miles: all of I-10, all of I-4, most of I-75 (except Alligator Alley) and all of I-95. Portions of I-95 and I-75 now include express toll lanes (which are also being added to 20 miles of I-4), but express lanes account for only a very small fraction of their total Interstate lane-miles.

The Interstate system was authorized in 1956, and most of its

corridors were built in the 1960s and early 1970s. That makes most of the system 50 years old or older—well beyond its original design life. Florida has rebuilt and widened portions of its Interstate system, but much of it still needs to be reconstructed and many portions widened.

In the 2015 FAST Act, Congress asked the Transportation Research Board (of the National Academy of Sciences) to convene an expert committee to study the future of the nation's Interstate system. The committee's 596-page report was released in December 2018.¹³ Among its main findings were the following:

- Much of the pavement is wearing out and needs to be replaced.
- The system has numerous bottleneck interchanges (such as the Golden Glades in Miami-Dade County) that are obsolete and should be replaced.
- There are not enough lanes in many corridors for projected growth in motorist and truck travel in coming decades.
- The system could benefit from dedicated truck lanes in some key freight corridors, but none are currently planned.

In its recommendations, the TRB committee suggested a repeat of the original 90 percent federally-funded program, which it estimated would require raising and spending an average of \$57 billion per year for the next 20 years (totaling about \$1.1 trillion). That would require a massive increase in federal gasoline and diesel taxes, which is highly unlikely. The committee's report also discussed the possibility of financing this huge set of projects based on projected toll revenues, which would require amending the 1956 federal law to permit the use of tolls on the 90 percent of the Interstate system where tolling is not allowed.

A 2019 Reason Foundation policy study responded to the TRB committee's report, recommending the toll-financed approach to rebuilding and selective widening.¹⁴ It also proposed that each state that decided to take this approach could *use it to begin the transition from per-gallon taxes to per-mile charges*. This could be done along the following lines here in Florida.

FDOT would first study the four non-tolled Interstate corridors, assessing the age and condition of each, along with its need for widening, and by which decade reconstruction and widening would be needed. This would lead to a long-term plan spelling out which segments of each of the four Interstates would be rebuilt (and widened, if needed) and when. One by one, each corridor's reconstruction would be designed, financed (via toll revenue bonds), rebuilt and widened as needed.

As each corridor was finished and re-opened to traffic, motorists and truckers would pay new per-mile tolls *instead of state gasoline and diesel taxes*. The Sunpass tolling system would calculate the amount of fuel each customer used driving the rebuilt corri-

dor (based on the vehicle make and model plus its EPA highway fuel economy rating), and software would calculate rebates of the state fuel taxes that would still be in place for all other roads. This would demonstrate to people that the new per-mile charge was the *replacement* for the fuel tax. Via this process, over several decades, more than 25 percent of all vehicle miles of travel in Florida would be converted from per-gallon to per-mile, with no users paying both fuel taxes and per-mile charges for the same roadway.

Starting with limited-access highways (where there are only a few places to get on and get off) means that the transition to per-mile charging can begin by making use of *existing technology*—the Sunpass system, consisting of windshield-mounted transponders supplemented by license-plate imaging. This avoids the need for near-term decisions about any new technology that would be needed in cars and trucks to enable per-mile charging for open-access roadways, such as U.S. 441, U.S. 27, numerous state-numbered highways such as SR 60 and SR 80, as well as local streets. Equipping all those other roadways for charging via Sunpass would require many thousands of gantries to record vehicles' passage, which would be far too costly (and unsightly).

The initial program outlined here would build public confidence that per-mile charges would indeed replace per-gallon taxes, as each corridor was rebuilt and opened with the new charges *and* rebates of the fuel tax paid for driving those miles. Fuel-tax rebates like this are already being offered to trucking companies that use the Massachusetts Turnpike and the New York Thruway, both of which are tolled Interstates. The rebate process has been automated by trucking service provider Bestpass, which offers trucking companies a 48-state universal toll transponder and consolidated billing service. *Fuel-tax rebates are not simply a theory; they are in actual practice in two states.*

How to Transition All Other Roadways to Per-Mile Charges

Ultimately, as gas-tax revenue continues to decline, Florida and other states should plan to phase out this tax altogether and replace it with per-mile charges statewide. Converting the limited-access highways first will provide breathing room, because as each segment of an Interstate or other limited-access highway gets converted to per-mile charges, that portion of the state's overall highway system will become self-supporting and will no longer consume a portion of the declining revenue from fuel taxes. Gas tax revenues will no longer have to cover the ongoing maintenance of those corridors and, more important, will not have to be used to rebuild and widen those corridors that have been converted.

As noted previously, today's Sunpass system would not work for the open-access state highways (which include critically important urban arterials such as many portions of U.S. 1, U.S. 441,

and a great many others). Nor would it work for local streets and roads. But if the limited-access highways are converted first, Florida will have ample time to research and experiment with customer-friendly ways for roadway users to record and report their miles of travel.

Florida has not yet carried out a pilot project to test various features of a state mileage-based user fee but should plan to do so in the relatively near future. In designing such a project, Florida can take advantage of what has been learned by states that have already carried out one or more MBUF pilot projects. Here is a brief summary of key features that have been well-received by participants in MBUF pilot projects elsewhere:

- Keep it simple and understandable: a user fee to pay for roads.
- Replace the state gas tax, rather than adding the fee on top of that tax.
- Make it fair to both rural and urban users, including lower per-mile charges for rural roads.
- Make it transparent, as with utility bills.
- Use private firms, selected competitively, to handle collecting and protecting miles-traveled data.
- Legislate strict privacy protections for miles-traveled data.

Among the ways to record miles of travel that have been offered to participants in state pilot projects are the following:

1. Annual odometer readings, at the time of vehicle-registration renewal.
2. An all-you-can-drive option under which the annual charge would be the equivalent of what the vehicle would owe for driving twice the average number of miles driven per vehicle in that state.
3. An on-board unit that plugs into the OBD-II port beneath a vehicle's dashboard and records miles driven, and if certain location information is needed (e.g., if some miles are driven across a state or county border), those miles are identified using cell-tower data.
4. An on-board unit that uses GPS to provide more precise location data than is available by using cell-tower data.

Speaking of GPS, it is important to note that the GPS system of satellites does not "track" anyone. GPS signals permit the vehicle's computer or its operator to know where the vehicle is at any given time. That information can be stored on the vehicle, but would only be uploaded along with the total miles driven if that is what the customer signed up for. Likewise, the GPS receiver in everyone's smartphone lets the phone's owner know where she and the phone are at any time but does not transmit that information to

anyone else unless agreed to by the owner. Regardless of which method of reporting miles is used, stringent privacy protection for that data must be ensured by statute.

Assuming Florida has begun the transition to per-mile charging using the Sunpass system on all the limited-access highways, that system will handle the revenue collection for all *those* miles of travel. That would be approximately one-quarter of all the vehicle miles of travel (VMT) in the state. So the subsequent problem to be solved is charging for the remaining VMT. That VMT consists of miles driven on two different categories of roadway: those with state highway numbers that are managed and maintained by FDOT and the remaining roads that are the responsibility of cities and counties. Table 1 breaks down the VMT by roadway provider.

TABLE 1: Florida Vehicle Miles of Travel by Type of Roadway (2017)

| Category | VMT (Millions) | Percent |
|----------------------------------|----------------|---------|
| LIMITED ACCESS HIGHWAYS | | |
| Interstates, rural | 10,585 | |
| Interstates, urban | 30,287 | |
| Other freeways, rural | 2,024 | |
| Other freeways, urban | 14,997 | |
| Subtotal: | 57,893 | 26.5% |
| STATE HIGHWAYS & ARTERIALS | | |
| Other principal arterials, rural | 8,454 | |
| Other principal arterials, urban | 45,566 | |
| Minor arterials, rural | 3,824 | |
| Minor arterials, urban | 29,288 | |
| Major collectors, rural | 3,759 | |
| Subtotal: | 90,891 | 41.5% |
| LOCAL ROADWAYS | | |
| Minor collectors, rural | 1,671 | |
| Local roads, rural | 5,596 | |
| Major collectors, urban | 19,780 | |
| Minor collectors, urban | 3,626 | |
| Local roads, urban | 39,372 | |
| Subtotal: | 70,045 | 32.0% |
| Total Florida VMT | 218,829 | 100.0% |

Source: FHWA Highway Statistics, Table VM-2

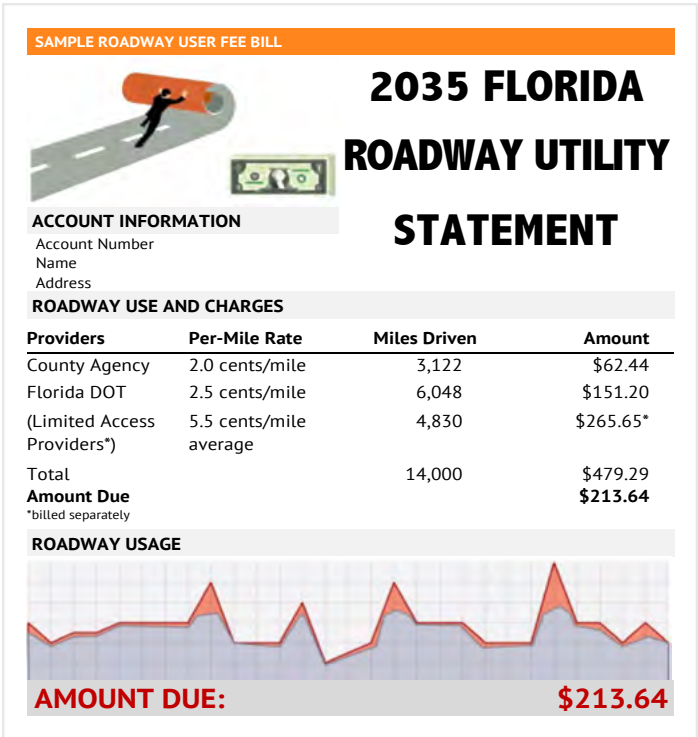
Since it would be desirable to include greater roadway-provider accountability to highway customers in the new system of paying

for roads, ideally, we would know how many miles each vehicle traveled on state roads and how many on local roads. Unless all vehicles used a very precise system such as GPS that could distinguish between these road types, that would not a realistic goal. But a second-best approach is available.

A state agency—either FDOT or the Department of Motor Vehicles—could identify all the VMT in each county (and subtract the amount driven and already paid for via Sunpass on the limited-access highways) by type of road owner. For simplicity, just divide this between state highways located in that county and the remaining city/county roads. FDOT would prepare its annual budget for the state highways and calculate the rate per mile needed for the coming year, subject to regulatory approval. That budget could then be divided among the FDOT districts, as is done today. And a similar process would take place at the county level, with the county and city governments having available the VMT driven on their roads, and the authority to decide on a countywide charge per mile for the coming year.

The idea is to provide a transparent system under which roadway customers know who provides which set of roads they use, what they charge per mile traveled, and therefore what they must pay—like the utility bills everyone is familiar with. Figure 3 provides a sample Roadway Utility Statement. This concept assumes an annual statement comparable to property tax bills, but it would also be possible for people to pay their highway bills in quarterly or monthly installments.

FIGURE 3: Sample Highway Utility Statement



Source: author

Conclusion & Recommendations

Over the course of the past decade, Florida transportation policy ignored the impending decline in revenue from per-gallon gasoline and diesel taxes. As a result, it failed to participate in any of the pilot programs created by Congress to allow states to experiment with mileage-based user fees. Western and midwestern states, and eastern states along the I-95 corridor (except Florida) did develop MBUF pilot projects and have learned a great deal about how such a program might work.

This policy brief has argued that a transition from per-gallon taxes to per-mile charges will be necessary, over the next several decades. It has also recommended that in designing such a program for Florida, the objective should be not merely to replace the revenue that fuel taxes traditionally provided but also to fix a number of other shortcomings of fuel taxes circa 2020. These include lack of transparency, lack of accountability of road providers to road users, and the fact that the fuel tax is a tax rather than a true user fee like utility bills.

Any switch-over from gas taxes to mileage-based user fees will necessarily be gradual. This brief recommends beginning the transition with Florida's limited-access highways, a significant fraction of which are outside the fuel-tax system already. The charging system is the widely accepted Sunpass system, which could be extended to non-tolled Interstates and expressways as those highways are modernized over the next two decades. The charges to use limited-access system should be stated on a per-mile basis. And customers paying these new electronic per-mile charges should be given rebates for the amount of fuel taxes they have incurred for the miles driven on the per-mile-charged limited-access system. When this step is completed, about 26 percent of Florida's vehicle miles of travel will have been transitioned from paying per-gallon to paying per-mile. And customers will receive regular statements documenting the miles they drove and the amounts they were charged via mileage-based user fees.

Once the transition of the limited-access system is well underway, Florida should begin planning the transition of state and local roadways to a per-mile charging system. By the time serious implementation planning is underway, road-user-charging technology will have advanced, and a number of states that have learned a great deal from taking part in MBUF pilot projects will likely have statewide systems in the early stages of implementation. Florida will be able to benefit from their experiences.

In the near term, Florida transportation policymakers should prioritize two important next steps. First, drawing on the findings of the Transportation Research board's landmark study on the future of America's Interstates, Florida should carry out a serious study of the need for modernizing the limited-access system (including reconstruction, replacement of bottleneck interchanges, and widening where needed). This study should be done corridor-by-corridor and should result in cost estimates and timeframes for various projects. The feasibility of financing these projects based on bonding the revenue streams should be an integral part of this study (or studies). Similar statewide studies have been carried out recently by Indiana and Wisconsin, and legislation for such a study in Michigan is pending as this policy brief is being written.

Second, Florida should seek to join the latest phase of the I-95 Corridor Coalition's mileage-based user fee pilot project. The first two phases have involved the state DOTs of Delaware, New Jersey, North Carolina, Pennsylvania, and Virginia, with participation from motorists and trucking companies. Florida was conspicuous by its absence. Active participation in the ongoing I-95 pilot project would give Florida motorists, truckers, media, and policymakers direct exposure to the MBUF methods and technologies current today, as a starting point for thinking about longer-term implementation in the Sunshine State.

In addition, should any measure be introduced in Congress that would reduce or eliminate the 1956 ban on using tolls on the 90 percent of the Interstate system that is non-tolled, Florida policymakers should strongly support such a measure.

Endnotes

- 1 *The Fuel Tax and Alternatives for Transportation Funding*. Special Report 285. Transportation Research Board. 2006
- 2 Paying Our Way: A New Framework for Transportation Finance. National Surface Transportation Infrastructure Financing Commission. February 2009.
- 3 “I-95 Corridor Coalition Phase 3 Pilot.” <https://i95coalitionmbuf.org> (accessed April 13, 2020).
- 4 Davis, Jeff. “Gas Tax Receipts Dropped in FY 2019.” *Eno Transportation Weekly*. Week of October 14, 2020.
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