Addressing Freight Industry Concerns about Mileage-Based User Fees

What Was the Need?
The primary source of funding for U.S. road and bridge construction, operation and maintenance, at both the federal and state level, is the motor fuel tax. This tax is levied on a per-gallon charge, so the rate a driver pays is directly correlated with fuel efficiency. As vehicles become more fuel efficient and governments resist raising fuel tax rates even to match inflation, less revenue is produced than may be needed to maintain and operate the system.

Policymakers are exploring replacing fuel taxes with more sustainable revenue sources, such as a tax based on the number of miles traveled by vehicles. Two congressional commissions have recommended such mileage-based user fees (MBUFs) to fund surface transportation, and several pilot projects have shown MBUFs to be promising. MnDOT recently appointed a task force to study potential implementation of MBUFs in Minnesota.

However, an MBUF system faces opposition from the public, particularly the trucking industry, which believes this system will increase costs prohibitively and invade the industry’s privacy without adding any apparent benefits to its operations. Yet because of their size and number of miles traveled, heavy trucks consume significant roadway capacity and cause a disproportionate amount of pavement distress. Research was needed to help initiate a dialogue with the commercial freight industry about its concerns.

What Was Our Goal?
The objective of this project was to gather information about the potential benefits of MBUFs to the commercial freight industry and to identify industry concerns about costs, fee predictability, privacy and other factors.

What Did We Do?
Researchers conducted a comprehensive literature search on MBUFs and their potential benefits to the commercial freight industry. Next, they facilitated a focus group to determine five Minnesota trucking industry executives’ reactions to MBUFs. Interviewees were given a brief presentation about MBUFs before the focus group, and then were asked to write down their concerns and what they liked about the concept. After discussing their reactions to MBUFs, the interviewees were shown a presentation about the potential benefits of MBUFs to the freight industry and asked to further discuss their reactions.

What Did We Learn?
The literature search showed that there is a large body of research from the last two decades concluding that MBUFs would, for the most part, have a positive effect on transportation funding and lead to a more efficient use of transportation infrastructure. These findings are supported by the results of MBUF pilot projects in the United States and abroad. Researchers found many potential benefits of MBUFs to the freight industry, including travel time reduction, improved travel time reliability, better infrastructure quality, increased predictability of operation costs, the ability to collect better freight
“We felt it was necessary to sit down with representatives of the trucking industry for a constructive dialogue on mileage-based user fees. We are fully sympathetic to their concern that these fees may impose a significant, new burden.”

—Ken Buckeye, Value Pricing Program Manager, MnDOT Office of Policy Analysis, Research & Innovation

“It is critical that future research into mileage-based user fees address freight industry concerns, which stem from the fact that the potential benefits of MBUF have yet to be fully evaluated in real-life implementations.”

—Ferrol Robinson, Research Fellow, University of Minnesota Humphrey School of Public Affairs

Produced by CTC & Associates for:
Minnesota Department of Transportation Research Services
M5 330, First Floor
395 John Ireland Blvd.
St. Paul, MN 55155-1899
(651) 366-3780
www.dot.state.mn.us/research


Highway revenue per mile has been declining steadily in the United States with increases in fuel economy, the use of alternative fuels, the prevalence of hybrid and electric vehicles, and the failure of fuel taxes to keep pace with inflation.

data and the industry’s ability to pass on pricing costs to customers. Nevertheless, the freight industry remains concerned that MBUFs will result in tax overpayment and has other concerns related to privacy, enforcement and use of revenues.

Freight industry focus group participants found little that they liked about MBUFs, with only one participant saying they might be beneficial. The remaining participants were adamantly opposed to MBUFs because of concerns that the technologies for tracking mileage would amount to an invasion of privacy and because they assumed that MBUFs would increase their fees to unaffordable levels compared to the current fuel tax system. Participants were also concerned that increased fees would make the freight industry noncompetitive with rail if the fees were passed on to customers. Finally, some participants were concerned that under an MBUF system, they would no longer be able to accurately determine shipping costs. Participants were more open to an increase in fuel taxes, which they saw as more fair, in line with efforts to increase fuel efficiency and reduce emissions, and more easily passed on to customers.

What’s Next?
Researchers recommend further efforts to address industry concerns, and Minnesota’s MBUF task force recommended continuing to explore the possibility of MBUFs by conducting pilot projects. MnDOT completed one such demonstration in 2012 to test technologies for collecting MBUFs and will issue a final report in 2013. However, the MBUF task force concluded that there are significant challenges to be overcome before MBUFs can be broadly implemented in Minnesota, including concerns related to privacy, data security and the costs of implementation and enforcement.