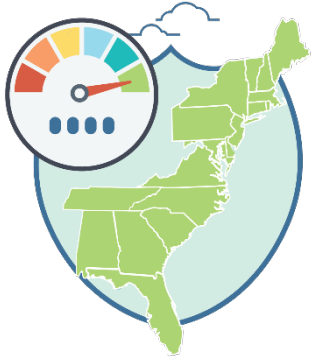


JACOBS®

I-95 Corridor Coalition Exploration of Mileage-Based User Fees (MBUF)

Louis Neudorff - Jacobs
Transportation & Highway Engineering Conference
February 25, 2020



Presentation Overview

- Background
- The Transportation Funding Problem
- Mileage – Based User Fees
- I-95 Corridor Coalition MBUF Pilots and Lessons Learned

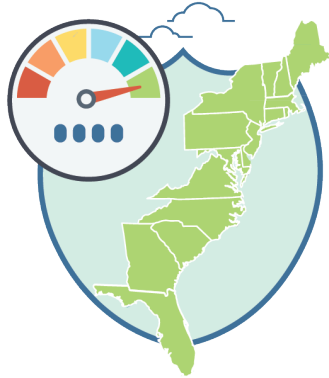


17 states + D.C.

In the Corridor

For over 25 years, the Coalition has brought together public agencies across state lines and modes to work together to address pressing challenges.

● Connecting for Solutions ●



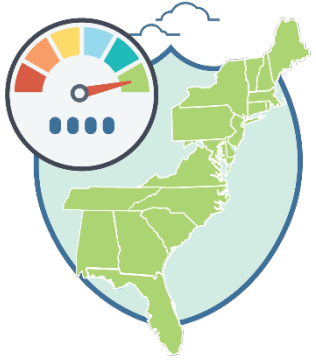
The Unique Challenges of Eastern States

- Out-of-state mileage happens every day
- Many toll facilities (and general acceptance)
- History of interoperability
- Experience bringing stakeholders together
- Heartbeat of US economy with significant truck traffic





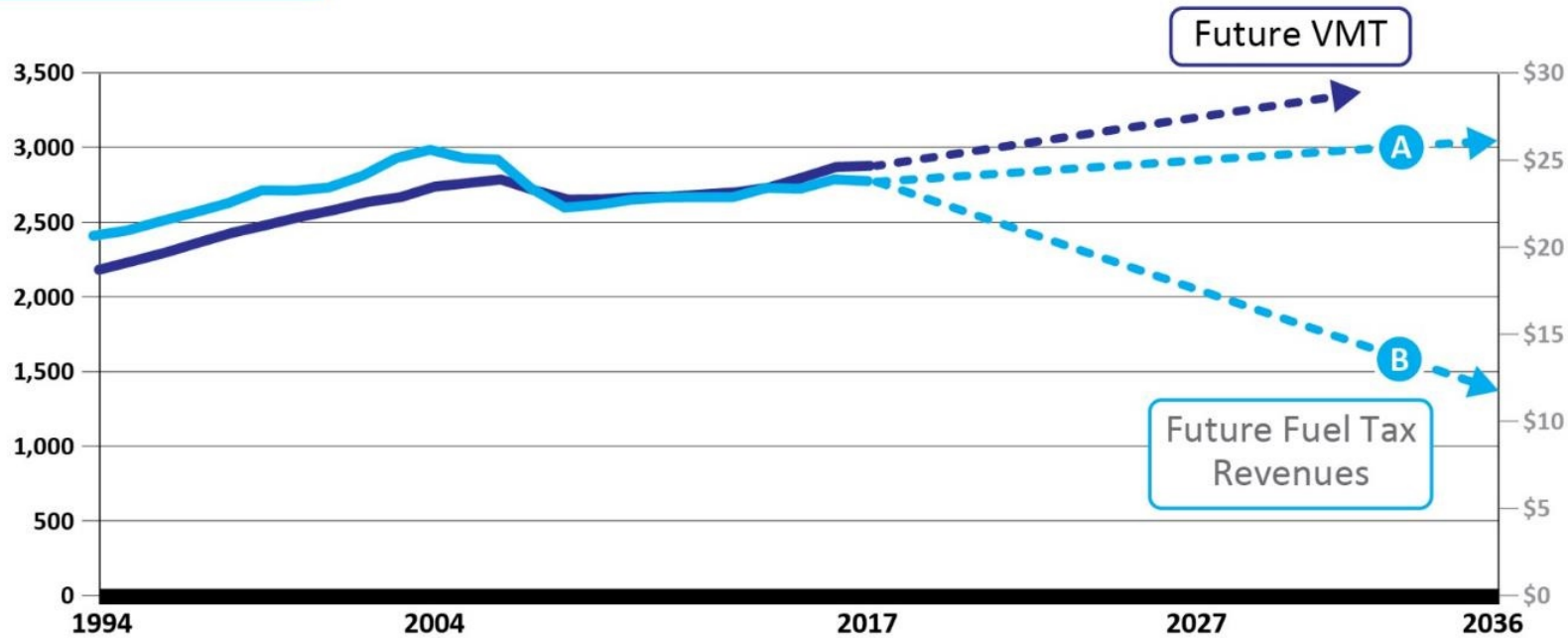
THE PROBLEM



Fuel Tax Revenues Are Declining

Light Duty VMT (billions)

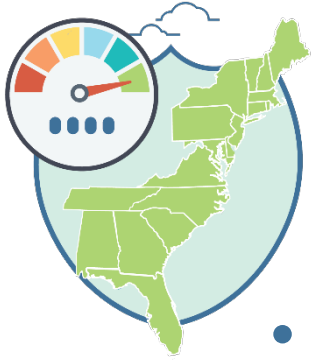
Light Duty Federal Fuel Tax Revenues (billions)



64%

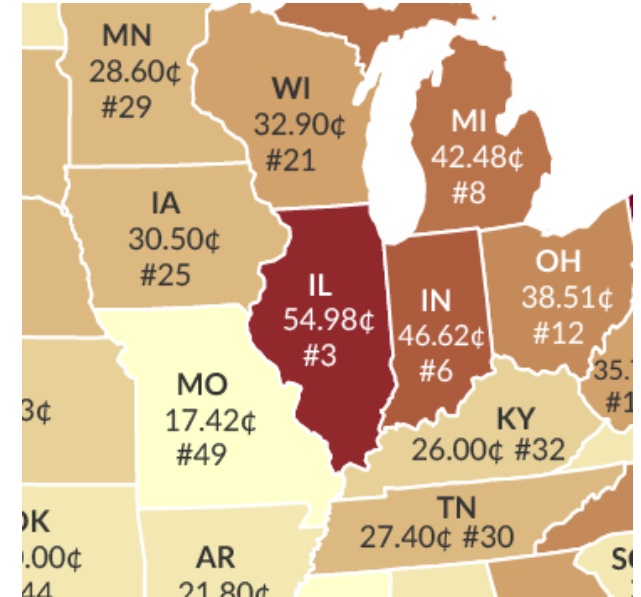
Decrease in purchasing power of federal fuel tax since 1993

- Combination of:
- Inflation
 - Increased fuel efficiency of fleet

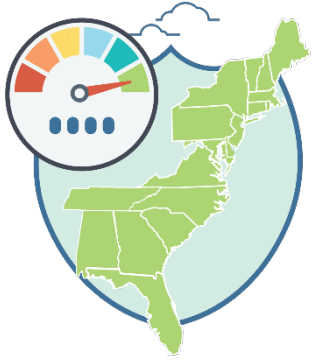


More Than Half of the States Have Increased Gas Taxes Since 2013

- Illinois raised its gas tax to 38 cents / gallon on July 1, 2019
- Plus other taxes on gas (state sales tax plus local sales taxes)
- Weighted average = 53.65 cents / gallon
- Revenues go into the Motor Fuel Tax Fund
 - May only be used for transportation costs

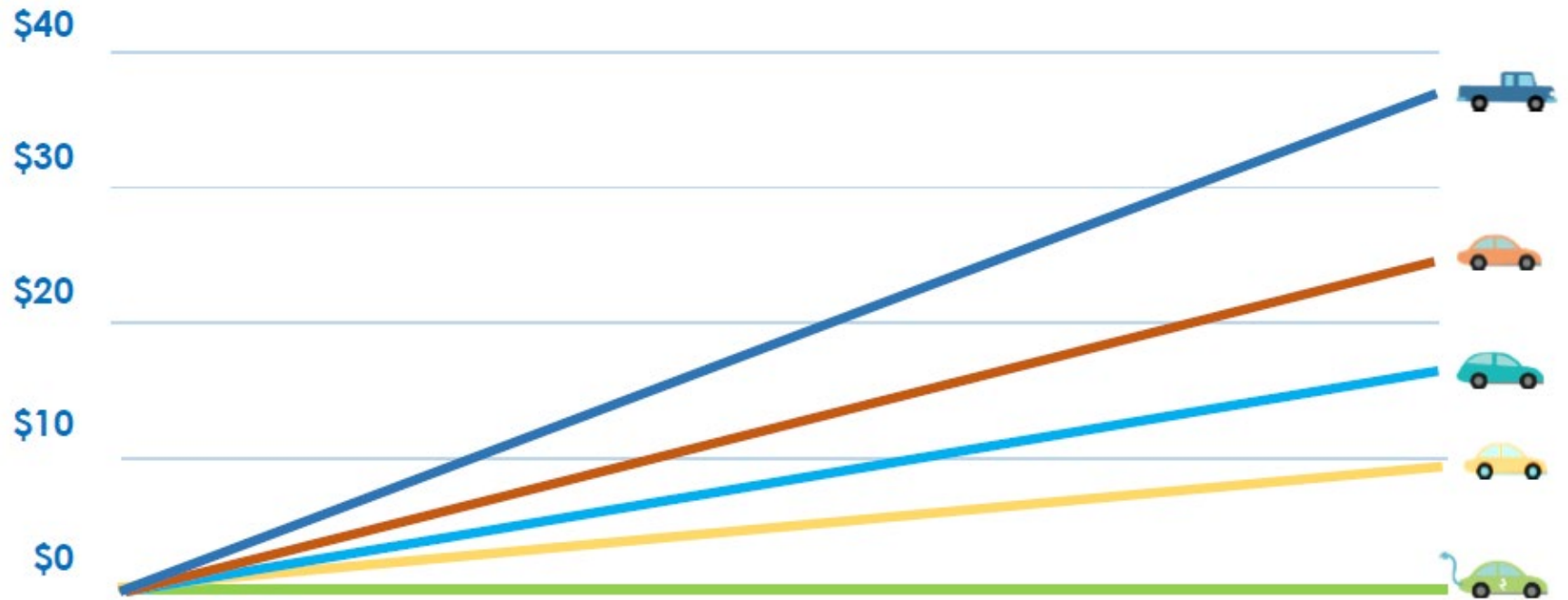


Source:
Tax Foundation 7-1-19



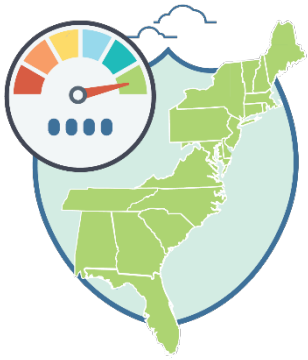
Transportation Fleet is Changing

Number of EVs is increasing

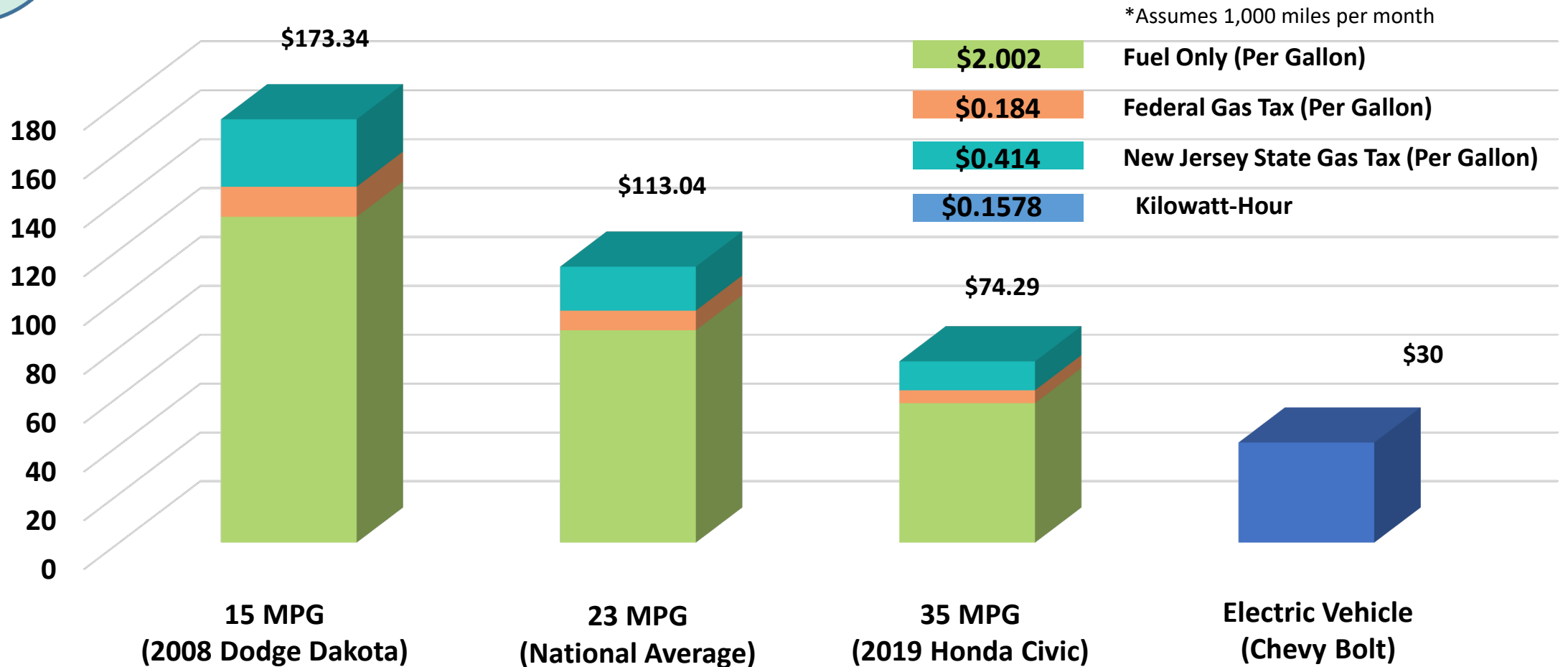


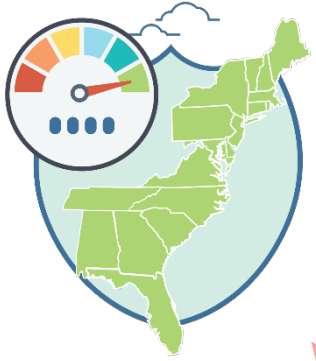
〜(ツ)〜

**Drivers have no idea
how little they are
paying in fuel tax.**



“Cost” is Really About Fuel

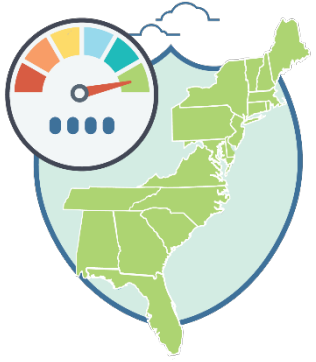




We need a new & more sustainable way to fund our transportation system.

WHAT IS AN MBUF?



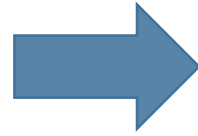


Mileage-Based User Fee (MBUF)

FROM THIS.....



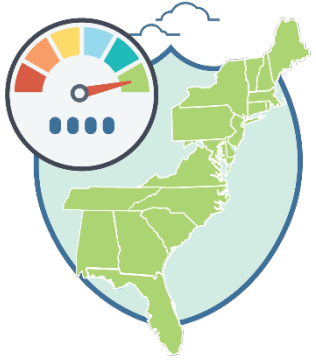
HOW MUCH FUEL
YOU USE.



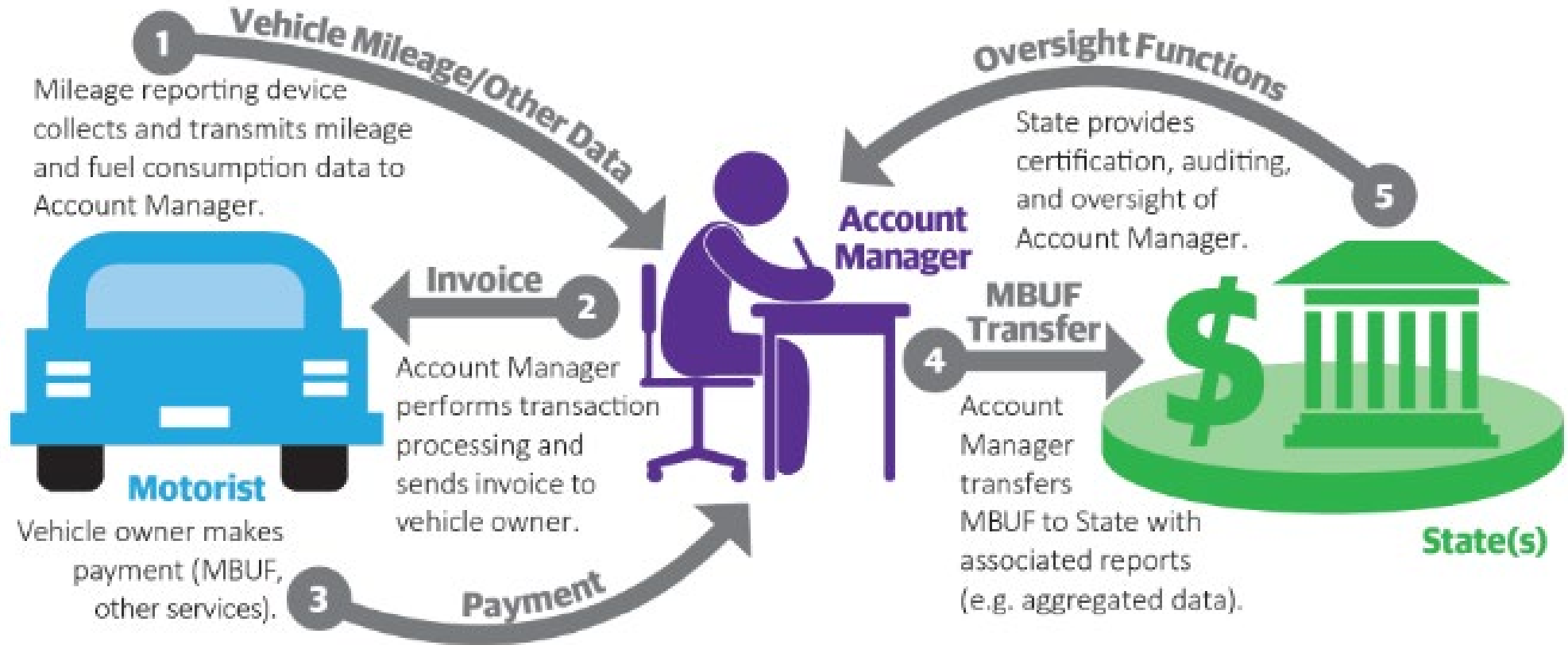
TO THIS.....



HOW MANY MILES
YOU DRIVE.



How MBUF Works

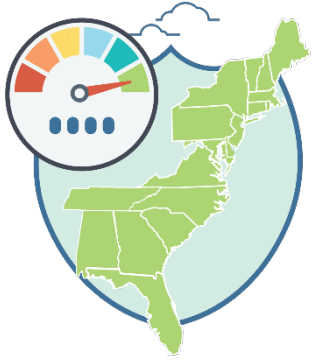


An MBUF system opens the possibility for different policies to be linked to transportation funding



But there are Issues and Concerns

- **Privacy**
- **Costs of Administration and Compliance**
- **Equity**



STSFA Grant Program

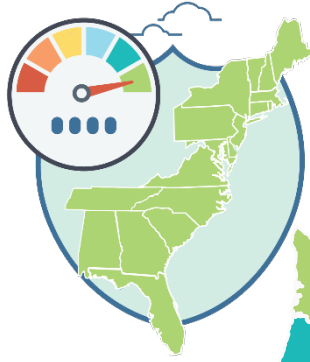
Surface Transportation System Funding Alternatives (STSFA) program under Section 6020 of the Fixing America's Surface Transportation (FAST) Act

- **Authorized grants to States for demonstrating:**
 - ✓ User-based alternative revenue mechanisms
 - ✓ Utilization of a user-fee structure
 - ✓ A solution to maintain the future long-term solvency of the Federal Highway Trust Fund

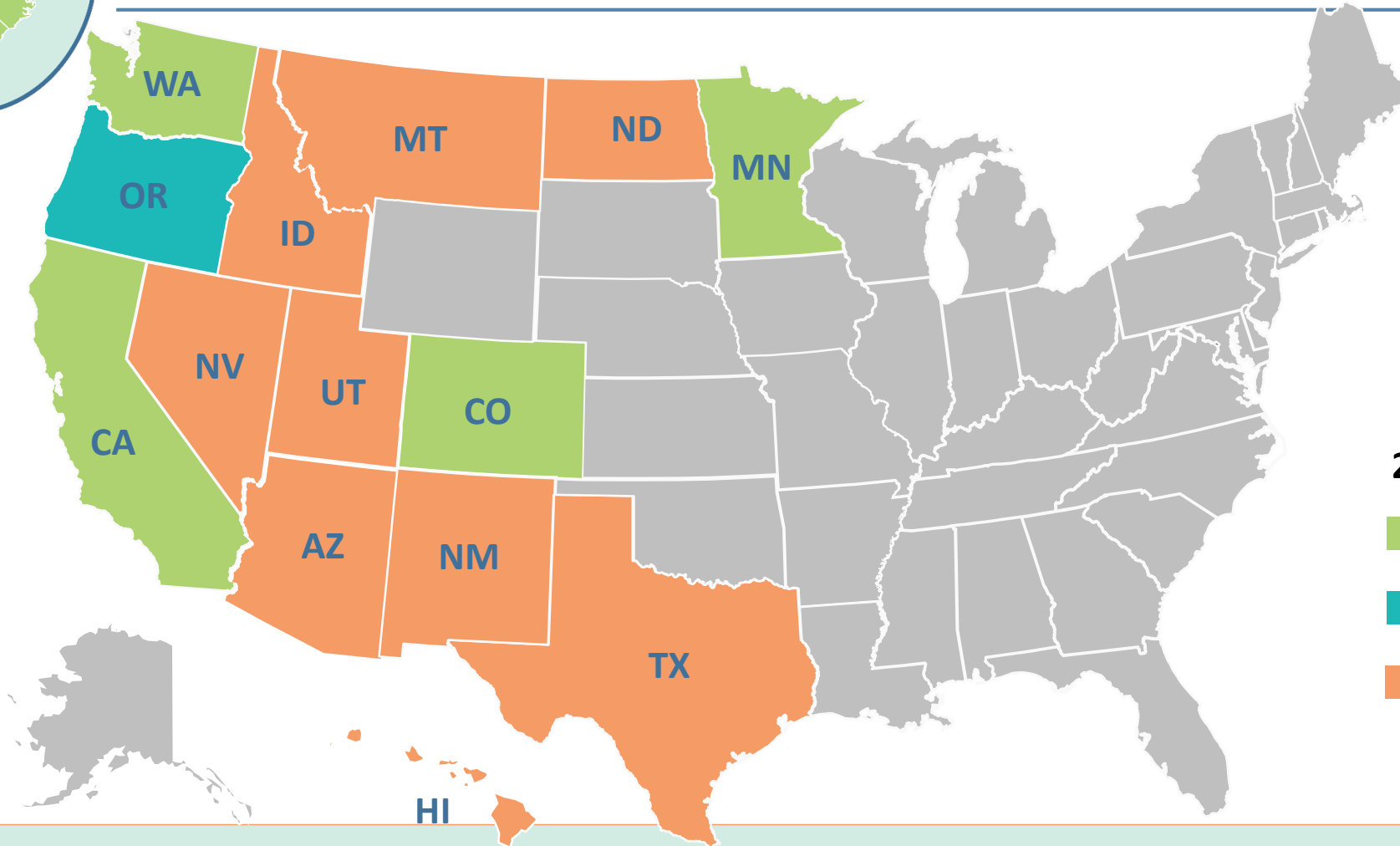
- **\$95 million over 5 years**

50-50

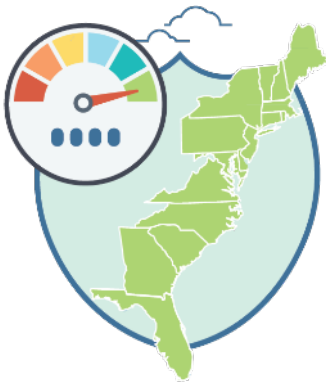
**Match
Required**



An East Coast Voice Was Needed



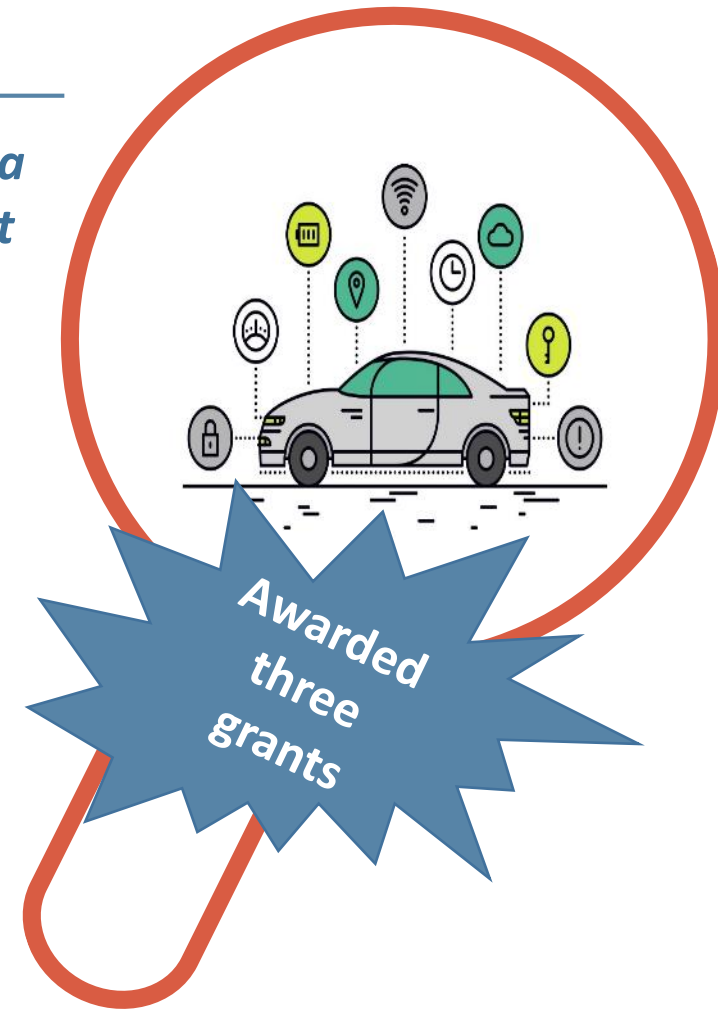
- 2016 MBUF Exploration Status**
- Conducted MBUF Pilot
 - On-going MBUF Program
 - MBUF Studies through RUC West Membership

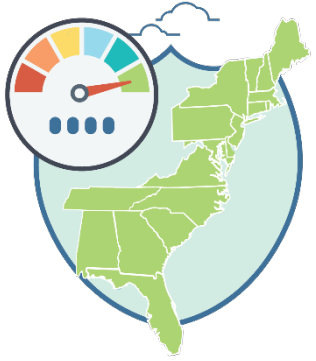


I-95 Coalition STSFA Grants

***Purpose:** Explore the feasibility of replacing the gas tax with a mileage-based user fee program in a multistate environment*

- **OUT-OF-STATE MILEAGE**
How will travel across boundaries be handled?
- **TOLLING**
What is the relationship between tolling and MBUF?
- **TRUCKING**
How does a user-fee fit into current requirements?
- **AMENITIES**
Will value-added amenities help with public acceptance?



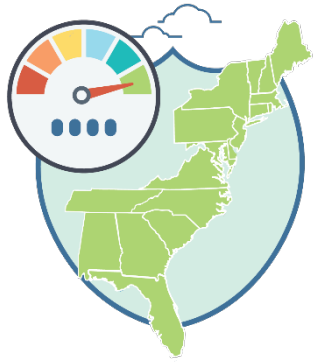


Is a mileage-based user fee a solution?

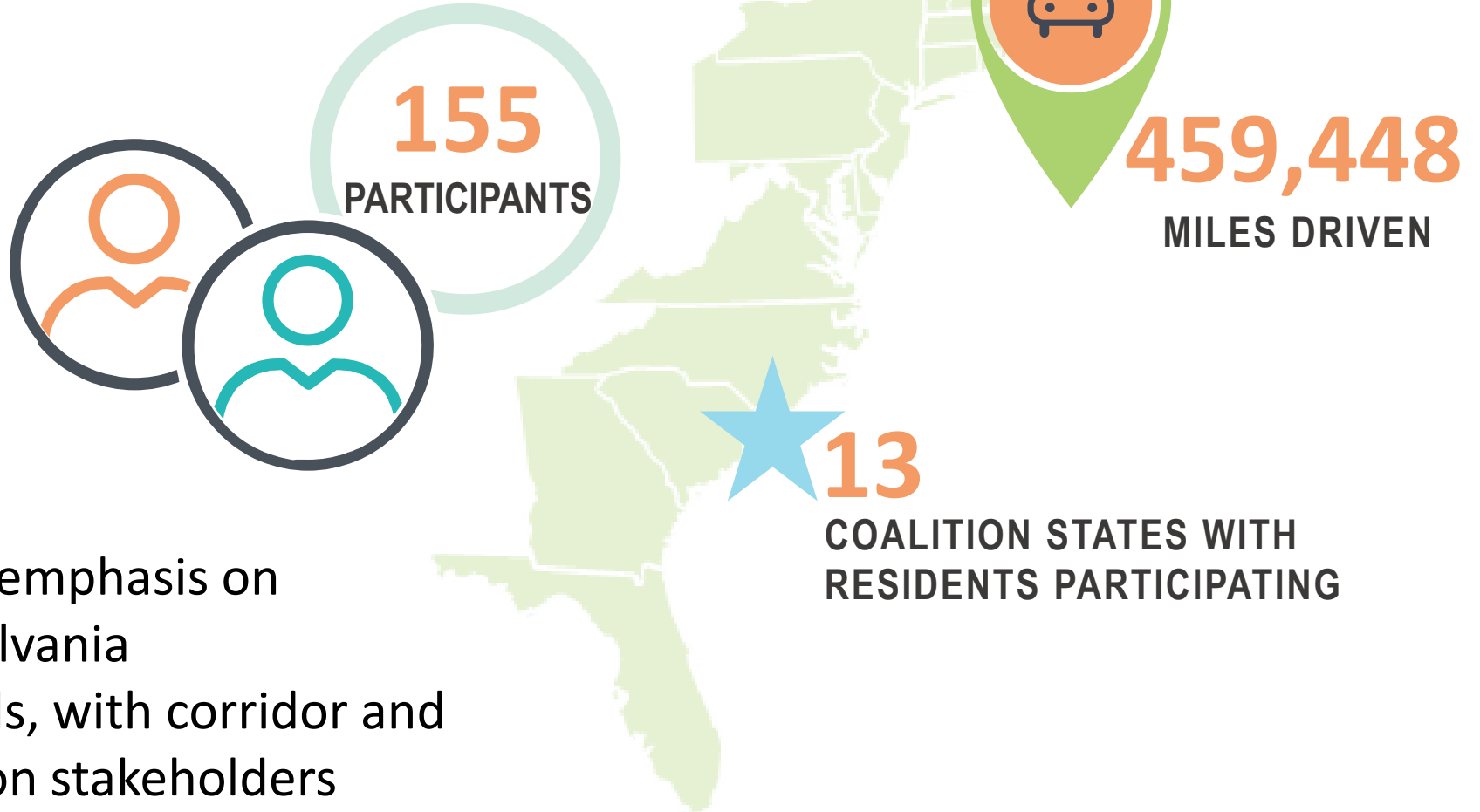
The I-95 Corridor Coalition members want to promote a better understanding of why investing in transportation is important, and why the current fuel tax does not provide a long-term and equitable solution in this regard. The Coalition, representing transportation agencies along the entire Eastern Seaboard, believes exploring the feasibility of a MBUF solution is important; for now, however, the Coalition is neutral if MBUF is the ultimate solution.



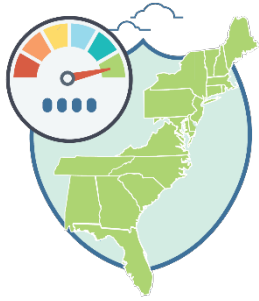
WHAT WE HAVE DONE



Phase One: 2018 Pilot Started the Conversation



“Focused” Pilot with emphasis on Delaware and Pennsylvania transportation officials, with corridor and national transportation stakeholders



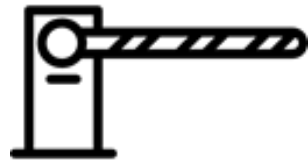
2018 Pilot: Highlights



> 20% out-of-state



65% learned (31% thought more)



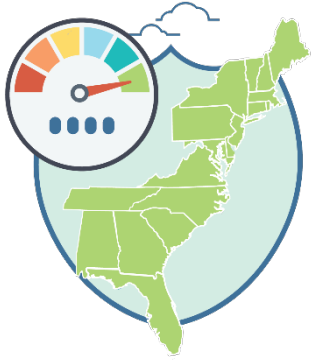
Possible to use MBUF to estimate tolls



Privacy concern 57% down to 30%



who liked MBUF up to 80%



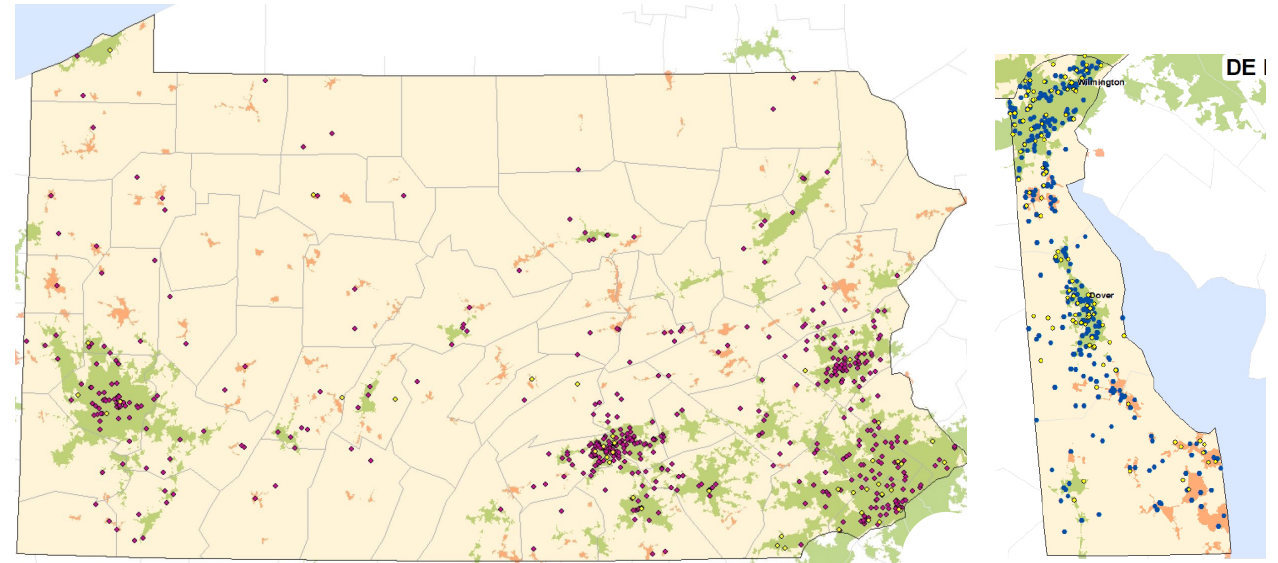
Phase Two: 2019 General Public Pilot

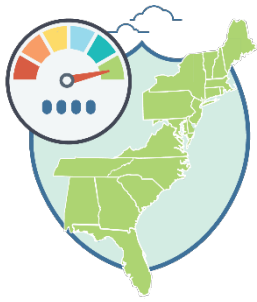
July 2019 – October 2019



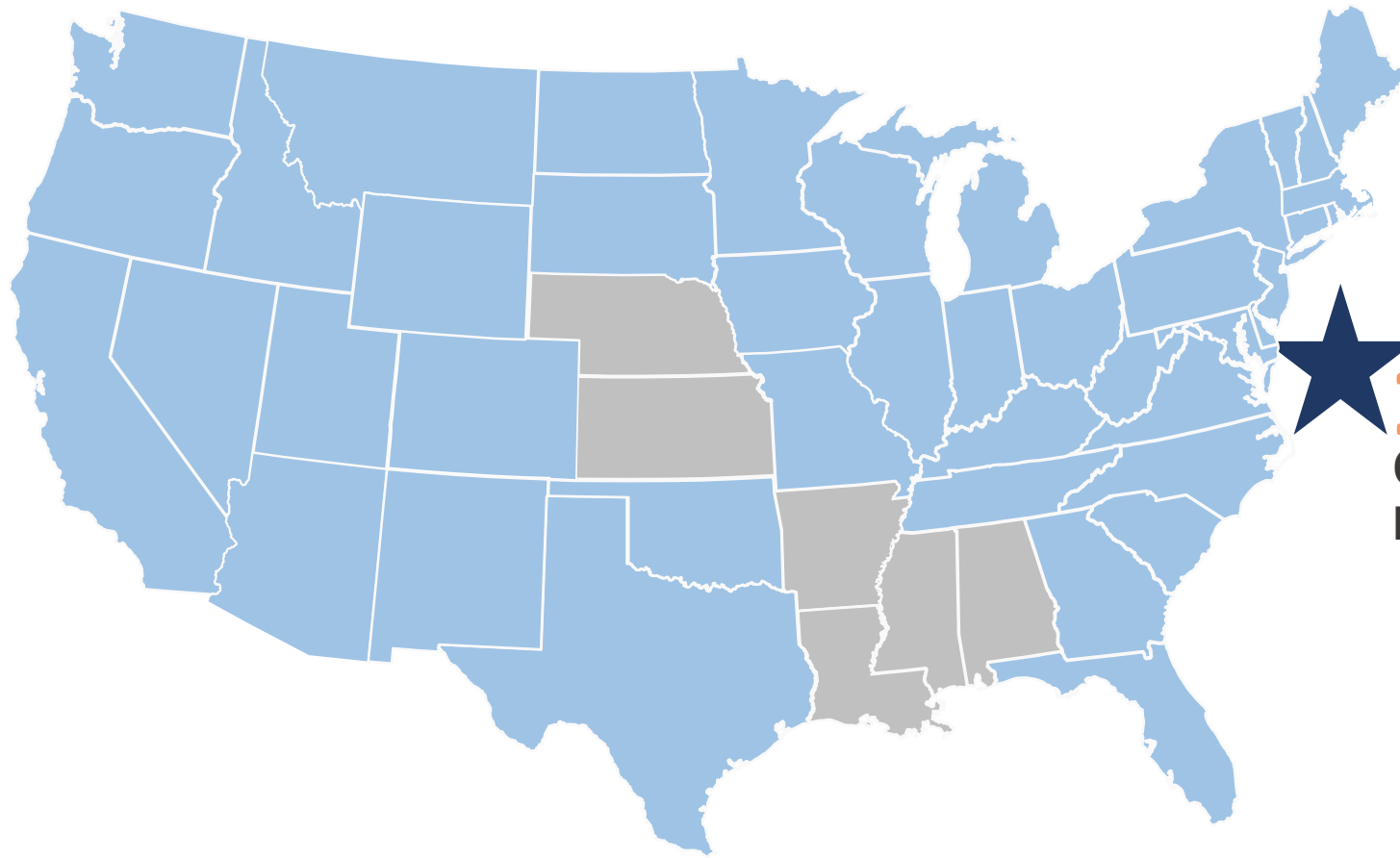
Purpose = Add the voice of the general public

- **889** participants
- **15** states (28 from NC)
- Mainly DE & PA
- OBD-II plug-in (with and without GPS)





2019 Pilot Overview



**Across 42 States
+ Canada**



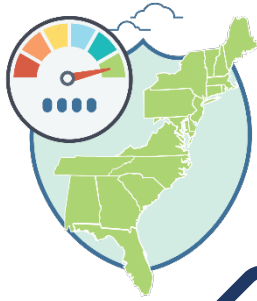
889
PARTICIPANTS



15
COALITION STATES WITH
RESIDENTS PARTICIPATING



3,129,096
TOTAL MILES DRIVEN



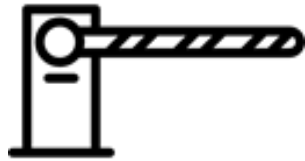
2019 Pilot: Highlights



13% out-of-state mileage



69% learned (72% unsure)



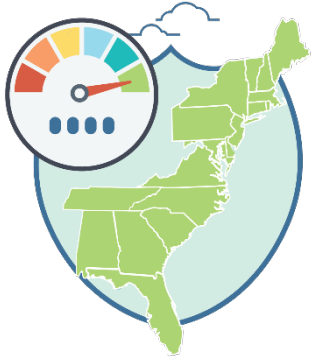
61% reasonable to charge MBUF on toll roads



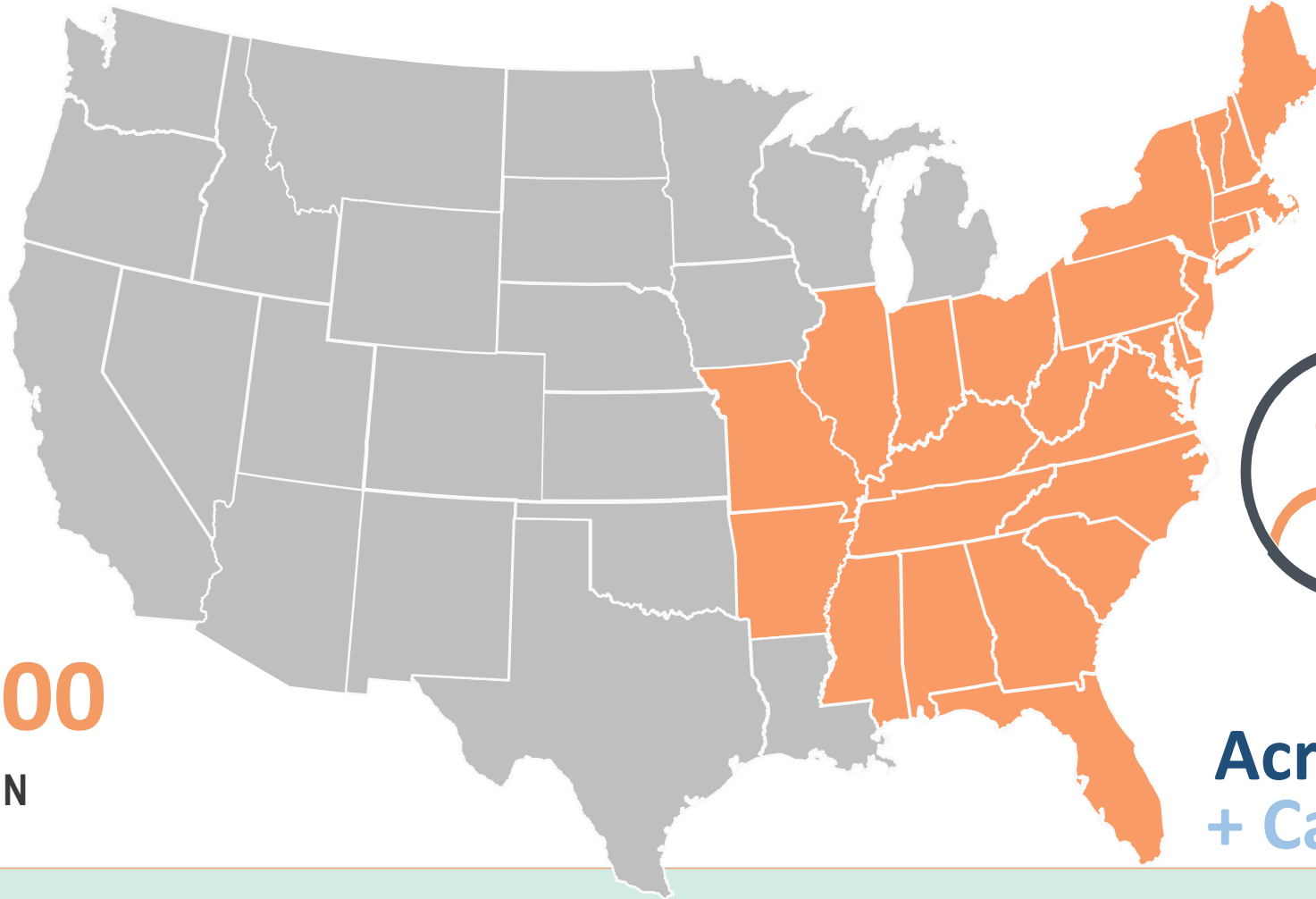
Very concerned about privacy from 46% to 20%



67% would support MBUF implementation



Phase 2: Multi-State Truck Pilot



EROAD



1,430,000

MILES DRIVEN



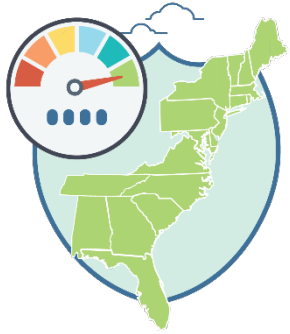
55
VEHICLES



**Across 27 States
+ Canada**

INITIAL FINDINGS





Education ... Education... Education



Sign up to test drive new technology for your car!
 #DeIDOT is partnering with the I-95 Corridor Coalition for a Mileage-Based User Fee Pilot. A MBUF system would replace the current gas tax. Volunteers who enroll in the pilot will get a \$10 Wawa gift card!
i95coalitionmbuf.org



10:00 AM · Jul 30, 2019 · eClincher



Project Overview

The Coalition's mileage-based user fee (MBUF) pilot includes many components:
 The first part of the pilot began in spring 2018. It was focused in Delaware and Maryland, with the trucking region.

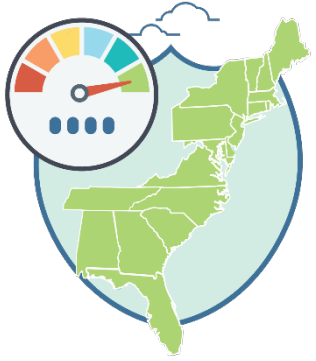


Pilot Study Enrollment

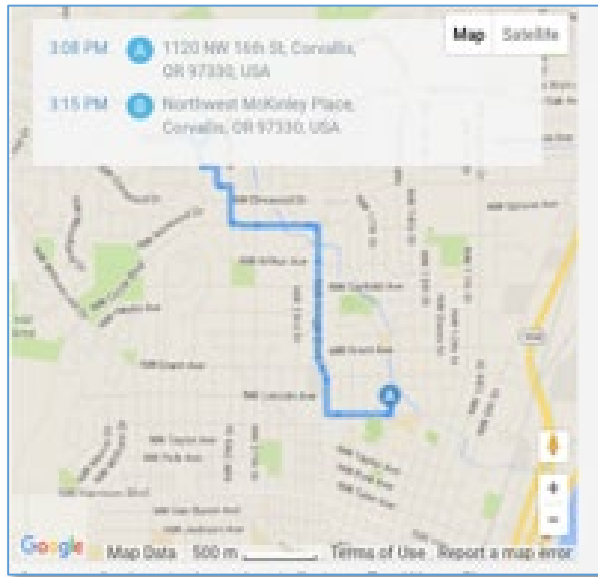
The pilot and the first step is to choose the type of device you want to use to record the number of miles you drive. There are two parts of this study: both use devices that plug directly in to the OBD-II port in your vehicle. The primary difference between the plug-in device with location utilizes GPS software to track your mileage and provide additional features. The table below compares features available with each device option. Questions? [Check out the Pilot Participant FAQs.](#)

[opens the Azuga enrollment site in a new window.](#)

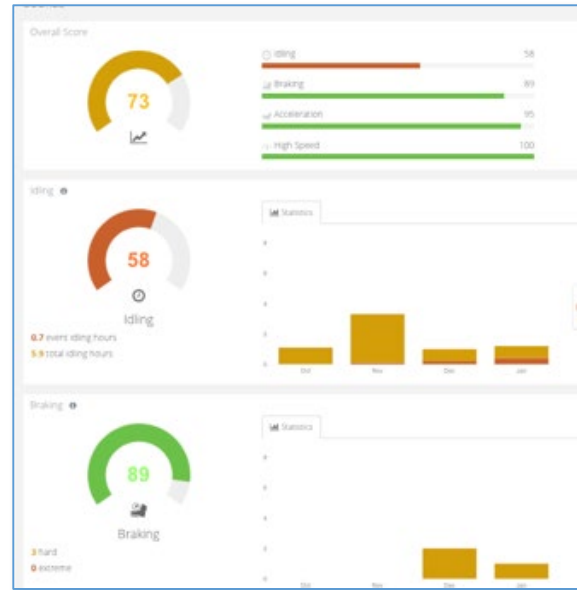
	Plug-In Device with Location	Plug-In Device without Location
	Enroll Now*	Enroll Now*
Device Operations		
Uses GPS to determine where you traveled	✓	✗
Uses a device that plugs in to your vehicle	✓	✓
Value-Added Amenities		
Mileage-Based User Fee (MBUF) Details: View all the data pertaining to MBUF charges, including your miles traveled and fuel tax credit.	✓	✓
Trip Logs: Detailed trip logs remember each trip you've taken, so you can see details about your trips like duration, cost, and carbon footprint.	✓	✓



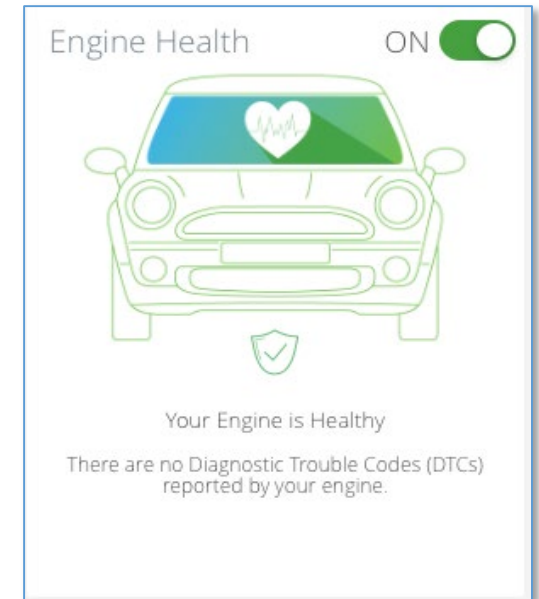
Value-Added Amenities: spoonful of sugar?



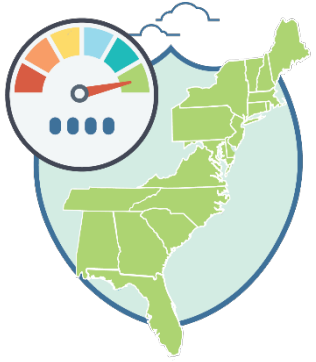
Trip Log



Driver Scores



Engine Health



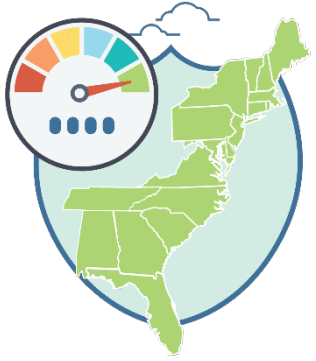
Focus Group Comments on Amenities

“After I signed up, I found [out]...’Oh, this is kind of cool.’”

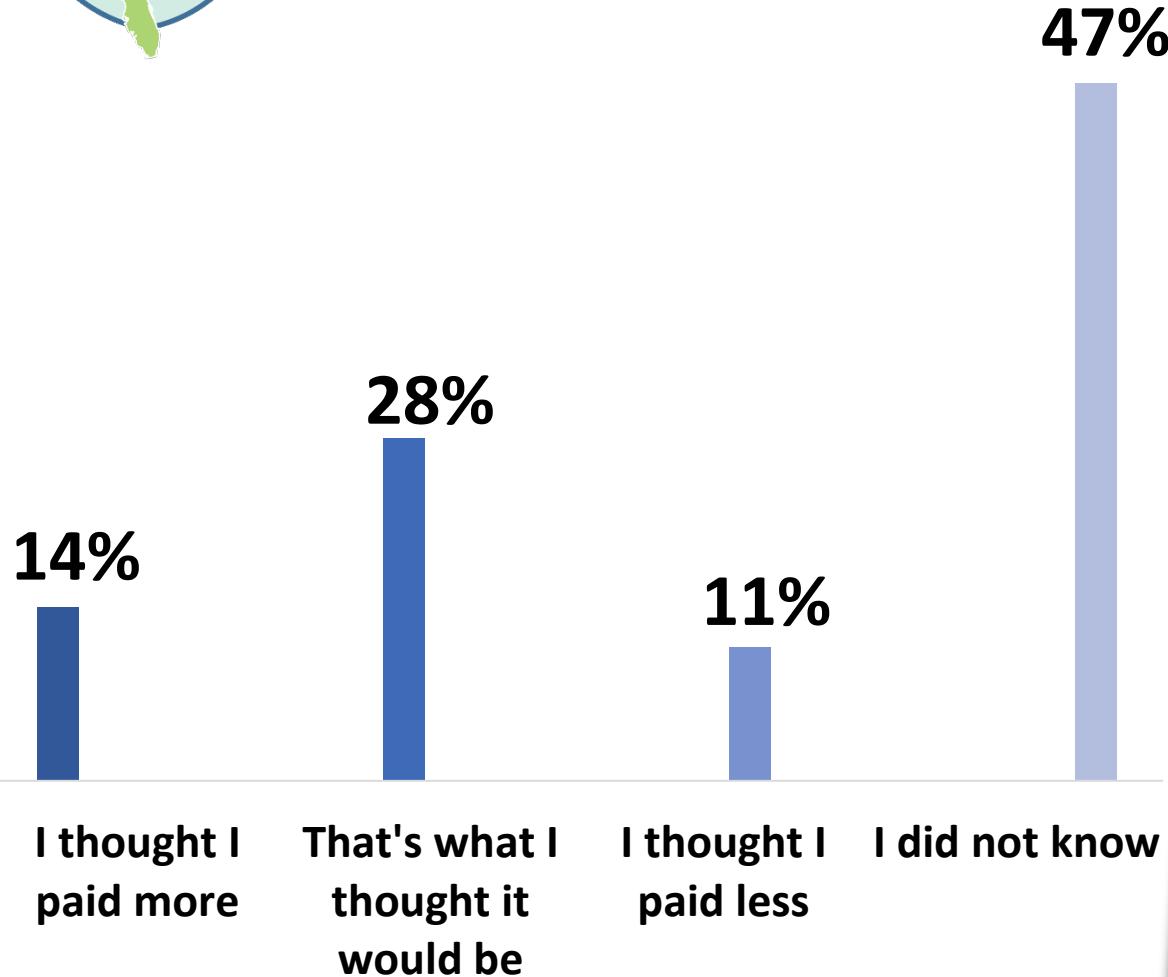
“The other features were interesting, and it was a lot of fun to watch how you were driving.”

“I actually used it (trip logs)...to see if I missed any of my expenses.”

“I liked to see what my average speed was when I got to work and the braking stuff. I became more conscious of how I was driving. That can obviously save gas.”



Pilots Lead to Increased Understanding About Transportation Costs



azuga
 2570 N. 1st Street
 San Jose, CA 95131
 Patricia Hendren
 7805 Boston Avenue
 Silver Spring, MD 20910

Statement Period: Jun 1, 2019 - Jun 30, 2019
 Account Number: Azuga-1011
 Questions? Email: 195mbufsupport@azuga.com
 Phone: 1-(888) 884-7004

Vehicle Information

Vehicle	Vin	Home State
2004 SAAB 9 3	YS3FD49Y241004672	Maryland

Summary for the Month

Billable Miles Driven During the Month	112.5	
Gallons of Fuel Used During the Month	6.45	
Transportation Costs, Fees and Taxes	Estimated Costs you currently pay	Estimated Costs with a MBUF
Fuel Costs (excluding state and federal taxes)	\$ 15.85	\$ 15.85
Mileage-Based User Fee (miles driven x per-mile rates for each state - refer to last page)	\$ 0.00	\$ 2.39
State Fuel Tax (estimated)	\$ 2.19	\$ 0.00
Federal Fuel Tax	\$ 1.19	\$ 1.19
Total Estimated Cost	\$ 19.23	\$ 19.43
Net Difference		\$ 0.20

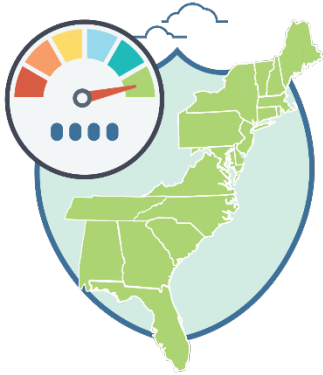
*Please note that all charges reflected on this statement are simulated. No amount of monetary value will be exchanged.

Fuel cost is based on the average mid-month fuel price in your home state times the number of gallons used for the month. Average statewide fuel prices are obtained from AAA (<https://gasprices.aaa.com/>).

Quick Facts:
 A MBUF (mileage based user fee) is paid per mile driven and could replace the fuel tax.
 If you are using a plug in device with location capability, your mileage in each state is directly measured and reported.
 If you are using a plug in device without location capability, your mileage driven inside your state is estimated based on census data on out of state work.

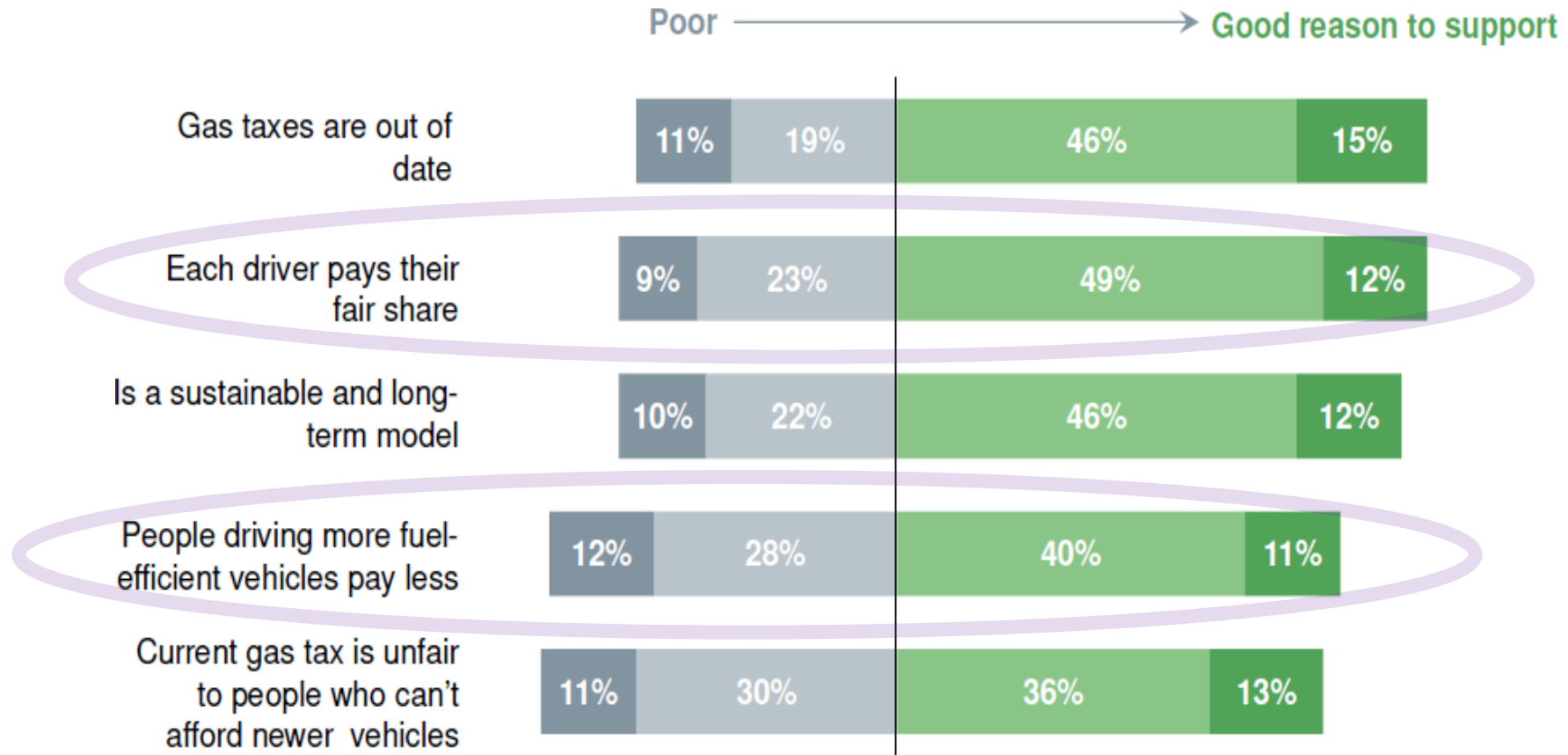
**The principle of
fairness seems to
resonate with people.
But.....**

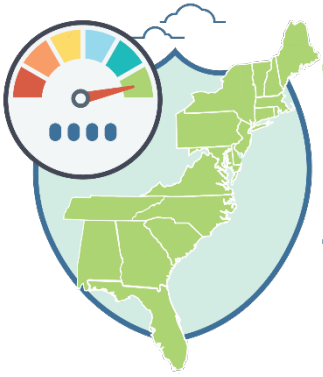




Statewide Survey (DE & PA)

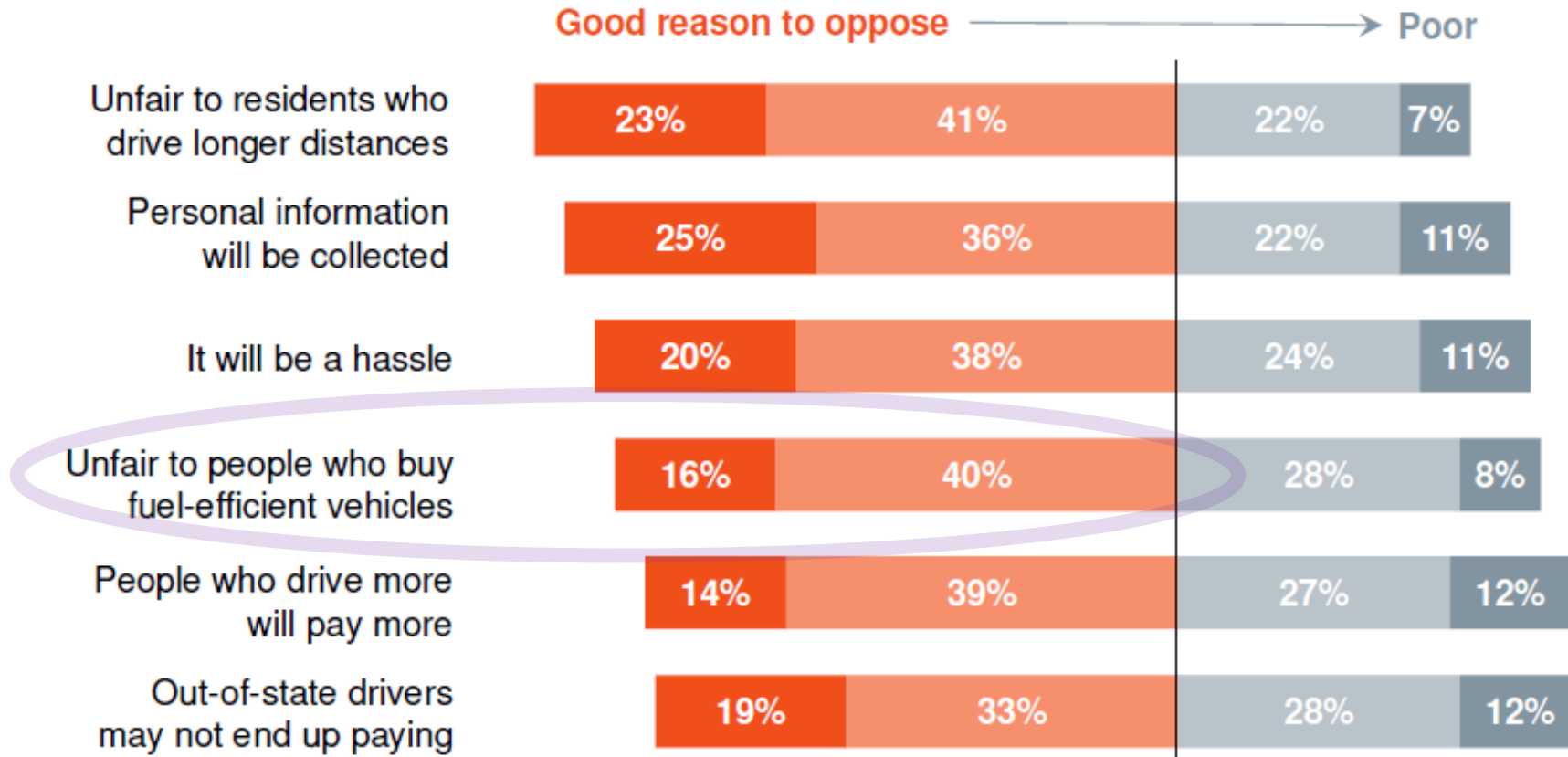
Messages to Support MBUF

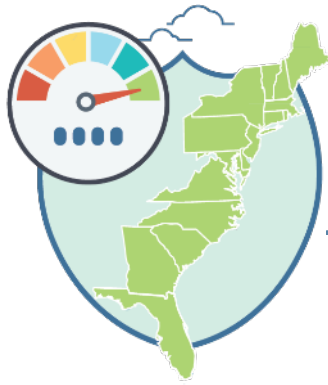




Statewide Survey (DE & PA)

Messages to Oppose MBUF

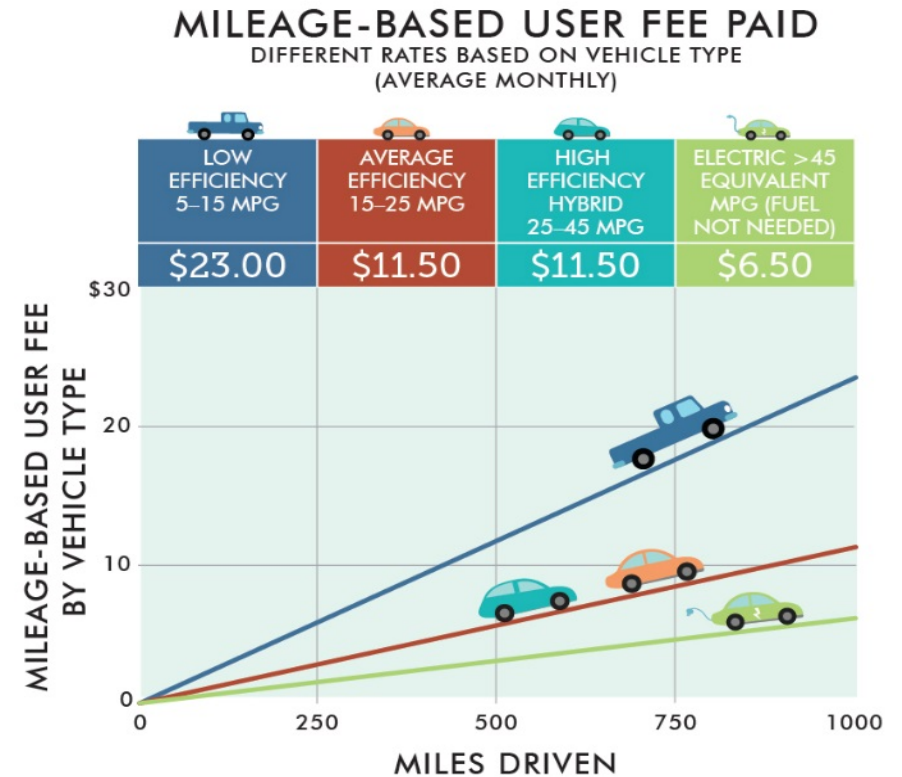
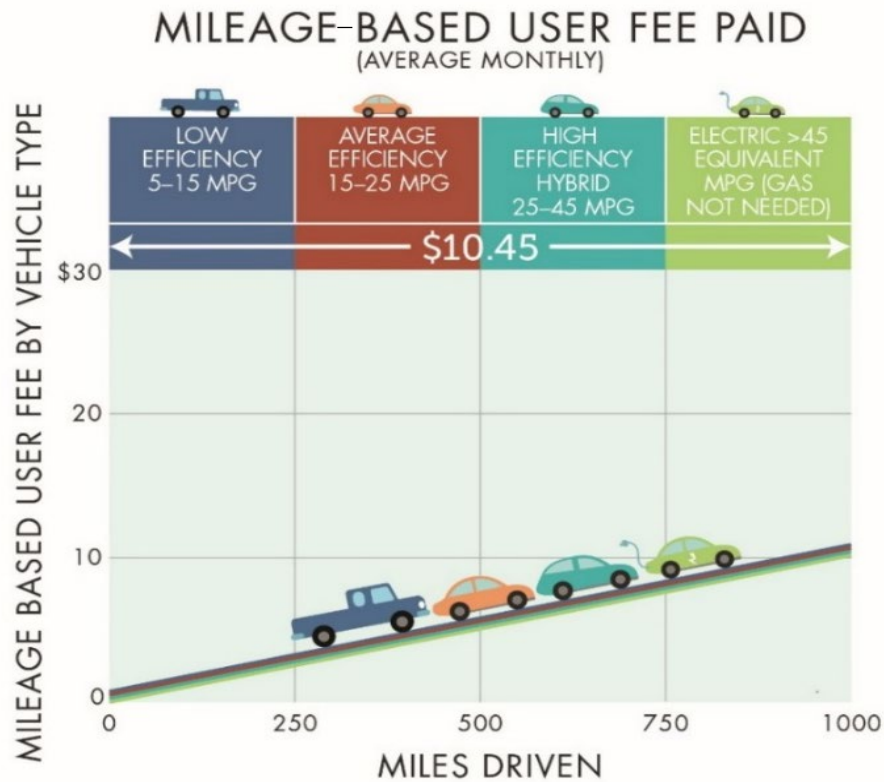




Perhaps Vary Per Mile Rates based on MPG

Go from this Approach

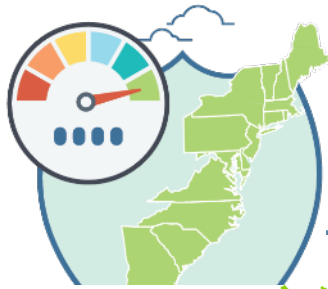
To this Approach



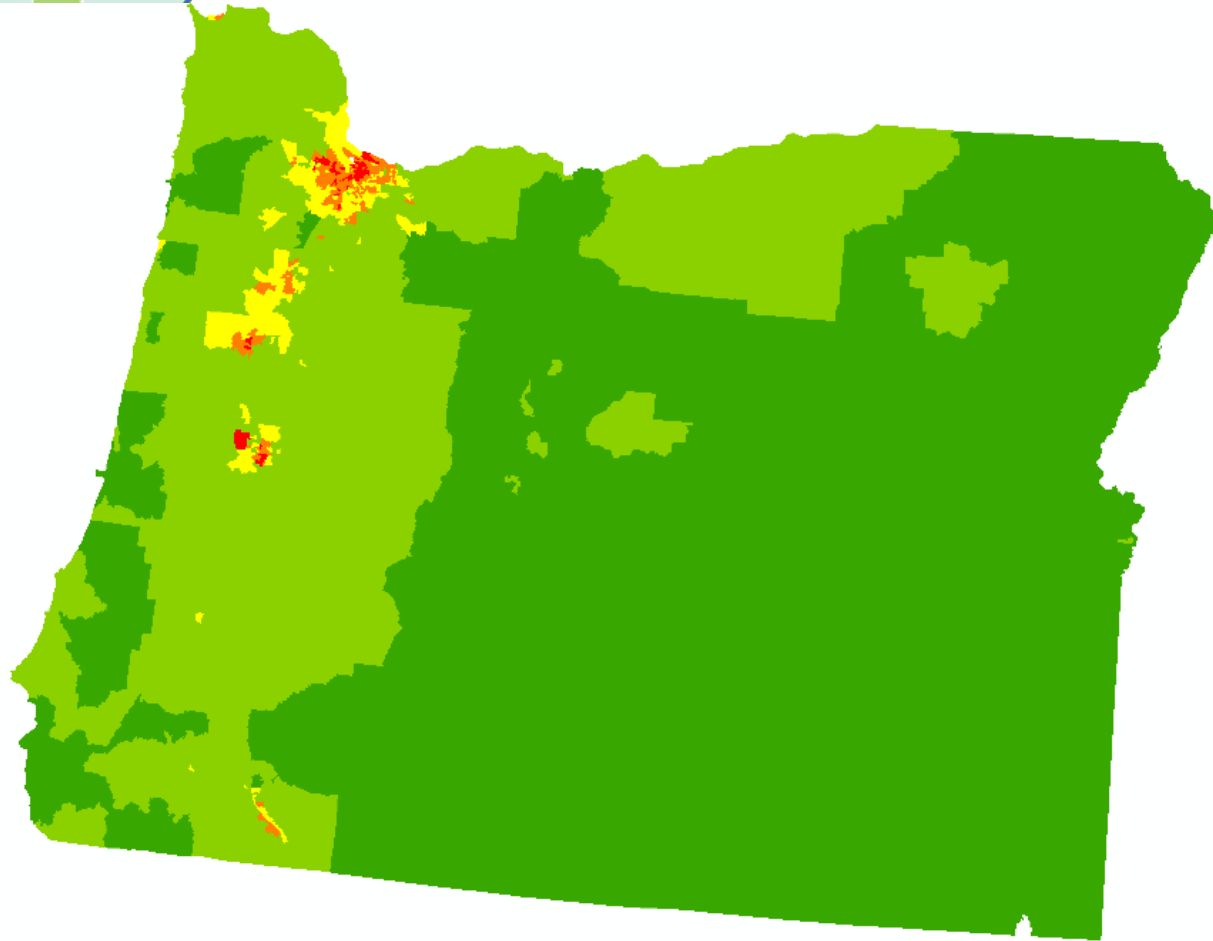
How would MBUF affect communities?

VS.










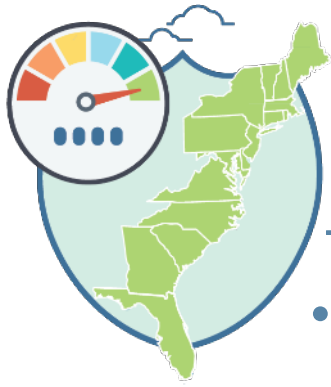
Example: Oregon



Payment Under RUC

-  Increase greater than 5%
-  Increase 5% to 1%
-  Change within +/- 1%
-  Decrease 1% to 5%
-  Decrease greater than 5%

Using a single revenue –
neutral MBUF rate based on
average MPG



Privacy May Be the Most Critical Concern

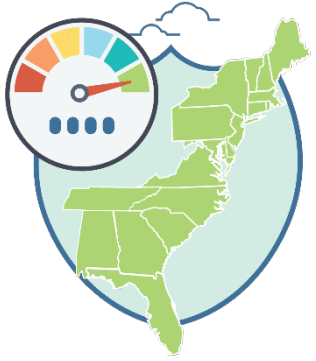
- Choices for reporting mileage
 - Don't require GPS
 - Provide one non-technology choice



Data becoming the “new oil”

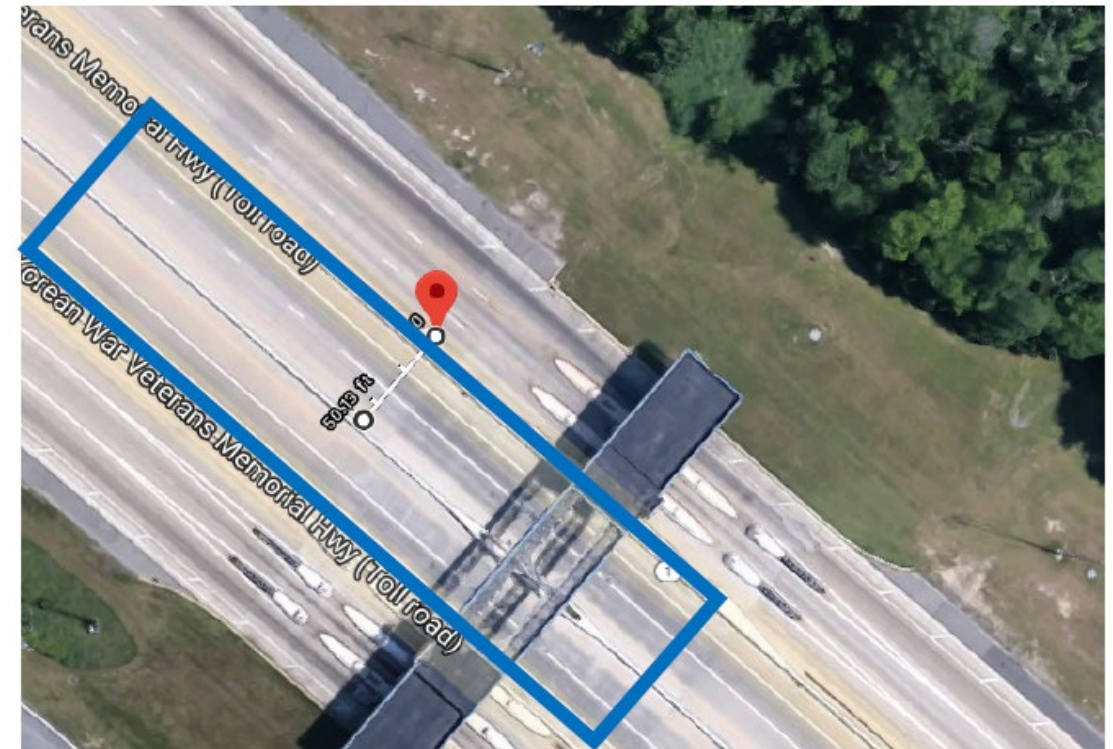
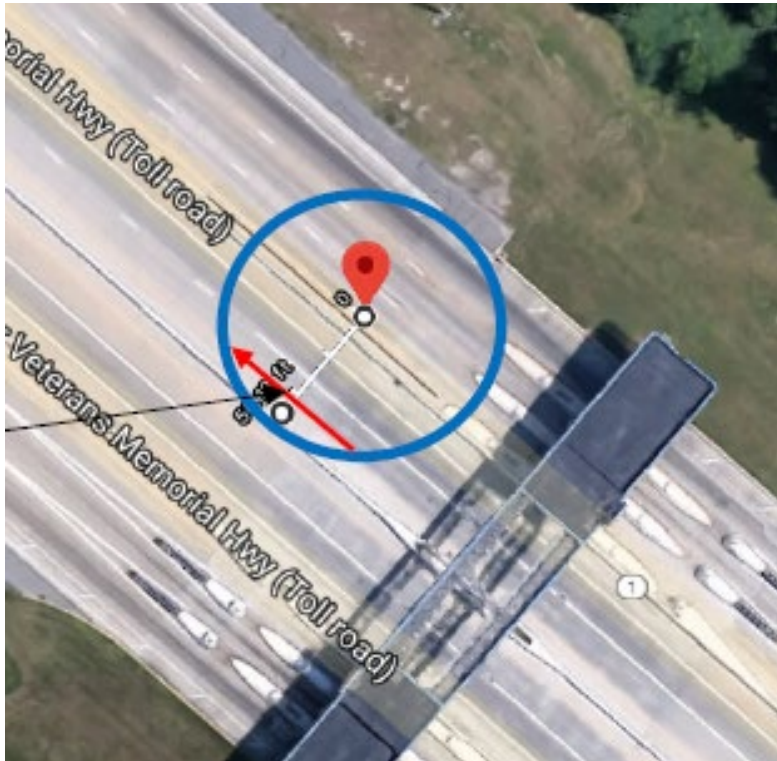
- Control and consent
 - What data can be shared with others
- Data retention
- Data anonymization
- Data security

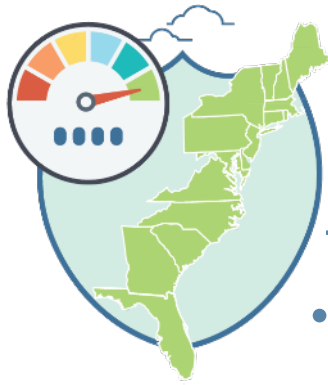




MBUF Can Accurately Calculate Tolls

- E-ZPass charges matched MBUF-based toll charges
 - Pennsylvania Turnpike Mainline, I-95 in DE, SR-1 in DE, US 301 in DE
- Change in how toll points set up between Phases 1 and 2

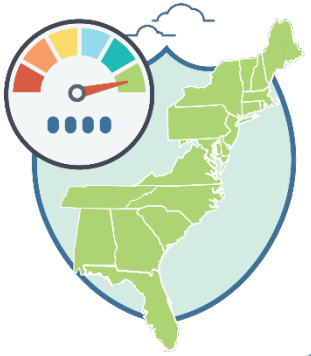




Other Issues / Opportunities for MBUF and Tolling Integration

- Should MBUF even be charged on toll facilities?
- Ability to differentiate between express toll lanes and general purpose lanes
- Ability to accommodate HOT lanes (identify vehicle is HOV)
- Potential for using tolling back office for MBUF account management
 - Transaction processing
 - Customer service
 - Possible economies-of-scale





Motor Carriers Must Be at the Table



Trucks contribute

45%

of the Highway Trust
Fund through fuel and
other taxes



Trucks make up

14%

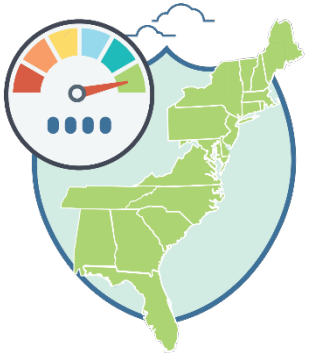
traffic on the nation's
highway system



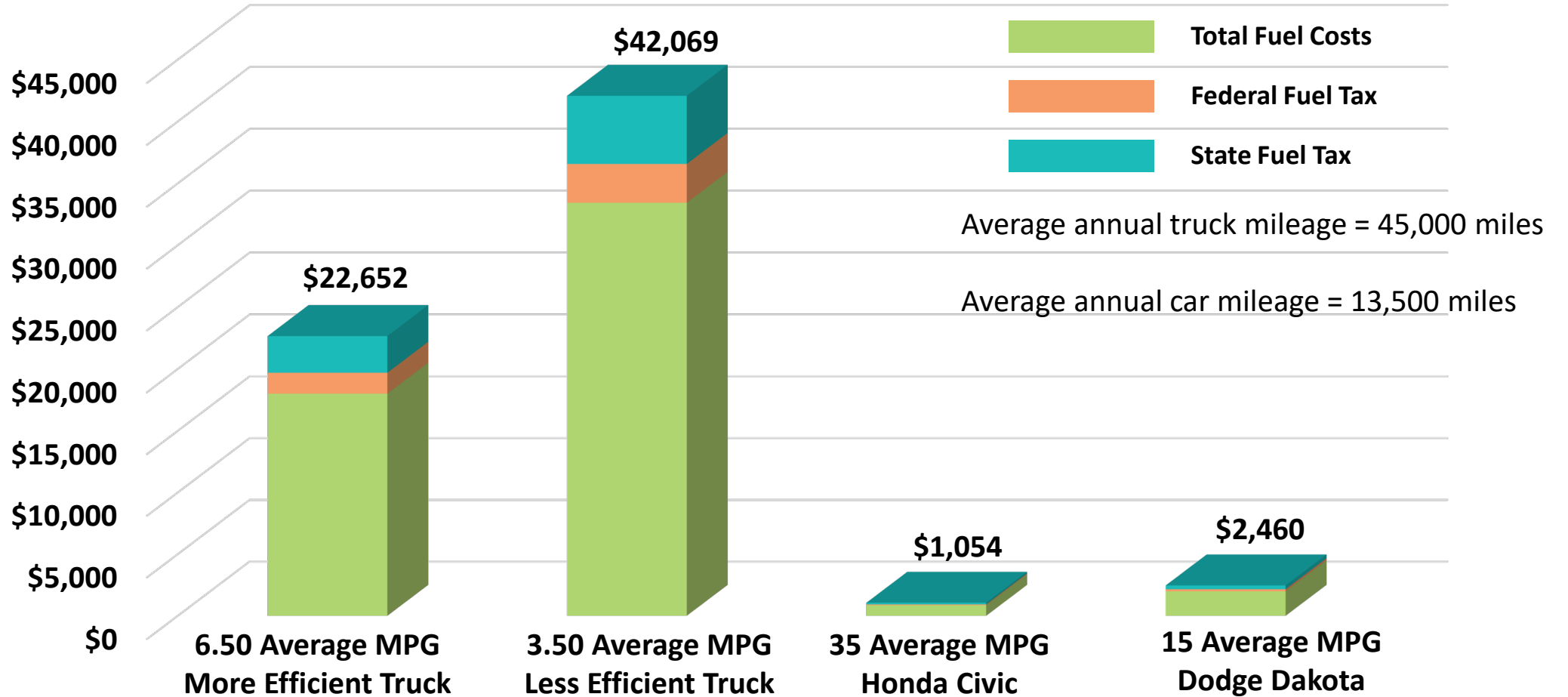
Trucks transport

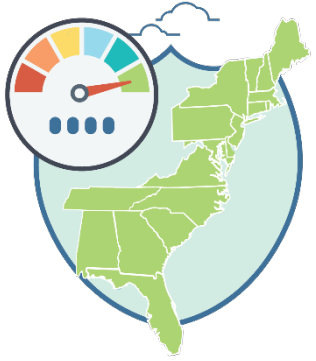
70%

of total domestic
freight tonnage



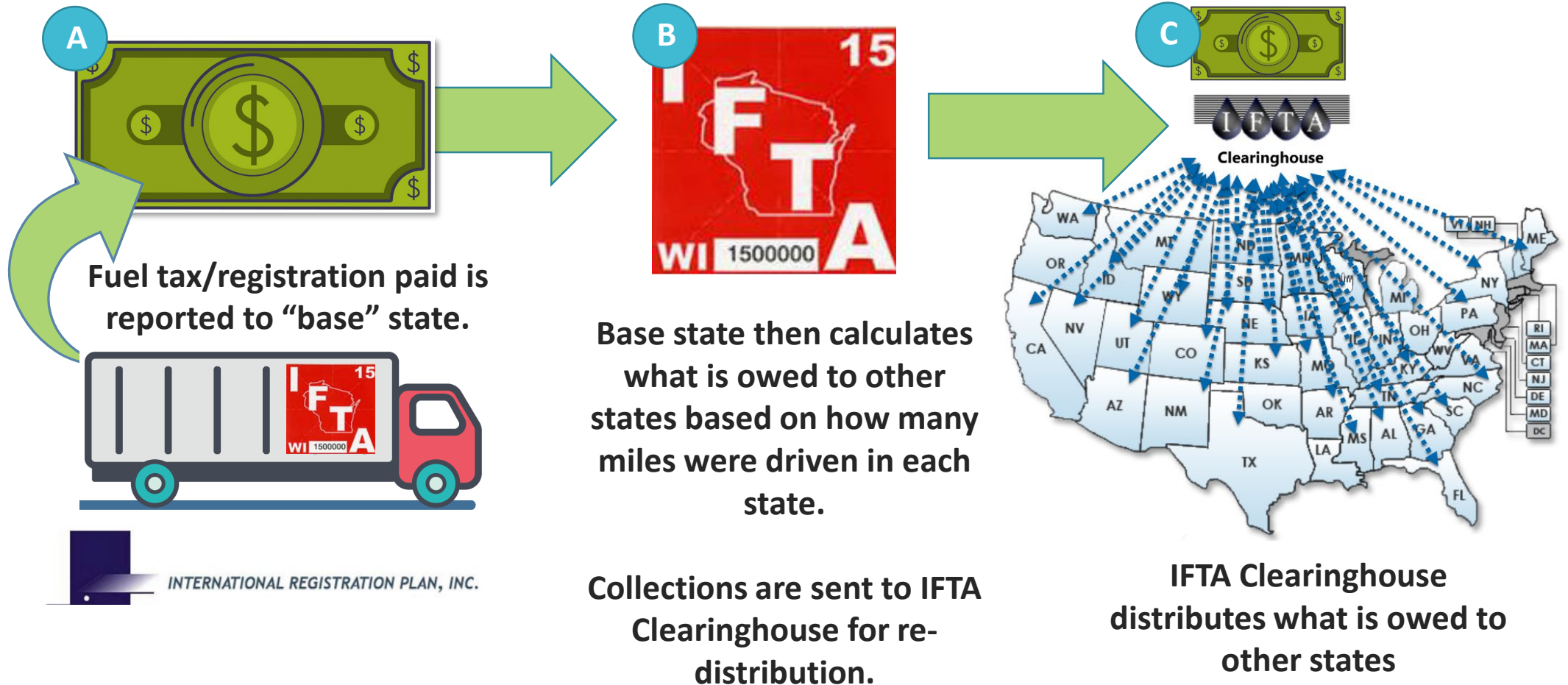
Trucks are Not Big Cars

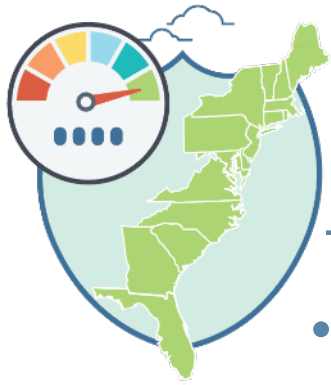




IFTA/IRP Potential Template for MBUF

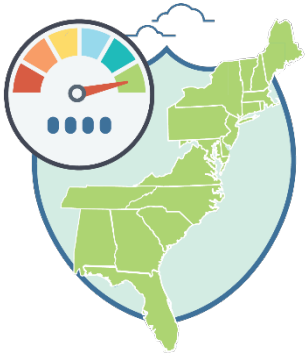
Also – rate setting for trucks is not straightforward





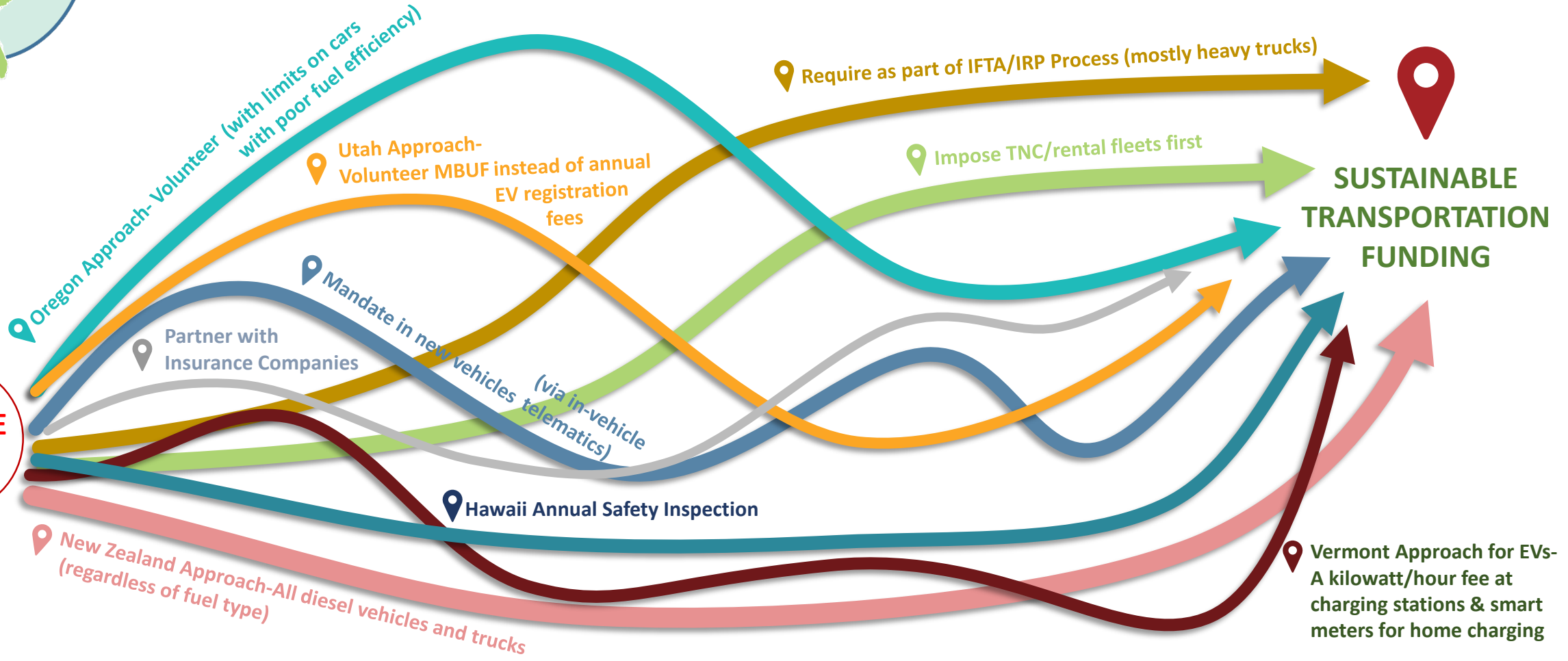
Other Findings and Needs for Trucks

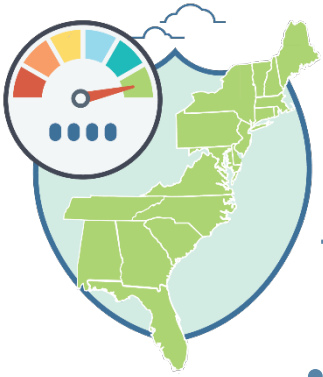
- Formed a Motor Carrier Working Group
- Per-Mile Rate setting is Critical
 - Average MPG for trucks varies significantly (%)
 - Potential for including weight (if fair)
 - Integrate other taxes in per-mile rate (e.g., fed)
- Potential issues with IFTA and MBUF
 - IFTA registrations do not include all trucks
 - Exemptions and surcharges vary between states



How could we get there?

**YOU ARE
HERE**

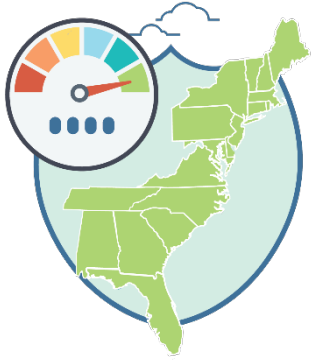




Pilots are the Way to Explore MBUF

- Hear directly from key stakeholders in your state
 - Then move to general public
- Real-world experience drives down concerns
- Design pilot to address state priorities
- Participation brings your voice into this national exploration





Additional Information

JACOBS[®]

- www.i95coalitionmbuf.org
- Lou.neudorff@jacobs.com