

# Rethinking the Highway Trust Fund

Testimony of  
**Robert W. Poole, Jr.**  
Director of Transportation Policy,

**Reason Foundation**  
5737 Mesmer Avenue  
Los Angeles, CA 90230  
310-391-2245

June 17, 2015

Chairman Ryan, Ranking Member Levin, and fellow Members:

My name is Robert Poole. I direct the transportation policy program at Reason Foundation, a nonprofit think tank with offices in Los Angeles and in Washington, DC. I'm a graduate of MIT with two degrees in mechanical engineering, and additional graduate study in operations research at NYU.

### My Credentials on Today's Topic

I have been studying surface transportation policy since 1988, when I researched and wrote the Reason Foundation policy study that inspired the first toll concession project in California, which became the prototype for express toll lane projects nationwide. My transportation research over the years includes highway finance, congestion pricing, bus rapid transit, and many related topics. I have served on transportation advisory bodies to the states of California and Texas, and have advised the state DOTs of close to a dozen states, as well as the Federal Highway Administration, the Federal Transit Administration, the Office of the Secretary of Transportation, and the Government Accountability Office.

I was a founding member of the Transportation Research Board standing committee on Congestion Pricing, and am a current member of its standing committee on Managed Lanes. In 2005 I served as a member of the TRB special committee on the long-term viability of fuel taxes for transportation funding. Our report concluded that the fuel tax was not a sustainable long-term funding source, and that it should be replaced by some form of per-mile charging that would be independent of the type of vehicle propulsion<sup>1</sup>. That conclusion was amplified several years later by the final report of the National Surface Transportation Infrastructure Financing Commission, which analyzed a wide array of possible fuel-tax replacements and concluded that a mileage-based user fee was the most effective alternative<sup>2</sup>.

My testimony today draws on my more than 25 years of transportation policy research.

### Overview of Testimony

As is widely known, the federal Highway Trust Fund (HTF) is no longer being supported exclusively by highway user revenues. Since 2008, Congress has shifted over \$60 billion in general fund money into the HTF, so as to avoid reductions in annual federal highway and transit spending. Given the intense pressures being placed on general fund monies and "discretionary" spending due to the overall federal budget's problems, there are serious concerns about whether such HTF bailouts can continue. At the same time, there appears to be little political support—House, Senate, or Administration—for fuel tax increases that would bring HTF revenues into alignment with current and projected spending.

---

<sup>1</sup> Committee on the Long-Term Viability of Fuel Taxes for Transportation Finance, *The Fuel Tax and Alternatives for Transportation Funding*, Special Report 285, Washington, DC, Transportation Research Board, 2006

<sup>2</sup> National Surface Transportation Infrastructure Financing Commission, *Paying Our Way: A New Framework for Transportation Finance*, February 2009

In my testimony I suggest that Congress needs to take these realities seriously as it develops a bill to reauthorize the federal program. I offer for the Committee's consideration four recommendations to guide a fundamental rethinking of the federal role, as follows:

1. Preserve and strengthen the users-pay/users-benefit principle on which the HTF was founded, and which remains the basis for most state highway programs.
2. Set meaningful priorities for the Highway Trust Fund, to balance spending with existing revenues.
3. Encourage state efforts to develop mileage-based user fee models that address the many current unknowns and concerns over this proposed transition.
4. Give states improved tools to make their existing transportation funding go further.

#### Recommendation No. 1: Preserve and Strengthen Users-Pay/Users-Benefit

This recommendation is analogous to what physicians are taught as a basic principle: "First, do no harm." Users-pay/users-benefit is the basic principle on which Oregon and all the rest of the states created fuel taxes dedicated to highway capital and operating costs, starting in 1919, and it is also the principle adopted by Congress in creating the Highway Trust Fund in 1956. Dedicated user fees (tolls) and user taxes (fuel taxes) have a number of inherent benefits. As outlined in a 2010 Reason study<sup>3</sup>, they include the following:

- *Fairness*: Those who pay are the ones who receive most of the benefits, and those who benefit are the ones who pay. This is the same general principle used for other network utilities, including electricity, natural gas, water supply, telephones, railroads, and many others.
- *Proportionality*: Those who use more highway services pay more, and those who use none at all pay nothing directly (though they do pay indirectly thanks to the highway user taxes paid by companies shipping goods to them on the highways).
- *Self-limiting*: If a user tax or user fee is the sole source of funding, it is supposed to impose a limit on how high the tax or fee can be: only enough to fund agreed-upon investment. By contrast, in Europe motor fuel taxes are a general revenue source, and most countries generate several times as much fuel tax money as they actually spend on transportation investment.
- *Predictability*: A user fee or user tax produces a revenue stream that can and should be independent of the vagaries of government budgets.
- *Investment signal*: The user-pays mechanism provides an answer to how much infrastructure to build, assuming that the customers have some degree of say in the matter. The contrasting fortunes of state fuel taxes (numerous increases) versus federal fuel taxes (gridlock since 1993) speaks volumes about the credibility of the respective federal and state transportation programs.

Using general fund and other non-transportation revenues to bail out the HTF undercuts the integrity of the users-pay/users-benefit principle. It has already led to calls from several parties for either diluting the principle further, by opening up the HTF to a much larger array of non-

---

<sup>3</sup> Robert W. Poole, Jr. and Adrian T. Moore, "Restoring Trust in the Highway Trust Fund," Policy Study No. 386, Reason Foundation, August 2010

highway programs<sup>4</sup> or to abolish the HTF and dedicated funding altogether, with all federal transportation spending henceforth coming from the general fund<sup>5</sup>. The latter approach would model the U.S. federal role after those of most countries in Europe, in which fuel taxes are a general government revenue source, and transportation makes do with whatever funding the national legislative body decides to allocate. Using figures provided in the Eno Center report noted below, one can see that national government fuel tax revenue in Germany is 1.8 times the amount spent on all modes of surface transportation. Even worse is the U.K. situation, in which the national government collects nearly three times as much in fuel tax revenue as it spends on all modes of surface transportation. In effect, highway users are getting a very raw deal in those systems<sup>6</sup>.

Thus, rather than reinforcing the trend of using general fund money to bail out the HTF, a far more prudent policy for the longer term would be to strengthen the users-pay/users-benefit principle by limiting HTF spending to the amount brought in from user-tax revenues. Rather than tying the Trust Fund's future to increasingly dubious general revenues, this approach would restore soundness and reliability to the HTF. This approach is beginning to be taken seriously by transportation experts.<sup>7</sup>

#### Recommendation No. 2: Set Meaningful Priorities for Trust Fund Spending

In order to make HTF spending match the approximately \$40 billion per year in projected revenues, Congress would have to take a hard-nosed look at the large array of programs now included in the federal program. Over the decades since it was created in 1956 to fund the construction of the Interstate highway system, the program has expanded in scope to cover just about anything related to highways, transit, ferries, bicycling, and even walking. All of these and many other programs serve some useful purpose—and each has a vocal constituency in support of its continuation.

But one question Congress needs to ask is this: which of the myriad programs within the current HTF are truly federal in nature—as opposed to being essentially state or essentially local in nature? One way to set priorities would be to identify the truly federal programs and, over time, refocus the HTF on only those programs. My Reason colleague Adrian Moore and I reviewed the HTF from that perspective in 2010, and came up with the following general guidelines:

- Maintaining and upgrading the Interstate highway system;
- Coordinating multi-state highway and bridge projects;
- Fostering freight corridors, to enhance interstate commerce; and,
- Funding transportation research and safety efforts<sup>8</sup>.

---

<sup>4</sup> Tony Dutzik, Gideon Weissman, and Phineas Baxandall, “Who Pays for Roads? How the ‘Users Pay’ Myth Gets in the Way of Solving America’s Transportation Problems,” Frontier Group and U.S. PIRG Education Fund, Spring 2015

<sup>5</sup> Joshua Schank, et al., “The Life and Death of the Highway Trust Fund,” Eno Center for Transportation, December 2014

<sup>6</sup> Robert W. Poole, Jr., “Abolish the Highway Trust Fund?” *Public Works Financing*, May 2015

<sup>7</sup> Ken Orski, “A Conservative Vision for the Future of the Highway Trust Fund,” *Innovation NewsBriefs*, Vol. 25, No. 5, June 13, 2015

<sup>8</sup> Part 4 in Poole and Moore, op cit.

A 2009 Government Accountability Office (GAO) report analyzed HTF spending over the five-year period 2004-2008<sup>9</sup>. It identified \$24.2 billion in miscellaneous spending over that time period, not counting direct outlays for either highways or transit projects. Were just those activities eliminated, the annual savings today would be in the \$5 billion range. Another \$1 billion per year could be saved by eliminating the Congestion Mitigation and Air Quality (CMAQ) and Surface Transportation Program (STP), based on GAO's numbers. Shifting the funding of the National Highway Traffic Safety Administration (NHTSA) and Federal Motor Carrier Safety Administration (FMCSA) from HTF to the general fund would save another \$1 billion a year. Note that this list of possible lower-priority items does *not* include the Federal Transit Administration, though in principle transit is an essentially local/regional responsibility, not federal or state.

A more recent GAO report sheds further light on the current allocation of resources just within what is nominally the highway and bridges portion of HTF<sup>10</sup>. Its analysis of FY 2013 HTF spending found that of the entire \$50.7 billion total, only \$24.05 billion—less than half—is spent directly on roads and bridges. The report then examined that \$24 billion to see where the money went. Given an assumed priority for major corridors for interstate commerce, such as the Interstates and the other highways comprising the National Highway System, the report identified just \$4.6 billion spent on highway and bridge “major projects.” And of that total, only \$3 billion was devoted to actual construction, reconstruction, or rehabilitation. In other words, in a system that was created to foster interstate commerce, *just six percent* of its current budget (\$3 billion out of \$50.4 billion) is devoted to actually investing in those facilities. To me, this finding cries out for Congress to rethink and revamp how HTF monies are being used.

#### Recommendation No. 3: Encourage the Transition to Mileage-Based User Fees

Both the Transportation Research Board committee on which I served and the Infrastructure Financing Commission made detailed cases for the necessity, over the medium/long-term, to transition from per-gallon fuel taxes to per-mile charges. The latter are now referred to as mileage-based user fees (MBUFs). Given ongoing trends toward (a) ever-higher miles per gallon ratings of new cars and trucks and (b) the likely increasing market penetration of alternatives to petroleum-fueled internal combustion engines, we need a funding mechanism that will be independent of propulsion sources on an ongoing, sustainable basis. Charging per mile driven—obviously with higher rates for heavy trucks than for personal vehicles—is widely considered as the best alternative among both transportation researchers and state departments of transportation (DOTs).

It is also clear that the prime movers in working on this transition are state DOTs, with help from various transportation research institutes. A decade ago many people assumed that if this transition were to come about, it would be imposed top-down by the federal government. Today, it seems far more likely that state DOTs, with support from their legislators, will pioneer MBUFs. Oregon is widely acknowledged as the leading pioneer, though Minnesota and several

---

<sup>9</sup> Government Accountability Office, “Highway Trust Fund Expenditures on Purposes Other than Construction and Maintenance of Highways and Bridges During Fiscal Years 2004-2008,” GAO-09-729R, June 30, 2009

<sup>10</sup> Government Accountability Office, “Highway Trust Fund: DOT Has Opportunities to Improve Tracking and Reporting of Highway Spending,” GAO-15-33, October 2014

others have also carried out important research and pilot testing. A recent trend is the formation of MBUF coalitions among adjacent states with significant cross-border travel (e.g., Washington, Oregon, California, and Nevada) to compare notes and learn from one another's pilot projects.

At this point in time, there is no consensus among those actively working on MBUF pilot programs about the best way to charge per mile driven or about how to phase in the transition from fuel taxes to MBUFs. One early lesson from the Oregon experience is that it will be important to offer motorists and trucking companies choices not of whether to pay but of how to pay. For example, among the ideas proposed or being tested in Oregon are the following:

1. A no-tech alternative, in which motorists could opt for a flat annual fee for unlimited miles, paid at the time of annual vehicle registration.
2. A very low-tech alternative, in which states that have annual vehicle inspection (or smog check) would record annual miles driven from the vehicle's odometer at such inspections, with the relevant fee added to the annual vehicle registration fee.
3. A modest-tech alternative, important for people who cross a state border frequently and need to document how many of their miles were on either side (e.g. Oregon/Washington or New York/New Jersey). A device that plugs into the under-dashboard diagnostic port could use cell-tower locations to distinguish total in-state miles from total out-of-state miles.
4. A higher-tech alternative, in which a commercial company would provide a GPS box offering a package of services, one of which would be miles driven.

None of the above, even the last, involves real-time “tracking” of every place the vehicle goes. So privacy need not be a serious obstacle to the MBUF transition. But since there is still a great deal to learn about consumer preferences, possible roles of private-sector vendors, and how to orchestrate the phase-out of fuel taxes and the phase-in of MBUFs, there is a need for more states to engage in serious pilot projects such as those now under way in California and Oregon. The Mileage Based User Fee Alliance is recommending that Congress create a competitive grant program for large-scale multi-state trials. Among the key issues to be addressed would be privacy, cost of collection, and equity<sup>11</sup>. This new grant program could be funded by making it a priority within the Federal Highway Administration's ongoing research budget.

Another step toward increased per-mile charging would be to encourage states to make greater use of per-mile electronic tolling on major highways. The rationale for this is to use new toll revenue to finance the enormous cost of reconstructing aging Interstates as they reach or exceed the end of their original 50-year design life—without any identified federal program to cover this investment need. A detailed 2013 Reason Foundation policy study used FHWA unit cost data to estimate, for each of the 50 states, what it would cost to reconstruct all the existing Interstate lane-miles, plus selective lane additions, where justified by conservative projections of car and truck traffic. A number of these corridors were proposed as dedicated truck lanes, due to future volumes of truck traffic. The net present value of the cost of this endeavor, in 2010 dollars, was just under \$1 trillion<sup>12</sup>.

---

<sup>11</sup> The MBUFA website provides brief position papers about aspects of mileage-based user fees: [www.mbufa.org](http://www.mbufa.org).

<sup>12</sup> Robert W. Poole, Jr., “Interstate 2.0: Modernizing the Interstate Highway System via Toll Finance,” Policy Study No. 423, Reason Foundation, September 2013

The study then used the state-specific traffic projections to estimate the toll revenue that could be generated over 40 years, using modest per-mile toll rates for cars and for trucks, indexed to inflation at an assumed consumer price index (CPI) of 2.5% per year. The net present value (NPV) of revenue (net of operating and maintenance costs) came in very close to the NPV of costs, suggesting that a toll-financed Interstate reconstruction and modernization program is within the realm of financial feasibility. Were many states to implement such a program, they would be leading the way toward the overall transition from per-gallon taxes to per-mile charges. And since the Interstates alone handle 25% of all U.S. vehicle miles of travel (VMT), and other limited-access highways probably handle another 6% or more, if all such highways eventually were reconstructed on this basis, one-third of all VMT would be paying MBUFs. The Reason study also called for rebates of state fuel taxes for all miles driven on the newly tolled Interstates, consistent with the principle that per-mile charges should replace, not supplement, existing fuel taxes.

There is a current pilot program that permits three states to each reconstruct a single Interstate using toll finance. Missouri, North Carolina, and Virginia hold the three slots—but none of them has reached political consensus on making use of it. To increase the odds of one or more pathfinder states solving the political problem of getting to “yes” on this, Congress should make several improvements to the pilot program:

- Add a use-it-or-lose-it provision, with a time limit after which the slot would lapse unless the state gains political support to move forward to implementation.
- Increase the number of states allowed to participate, to encourage potential pathfinder states to take part.
- Allow a participating state to use toll finance to reconstruct all of its Interstates, so it could plan a comprehensive 2<sup>nd</sup>-generation Interstate system.
- Require that participating states grant rebates of state fuel taxes for miles driven on the reconstructed, tolled Interstates.
- Provide stronger protection for highway users, by ensuring that the new tolls are pure user fees that can only be used for the capital and operating costs of the rebuilt Interstates.

These provisions are critically important to gain the support of highway user groups, which have legitimate complaints about paying twice (fuel taxes plus tolls) on legacy tolled Interstates and about tolled Interstates being used as cash cows to fund a wide array of other transportation and in some cases “economic development” projects.

#### Recommendation No. 4: Give States Increased Tools for Long-Term Public-Private Partnerships

If Congress is unable to increase, or even maintain, the current level of HTF spending, the least it should do is to give states more and better tools for doing more with their existing funding. A powerful tool that fewer than a dozen states are using thus far is the long-term public-private partnership (P3) in which the private sector designs, builds, finances, operates, and maintains a major highway or bridge—typically of the scale of \$500 million to several billion dollars in cost. Over the past 12 years, the largest 16 P3 projects of this kind have involved a total investment of nearly \$28 billion. Most of these projects involve some degree of state investment, on the order

of 20-25%, analogous to a down payment. The rest is privately financed by the winning concession team, using a mix of debt and equity.

There are many advantages to this type of procurement. Because the same entity will be constructing and operating the project over many decades, its incentive is to build it more durably so as to minimize its life-cycle cost, rather than the initial construction cost. The P3 company also accepts many of the mega-project risks that are usually borne by taxpayers—construction cost overruns, late completion, inadequate maintenance, and in many cases traffic and revenue. Because these are examples of project finance, the total cost is raised up-front, and the bonds are paid off over many years as highway users benefit from the improved infrastructure. And proper maintenance is contractually guaranteed for these high-profile projects.

Congress has provided two financial tools to help make these projects possible. So that the private investors can compete on a level financial playing field, Congress authorized states to issue tax-exempt revenue bonds, whose interest rates are similar to revenue bonds for state-led projects. These are called Private Activity Bonds (PABs), and there is a statutory cap of \$15 billion. Congress also created the popular Transportation Infrastructure Finance and Innovation Act (TIFIA) credit support program, under which P3 projects can obtain subordinated loans to complete a financing package. These tools would be more viable going forward into the next reauthorization period if each were modified.

The PABs program in recent years has been well-used. As of the end of 2014, about \$5 billion of these bonds had been issued, and another \$5 billion had been approved for issuance by DOT. That leaves only \$5 billion of the original \$15 billion available for a growing pipeline of P3 projects. To enable more such projects to be financed, Congress should at least double the cap to \$30 billion, especially if the reauthorization is for a long period such as six years.

The TIFIA program is generally working well, with a healthy loan portfolio and several of the loans already having been repaid. Congress greatly increased the size of the program in MAP-21, but it also made an ill-advised change. For most of its life, TIFIA loans have been limited to providing a maximum of 33% of a project's budget, consistent with the intent that it is to provide supplemental, subordinated debt, not primary debt. Congress increased this maximum to 49% in MAP-21, which has two potentially negative consequences. First, it makes projects overly reliant on federal loans, as opposed to private financing. Second, for a given annual budget, it could lead to a smaller total number of larger TIFIA loans, leaving many deserving projects unable to be financed. My recommendation is that Congress restore the original 33% limit.

These two changes would encourage continued growth in the use of long-term P3 procurement by state DOTs, enabling them to do more with their limited budgets.

This concludes my testimony. I would be happy to answer questions, either orally or in writing.