



# Exploration of Mileage-Based User Fee Approaches for All Users

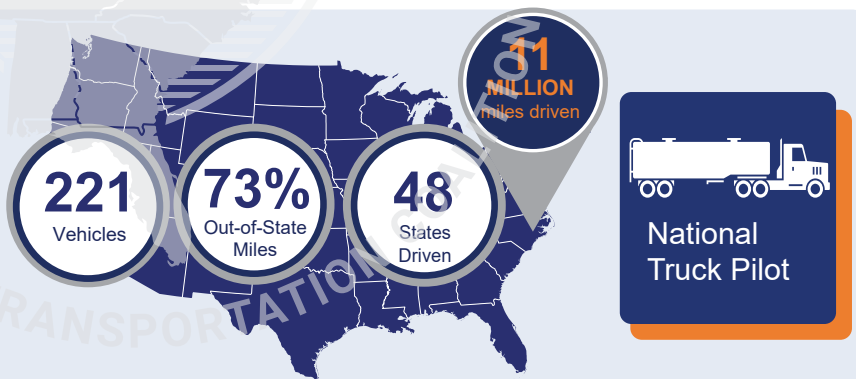
The connection between how much a driver uses the road and how much they pay for it is broken. As vehicles become more fuel efficient, they contribute less revenue to build and maintain roads, yet continue to contribute to wear and tear as well as congestion.

Since 2018, The Eastern Transportation Coalition (the Coalition) has researched how to restore the link between road use and payment by exploring a distanced-based approach to transportation funding known as a mileage-based user fee (MBUF). The central finding from nearly four years of work is that MBUF can be a viable alternative to the pay-at-the-pump fuel tax. The Coalition's 2020-2021 MBUF Work included the following:

- National Truck Pilot
- Motor Carrier Working Group
- State Passenger Vehicle Pilots
- Public Opinion Surveys
- Geographic Equity Analysis
- Tolling Synergies Test
- Congestion Mitigation Test

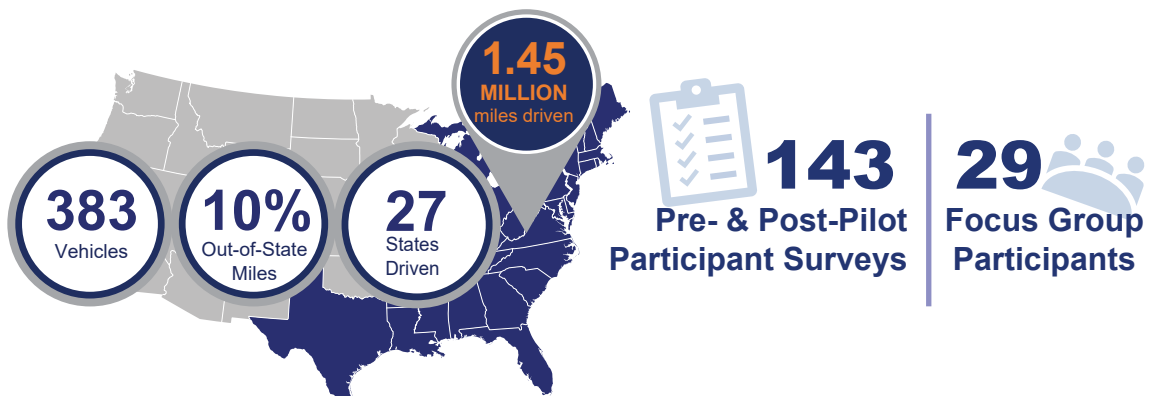
## Our Work

Participant Interviews with **25%** of participating companies



**State Passenger Vehicle Pilots\***

*in Delaware, New Jersey, North Carolina, and Pennsylvania*





**Motor Carrier Working Group**

**Included subject matter experts from across the trucking industry:**



*Freight Shippers*



*Trucking Manufacturers*



*Regulators*



*Trucking Companies*



*Trucking Associations*

**2,000**

*residents in Delaware, New Jersey, North Carolina & Pennsylvania*




*representative sample*



*interviewed via phone / text-to-online surveys*



**Public Opinion Surveys**



**Geographic Equity Analysis**

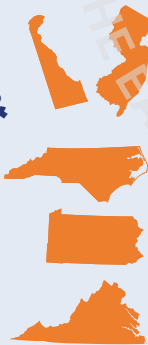
**5 Geographic Classes**  
*3 Urban, 1 Rural, 1 Commuter Community*

**Travel Behavior**  
*U.S. Census Data*

**Vehicle Fleet Analysis**  
*State DMV Data*

**MBUF Technology & Tolls**

Toll Facilities in Delaware, New Jersey, North Carolina, Pennsylvania & Northern Virginia



**Tolling Back Office as MBUF Account Manager**

Tolling Entity-Led Pilot in Northern Virginia

**192**  
Participants

**20%**  
Out of State Miles

**70%**  
Chose GPS

**29**  
States Driven



**Tolling Synergies Test**



**Congestion Mitigation Test**



**Approaches**  
*Time of Day & Cordon Pricing*



**Technology**  
*OBD II & Location-Based (Cordon)*



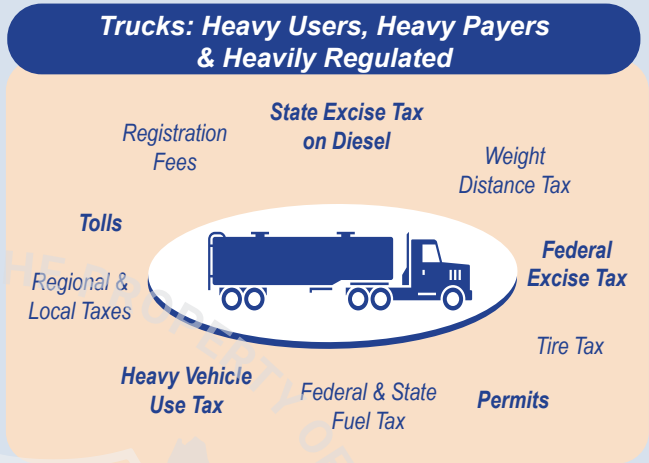
**Locations**  
*Harrisburg, Pennsylvania & Tysons Corner in Northern Virginia*

# 5 Key Findings from The Eastern Transportation Coalition's 2020-2021 MBUF Work

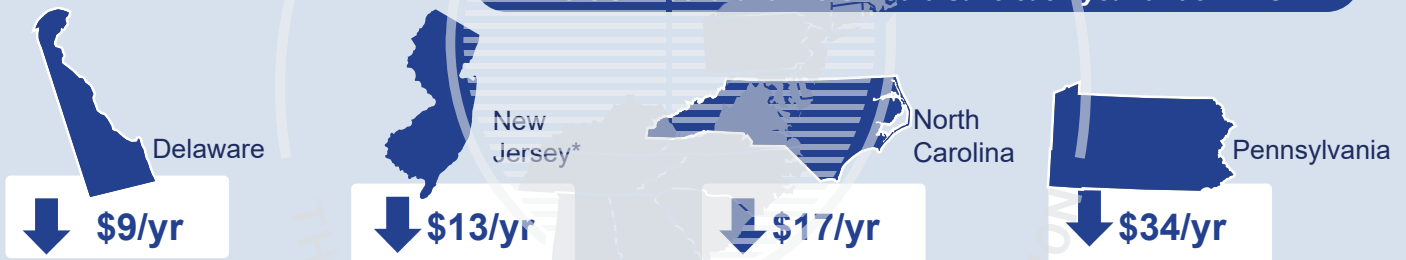


## 1 Understanding the Complexity of the User Matters.

A road funding solution must address all users and understand the unique complexities of each. This means understanding the need to keep rates simple to account for the trucking industry's complexities, and understanding MBUF's effect on different geographies. For example, when compared to the fuel tax, an MBUF approach (using a revenue neutral per-mile rate) may save rural drivers money since they tend to drive less fuel-efficient vehicles.



Rural drivers may fare better with MBUF. Here's what rural drivers would save each year under MBUF:



\*Commuter communities; New Jersey doesn't have Census tracts classified as rural geographies.

## 2 Real-World Pilots Reduce Privacy Concerns.

MBUF pilots and programs help reduce privacy concerns by providing drivers a real-world experience with MBUF technology, offering mileage reporting choices including a non-GPS option, and establishing sufficient data privacy and security protections as part of MBUF system requirements.

52% of passenger vehicle pilot participants were concerned about privacy before the pilot. After the pilot, this number dropped to 7% due to robust privacy practices.

- Transparency** (Magnifying Glass icon)
- Limited Personal Data** (Hands icon)
- Option to Decline GPS** (GPS icon): (passenger vehicles only; trucks must have GPS for reporting requirements)
- Data Protections** (Shield icon):
  - Account manager could not sell data to 3rd-party entities
  - Data destroyed 30-60 days after pilot
- Participant Agreement** (Document icon)



### 3 Leveraging Technology Creates Solutions.

In the Coalition’s public opinion surveys, 49% to 61% of the general public said the fuel tax is an out-of-date way to assess road usage and agreed that advances in technology should be leveraged for new funding approaches. The Coalition’s work has found that technology does create solutions for tolling, congestion mitigation, and MBUF collection, and also eases the burden of mileage reporting on users. In surveys, commercial and passenger vehicle pilot participants said technology provides a secure, hassle-free way to report distance.

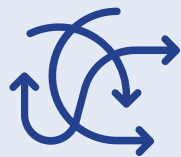


### 4 A Tiered Rate Based on MPG Doesn’t Work



Drastic differences in charges for similar MPGs

Tiered rates based on fuel economy can result in drastically different charges for vehicles with similar fuel economies, are difficult to explain, and create winners and losers.



Difficult to explain



Creates winners & losers

A possible issue with any tiered rate structure based on fuel economy is that charging lower per-mile rates on more fuel-efficient vehicles could cause lower income households and rural drivers to pay more in MBUF than they do in fuel tax since they tend to drive less fuel-efficient vehicles. Similarly, small, independently-owned truck fleets could be negatively impacted if they can’t purchase newer, more fuel-efficient trucks.

### 5 Customized Outreach Needed to Move MBUF Forward.

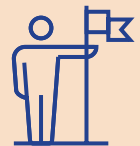
An MBUF approach to transportation funding is still a little-known concept for most of the general public. Strategic engagement provides an opportunity to address misconceptions and concerns about MBUF, build connections with policymakers and other stakeholders, and participate in a dialogue with particular user groups. Our work has shown that as people learn more about MBUF, their support for the concept increases.

Effective outreach methods used in the Coalition’s work include the Coalition’s MBUF website and MBUF calculator, monthly participant statements, and newsletters.

*Outreach should be tailored to different audiences.*



Legislators & Policymakers



Industry Organizations & Interest Groups



Transportation Associations & Conferences



General Public & Pilot Participants