

## Minnesota Distance Based Fee Technical Advisory Committee (TAC) Meeting

10:30am- 12:00pm

03/02/2021

Zoom

Convene: 11:30am

Adjourn: 12:04pm

### List of attendees:

#### TAC Members:

Nick Thompson, Met Council

Margaret Donahue, Transportation Alliance

Bill Dossett, Shared Mobility

Emily Murray, Assoc. of MN Counties

Scott Peterson, TAC Chair

Shawn Kremer, (for Elizabeth Connor) MMB

Craig Plummer, DPS

Russ Stark, City of St. Paul

Kathleen Mayell, City of Minneapolis

Brendan Jordan, Drive Electric/Great Plains Institute

Dawn Hood, CTS

Glen Kleven, DOR

#### Core Team Members:

Ken Buckeye

Chris Berrens

Serge Phillips

Jeanne Aamodt

Ray Starr

Andrew Emanuele

Lynn Poirier

Lee Munnich

Frank Douma

Joe Loveland

Jerry Zhao

Adeel Lari

Raihana Zeerak

Camila Fonseca-Sarmiento

Meredith J Benesh

Victoria Gutierrez

Mike Warren

Markell Moffett

- Scott Peterson- Opening Remarks
  - Welcome
  - Craig Plummer from the Department of Public Safety (DPS) is replacing Tony Anderson on the committee for now.
  - This is the fourth TAC meeting and we are planning to have two more in the coming months
  - We are in the final month of the demonstration. Information about it will be coming in some of the coming meetings
  - Has discussed with Ken about doing an additional TAC report with information put together from our conversations and list issues, concerns, and other things that would be of value when considering a potential adopting of a DBF system
    - We will discuss more at the end of the meeting
  
- Ken Buckeye- Agenda Overview
  - See agenda
  - This is the final month of data collection, but we anticipate two more meetings in April and June to wrap this up.
  
- Lee Munnich- National Overview
  - Talk has been happening recently about DBF or VMT fees at the national level.
    - Secretary Buttigieg (USDOT) recently said that there would be a need to move to an alternative user-based approach to fund the trust fund in the future
    - President Biden has also expressed support for this approach
    - At the latest quarterly Mileage-Based User Fee Alliance (MBUFA) Senator Carper's key transportation staff person talked about the Senator's desire to move forward on a national trial with a 10-year transition.
      - By the next reauthorization bill, they are hoping to begin implementing this at a national level
    - There seems to be a strong commitment towards passing an infrastructure reauthorization bill as an indexed stage right after the COVID-19 relief bill passes.
      - Hoping to have a bill by May
      - Have asked MBUFA for inputs for a national trial, MBUFA is updating their previous recommendations in the coming weeks.
      - MN demonstration will be an important element in the implementation of a national trial (reduced administrative costs using embedded telematics)
      - Bipartisan support for a reauthorization bill in the house, with the Chair hoping to get it done by a 5-year timeline, minority

transportation ranking member has expressed willingness to do it now, so there is willingness in Congress to move on with this.

- The national pilot would be a focus of this legislation, but there is a likelihood of state grants for pilots, as it relates to a national trial and 10-year implementation focus
  - Given Secretary Buttigieg's comments as well as the discussions with Senator Carper's staff, they see an expanded role for the USDOT in a national trial moving towards implementation
  - So far, the role of USDOT has been in administering the grants, but they will be ramping up their efforts. They are hosting a workshop on the national pilot this week
- Ken Buckeye-State Overview and plan on moving forward
    - Motor Fuel Tax (MFT) forecasts for years have shown that it will decline due to increased fuel efficiency, and we have reached that inflection point where MFT is declining.
    - Last year was an anomaly; the forecasts showed a 1% decline, but it ended up a 6% decline due to a decline in VMT
    - The long term forecast indicates that there could be about a half percent decline year over year in MFT for the next 20 years or so
    - Important developments happening in the EV world
      - 230 new models will be introduced in 2021 worldwide, 65 will be in the US
      - Promise of more vehicle embedded telematics
      - About 20% of vehicles could be EVs by 2030
      - Longer battery life
    - Rep. Elkins Bill HF 523
      - Has been introduced in the State House; is similar to the Utah RUC law
      - Replaces \$75 EV surcharge with a mileage-based rate in Minnesota
      - Assumes DVS will enter into agreement with service providers to collect that fee
        - Cost of account provider service cost passed onto vehicle owner
        - Vehicles not enrolled are charged based on formula
      - Rates based on gas powered equivalent vehicles
        - Recognizes five classes of vehicles (EPA);
          - Sedans, SUVs, truck SUVs, minivans, and pick-ups
      - This bill is in line with our vision of incremental development of a BDF, leaving MFT in place, and recognizes that as technology advances the replacement of MFT might become a possibility
    - This is the last month of data collection, but two more meetings coming up to wrap this demonstration up
      - April meeting to review draft report
      - June meeting to review the final report
    - Destination:

- What is the final outcome of this demonstration; the recommendations; where the federal influence would take us; and the state desire to have another demonstration or a more aggressive approach toward deployment?
      - Therefore, a TAC report would be good supplement to this project and help discern where this project should be headed
    - Comment in the chat from Brendan Jordan: If there is time on the agenda, I would like to say a few words about the Elkins VMT tax proposal.
      - From the Drive Electric perspective, there are some serious concerns to Rep. Elkins proposal.
        - It is not comprehensive, it only singles out EVs
        - Fuel efficiency: EVs are assigned an EPA mpg rating, but this proposal is not using an individual mpg rating. It uses the average
        - The administration cost per vehicle is \$125, this would be passed on to the EV driver. It will not go to the road. With the existing system it would be \$200 (administration cost + EV registration fee), which would be a very high EV tax, which would only break even.
        - There is an administrative as well as fairness and consistency questions related to the proposal
        - At a high level, finding a way to make EVs pay a gas tax, which would not assign them mpg per class, but treat them the same way as the other vehicles, and use actual miles driven and actual mpg assigned. Some elements of the bill are promising.
      - Ken Buckeye: Meant to say the project design and vision was aligned closely with Rep. Elkins proposal, which is incremental, not universal, leaves MFT in place.
        - We share your concerns about account manager and collection costs, which is why we are interested in embedded telematics to collect that information to reduce costs.
        - It is not a perfect bill, but a step forward
- Frank Douma- C/AV Alliance Update
  - Governor Dayton appointed an advisory committee of C/AV
    - Their report in 2018 recommended a statewide coalition to coordinate C/AV activities.
    - In May 2020, the successor advisory committee appointed by Governor Walz established the alliance
      - It has a number of goals; (link to the goals in the chat: <http://www.dot.state.mn.us/automated/innovation-alliance.html>)
      - There are several committees that are part of the alliance
        - More informal networks than the advisory committee

- Participation is open in committees: Safety, infrastructure investment, labor and workforce issues, outreach and education, connectivity and data (Frank co-chairs)
  - Meeting since last fall- a number of privacy principles have been set
  - These data privacy principles may apply to a DBF system as well
  - A MnDOT office is also working with another state agency looking at security by design, that is how to collect information about individuals, and not collect more than needed, and handling data
- Raihana Zeerak- Summary of social equity survey results
  - The analysis is based on 10 complete responses
  - Social inequities in a DBF vs. MFT- Three themes appeared:
    - First, four respondents feel that a DBF system will manifest inequities based on income, the need for a bank account, and accurate payment for road damage.
      - Two respondents mentioned that low income and those who drive for a living have to drive longer distances, and will end up paying more under a DBF- one of them also mentioned that disparities based on the need for accurate payment for road damage between large and small vehicles could be exacerbated.
      - Two respondents mentioned that it would be necessary to have a bank account under a DBF, which would be inequitable for unbanked people
    - Second, two respondents consider DBFs as an equitable solution
    - Lastly, three respondents think that it would depend on:
      - Pricing structure
      - How it is instituted
      - Revenue allocation: if used for transit and other transportation modes, it could be more progressive.
      - If DBF replaces some of the progressive elements of transportation finance like tab fees and motor vehicle sales tax (MVST), it could exacerbate the inequities, but if it replaces MFT only, it would be neutral
  - Social aspects that should be considered in the design of a DBF system
    - The majority of respondents believe that income and disabilities should be considered in the design of a DBF system. Five respondents believe that race, three respondents believe that other underserved populations should be considered
    - On the other hand, over half of the respondents feel that age and gender should be considered to a small extent or not at all.

- Other characteristics to be taken into consideration in the design of DBF rates to make them less regressive:
  - More than half of the respondents believe that time of day and vehicle occupancy should be considered in the design of DBF rates. Thirty percent of the respondents believe that the income level of the vehicle owner should be considered.
  - Four respondents mentioned trip location should not be considered at all
- Policies outside the fee structure to make the DBF system more equitable for different populations:
  - The extent to which public transit, active transportation, and access to ridesharing and crashing should be improved for general public certain populations
  - Overall, most of the respondents think that public transit, active transportation, and access to ride-sharing and car-sharing should be improved for both the general public and certain populations
  - A higher percentage of the respondents believe that these options should be improved for certain populations.
- Changes to the current transportation revenue system to make it more equitable for different populations:
  - Two main themes: the potential to allocate transportation revenues differently and to improve transportation access under DBFs; and the progressivity that exists in some elements of the current transportation revenue system.
    - Two respondents believe that under a DBF, some transportation revenue could be allocated to for example transit and active transportation and to improve transportation access for low-income people and those with disabilities
    - Two respondents believe that some of the elements in the current transportation system are already progressive to some extent. They mentioned that MVST and tab fees, for instance, are already progressive as they are directly linked to the value of a vehicle. Those who purchase more expensive vehicles are assumed to have greater ability to pay.
  - One respondent mentioned that payment of vehicle registration fee as a lump sum burden users and suggests spreading out its payment
  - One other respondent said that a road usage fee would be appropriate as currently a lot of the transportation system is paid for by the general public, so shifting that burden to actual road users would be more fair
- Credit/subsidy implementation in a hypothetical DBF system
  - Eligibility: geographic areas, income, and time of day.
    - The subsidy should not make driving cheaper.
    - Invest in alternatives to driving that improve air quality and reduce reliance on highways

- The subsidy could be used to incentivize travel during certain times of day or in certain areas.
  - Administration:
    - Based on some other income-based program eligibility, income tax data, an application process for users to request the subsidy and be provided when people submit their income tax return.
  - Funding: Half of the respondents believe the credit should be funded through a surcharge on a DBF while one respondent thinks it should be funded through a surcharge on vehicle registration and another believes it should come from DBF revenues.
    - One mentioned DBF revenues but not a surcharge
    - One mentioned a DBF surcharge, but they would leave it to finance experts
    - One respondent had no strong opinions on this
- Other considerations:
  - Determining the constitutional requirements for how DBF funds would be used
  - A simultaneous fuel tax and DBF to properly price fuels given their negative environmental impacts,
  - Starting with a simple program with room for added complexity later
  - Consideration of how to handle out-of-state road users
- Lee Munnich- Rural/Urban Equity
  - Rural/urban equity concerns in consideration of DBF or mileage-based fee as a future source of transportation system funding both at the national level and state level has been whether drivers in rural areas would be disadvantaged relative to their urban counterparts
  - Given the greater travel distances to work and other destinations in rural areas compared to the shorter travel distances in urban areas, all things being equal, rural drivers would be paying more for the miles they traveled with a fixed fee based on miles-traveled. The question is are all things equal between urban and rural drivers?
  - Recent studies show that rural drivers may in fact be better off financially with distance-based fees than under the current gas tax
    - A 2010 study on the impact of switching from a fuel tax of 24 cents per mile to a flat 1.2 cent per mile VMT tax using the example of the state of Oregon
      - The study found that households in rural areas would benefit from a change in tax regimes from a fuel tax to a VMT tax
      - This is because on average, rural households own vehicles that have lower mpg even though they drive more miles than urban households
    - A 2017 EDR Group study for the Western Road Usage Charge Consortium (RUC West)

- According to the study projections, on average, rural households would pay 1.9%-6.3% less and urban households would pay 0.3%-1.4% more state tax in a RUC system
    - A 2019 paper points out that rural drivers are currently paying more in fuel taxes because they drive more
      - However, even with this reality, there should be no difference in how switching to road user charges impacts rural drivers.
    - A 2017 study found that a VMT system that includes congestion pricing would impact urban and higher-income drivers more than rural and lower-income drivers.
  - Scenarios:
    - Status quo: Continue the reliance on the motor fuel tax with no new DBF.
      - Rural drivers will continue to pay more than urban drivers
    - Flat distance-based fee: Replace MFT with a flat rate DBF
      - Rural drivers would pay less than their urban counterparts
    - DBF with congestion pricing: Combine a DBF with congestion pricing
      - Rural drivers would pay less than urban drivers
    - Parallel systems: Continue the MFT but initiate DBF on some vehicles such as EVs, AVs, fleets, those who choose to pay DBF in lieu of the fuel tax, or a separate DBF for the Metro region or Metro counties only.
      - Would leave most rural drivers with the status quo of the MFT but could increase revenue in urban areas. Rural drivers would also pay these DBF to the extent they use roads in urban areas
  - Given the challenges and costs of retrofitting a system for a DBF, it is most likely that this last scenario of parallel systems would be the way that DBFs might be introduced in Minnesota
    - The current Minnesota pilot offers an opportunity to test a system which could build upon in-vehicle technology and platform technology
    - Under this scenario, DBFs would be introduced incrementally
    - Shared mobility services such as car sharing as well as EVs and AVs are likely to be most common in urban areas, and thus would not have an impact on the tax burdens of rural drivers who would continue to pay the MFT
- Camila Fonseca- Administrative Costs
  - Administrative costs of a DBF system is higher than those of the MFT system
  - Some studies have estimated these costs:
    - As a share of total revenue collected, a widely implemented DBF system administrative cost would be between 5% to 13%
      - MFT is currently less than 1%
        - In MN it is 0.2% according to the DOR
      - Ken Buckeye: How did you reach to that estimated DBF administrative cost? What is the source of that information? The



current experience shows a much higher collection cost today due to no state going to full deployment.

- It is from a study that estimated these costs based on a statewide DBF implementation
  - Per VMT, a DBF system would cost between \$1.79 to \$65 per 1,000 VMT
    - \$65 DBF cost is from the experience of Germany; applies to very heavy vehicles and specific roads, so is very context specific
    - MFT costs \$0.10 per 1,000 VMT
- DBF pilots have estimated administrative costs:
  - Oregon pilot from 2019 cost is 40% of the total revenue
  - The estimated costs in different pilots vary a lot and depend on different factors such as definition of administrative costs
  - One pilot includes education and outreach, monitoring, software changes, compliance and enforcement etc. in the administrative costs
  - Other key factor is the use of technology: In CA pilot, the costs vary depending on technology level (high and low technology)
  - Also depends on the entity in charge of collecting and aggregating the DBF
    - A commercial partner such as a SM in MN demonstration
    - State collecting DBF from each individual vehicle
- Three factors that can result in reduction in administrative costs
  - An increase in the number of vehicles in the collection system
    - Currently MFT is collected from 485 distributors in MN
    - If a DBF were collected from individuals, it would be 5.6 million registered vehicles in MN
    - At SM provider level: 2
  - A commercial partner that centralizes the DBF collection
    - Bring value added services that offset some of the administrative costs of the DBF system
  - An integration of DBF with other collections systems (such as tolls or registration fee)
    - The I-95 corridor study estimated a 20% reduction in administrative costs when integrated with another collection system (from \$51 to \$40 per vehicle)
- WA RUC:
  - As the number of vehicles involved increase, the annual cost per vehicle decline
  - State-run scenario: Costs are much higher than when using a commercial partner
- CA RUC: Different scenarios of implementation depending on the technology used
  - In all scenarios costs are higher compared to MFT costs

- Over time the costs are declining assuming technological breakthroughs that increase consumer adoption of in-vehicle services and serve as a platform for DBFs
  - MN Demonstration
    - Collaboration between MnDOT and SM providers
    - Aims to improve the administrative and political feasibility of a DBF system
      - Potential for higher political feasibility
        - Addresses privacy and data protection concerns as there are already policies in place that prevent dissemination of personal and identifiable information
      - Potential for higher administrative feasibility
        - It reduces collection points
        - It uses existing in-vehicle technologies
    - Collection costs:
      - SM services are expected to continue growing (their VMT will grow)
      - DBF system could be expanded to other SM services such as ride-sourcing and car sharing
      - Integrate DBFs and other charges levied on SM services (tab fees, tolls, etc.)
        - Total tax burden on SM is currently 22%
      - SM providers can operate in multiple states allowing for easy interoperability of the DBF system
- Discussion:
  - Ken Buckeye: Were there any discussion of vulnerabilities of using add-on technology in terms of evading paying the fee/avoid charges in terms of enforcement costs? Because using add-on technology can add additional vulnerabilities as there is a possibility of disconnecting the device without any impacts on vehicle operation unlike using embedded technologies.
    - This is one driving force for us that we are using embedded technology, it reduces that vulnerability and collection costs, and enhances data privacy and security.
    - The I-95 corridor administrative costs include enforcement costs
  - Nick Thomason's comment in the chat: It may help if we compare collection costs to more systems that have billing for use because the fuel tax collection is so efficient
    - The efficiency to collect is the main issue for those opposing a DBF system when comparing to MFT collection costs
    - Framing the discussion a little broader by comparing it to other infrastructure such as water, electricity that have devices in that track usage and billing system might help policy discussions
    - Chris Berrrens comment in the chat: Such as the Sales Tax?

- Reframing the discussion about overhead costs makes sense to what is a more logical analogy along side comparing against administrative overhead costs of the existing DBF pilots in the US
  - Jerry Zhao's comment in the chat: Sales tax is very easy to administer
  - Scott Peterson:
    - Considering the increase of EVs, people will need to rethink how to use their motor vehicles. If we achieve becoming more electrifying in transportation, collecting gas tax isn't an option. People will be charging at home, planning trips around availability of charging stations, so, we should think about the given options in electrified transportation; what are the lowest cost options to use
  - Ken Buckeye: good discussion in the chat
    - Kathleen Mayell: I agree with trying to frame this differently in terms of comparison of administrative costs.
    - Serge Phillips: I think the comparison to other utilities idea would make for a great pilot program proposal.
    - Jeanne Aamodt: All great points
    - Kathleen Mayell: Agreed. Look forward, not backward.
    - Margaret Donahoe: Administrative costs are real and they take away from the amount of money available to invest in roads and bridges. That's why 28 states have adopted a flat, annual fee on electric vehicles to compensate for the fuel tax not being paid.
- Mike Warren- Demonstration Update
  - Timeline and status:
    - We are in the last month of data collection
    - Collecting data from SM providers, SM providers are creating revenue reports and sending it DOR
    - No quality controls done by WSP
    - In the first phase, WSP was creating the reports
    - In the second phase, WSP validated the report
    - WSP is also working with DOR to do a mock audit, tracing back information to the individual miles reported (results will be available in the next TAC meeting)
  - Numbers as of January 31st, 2021
    - Total VMT: 470,654
    - Gallons of fuel purchased: 13,986
    - Average fuel economy: 33.65
    - Involving 64 vehicles with two SM providers
      - 60 active vehicles since January
    - Total DBF (federal and state): \$12,707.68
    - Total gross fuel tax credits (federal and state): \$7,146.04
    - Net total DBF assessed: \$5,561.64

- Monthly averages:
  - 47,065 Reported Miles
  - 1,523.7 Gallons Purchased
  - \$1,270.77 Gross DBF
  - \$556.16 Net DBF (After Fuel Tax Credits)
    - \$318.80 State DBF
    - \$237.36 Federal DBF
- AV testing:
  - AV market is moving towards Automated Connected Electric Shared (ACES) model
  - Conducted an AV testing with VSI labs based in St. Paul
    - MnPass express lane test to detect lane location and vehicle occupancy test
    - Results (see the slides) show HOV lane, average speed in lanes, and vehicle occupancy
- Other demonstration activities:
  - MnDOT collects telematics data from fleet vehicles, WSP is analyzing data to see if it could be used in addition to the demonstration data to support enhanced operations
  - These are initial statistics, but hoping to have more robust analytics in the next TAC meeting
- Next steps:
  - Wrapping up this demonstration; having two more revenue reports for February and March 2021
  - Project Team conduct mock audits with both SM Providers – In Progress
    - Validate data accuracy and integrity
    - Simulate real-world revenue audit processes
    - Identify areas of alignment with current fuels tax audit processes; areas for improvement
  - Continue data mining and analytics on MnDOT fleet data
  - Interview key demonstration and TAC members
    - Work with MnDOT to develop interview questions
  - Document findings in final demonstration report
    - Demonstration observations and results
    - Alignment with STSFA grant program objectives
    - Opportunities and challenges
    - Policy considerations and recommendations
- Wrap up discussion:
  - Frank posted the DBF website in the chat: Demonstration website - where results are posted, along with other information: <https://dbf.dot.state.mn.us>
    - Encourage TAC members to take a look at it
  - Review draft report in late April and review the final report in June
  - Ideas are welcome on how to proceed with a separate TAC report

- May (after reviewing the WSP draft report) might be a good time to shoot for that report
- This would help us think about how to proceed in terms of technical as well as policy standpoint
- TAC report
  - TAC members might have some perspective on how to best address some of the critical issues that remain unresolved, and how a DBF system could be implemented
  - This would be valuable to making a shift towards providing adequate funding for transportation
  - Feel free to email with ideas and suggestions about an outline for the report
  - Please share other issues and concerns with the WSP during interviews
- Camila posted the link to the rural/urban and administrative survey posted in the chat: [https://umn.qualtrics.com/jfe/form/SV\\_6uvrZhFY7BbckhE](https://umn.qualtrics.com/jfe/form/SV_6uvrZhFY7BbckhE)
  - Please complete the survey by March 12th

Adjourn