



Highlights of [GAO-13-77](#), a report to Subcommittee on Transportation, Housing and Urban Development, and Related Agencies, Committee on Appropriations, House of Representatives

## Why GAO Did This Study

Federal funding to build and maintain the nation's highways and bridges comes primarily from highway users through federal fuel taxes. These revenues have eroded due to improvements in vehicle fuel efficiency and other factors contributing to shortfalls in the Highway Trust Fund. Experts have proposed alternative means of raising revenues by charging drivers fees based on their miles traveled. Several states have tested systems that gather vehicle mileage and location data, which has raised privacy concerns. GAO examined (1) the benefits and challenges of mileage fee initiatives in the United States and other selected nations, (2) mileage fee rates necessary to replace and supplement current Highway Trust Fund revenues and the effect these fees would have on users' costs, and (3) state DOTs' views on future revenue demands and mileage fees. GAO reviewed five domestic pilot projects and programs in Germany, New Zealand, and the Netherlands; modeled mileage fees for passenger vehicles and commercial trucks; and surveyed 51 state DOTs.

## What GAO Recommends

Should Congress further explore mileage fees, it should consider establishing a pilot program to test the viability of such fees for commercial trucks and electric vehicles. FHWA should update its estimates of road damages imposed by all vehicle types compared with the tax revenues generated by each. The Department of Transportation took no position on GAO's recommendation but provided technical comments which GAO incorporated as appropriate.

View [GAO-13-77](#). For more information, contact Susan Fleming at (202) 512-2834 or [flemings@gao.gov](mailto:flemings@gao.gov).

December 2012

## HIGHWAY TRUST FUND

### Pilot Program Could Help Determine Viability of Mileage Fees for Certain Vehicles

## What GAO Found

Mileage-based user fee initiatives in the United States and abroad show that such fees can lead to more equitable and efficient use of roadways by charging drivers based on their actual road use and by providing pricing incentives to reduce road use. Mileage fees for passenger vehicles, however, continue to face significant public concerns related to privacy as well as cost challenges. Privacy concerns are particularly acute when Global Positioning System (GPS) units are used to track the location of passenger vehicles. Reliable cost estimates for mileage fee systems are not available, but implementing a system to collect fees from 230 million U.S. passenger vehicles is likely to greatly exceed the costs of collecting fuel taxes. Commercial truck user fee systems in Germany and New Zealand have achieved substantial revenues and benefits such as reduced road damage and emissions with fewer privacy concerns, but ensuring compliance in a cost effective manner presents trade-offs. Few commercial truck mileage fee pilots have been conducted in the United States, but efforts in two states suggest such fees pose fewer privacy and cost challenges than passenger vehicle fees.

Mileage fee rates could be set to replace or supplement current Highway Trust Fund revenues. GAO calculated average mileage fee rates for passenger vehicles and commercial trucks needed to meet three federal revenue targets ranging from \$34 billion (replace current federal fuel tax revenues) to \$78 billion (increase spending to maintain existing system conditions and performance). To meet these targets, drivers of passenger vehicles with average fuel efficiency would pay \$108 to \$248 per year in mileage fees compared to the \$96 these drivers currently pay in federal gasoline tax. These fees would affect users' costs differently based on each vehicle's fuel efficiency, because drivers of less efficient vehicles now pay more in fuel taxes than drivers of vehicles with greater fuel efficiency. However, like federal fuel taxes, mileage fees would comprise a small portion of users' overall fuel costs and thus only marginally increase users' overall transportation costs. A mileage fee for commercial trucks could also increase users' costs, particularly for larger trucks that log more miles. In 2000, the Federal Highway Administration (FHWA) estimated that heavy commercial trucks generally pay less in federal taxes than the road damage costs they impose. Adjusting mileage fee rates to account for vehicle road damage costs would increase rates for commercial truck users. However, FHWA's estimates may not reflect current conditions. Setting rates to cover these costs would require updated estimates of vehicles' responsibility for road damage.

State departments of transportation (DOT) recognize the need for an alternative funding mechanism to meet future revenue demands, and many would support federal actions to evaluate mileage fees. Few states reported that they are likely to introduce such fees in the next 10 years, but more than half would support federally-led field tests of mileage fees for commercial trucks and electric vehicles. Although few electric vehicles are on the roads today, their numbers are expected to increase, and they do not contribute to the Highway Trust Fund. Without a federal pilot program to evaluate (1) options to more accurately charge commercial trucks and electric vehicles for their road use and (2) the costs and benefits of such systems, Congress lacks critical information to assess whether mileage fees for these vehicles could be a viable and cost-effective tool to help address the nation's surface transportation funding challenges.