Minnesota Distance Based Fee Demonstration Technical Advisory Committee

June 22nd, 2021

Scott Peterson,

TAC Chair

DEPARTMENT OF TRANSPORTATION

Agenda

- Welcome – Scott Peterson
- Meeting Guidelines and Agenda Review – Lee Munnich and Ken Buckeye (5 min)
- June 14th Roundtable Review - Lee Munnich (5 min)
- Project Recap – Ken Buckeye and Mike Warren (10 min)
- National Perspective – Lee Munnich (5 min)
- Summary of Final Report – Mike Warren (15 min)
- Rate Setting Framework – Trey Baker (10 min)
- Review of Policy White Papers – Frank Douma (10 min)
- Discussion and Next Steps – Scott Peterson (20 min)
- Adjourn

Meeting Guidelines

•Mute your audio when you are not speaking. Unmute your audio when you are called on to speak.

•TAC members turn on your video. Project team members should mute your video except when speaking.

•Open the participant box. Use the hand raising icon if you would like to ask a question.

•You may also open the chat box and type in questions or comments at any time during the meeting. If you have a technical issue or comment, you may send a message to the host only.

•The meeting is not being recorded but the chat box comments will be saved.

Review of June 14th Roundtable

Lee Munnich

Humphrey School of Public Affairs

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Project Recap

Ken Buckeye, MnDOT

Mike Warren, WSP

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Demonstration Operations
Final By the Numbers

Total Miles Traveled	Total Fuel Gallons Purchased	Average Fuel Economy (miles per gallon)
565,389	18,068.83	31.32

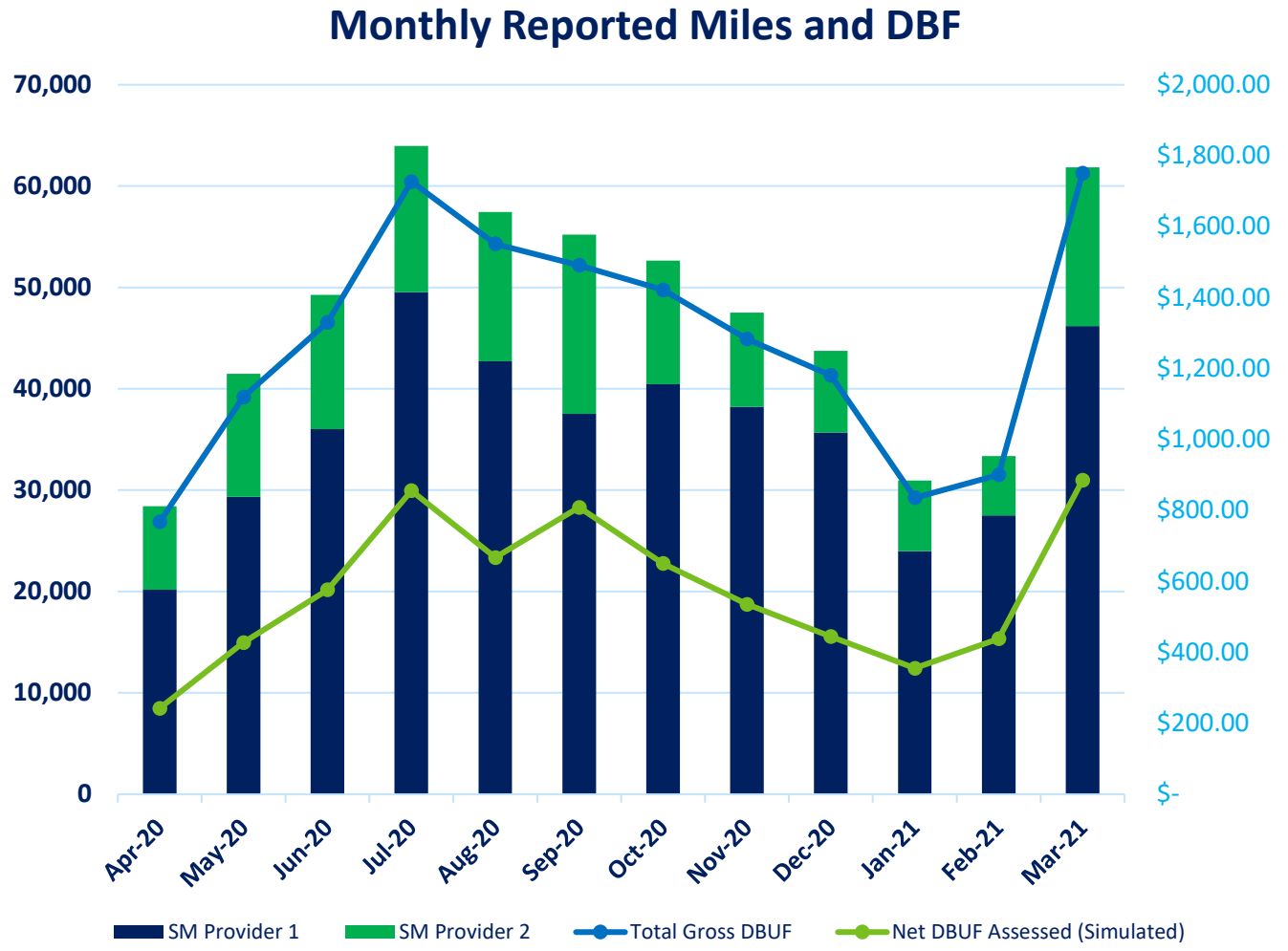
Total Gross Distance Based Fees (DBF) *(state and federal)*	Total Gross Fuels Tax Credits *(state and federal)*	Net Total DBF Assessed *(simulated)*
$15,358.67	$8,474.20	**$6,884.47**

As of data reported through March 30, 2021

- **2 Shared Mobility Providers**
- **61 total vehicles have participated / collected data**
- **64 active vehicles as of October 31, 2020**
  - ***Some vehicles are not utilized every month or have been decommissioned***

Demonstration Operations
Final Monthly Averages

- **47,153 Reported Miles**
- **1,505.7 Gallons Purchased**
- **$1,279.89 Gross DBF**
- **$573.71 Net DBF** *(After Fuel Tax Credits)*
  - **$329.32 State DBF**
  - **$244.38 Federal DBF**



National Perspective

Lee Munnich

Humphrey School of Public Affairs

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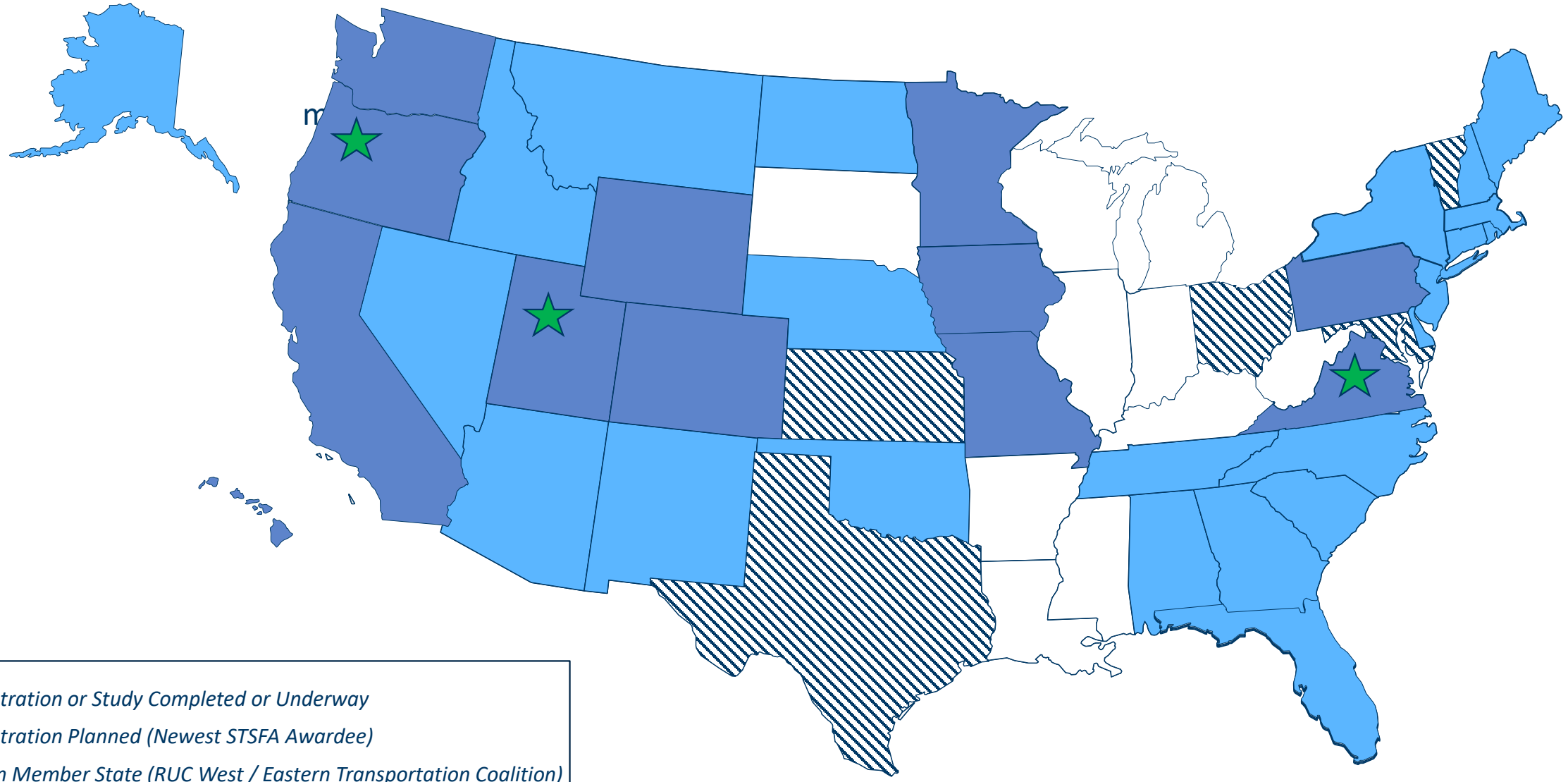
National RUC Studies Being Conducted



= *Demonstration or Study Completed or Underway*

= *Demonstration Planned (Newest STSFA Awardee)*

= *Coalition Member State (RUC West / Eastern Transportation Coalition)*

= *Legislative mandated RUC program*

National RUC Picture
Overview

In the 2019/2020 Legislative Sessions, 19 states had some sort of proposed RUC legislation (34 total pieces of legislation total)

- ***Nevada AB 483*** directs DMV to conduct a pilot program on annual vehicle miles traveled charging, as adjusted by type of vehicle and fuel system.

- ***Oregon HB 2881*** exempts vehicles at least 40 mpg from an additional registration surcharge of $33 and electric vehicles from a registration surcharge of $110 if they enroll in OReGO…Increased minimum OReGO fuel economy from 17 MPG to 20 MPG…Removed enrollment cap from 5,000 vehicles…Adjusted per-mile rate to 5% of per-gallon license tax

- ***Utah SB 72*** launches RUC program to include fully electric, plug-in hybrid, and gasoline hybrid vehicles. Participation is voluntary to pay a 1.5 cent per mile charge in lieu of an alternative fuel vehicle registration fee of $90 in 2020, which will rise to $120 beginning in 2021.

- ***Virginia SB 890*** establishes a voluntary MBUF program for owners of electric vehicles, alternative fuel vehicles or a fuel-efficient of at least 25 MPG vehicle who are subject to a new “Highway Use Fee.”

- ***Washington HB 1160*** required DOT to conduct RUC impact study on low-income households, establishes a RUC Working Group, and submits the Washington RUC Demonstration Final Report

National RUC Picture
INVEST Act

- Nearly doubles funding **(from $95M to $140M)** for VMT pilots across the country, encouraging States to begin implementing successful VMT programs.
- Includes potential language for cities, counties, and MPOs to participate
- Establishes a national VMT pilot program, including both passenger and light and/or heavy duty commercial vehicles in all 50 States, to invest in developing a sustainable funding mechanism for the surface transportation system
- Establishes advisory board for shaping national pilot
- Key focus areas of interoperability, privacy protection, administrative costs, equity, and innovation

Final Report Overview

Mike Warren

WSP

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DBF Final Report
Overview

- Provides the details leading up to and during the operational phase of the demonstration
- Establishes the rationale for studying distance-based fees
- Provides key findings, recommendations, and next steps for Minnesota to consider in DBF research
- Sets the stage for future initiatives
- **Eight Total Chapters:**
  - ❑ *Section 1:* Introduction
  - ❑ *Section 2:* Project Scope and Concept
  - ❑ *Section 3:* Phase 1 - Proof of Concept
  - ❑ *Section 4:* Phase 2 – Demonstration
  - ❑ *Section 5:* Demonstration Evaluation Results
  - ❑ *Section 6:* Key Takeaways
  - ❑ *Section 7:* Future of DBF in Minnesota
  - ❑ *Section 8:* Conclusion

Three appendices of supporting documentation:

- ❑ *Appendix A:* Rate Setting Framework
- ❑ *Appendix B:* Fuel Tax Credit Options Assessment Memo
- ❑ *Appendix C:* Mock Audit Results Memo

- **Finalizing report and developing executive summary and presentation for future use**

DBF Final Report
Project Goals

These goals were established at the onset, shared with FHWA, and used to evaluate whether the demonstration was operating effectively

DBF Final Report
Identified Firsts of any STSFA Demonstration

- ✓ Assess how a distance-based fee could be assessed using Shared Mobility providers
- ✓ Successfully collect DBF data from a Connected/Automated Vehicle
- ✓ Not rely on plug-in devices to accurately report DBF data
- ✓ Accurately report lane differentiation
- ✓ Successfully audit data and transactions through a State Department of Revenue
- ✓ Use a per-mile rate consisting of both the state and the federal motor fuel tax equivalents
- ✓ Support maintaining the motor fuel tax
- ✓ Develop a rate setting framework

DBF Final Report
Demonstration Key Takeaways

- The information necessary for DBF assessment can be accurately and reliably collected from fleet-based shared mobility providers and connected and automated vehicle (CAV) systems.
- Leveraging fleet SM providers' in-vehicle telematics systems eliminates the need for aftermarket devices to assess and collect fees. This helps future proof the fee system as telematics become a standard feature in new model vehicles.
- A DBF levied on fleet-based SM providers reduces the number of collection points for the state to administer, thus lowering overall system costs to the state.
- A statewide DBF could serve as a foundation for other transportation-related fees including congestion pricing.
- Factory installed telematics systems supports a natural migration to DBF as vehicles come factory equipped with embedded telematics, avoiding exorbitant challenges associated with procuring, installing, and maintaining aftermarket telematics equipment and devices.
- Financial reports and DBF information can be accurately, securely, and privately reported, collected, and transferred to state revenue systems

DBF Final Report
Recommendations

Share: Disseminate the results of this Project locally and nationally to educate and build community with relevant stakeholders.

Plan: Create the technical project documents required to procure necessary services to develop, implement and evaluate the larger-scale DBF project including a scope of work and budget that identify funding sources, necessary project team members and other required components and services.

Advocate: Perform legislative advocacy and education to promote and fund DBF projects in Minnesota.

Support: Convene state and local government, nonprofit, academic and other interested third party stakeholders to build community support of the DBF concept.

Partner: Develop partnerships with existing and emerging vehicle fleet owners that operate in Minnesota and with other necessary organizations required to deploy the project to engage in a larger-scale DBF demonstration.

DBF Final Report
Future Research Considerations

DESCRIPTION	CATEGORY	TERM
Administrative Costs – What are the potential policy considerations and parameters that would drive a high administrative cost?	Organizational	Short
How can demonstration lessons learned be used and scaled to larger DBF applications?	Organizational	Long
Role of the state in collection of potential federal DBF	Organizational	Long
Data Ownership – Who owns the data?	Operational	Long
What are rational fee schedule parameters, such as fuel type, location, and time-of-day?	Economic	Long
Does the state have the right to refund federal motor fuels tax paid if the net balance of a DBF assessment is negative?	Economic	Long
Calculation of fuels tax credits based on fuel purchased vs. fuel consumed	Technical	Long
Should out-of-state miles traveled be assessed a DBF?	Social	Short
If an EV enhanced registration opt-out option is offered, does that reintroduce inequity for low-efficiency vehicles?	Social	Long

DBF Final Report
Next Steps

- Capture last round of stakeholder interviews
- Incorporate final set of updates into final report
- Submit Final Report to FHWA
- Create Executive Summary and Legislative Presentation
- Identify potential topics for future DBF communications materials
- Await further word on next round of federal grant program
- Support potential National VMT Pilot lessons learned discussions

Rate Setting Framework

Trey Baker

WSP

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Minnesota DBF
Rate Setting Framework

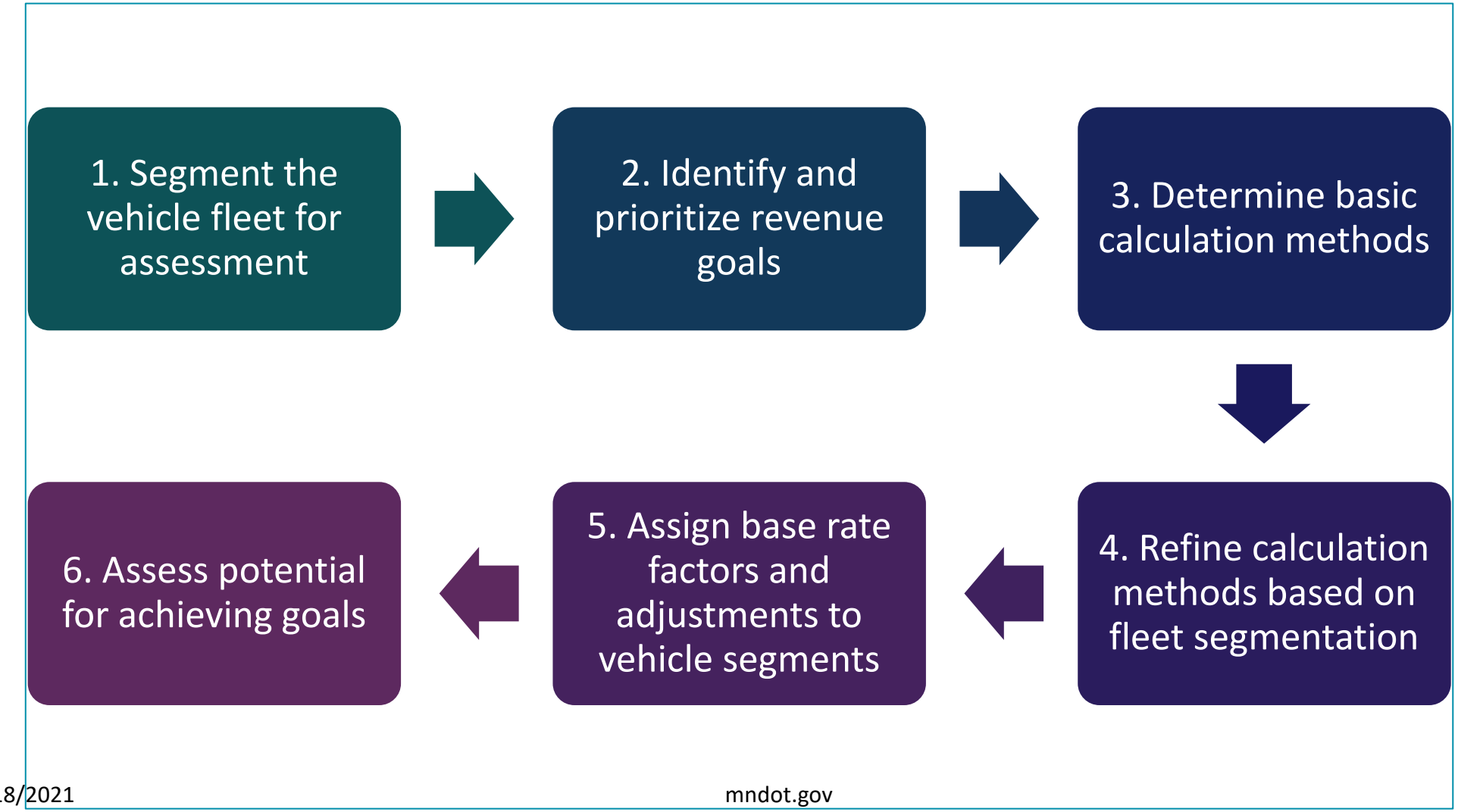
Premised on Equity and Fairness:

- A single rate for all vehicles would limit the state in achieving various transportation goals and objectives
  - Does not collect revenues in proportion to use
  - Reduces ability to incentivize environmentally friendly vehicle

Additional framework development considerations:

- Rates should not be set such that a vehicle would be assessed a lower rate for road usage than what it would be assessed under the current transportation funding system
- Different rate structures are required for different vehicle classes if the state is to achieve its numerous transportation policy objectives
- Fee structures should be fair and include incentives for vehicles that help the state achieve its transportation goals and objectives
- Fee structure should account for different transportation modes and service delivery models
- Vehicles should be charged an appropriate and proportionate share for their use of the roads regardless of their motive power, fuel type, or automation level.
- The motor fuel tax is a viable revenue collection mechanism and should remain in place for the time being. As vehicles with internal combustion engines come factory equipped with embedded telematics, a migration to DBF will be enabled.

DBF Rate Setting Framework
General Approach



DBF Rate Setting Framework
Fleet Segmentation

High Level Classification	Base-rate classifications	Adjustment Classifications
Light Duty Vehicles	Class 1 – Motorcycle Class 2 – Car Class 3 - Van/Pickup	• Engine type, powertrain, fuel type, fuel efficiency • DBUF assessment and reporting option • Service/industry type • Occupancy • Veterans status • Vehicle safety features
Commercial Vehicles	Class 4 - Bus, truck with trailer Class 5 - 2 axle single unit Class 6 - 3 axle single unit Class 7 - 4+ axle single unit Class 8 - 3 & 4 axle semi Class 9 - 5 axle semi Class 10 - 6+ axle semi Class 11, 12, 13 - Twin trailer semi	• Weight (loaded or unloaded) • Axel configuration • Industry type (farming/ranching, mining, lumber, etc.

DBF Rate Setting Framework
Base Rate Setting

- Four likely revenue objectives
  - **Revenue Neutral** – Generating the same amount of revenue as the state currently collects from drivers (passenger vehicles and commercial vehicles) for investment in the transportation system.
  - **Revenue Augmenting** – Generating revenue in addition to what the state normally collects from drivers for transportation investment.
  - **Use Monetization** – Generating revenues that account for various aspects of transportation system use..
  - **Cost of Collection** – Generating revenues to account for the cost of program operation and administration.
- Each objective entails a different methodology for calculating a base DBF rate.

Revenue Neutrality	Example Calculation Method
System Revenue-oriented: Calculate rate that will generate the equivalent amount of revenue as fuel tax receipts	Annual Fuel Tax Revenue divided by Total State VMT OR (Anticipated Fuel Consumption times the State Fuel Tax Rate) divided by Total State VMT
System Disbursements-oriented: Calculate rate that will generate revenues equivalent to fuel tax disbursements by the state	Total Fuel Tax Disbursements (with refinements) divided by Total State VMT
User-oriented: Calculate rate that will result in the average driver paying what they pay in fuel taxes	State Fuel Tax Rate divided by Average Fuel Efficiency

DBF Rate Setting Framework
Adjustments

- Are levied on top of the base rate to increase or decrease or decreases the final assessed amount
- Adjustments are made in response to policy objectives
- Not evenly applied across all vehicles

Objective	Applicable Rate Factors
Congestion Mitigation	Time-of-day, occupancy, vehicle type
Income Equity	Household income
Geographic Equity	Location (rural, urban or suburban)
Accessibility	Location (presence of underserved populations
Environmental	Fuel type, engine type, fuel efficiency, time-of-day, occupancy

DBF Rate Setting Framework
Examples

ICE Light-duty vehicles as a replacement to the fuel tax

Baseline Rate		Adjustment
Revenue Neutrality	**Cost of Collection**	**Geography**
$ per mile based on the states motor fuel tax rate and average fuel economy for Minnesota passenger vehicles	$ per mile reduction based on the use of in-vehicle telematics for assessment	$ per mile discount for travel in rural areas

ICE Commercial Vehicle to replace the fuel tax and account for roadway wear-and-tear

Baseline Rate		Adjustments	
Revenue Neutrality	**Usage monetization**	**Congestion Pricing**	**Geography**
$ mile fee based on annual state commercial fuel tax revenues and annual commercial vehicle VMT	$ per mile assessed on weight and axle configuration based on the estimated impact per VMT to roadways in terms of wear and tear	$ per mile when traveling in a specified urban area during peak periods	Congestion pricing charge applied only in designated urban areas or on designated urban roadways.

AF Vehicles used in Shared Mobility Services

Baseline Rate		Adjustments	
Revenue Augmentation	**Cost of Collection**	**Service type**	**Accessibility improvement**
$ per mile based on annual contribution of EVs to future needs divided by EV VMT	$ per mile reduction based on the use of in-vehicle telematics for assessment	$ per mile as a TNC based on local considerations.	$ per mile reduction when operating in underserved areas based on local considerations

DBF Rate Setting Framework
Next Steps

- Define the range of policy options and adjustments that should be incorporated within the framework
- Analyze state and federal data resources, research reports, and industry publications to identify data for use in rate calculations
- Refine calculation methodologies tailored to the state of Minnesota
- Engage the TAC to prioritize policy objectives and identify optimal rate calculation methods
- Examine and assess other rate setting considerations including:
  - Impact of different phase-in approaches on rate setting;
  - Potential indexing adjustments;
  - Incorporation of local fees;
  - Incorporating other transportation revenue sources in the calculation of revenue neutral rate factors such as vehicle registration and other use fees.

Review of Policy White Papers

Frank Douma

Humphrey School of Public Affairs

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Discussion and Next Steps

Scott Peterson

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Thank you for your participation!

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