Charging motorists on a per mile basis has gained some traction in recent years as a potential revenue mechanism to replace state and federal fuel taxes. Pilot projects to test VMT systems in many states are helping to define how they would work.

Executive Summary:

- Charging motorists on a per mile basis has gained some traction in recent years as a potential mechanism to replace or supplement state and federal fuel taxes to fund transportation improvements. Three federal bipartisan commissions recommend the U.S. move to such a system.
- Under such a system, vehicles could be outfitted with equipment capable of tracking the number of vehicle miles traveled—often referred to as VMT—in a given area. Fees could be collected based on the number of miles, and revenues could be distributed among various jurisdictions, including state governments.
- Oregon’s Department of Transportation tested such a system in a yearlong pilot project beginning in 2006. Oregon officials found that paying VMT fees at the pump could work, the mileage fee could be phased in, integration with current systems could be achieved, various pricing options could be available, privacy could be protected, the system would place minimal burden on business, the potential for evasion would be minimal, and the cost of implementation and administration would be low.
- The Puget Sound Regional Council conducted its own test of a VMT system between 2005 and 2007 in the Seattle area. The University of Iowa is currently involved in a multistate VMT pilot project—cities in California, Florida, Illinois, Kansas, Maine, Maryland, Montana, New Mexico, North Carolina and Texas are all taking part.
- Distance-based user charges are already in place for trucks in Germany, Austria, Switzerland and the Czech Republic. In 2008, the Dutch Parliament approved the Dutch Mobility Plan for both passenger and freight vehicles. The program is expected to begin next year.
- Proponents like a VMT system because they believe it can provide significant revenue potential and stability, greater cost and revenue distribution equity, and greater economic efficiency, and because it would make use of proven technology such as in-vehicle GPS systems to track miles.
- Among the potential obstacles to a VMT system, according to the RAND Corporation:
  - As with gas taxes, VMT tolling is not inherently responsive to inflation.
  - It would require a significant investment of capital ranging from $1 billion to more than $20 billion.
  - There would need to be safeguards against evasion of VMT fees.
The appropriate institutional framework for implementing VMT tolling is unclear. Depending on whether VMT tolling is implemented at a state, national, regional or multi-state level, different oversight agencies and institutions may be needed.

VMT tolling would need to be phased-in over time.

Privacy advocates could find fault with it because of the potential to track the traffic patterns of drivers, and environmentalists could find fault with it because in replacing the per gallon fuel tax, it would eliminate one of the few tax-related incentives for purchasing more fuel-efficient vehicles.

There is some disagreement as to how soon a VMT system could be implemented in the U.S.—estimates range from as little as two years up to 20 years for full implementation.

The Transportation Research Board’s National Cooperative Highway Research Program identified three promising VMT-fee mechanisms that might be pursued in the near term: mileage metering based on fuel consumption, an onboard diagnostics unit with cellular-based metering, and coarse-resolution GPS-based metering (the method used in Oregon’s pilot project).

Public acceptance must be addressed in the transition to VMT. Others key issues include: a national policy direction, state legislation to set up VMT fees, consideration of equity issues, development of system architecture and program structure, delineation of roles for the public and private sectors, and resolution of administrative issues.

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