# Mileage-Based User Fee Public Opinion Study

## Summary Report Phase III

Prepared for:

Minnesota Department of Transportation

December, 2009

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# Executive Summary

# Executive Summary: Background/Objectives

## Background

Transportation planners, both nationally and globally, have been exploring options to solve for potential transportation funding deficits. One possible solution being considered is a mileage-based user fee (MBUF). Initiatives related to a MBUF have, historically, focused on technical and policy issues, but limited attention had been paid to public opinion.

Mn/DOT planners recognized this crucial aspect had not been addressed, and with Federal backing, designed a market research project to understand consumer insights. This research included three phases:

- Phase 1 – Qualitative – Online panel discussion with transportation experts, 10 Focus groups with Minnesota drivers. Conducted June 2007
- Phase 2 – Qualitative – 9 Mini-focus groups with Minnesota drivers. Conducted August 2008
- Phase 3 – Quantitative – 821 phone-mail-phone interviews with Minnesota drivers*. Conducted June-July 2009

Individual reports have been developed for each phase. This report highlights the findings of the third quantitative phase of research.

## Objectives

The overall goal of the research was to understand public attitudes and awareness regarding mileage-based user fees (MBUF) and to learn how to communicate with the public regarding transportation funding and potential solutions.

Specific quantitative objectives of this third phase were to better understand:

- End-user reactions to informational pieces and determine whether the materials aid respondents in adequately understanding transportation issues and funding scenarios
- Reaction to written concept(s) of the mileage-based user fee funding initiative, which will charge a user fee according to the number of miles driven per year, keeping attuned to potential unintended consequences
- Quantify the barriers to a mileage-based user fee and identify potential solutions that would aid the public in acceptance of the models as presented, or perhaps enhance or remove features in the concept(s)

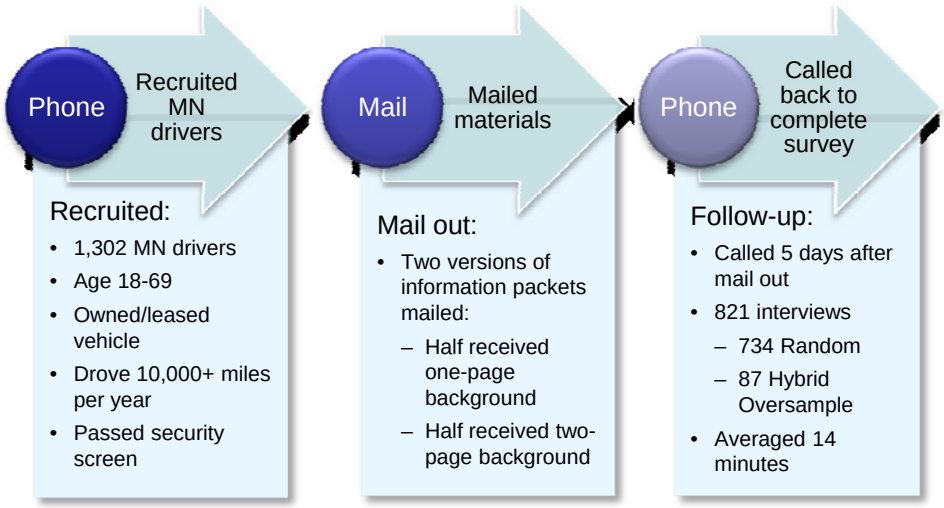
*Interviews were conducted with a random sample of Minnesota drivers as well as an augmented sample of hybrid drivers.

# Executive Summary: Methodology/Key Findings

## Methodology

Respondents were screened and qualified by phone. Once qualified, they were mailed materials to review for a period of 4-5 days before being called back and interviewed. Sampling was done by RDD and an augment of hybrid drivers was added to adequately represent this unique group. Mail out packets included: a cover letter, concept page detailing two potential MBUF approaches (rotated to avoid order bias), background information (half brief, half more detailed) and a 2009 MN road map as a thank you gift.

A total of 821 interviews were conducted between June 10 and August 13, 2009, for a response rate of 63%.




## Summary of Key Findings

- Few Minnesota drivers are concerned about current levels of funding for transportation. While acknowledging there may be funding challenges in the future, they are skeptical about the seriousness of the issue today. This skepticism may be caused by a perception that current funding levels are adequate, but mismanaged.
- Despite increasing media coverage, the concept of a mileage-based user fee remains relatively new. Once it is explained, even briefly, the public understands the idea, but remains cautious.
  - **When communicating MBUF to the public, start simply, explain funding needs and build from there.**

# Executive Summary: Key Findings (Cont'd.)

- Not surprisingly, the public needs different levels of information. The degree to which people understood the materials they were provided was proportional to the amount of time spent reviewing them. Also, those who reviewed more thoroughly often wanted more information.
  - **A website offers an ideal opportunity to provide the public the varying depths of information they seek. Once created, widely publicize it to encourage its use.**
- Initial reactions to the MBUF approaches tested were less than favorable. The higher technology approach drew stronger negative reactions, due to a concern of a loss of privacy; however, younger drivers were less adverse to the use of technology to determine the number of miles driven.
- Of the two approaches, the less technical option, relying on regular odometer checks, was preferred and considered the more "fair" and acceptable method. However, this appears to be driven less by an affinity for the less technical option and more by an aversion to the more technical option.
  - **Consider implementing a MBUF plan with stages to gradually transition from simple to more advanced to minimize public resistance.**
- Concerns of fairness were common, specifically that a MBUF would penalize those who drive more often, whether due to work or where they live, and burden lower income households. Other concerns include the added expense to implement the system, uncertainty of how out-of-state drivers would be accounted for, and the accuracy of the GPS device, should it be used.
  - **Emphasize the parallel 'pay for use' aspects of fuel tax and mileage-based user fee and proactively address other concerns to facilitate public acceptance.**

# Executive Summary: Key Findings (Cont'd.)

- Respondents acknowledge any funding solution will include a mix of options as opposed to a single, ultimate solution. While no one funding solution is preferred, MBUF is on par with other more familiar options such as raising fuel taxes and adding toll roads.
- A final mileage-based user fee model has yet to be developed, but this research overall suggests clear communication is one of the keys to public acceptance, not only to explain the need for a new solution, but how a MBUF will meet those needs, how drivers will be impacted and how their privacy will be protected.

# Introduction

# Research Background

## Research Background

Transportation authorities have begun to consider the long-term adequacy of the motor fuel tax, currently the key source of highway funding in the US. One of several alternative funding sources being considered by transportation authorities is the mileage-based user fee (MBUF), which would charge drivers based on the miles they drive, rather than the fuel they use. This project proposes to supplement and enhance the work of other efforts by understanding public attitudes, awareness and potential conditions for public comprehension and potential acceptance of MBUF.

A stable source of transportation revenue for generations, the motor fuel tax is assessed on a per-gallon basis and thus collections are tied directly to consumption of fuel, not actual usage of the roadways. As congress and the president increasingly guide the nation toward greater energy conservation, the vulnerability of this revenue source has become apparent. For example, recent motor fuel price fluctuations have had the effect of significantly reducing tax revenue. Simultaneously, the nation is facing the challenges of aging and deteriorating infrastructure, increasing construction costs and growing congestion. The increasing array of vehicles and fuel types now being offered to consumers has increased the urgency to find an adequate replacement or supplemental tax for the future.

Most of the initiatives and discussions regarding MBUF are focused on technical and policy issues, and limited attention has been paid to the critical dimension of public opinion. The Federal Highway Administration recognized that a fundamental understanding of public perceptions and terms of acceptance is vital to determining whether such a concept can be ultimately designed and deployed that will garner understanding and possibly support from the public.

# Objectives

## Objectives

The primary goal of the research was to quantitatively understand public attitudes and awareness regarding mileage-based user fees (MBUF) and communication...

Mn/DOT specifically listed the goals of the third phase of research as:

- Assess reactions to informational pieces the Minnesota public respondents will see and determine whether the materials aid respondents in adequately understanding transportation issues and funding scenarios
- Gauge the reaction to written concept(s) of the mileage-based user fee funding initiative, which will charge a user fee according to the number of miles driven per year, keeping attuned to potential unintended consequences
- Quantify the barriers to this concept which Mn/DOT heard qualitatively and identify potential solutions that would aid the public in acceptance of the models as presented, or perhaps enhance or remove features in the concept(s)

# Previous Phases of Research

**Research Phases**

**Phase I** – Qualitative Research – May-June 2007

- Online bulletin board discussion with mileage-based user fee experts – May 16, 2007 to June 11, 2007
- Ten focus groups with Minnesota drivers from June 19, 2007 through June 28, 2007 to gather initial reactions to funding issues and the concept
- Full, published report can be viewed/downloaded at www.lrrb.org/pdf/200750.pdf

**Phase II** – Qualitative Research – August 2008

- Nine mini-focus groups were conducted with Minnesota drivers from August 11, 2008 through August 21, 2008 to gauge changes in perceptions/knowledge base due to heightened focus post-collapse of the I-35W bridge and also the MN gasoline tax increase*
- Full, published report can be viewed/downloaded at www.lrrb.org/pdf/200855.pdf

**Phase III** – Quantitative Research – June-August 2009

- 821 phone interviews were conducted with Minnesota drivers from June 10, 2009 to August 13, 2009 to measure perceptions and attitudes toward both the MBUF concept in general and toward two proposed approaches (one higher tech with a GPS and one lower tech)
- This document reports the findings of the third phase of research, which incorporated learnings from the first two phases

*Minnesota legislature approved a gas tax increase in February 2008 to be instituted incrementally. A $0.02 increase was applied in April 2008, and an additional $0.005 increase was applied in August 2008.

# Methodology – Quantitative

## Methodology

This third phase of research was conducted using a phone-mail-phone methodology. This approach was selected for the following reasons:

- Ability to target needed segments to ensure study participants were representative of Minnesota population, as well as providing adequate sub-segments for analysis of specifically affected groups
- Opportunity for respondents to review/absorb informational materials, which would have been difficult to adequately communicate over the telephone alone
- Ability to thoroughly capture respondents' perceptions and reactions to the materials probing and clarifying responses in depth

The DRG recruited 1,302 Minnesota residents to participate in the study (1,151 from a random digit dial (RDD) list of Minnesota residents, and an augment of 151 hybrid-vehicle drivers).

Those recruited to participate were Minnesota adults who:

- Were age 18 to 69
- Owned or leased a vehicle and had a valid driver's license
- Drove at least 10,000 miles per year
- Did not work*:
  - For an advertising agency or public relations firm
  - For a marketing research organization or department
  - For any local or state transportation agencies
  - In State legislation
  - As a Commercial Driver
  - For a TV or radio station or for a newspaper

*These professions were excluded to minimize bias.

# Methodology – Quantitative (Cont'd.)

## Methodological Steps

1. The DRG mailed materials to qualified respondents for their review prior to the follow-up discussion (see Appendix for examples of materials). All respondents received the same concepts to review regarding mileage-based user fees. Concepts were rotated randomly so as not to bias opinions based on the order in which they were presented.

2. In addition to the concepts, Mn/DOT provided background information; however, respondents were randomly assigned to one of two levels of background information:

   - Half were provided with only a brief paragraph describing the situation ("Received Less Information" respondents)
   - Half received two pages of supporting information on the current situation ("Received More Information" respondents)

3. The DRG called respondents approximately five days after mailing materials to conduct the follow-up survey to understand reactions to and perceptions of a mileage-based user fee. In appreciation for their participation, respondents were mailed a new Minnesota map with their information packet.

Both the recruitment screener and the questionnaire were developed by The Dieringer Research Group, with input from Mn/DOT. (See Appendix for copies of the screener and questionnaire.)

# Methodology – Quantitative (Cont'd.)

## Methodology (Cont'd)

A total of 821 follow-up telephone interviews were conducted, averaging 14 minutes in length.

Of these, 87 interviews were completed from the oversample of 151 hybrid drivers that were recruited.

This report focuses primarily on the results of the 734 randomly selected Minnesota residents.

## Data Weighting

In order to ensure the survey results are reflective of the Minnesota population, the RDD survey results were weighted. However, by survey design, participants were initially screened to ensure they were at least 18 years of age and drive at least 10,000 miles per year.

Because of these screeners, it was not possible to weight the results to the U.S. Census data, as might typically be done. Survey results were, instead, weighted to the 2001 National Household Transportation Survey.

**Mileage-Based User Fee Public Opinion Survey**
**Breakdown of Completed Interviews**

| Segment | Number of Recruits | Number of Completed Interviews |
|---|---|---|
| **Total** | 1,302 | 821 |
| **Materials Received** | | |
| Received More Information | 566 | 369 |
| Received Less Information | 585 | 364 |
| **Materials Received** | | |
| Metro Area Peak Drivers | 701 | 442 |
| Non-Metro Peak | 450 | 292 |
| **Age** | | |
| 18-34 | 279 | 236 |
| 35-54 | 568 | 350 |
| 55-69 | 304 | 147 |
| **Mileage Per Year** | | |
| High (25K+) | 146 | 95 |
| Moderate (15-<25K) | 455 | 295 |
| Average (10-<15K) | 541 | 340 |
| **Hybrid/Non-Hybrid** | | |
| Non-Hybrid total | 1121 | 714 |
| Hybrid total | 179 | 104 |
| Hybrid – Oversample | 151 | 87 |
| Hybrid – Random | 28 | 17 |
| **Gender** | | |
| Male | 584 | 381 |
| Female | 567 | 353 |

Note: When available, 2008-2009 data from NHTS will be reviewed and changes will be added as addendum if significant differences exist.

# How to Read This Report

## How to Read This Report

Throughout the questionnaire, respondents were asked to use a 10-point scale to indicate their level of understanding of the materials, the believability and clarity of the materials, the seriousness of the situation, and their reaction and support for the concepts.

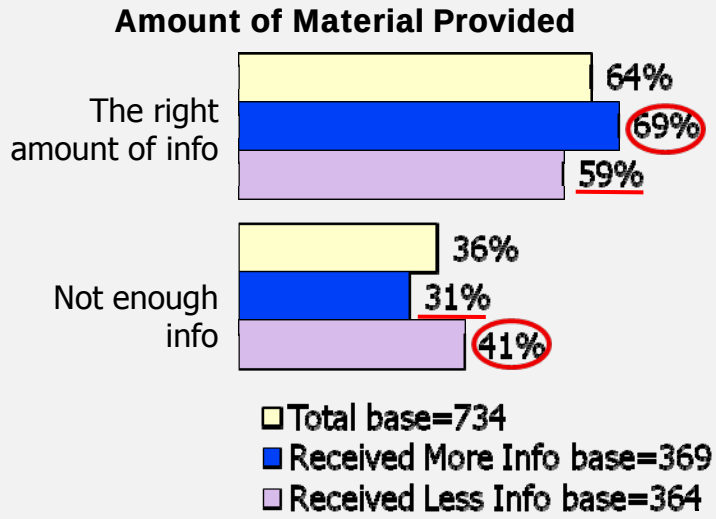
- Results are reported using Top-3/Bottom-3 box rating scores as a means of grouping together similar opinions
- Top-3 box scores include those giving a rating of "8," "9," or "10."
- Bottom-3 box scores include those giving a rating of "1," "2," or "3."
- A rating of "5" is not the mid-point on this type of scale and respondents were not prompted to that effect.

Significant differences in the data are noted in the charts; when comparing groups of respondents, the circled data is statistically higher than the underlined data at the 95% confidence level.

- In the example at the right, the 69% of the "Received More Info" respondents who said the material they received contained the right amount of information is significantly higher than the 59% of the "Received Less Info" respondents.

Please see the "Statistical Reliability and Limitations" in the Appendix for more information on significant differences.

*Q.17 – Do you believe you were provided The right amount, Too much, Or not enough information to understand the transportation funding challenges?*




Circled number is statistically higher than the underlined number at the 95% confidence level.

# Conclusions and Recommendations

# Conclusions and Recommendations

Based on the results of this research, The Dieringer Research Group offers the following conclusions regarding public opinions of a mileage-based user fee and recommendations for future communication.

**Highlight transportation funding situation, both current and future, to increase public awareness**

- Participants reported more concern about the current level of funding for education and healthcare than transportation. While concern about future levels of funding increased, transportation still trailed the other two issues.

**Start with basics as the platform for communicating MBUF to the public, and build from there.**

- As a whole, the information provided was understandable, believable and conveyed the connection between the fuel tax and funding. Even those receiving less information recognized the connection and future implications.
- The additional information provided appears to have helped participants understand the connection between fuel tax and funding 5 to 10 years from now.
- Once the underlying concept of a mileage-base user fee is explained, more specific details on how such a program would be implemented, estimated costs and comparisons to alternatives are needed to garner public buy in.

**Anticipate initial reservations from public, as natural reactions to change**

- Although there has been increasing coverage of a mileage-based user fee in the media, it is still a new concept to a large portion of the public.
- As seen in previous phases, residents understand the general MBUF concept even with very little explanation, but often react less than positively towards it initially.

# Conclusions and Recommendations (Cont'd.)

**Emphasize the parallel 'pay for use' aspects of fuel tax and mileage-based user fee**

- While a variety of barriers to a MBUF were raised, concerns of 'fairness' were common, as it was perceived to unfairly penalize those who live in rural areas or drive long distances.
- Under the existing fuel tax model, those who drive more use more fuel and, therefore, pay more fuel tax. Communicating this message to drivers may help to overcome this barrier.

**Uncertainty breeds apprehension – craft communication around a more fully developed model**

- Other barriers mentioned were due to the uncertainty of the final MBUF model.
- Once the details of the MBUF are developed, share them with the public to answer questions such as:
    - How will it be implemented/regulated?
    - How will out-of-state drivers be charged?
    - How will the accuracy of GPS be verified?
- Specific communication should be drafted to highlight the security measures in place to address common concerns of loss of privacy/government intrusion.

# Conclusions and Recommendations (Cont'd.)

**Provide opportunity for public to review / absorb information at their own pace**

- Not surprisingly, the perception that the materials were understandable and the clarity of the connection between current taxing methods and funding was proportionate to the degree to which respondents reviewed them.
- The public has differing requirements with regard to the amount of information they need or want. Those who had taken time to review the materials they received often wanted more.
- A website offers an ideal opportunity to provide the public the varying depths of information they seek regarding the mileage-based user fee, from high-level overviews to more specific details. However, strong efforts must be made to widely publicize the website in order to encourage its use.

**Consider an implementation plan with stages to gradually transition from simple to more advanced**

- When asked their preference between the two MBUF approaches that were presented, the public opted for the lower technology approach; however, this was often a result of a stronger dislike of the higher tech approach.
- The lower technology approach, viewed as less invasive, simple, and requiring lower administrative costs, was also considered to be more fair and acceptable than the higher tech approach.
- Beginning simply, for example with a model that relies on a straight-forward odometer reading, may ease the transition from fuel tax to MBUF.
- Communicating the additional benefits technology would offer in addition to addressing privacy concerns could pave the way to increasingly more advanced models.

# Detailed Findings

# Understanding the Issues

# Level of Concern About Funding Adequacy

## Over half very concerned about adequacy of funding for education and healthcare

- Far fewer very concerned about funding for transportation
- Hybrid drivers more concerned about current funding than non-hybrid drivers

*5a. How concerned are you today with there being adequate funding for…?*
*5b. How concerned are you with there being adequate funding for… 5 to 10 years in the future?*

| % Very concerned | Total base=734 | Vehicle type: Hybrid base=104 | Vehicle type: Non-hybrid base=714 |
|---|---|---|---|
| **Current Funding** | | | |
| Education | 54% | 64% | 55% |
| Healthcare | 52% | 68% | 52% |
| Transportation | 25% | 37% | 25% |
| **Future Funding** | | | |
| Education | 57% | 63% | 57% |
| Healthcare | 61% | 66% | 61% |
| Transportation | 34% | 43% | 34% |

Circled number is statistically higher than the underlined number at the 95% confidence level.

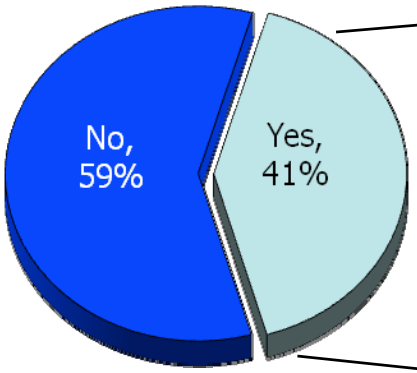
# Prior Knowledge of MBUF

## Four in ten respondents had heard of MBUF prior to participating in this study

- Two-thirds of those aware of MBUF reported they "gave it some thought"
- Those previously aware tended to report a less favorable reaction to it as a solution to the funding problems (roughly half not in favor), instead preferred to simply raise the gas tax

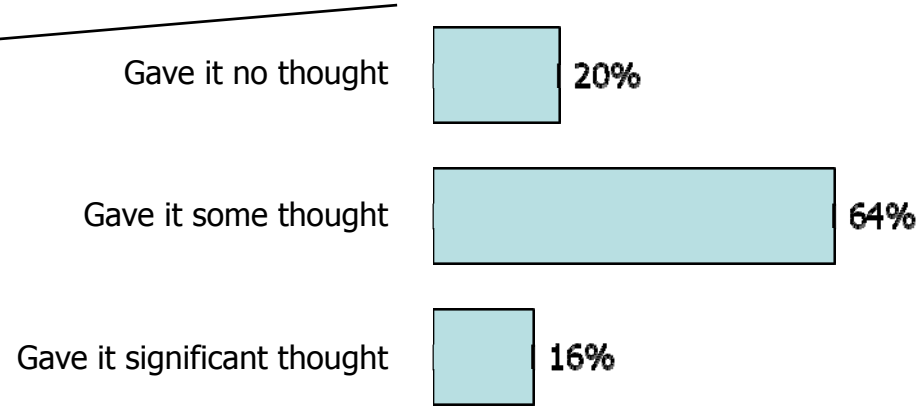
*Q.8 – Had you ever heard of a user fee based on mileage driven before you received these materials?*
*Q.8a – How much thought or consideration had you given this idea of a user fee for miles driven, before you received these materials? Would you say:*

**Heard of MBUF Before?**




Q8: base=734

**Amount of Thought Given?**




Q8a: base=300

# Top of Mind Description of Materials

## When asked to identify main idea of materials, respondents demonstrated a high level of understanding

- Two-thirds named it: new way to fund transportation
  - Few raised more underlying issues
  - Fewer still identified an underlying cause of the need for a new solution

*Q.1 – Please describe the main idea you gathered from the materials you reviewed.*

| Main Ideas Gathered | Total base=734 |
|---|---|
| New funding solution (NET) | 69% |
| Finding a new way to fund transportation/roads | 38% |
| Funding decided by mileage driven | 21% |
| Change from gas tax to usage tax | 11% |
| Funding shortfall (NET) | 13% |
| Less gas is being used (NET) | 7% |
| Raising/New taxes (NET) | 5% |
| Underlying causes of a need for a solution (NET) | 2% |

Percentages may not total 100% due to multiple responses.
Net Mentions of 2% or more are shown. Subnet mentions of 10% or more are shown.

# Top of Mind Description of Materials (cont'd.)

## Additional information helped communicate underlying issues

- Those who received more information about the funding issues were more likely to mention the funding shortfall as a main idea
- Those who received less information were more likely to simply state the materials described a new funding solution

*Q.1 – Please describe the main idea you gathered from the materials you reviewed.*

| Main Ideas Gathered | Total base=734 | Received More Info base=369 | Received Less Info base=364 |
|---|---|---|---|
| New funding solution (NET) | 69% | 63% | (76%) |
| Funding shortfall (NET) | 13% | (18%) | 8% |
| Less gas is being used (NET) | 7% | 5% | 8% |
| Raising/New taxes (NET) | 5% | 5% | 5% |
| Underlying causes of a need for a solution (NET) | 2% | 3% | 1% |

Circled number is statistically higher than the underlined number at the 95% confidence level.
Percentages may not total 100% due to multiple responses.
Net Mentions of 2% or more are shown.

# Top of Mind Description of Materials (cont'd.)

## An understanding of the underlying issues may lead to greater acceptance of the concept

- Those who ultimately favored MBUF were more likely to mention the underlying issues of the funding shortfall and less gas being used
  - Those who opposed the concept were more likely to say the materials involved raising or implementing a new gas tax

*Q.1 – Please describe the main idea you gathered from the materials you reviewed.*

| Main Ideas Gathered | Total base=734 | Support MBUF base=170 | Oppose MBUF base=255 |
|---|---|---|---|
| New funding solution (NET) | 69% | 69% | 67% |
| Funding shortfall (NET) | 13% | (18%) | 9% |
| Less gas is being used (NET) | 7% | (12%) | 5% |
| Raising/New taxes (NET) | 5% | 2% | (10%) |
| Underlying causes of a need for a solution (NET) | 2% | 4% | 2% |

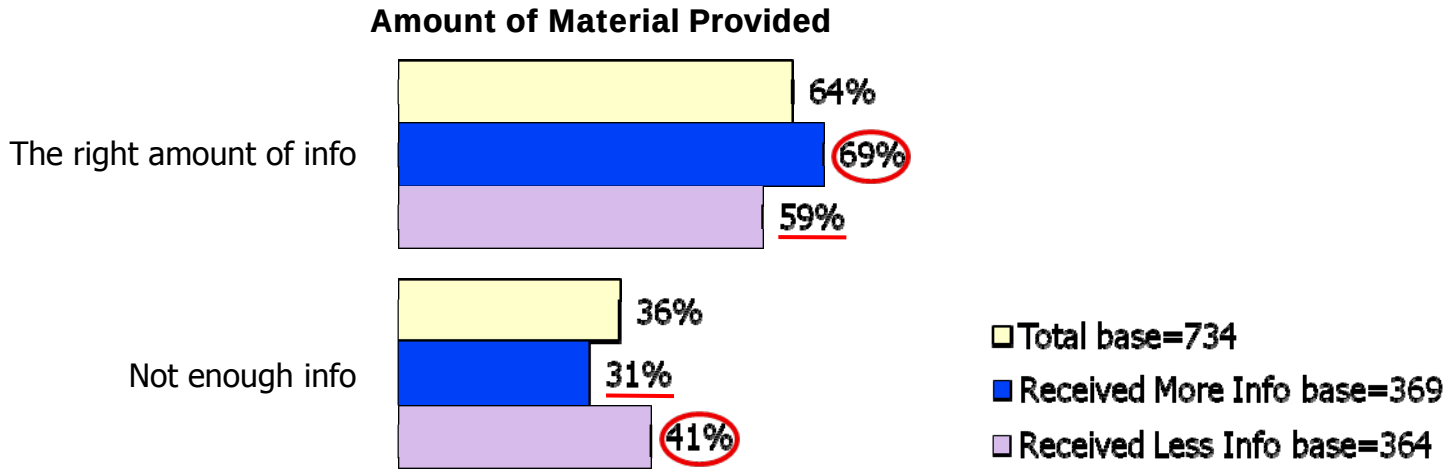
Circled number is statistically higher than the underlined number at the 95% confidence level.
Percentages may not total 100% due to multiple responses.
Net Mentions of 2% or more are shown.

# Perceptions on Amount of Material Received

## Respondents were comfortable with the amount of information given

- Two-thirds indicated they were provided the right amount of information; one-third would have preferred more
- Those who received more information were more likely to say they received the right amount
  - Those who received less information were more likely to say they did not receive enough

*Q.17 – Do you believe you were provided The right amount, Too much, Or not enough information to understand the transportation funding challenges?*




Circled number is statistically higher than the underlined number at the 95% confidence level.

# Additional Information Sought

**Among those seeking more information, many believed more explanations, particularly on how MBUF would work, would be helpful**

- Regardless of the amount of information received, responses were similar

*Q18. – What might have been more helpful to you?*

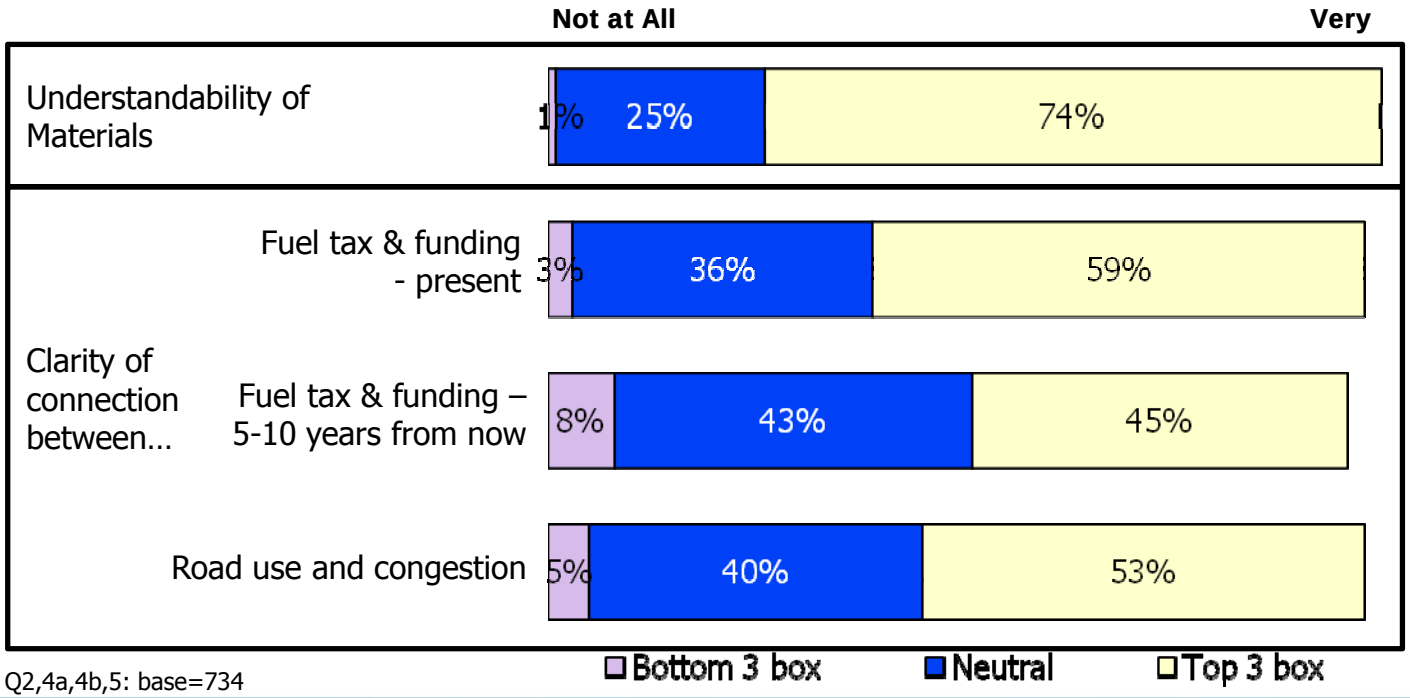
| What Would Have Been Helpful? | Total base=263 |
|---|---|
| More explanations/information (NET) | 58% |
| More info on how system would work | 49% |
| Comparisons (NET) | 37% |
| Like to see more alternatives | 27% |
| Comparison of current vs. new system | 16% |
| More data (NET) | 37% |
| Hard data about what it will actually cost | 37% |
| Other | 10% |
| None | 2% |

Percentages may not total 100% due to multiple responses.
Net Mentions of 2% or more are shown. Subnet mentions of 10% or more are shown.

# Comprehension of Current Transportation Situation from Materials

## Respondents comprehended the materials they received

- Three-quarters rated the materials as understandable; only one percent believed the materials were difficult to understand
- The materials provided a clear illustration of the current role of fuel taxes and funding for roads as well as the connection between road use and increasing congestion
  - Less well illustrated was the future role fuel taxes play in funding for roads




*Q2 – How understandable was the material overall?*

*Q4a - How clear was the connection made between the role of fuel taxes and funding for the roads with regard to the present day?*

*Q4b - And what about with regard to 5 to 10 years from now?*

*Q5 - Now, how clear was the connection made between road use and increasing congestion?*

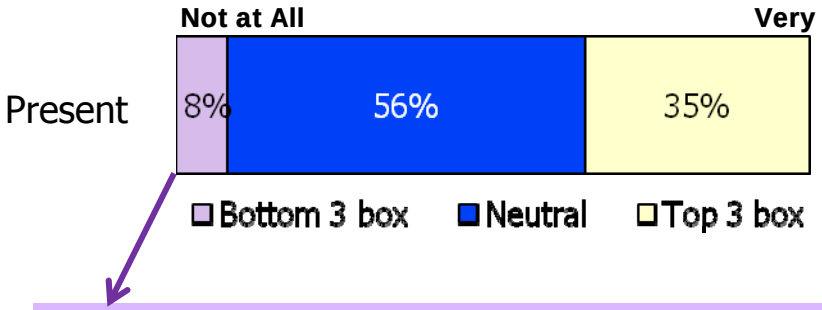
Q2,4a,4b,5: base=734

# Seriousness of Funding Problem

## Majority not concerned about the current funding situation, but recognized potential seriousness

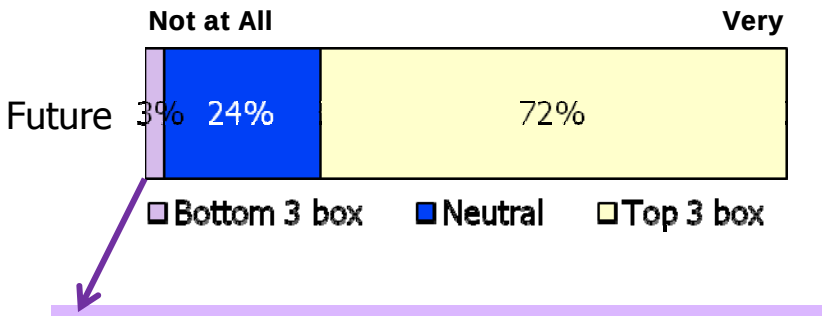
- Perception that funding is adequate but possibly mismanaged limits concerns

**Seriousness of Problem**




**Why do you believe it IS not serious?**

- Is adequate funding (20%)
- Currently money being misused (13%)
- Roads are in good condition (13%)
- Don't have road congestion (13%)
- Is no problem (11%)
- Other, more important issues (10%)
- Don't trust/believe facts (3%)




**Why do you believe it WILL NOT be serious?**

- Is adequate funding (22%)
- Currently money being misused (16%)
- Is no problem (11%)
- Roads are in good condition (9%)
- Don't have road congestion (5%)
- Don't trust/believe facts (5%)

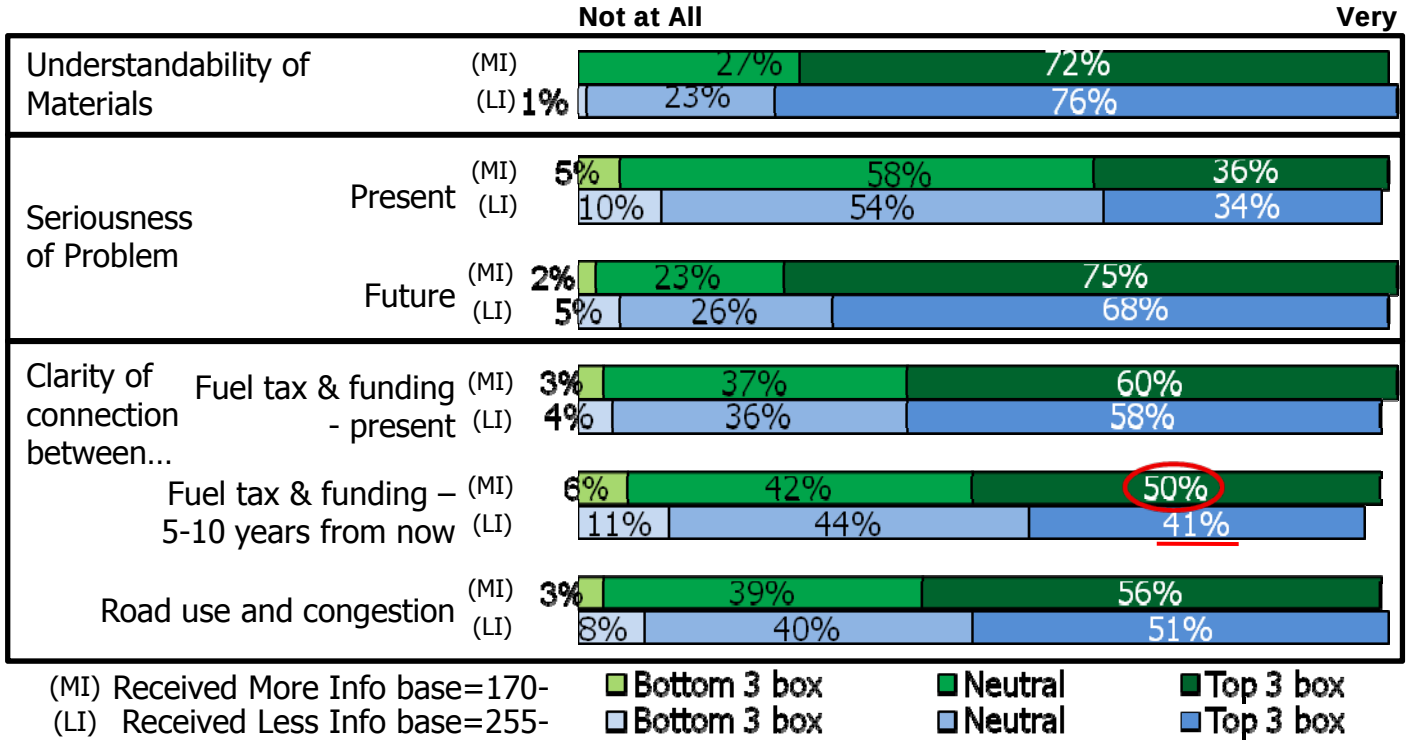
*Q6 - How serious do you think the problem is currently?*
*Q7 - If this situation were not addressed, how serious do you think it could become in the future?*

Q6,7: base=734

# Comprehension of Current Transportation Situation from Materials –
## Received More Info vs. Received Less Info

### Overall, comprehension levels were similar regardless of amount of information received

- One notable difference was the clarity of the connection between fuel taxes and funding for roads in the future
  - Those who received more information reported this connection was clearer in the materials




*Q2 – How understandable was the material overall?*

*Q6 - How serious do you think the problem is currently?*

*Q7 - If this situation were not addressed, how serious do you think it could become in the future?*

*Q4a - How clear was the connection made between the role of fuel taxes and funding for the roads with regard to the present day?*

*Q4b - And what about with regard to 5 to 10 years from now?*

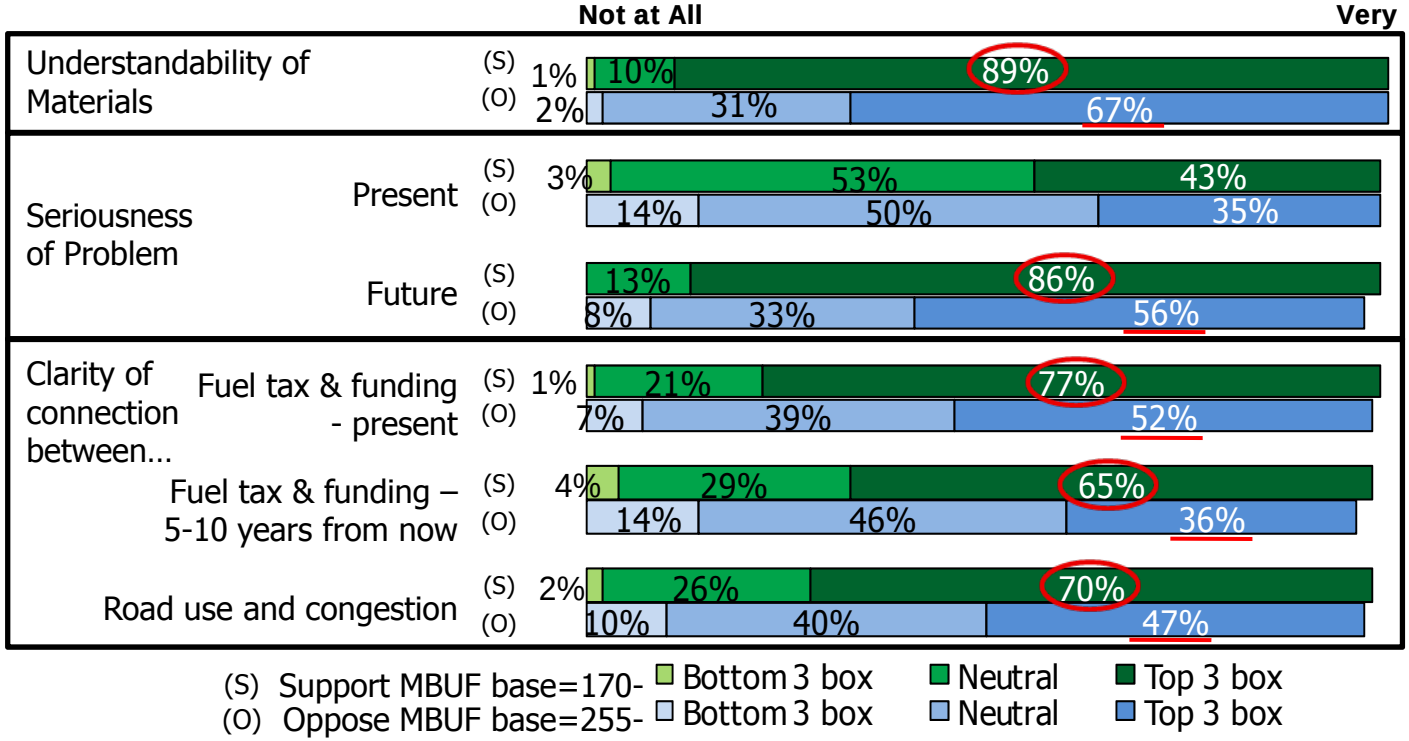
*Q5 - Now, how clear was the connection made between road use and increasing congestion?*

Circled number is statistically higher than the underlined number at the 95% confidence level.

# Comprehension of Current Transportation Situation from Materials –
## Supporters vs. Opposers of MBUF

### Supporters of a mileage-based user fee reported better comprehension

- Supporters thought:
  - the materials were more understandable
  - the problem would be more serious in the future
  - the connections between fuel tax and road funding as well as the connection between road use and congestion was more understandable




*Q2 – How understandable was the material overall?*

*Q6 - How serious do you think the problem is currently?*

*Q7 - If this situation were not addressed, how serious do you think it could become in the future?*

*Q4a - How clear was the connection made between the role of fuel taxes and funding for the roads with regard to the present day?*

*Q4b - And what about with regard to 5 to 10 years from now?*

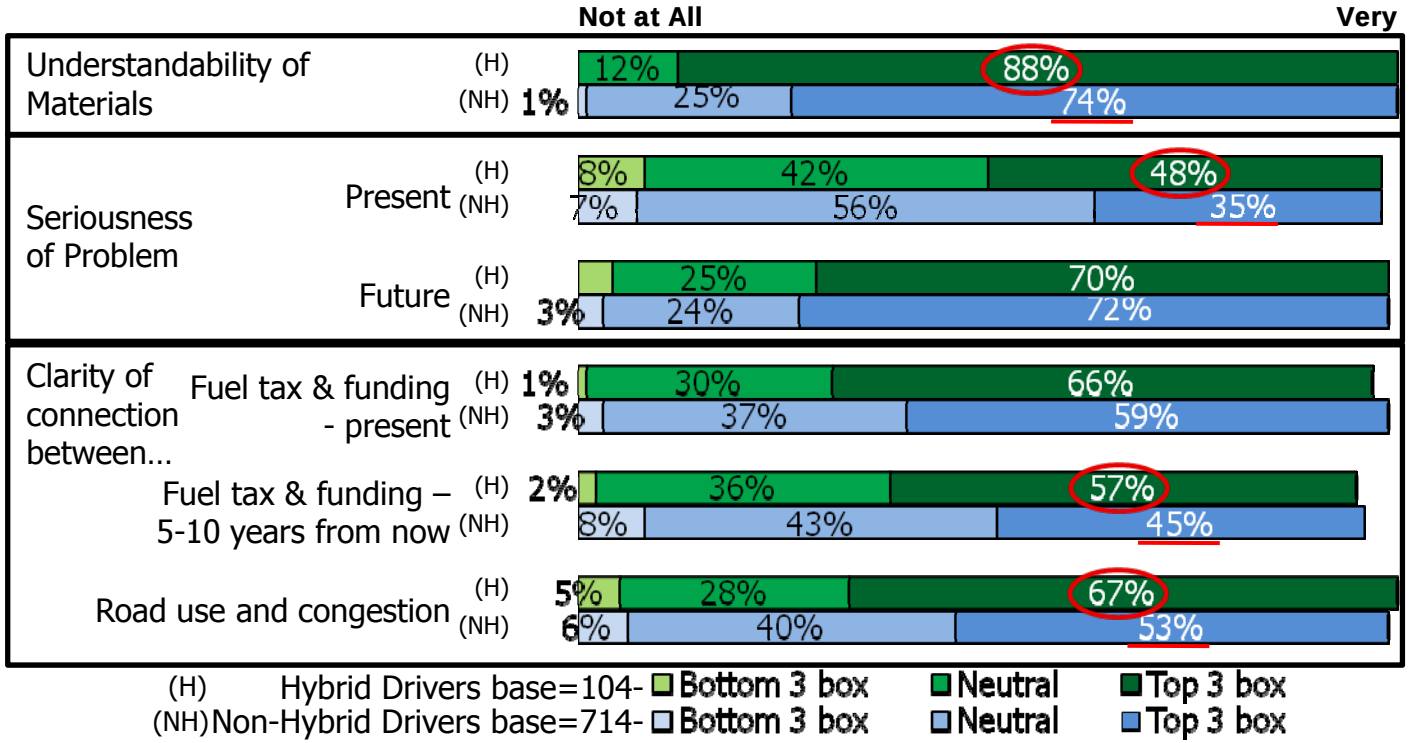
*Q5 - Now, how clear was the connection made between road use and increasing congestion?*

Circled number is statistically higher than the underlined number at the 95% confidence level.

# Comprehension of Current Transportation Situation from Materials –
## Hybrid Drivers vs. Non-Hybrid Drivers

### Hybrid drivers reported better comprehension

- Hybrid drivers were more likely to report the materials were more understandable, consider the problem to be more serious currently, and better understand the connections between fuel tax and road funding in the future as well as the connection between road use and congestion




*Q2 – How understandable was the material overall?*

*Q6 - How serious do you think the problem is currently?*

*Q7 - If this situation were not addressed, how serious do you think it could become in the future?*

*Q4a - How clear was the connection made between the role of fuel taxes and funding for the roads with regard to the present day?*

*Q4b - And what about with regard to 5 to 10 years from now?*

*Q5 - Now, how clear was the connection made between road use and increasing congestion?*

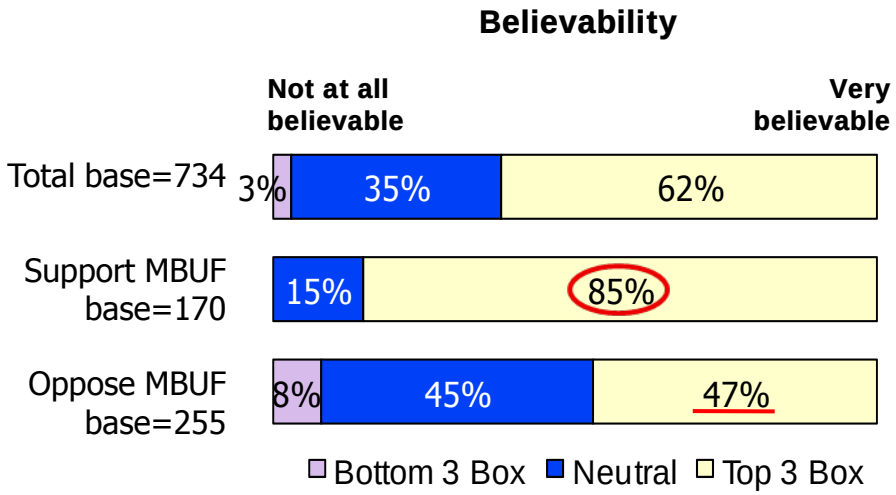
Circled number is statistically higher than the underlined number at the 95% confidence level.

# Believability of MBUF Information

## Materials presented were believable

- Over six in ten reported the information provided in the materials was believable
- Not surprisingly, those who supported a mileage-based user fee as a solution were more likely to believe the information, while opposers were more likely to be skeptical
- Skeptics reported that they would need more data on costs and additional information in order to be swayed

*Q3 – How believable was the information on that 1-10 scale? This time a "1" would mean "Not at all Believable" and "10" "Very Believable"?*
*Q3.1 – In your opinion, what could have made this initial material more believable to you?*




Circled number is statistically higher than the underlined number at the 95% confidence level.

| What Could Make It More Believable? | Total base=22 |
|---|---|
| Need more data (NET) | 34% |
| Hard data about cost | 30% |
| Need more information (NET) | 12% |
| Like to see alternatives | 7% |
| Info on how system will work | 5% |

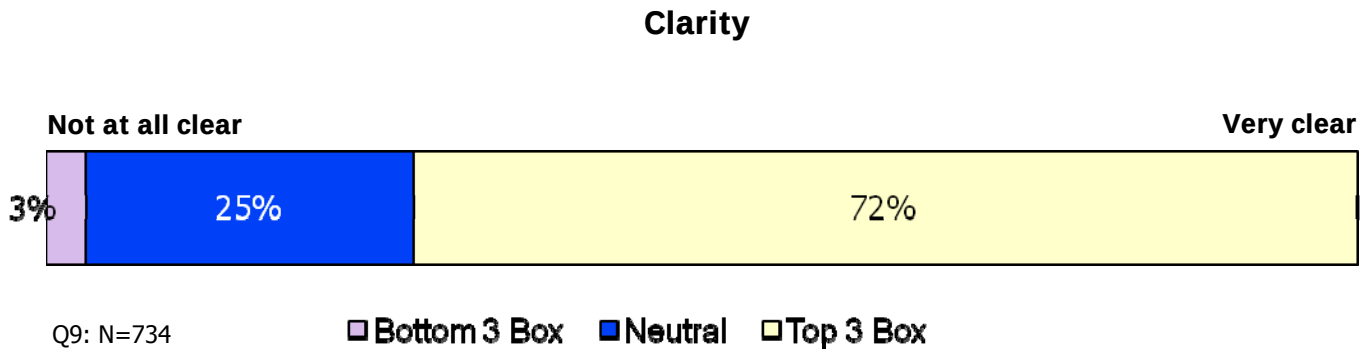
Caution: Directional information only.
Percentages may not total 100% due to multiple responses.
Net Mentions of 2% or more are shown. Subnet mentions of 5% or more are shown.

# Clarity of MBUF Explanation

## Materials presented were clear

- In general, respondents agreed the explanation of the mileage-based user fee solution provided in the materials was clear
- This perception was consistent regardless of respondent type

*Q9 – How clearly was the idea of a mileage-based user fee explained? Please use a 10-point scale where "1" means "Not at all Clear" and "10" means "Very Clear"?*



# Reactions to the Approaches

# Approaches Considered

(Low Technology)

**Approach "S":**

Drivers report their odometer readings annually (when they register/get tabs for their vehicle). The rate charged is based on per-mile of travel and may vary with the class, size and/or type of vehicle. Based on the type or weight of the vehicle, a subtraction is made for the estimated gas tax paid or replaces the vehicle's registration fee.

**Advantages:**

- Replaces the motor fuel tax or the registration fee with a revenue stream that is based on use of the road,
- Payments match the size and/or weight of vehicle, and
- Low cost to collect and administer.

**Disadvantages:**

- May require driving a vehicle to an authorized station to register and have an official odometer reading,
- The system may require users to pay on either annual or semi-annual basis for miles traveled, and
- Does not provide an incentive to drive in less congested periods.

Note: For clarity in this report, the approaches are referred to as high or low technology. With the respondents, the approaches were only referred to as "K" and "S" to avoid bias.

(High Technology)

**Approach "K":**

A small device like an odometer is installed on the vehicle and its purpose is to tally the number of miles driven. Using global positioning systems (GPS) it will charge users by where and when the travel occurred. The device is used for billing purposes only and does not track vehicles' whereabouts. All information remains onboard the vehicle until it is periodically downloaded for billing purposes only. A billing center subtracts the motor fuel tax or registration fees, and adds appropriate per-mile fees.

User fee rates will vary for different types of travel; e.g., travel in the most congested periods (rush hour) might be more expensive than travel at other times. Travel on freeways may be more expensive than travel on local roads, and the rate may vary with the size or weight of the vehicle.

**Advantages:**

- Replaces the motor fuel tax or registration fee with a revenue stream that is based on use of the road,
- Congestion may be reduced because users are charged rates that vary by facility type and time-of-day, and
- Fees may vary by vehicle class, size and/or weight.

**Disadvantages:**

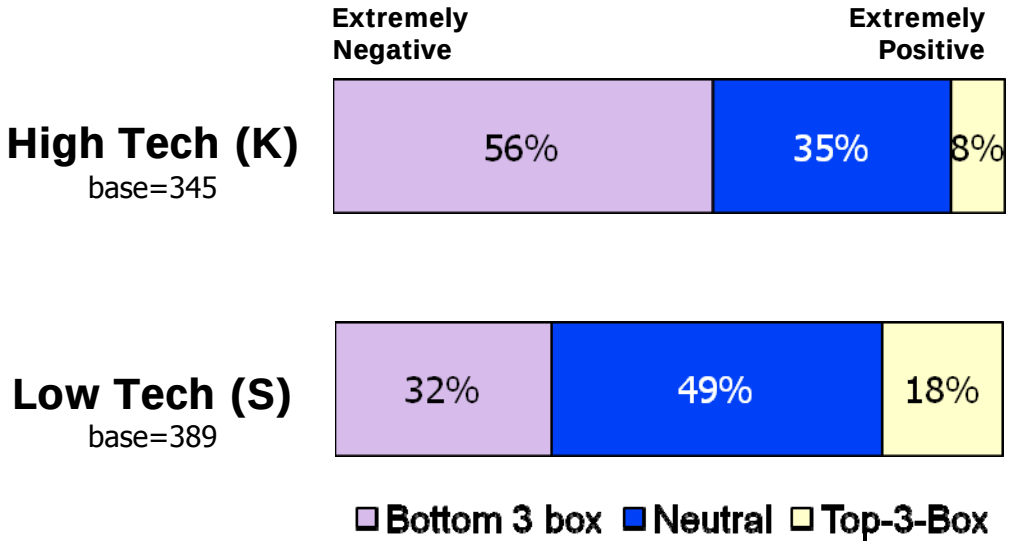
- It may be more expensive for users at certain times of the day,
- There may be an added administrative cost to operate the system, and
- The system may require users to pay on a monthly invoice.

# Initial Reactions to Approaches

## Initial reactions were less than positive overall, but the lower tech solution garnered the stronger preference

- Over half reacted negatively to Approach K, the higher tech approach which used GPS to tally the number of miles driven
- Approach S, which used odometer readings, elicited more neutral reactions

*Q10 – What was your initial reaction to Approach K/S?*



# Initial Reactions to Approaches

## Given mediocre reactions, no attribute stood out as making the approach more likeable

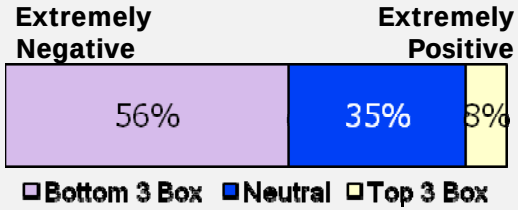
- Overall, supporters of each approach listed similar themes
- The differentiator was the perceived invasion of privacy in Approach K

*Q10 – What was your initial reaction to Approach K/S?*
*Q11 – Describe what, if anything, you like most about this approach.*
*Q12 – Describe what, if anything, you liked least about this approach.*

**Initial Reaction** Q10

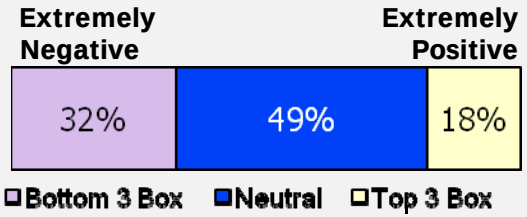
**Approach K**

Q10: base=345
Q11: base=244
Q12: base=345




**Approach S**

Q10: base=389
Q11: base=327
Q12: base=389



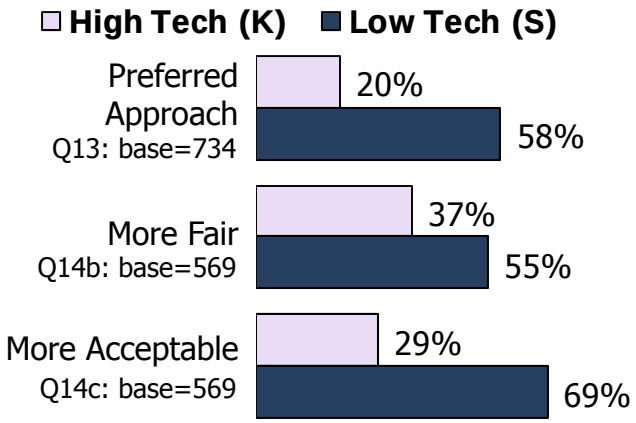

| Liked Least Q12 | | Liked Most Q11 | |
|---|---|---|---|
| Loss of privacy | 42% | Base for fees | 24% |
| Costs | 31% | Easy to use | 16% |
| Base for fees | 16% | Fairness | 14% |
| Uncertainty of outcomes | 8% | Collection method | 9% |
| Inconvenience | 6% | Lower costs | 4% |
| Enforcement issues | 5% | | |
| Inconvenience | 25% | Base for fees | 34% |
| Costs | 22% | Fairness | 16% |
| Base for fees | 16% | Lower costs | 11% |
| Uncertainty of outcomes | 11% | Easy to use | 11% |
| Loss of privacy | 11% | Collection method | 8% |
| Enforcement issues | 7% | Less invasive/more private | 6% |

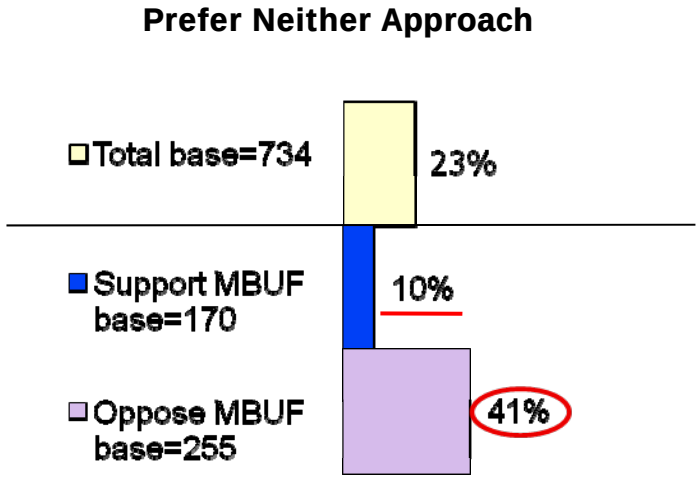
# Approach Preference

## More respondents preferred Approach S, the less technical approach

- About one-quarter of respondents, though, preferred neither approach
  - Those who opposed the MBUF concept were more likely to choose neither approach

*Q13 – Which approach do you prefer?*
*Q14b – And thinking about both approaches, which do you think is…A more "fair" method to fund transportation?*
*Q14c – And thinking about both approaches, which do you think is…The more acceptable approach?*




**Note:** Respondents were not offered a choice of "Neither," but it was accepted if respondents were ultimately unable to indicate a preference.

Circled number is statistically higher than the underlined number at the 95% confidence level.

# Approach Preference (cont'd.)

## Younger respondents were more accepting of Approach K, the GPS-based approach

- Compared to older drivers, younger respondents were more likely to prefer Approach K, believing it to be more fair and acceptable
- By comparison, older respondents perceived Approach S as more fair and acceptable

| | | Age of Respondent | | |
|---|---|---|---|---|
| | Total base=734 | 18-34 base=236 | 35-54 base=350 | 55-69 base=147 |
| Preferred Approach | | | | |
| High Tech (K) | 20% | (23%) | 20% | 14% |
| Low Tech (S) | 58% | 61% | 55% | 56% |
| Neither | 23% | 15% | (25%) | (29%) |
| More Fair | | | | |
| High Tech (K) | 37% | (38%) | (41%) | 24% |
| Low Tech (S) | 55% | 53% | 53% | (66%) |
| More Acceptable | | | | |
| High Tech (K) | 29% | (30%) | (31%) | 20% |
| Low Tech (S) | 69% | 67% | 67% | (77%) |

*Q13 – Which approach do you prefer?*

*Q14b – And thinking about both approaches, which do you think is…A more "fair" method to fund transportation?*

*Q14c – And thinking about both approaches, which do you think is…The more acceptable approach?*

Circled age group number is statistically higher than the other age group underlined number at the 95% confidence level.

# Reasons for Preference

## A preference for lower tech approach was often due more to an aversion to the higher tech approach

- Nearly half of those who preferred the low tech approach reported it was because they *disliked* the GPS aspect of Approach K which was perceived as an invasion of privacy
- Other reasons for preference varied greatly

*Q13.1 – Why do you prefer this approach?*

| Why do you prefer this approach? | | | |
|---|---|---|---|
| **High Tech (K) base=146** | | **Low Tech (S) base=423** | |
| Convenience (NET) | 39% | Less invasive/more private (NET) | 49% |
| Simple/Accurate | 31% | Don't like GPS/Gov't monitoring | 31% |
| Fairness (NET) | 21% | Costs (NET) | 23% |
| Road maintenance paid by user | 11% | Lower administrative costs | 18% |
| Collection method (NET) | 20% | Convenience (NET) | 19% |
| Like the GPS idea | 11% | Simple/Accurate | 18% |
| Base for fees (NET) | 18% | Base for fees (NET) | 16% |
| Based on time of day | 7% | Not based on time of day | 8% |
| Based on type of road driven | 6% | Based on mileage driven | 4% |
| Enforcement issues (NET) | 9% | Collection method (NET) | 12% |
| Costs (NET) | 4% | Fairness (NET) | 7% |
| | | Enforcement issues (NET) | 3% |

Percentages may not total 100% due to multiple responses.
Net Mentions of 2% or more are shown.

# Barriers to Mileage-Based User Fees

# Barriers to MBUF

## A variety of barriers were noted

- Fairness was the top barrier with over one-third of respondents mentioning it unaidedly
- Specifically they noted that a mileage-based user fee could:
  - Penalize those who drive a lot for work or because they live in rural areas
  - Be a burden on lower income households
  - Doesn't tax other means of transportation
- Those who opposed the idea of a mileage-based user fee were more likely to name fairness, privacy, and lack of need as barriers

*Q.16 – In your opinion, what are the major drawbacks of a mileage-based user fee in general?*

Additional details of respondent answers on following page.

| Barriers to MBUF | Total base=734 | Support MBUF base=170 | Oppose MBUF base=255 |
|---|---|---|---|
| Fairness | 36% | 29% | 41% |
| Costs/Administrative overhead | 13% | 11% | 13% |
| Uncertainty of outcomes | 13% | 15% | 12% |
| Won't work | 12% | 10% | 12% |
| Inconvenience | 11% | 12% | 6% |
| Loss of privacy | 9% | 3% | 18% |
| Enforcement issues | 7% | 9% | 5% |
| Base for fees | 7% | 9% | 8% |
| Not needed | 5% | 3% | 8% |
| Collection method | 4% | 4% | 6% |

Circled number is statistically higher than the underlined number at the 95% confidence level.

# Barriers to MBUF (cont'd.)

*Q.16 – In your opinion, what are the major drawbacks of a mileage-based user fee in general?*

| Barriers to MBUF | Total base=734 |
|---|---|
| Fairness (NET) | 36% |
| Penalizes those who drive a lot for work | 17% |
| Penalizes those who have to drive a lot (non-specific) | 6% |
| Burdensome on lower income | 6% |
| Penalizes those who live in rural areas | 5% |
| It's not fair to all | 5% |
| Doesn't tax other means of transportation | 2% |
| Costs/Administrative overhead | 13% |
| Uncertainty of Outcomes (NET) | 13% |
| Dealing with out-of-state users | 5% |
| Implementation/regulation would be difficult | 4% |
| Accuracy of GPS/Monitoring road usage | 4% |
| Won't work (NET) | 12% |
| Just another tax | 8% |
| Won't generate enough revenue/people will drive less | 2% |

| Barriers to MBUF | Total base=734 |
|---|---|
| Inconvenience (NET) | 11% |
| Inconvenience of use | 9% |
| Won't be able to personally budget for | 2% |
| Loss of privacy/government intrusion | 9% |
| Enforcement issues – Honesty/Cheating the system | 7% |
| Base for fees (NET) | 7% |
| Doesn't reflect type of vehicle driven (general) | 3% |
| Doesn't take into account the weight/size of vehicle | 2% |
| Not needed – Already have gas tax, revenue available from other sources | 5% |
| Uncertain of collection and payment method | 4% |

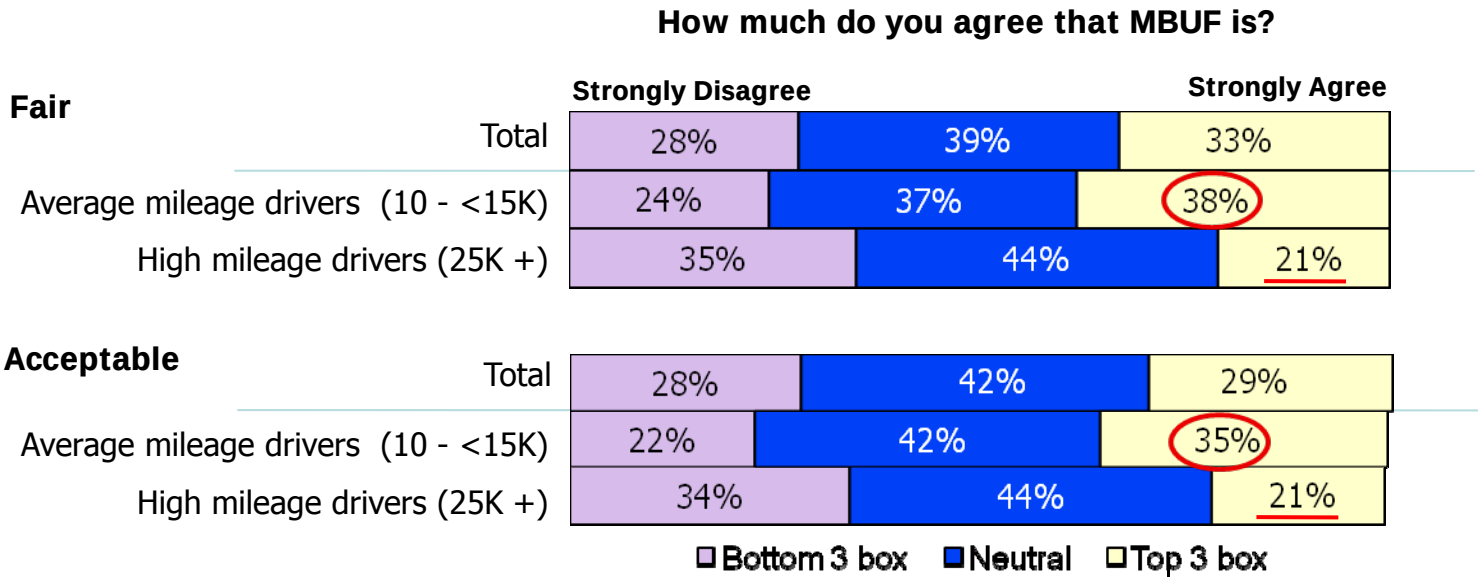
# “Big Picture” Perceptions

# Perceptions of MBUF by Travel Frequency

## In terms of MBUF being fair and acceptable, opinions varied widely

- About one-third strongly agreed or disagreed, while four in ten were neutral
- High mileage drivers were less likely to agree MBUF is fair and acceptable

*Q.15b – How much do you agree that a mileage-based fee is a "fair" method to fund transportation?*
*Q.15c – How much do you agree that a mileage-based fee is an acceptable method to fund transportation?*




Q15b/c: base=734 Total; base=340 Average mileage drivers; base=95 High mileage drivers
Circled number is statistically higher than the underlined number at the 95% confidence level.

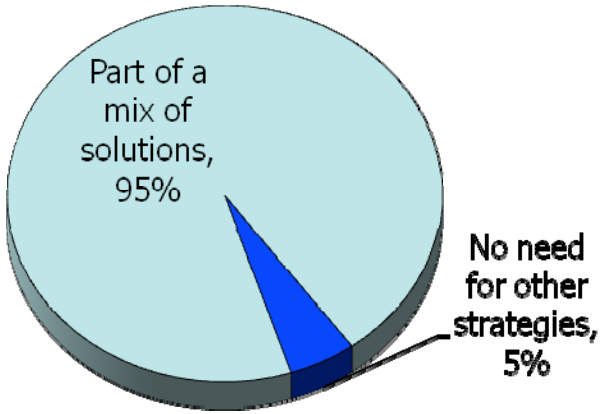
# Interpretation of Term "Transportation Solution"

## The term "transportation solution" was seen as part of a mix of solutions

- The majority of respondents reported they perceive it as part of a mix of solutions as opposed to the sole solution

*Q19 – Just to check, when you hear or use the term "transportation solution," which of the following most closely compares to YOUR interpretation of the term "Transportation solution" would mean? Part of a mix of solutions or no need for other strategies.*

**What is your interpretation?**



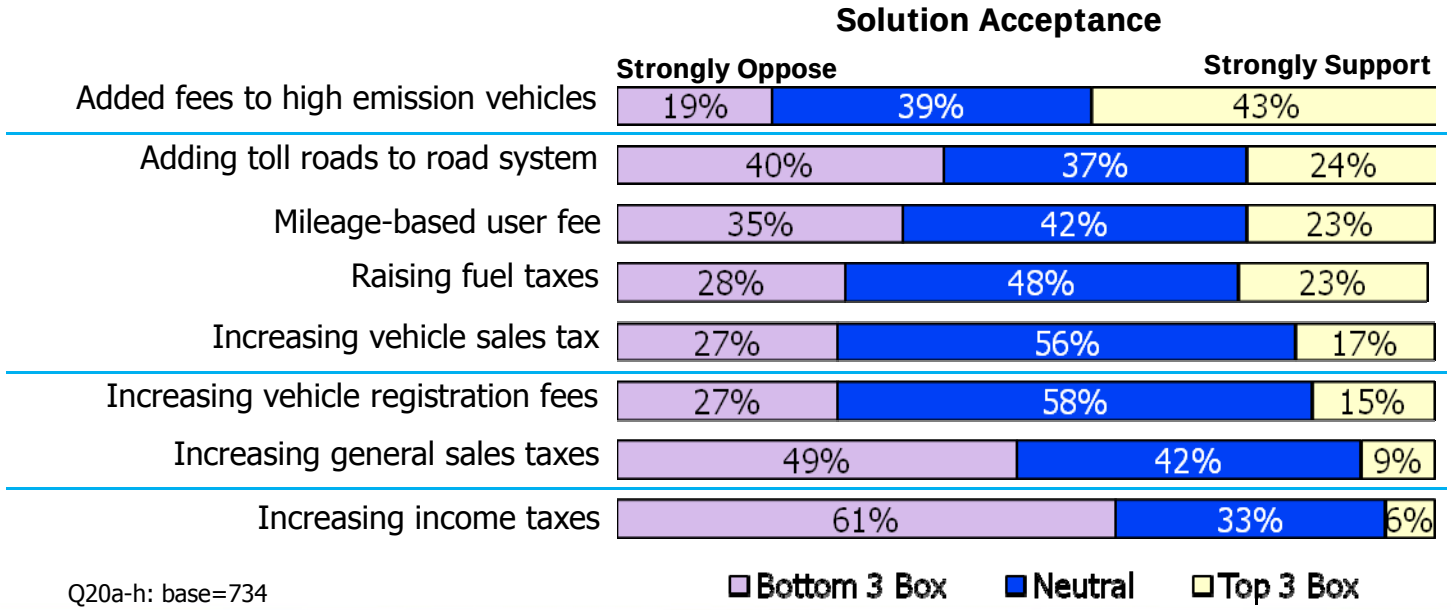

Q19: base=734

# Openness to Funding Solutions

## No one funding solution garnered strong support

- The one gaining more support than others, however, was adding fees to high emission vehicles, supported by 43% of respondents.
- Approximately one in four were open to toll roads, a mileage-based user fee, or raising fuel taxes.
- Of these solutions however, more respondents opposed toll roads and a mileage-based user fee than raising fuel taxes.

*Q20– If a decision were made to supplement or replace lost funding, how open would you be to each of the following?*




Q20a-h: base=734

# Acceptance of Funding Solutions -
## By Travel Frequency

**Average mileage drivers (10,000 to less than 15,000 per year) were more receptive to a mileage-based user fee**

- They were also more receptive to adding fees to higher emission vehicles or increasing the income tax

*Q20– If a decision were made to supplement or replace lost funding, how open would you be to each of the following?*

| Acceptance of Solutions | | Mileage Per Year | | |
|---|---|---|---|---|
| Top 3 box | Total base=734 | High (25K+) base=95 | Moderate (15-<25K) base=295 | Average (10-<15K) base=340 |
| Fees for high emission vehicles | 43% | 41% | 38% | 47% |
| Mileage-based user fee | 23% | 16% | 23% | 26% |
| Raising fuel taxes | 23% | 18% | 22% | 25% |
| Increasing vehicle tax | 17% | 14% | 17% | 18% |
| Increasing vehicle registration fees | 15% | 12% | 14% | 18% |
| Adding toll roads | 11% | 26% | 27% | 20% |
| Increasing general sales tax | 9% | 11% | 8% | 10% |
| Increasing income tax | 6% | 3% | 6% | 8% |

Circled number is statistically higher than the underlined number at the 95% confidence level.

# Acceptance of Funding Solutions -
## Profile of Least Supportive

**Differences in acceptance of a mileage-based user fee solution are noted between respondent demographics segments**

- Those more strongly opposed include:
  - those age 55 to 69
  - those who drive a moderate to high number of miles per year (15,000 +)
  - and those who drive a low fuel efficiency car (less than 20 miles per gallon)
- No difference was noted between hybrid and non-hybrid vehicle drivers or among the most supportive

*Q20h.– If a decision were made to supplement or replace lost funding, how open would you be to each of the following? Mileage-based user fee*

| Those Who Strongly Oppose MBUF (Gave a rating of 1) | | | |
|---|---|---|---|
| Age | 18-34 base=236 | 35-54 base=350 | 55-69 base=147 |
| | 18% | 20% | (30%) |
| Miles driven per year | High (25K+) base=95 | Moderate (15-<25K) base=295 | Average (10-<15K) base=340 |
| | (30%) | (24%) | 16% |
| Fuel Efficiency | High (28 MPG+) base=160 | Average (20-27 MPG) base=397 | Low (<20 MPG) base=166 |
| | 22% | 16% | (31%) |

Circled number is statistically higher than the underlined number at the 95% confidence level.

# Acceptance of Funding Solutions -
## Profile of Neutral Support

**Approximately 4 in 10 expressed neutral reactions towards a MBUF, with fairly even distribution across the 4-point spread**

- Roughly two in ten gave a rating of 6 or 7 on the 10-point scale
- Those who were neutral to a MBUF include:
  - those middle aged (35 to 54)
  - and those who drive a average fuel efficiency car (between 20 and 27 miles per gallon)
- No difference was noted by number of miles driven

*Q20h.– If a decision were made to supplement or replace lost funding, how open would you be to each of the following? Mileage-based user fee*

| Those Who Were Neutral to MBUF (Gave a rating of 4 to 7) | | | |
|---|---|---|---|
| Age | 18-34 base=236 | 35-54 base=350 | 55-69 base=147 |
| | 43% | 44% | 35% |
| Miles driven per year | High (25K+) base=95 | Moderate (15-<25K) base=295 | Average (10-<15K) base=340 |
| | 38% | 39% | 45% |
| Fuel Efficiency | High (28 MPG+) base=160 | Average (20-27 MPG) base=397 | Low (<20 MPG) base=166 |
| | 34% | 46% | 39% |

Circled number is statistically higher than the underlined number at the 95% confidence level.

# Most Acceptable Solution -
## By Attitude Toward MBUF/Vehicle Type

### No one funding solution was widely preferred

- A mileage-based user fee was among the top four most accepted solutions
- Those who oppose a mileage-based user fee were more likely to prefer raising the fuel tax, adding toll roads, and adding fees for high emission vehicles
- No difference in preference for MBUF by vehicle type

*Q.20a – Of the solutions you just rated, which one do you feel would be most acceptable?*

| Acceptable Solutions | | Openness to MBUF | | Vehicle Type | |
|---|---|---|---|---|---|
| | Total (base=734) | Support MBUF (base=170) | Oppose MBUF (base=255) | Hybrid (base=104) | Non-Hybrid (base=714) |
| Raising fuel taxes | 20% | 13% | 27% | 35% | 20% |
| Adding toll roads | 19% | 15% | 25% | 9% | 20% |
| Mileage-based user fee | 19% | 47% | 2% | 20% | 19% |
| Fees for high emission vehicles | 13% | 7% | 14% | 14% | 13% |
| Increasing vehicle registration fees | 11% | 7% | 10% | 7% | 11% |
| Increasing vehicle tax | 7% | 4% | 7% | 4% | 7% |
| Increasing general sales tax | 5% | 3% | 6% | 4% | 5% |
| Increasing income tax | 3% | 3% | 4% | 5% | 3% |

Circled number is statistically higher than the underlined number at the 95% confidence level.

# Appendices

# Who We Talked To

## Who We Talked To

Respondents were split about half and half male/female.

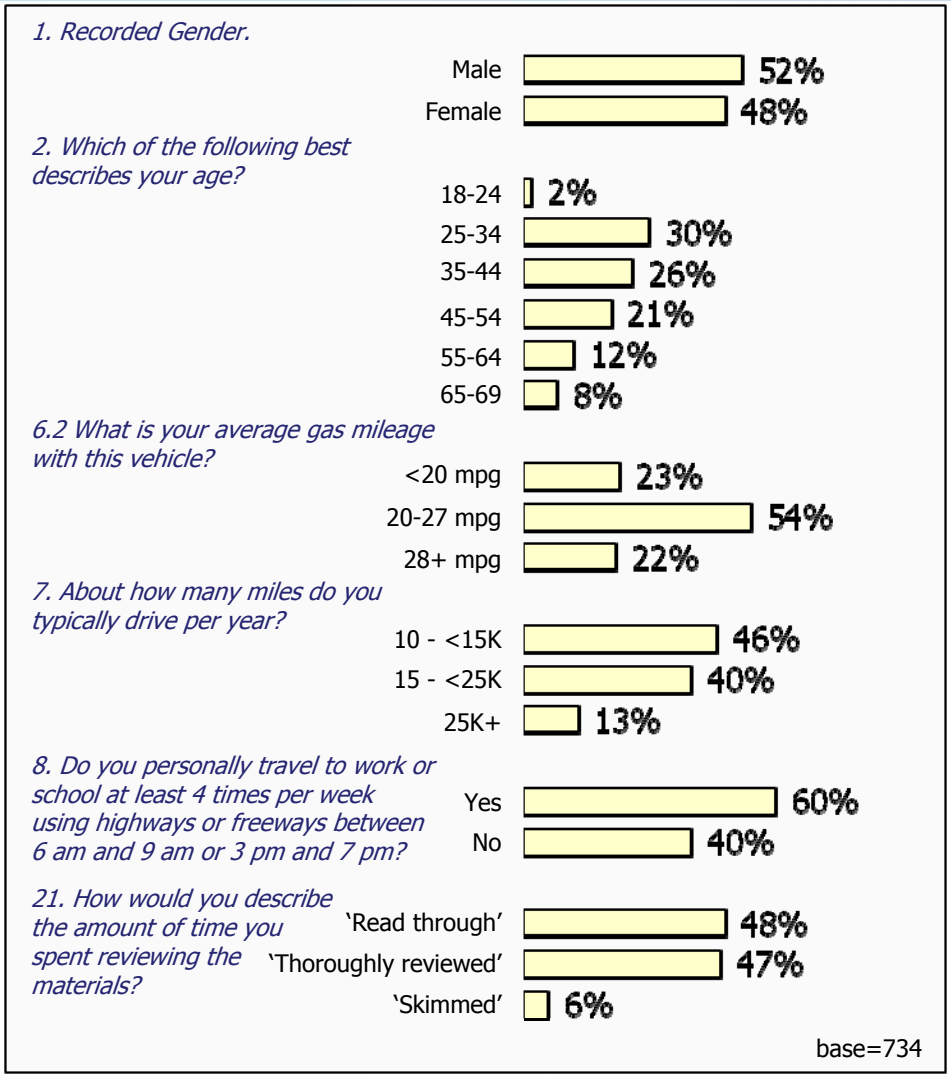
By survey design, we talked to a range of respondents from the ages of 18 to 69.

Half of respondents had average fuel efficiency (20-27 miles per gallon). Another quarter had low fuel efficiency (<20 mpg) and another quarter had high fuel efficiency (28+ mpg).

The majority of respondents (86%) drove an average to moderate amount of miles per year.

Six in ten were peak commuters.

About half of respondents indicated they 'read through' the materials and about another half indicated they 'thoroughly reviewed' them. Few indicated they only skimmed the materials.



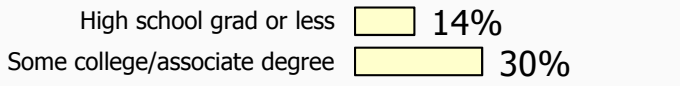
# Who We Talked To (cont'd.)

## Who We Talked To (cont'd.)

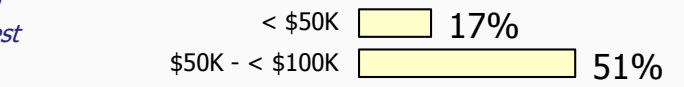
Over half of respondents have a college degree or higher.

Half of respondents have a moderate household income.

*21a. What is the highest level of education that you have completed?*




*22. Please stop me when I reach the category that best describes your household income before taxes from last year.*




base=734

# Statistical Reliability and Limitations

- Reliability is the degree to which survey sample data reflects the actual population and the true parameters of that population. It is dependent primarily upon survey sample size, along with other factors, including the degree of representativeness of the original sample selection, types of questions asked, answers received, interviewer proficiency, and respondent quality.
- The Mileage-Based User Fee Study sample of 734 yields overall data reliable with 95% confidence and a plus or minus 3.6% sampling error interval
  - That is to say, if a similar survey were conducted repeatedly, results within plus or minus 3.6% would occur for any one question 95 out of 100 times. Looking at it another way, if a question received a "yes" answer by 60% of the 734, the chances are 95 out of 100 that between 56.4% and 63.6% of the targeted population would answer a similar "yes" response, if asked. Sampling error such as this is applied to each cross-tabulation market cell as well as the total survey sample.
- It is also important to point out that surveys should never be viewed as 100% reliable. A small difference between two statistics or findings cannot be considered necessarily meaningful; however, as the sample size or market segment increases, the margin of error (sampling error) decreases, thereby providing more conclusive and reliable data.

# Statistical Reliability and Limitations (Cont'd.)

| Mileage-Based User Fee Public Opinion Survey Breakdown of Completed Interviews | | | |
|---|---|---|---|
| **Segment** | **Number of Recruits** | **Number of Completed Interviews*** | **Margin of Error** |
| **Total** | 1151 | 734 | ± 3.6% |
| **Materials Received** | | | |
| Received More Information | 566 | 369 | ± 5.1% |
| Received Less Information | 585 | 364 | ± 5.1% |
| **Materials Received** | | | |
| Metro Area Peak Drivers | 701 | 442 | ± 4.7% |
| Non-Metro Peak | 450 | 292 | ± 5.7% |
| **Age** | | | |
| 18-34 | 279 | 236 | ± 6.4% |
| 35-54 | 568 | 350 | ± 5.2% |
| 55-69 | 304 | 147 | ± 8.1% |
| **Mileage Per Year** | | | |
| High (25K+) | 146 | 95 | ± 10.1% |
| Moderate (15-<25K) | 455 | 295 | ± 5.7% |
| Average (10-<15K) | 541 | 340 | ± 5.3% |
| **Hybrid / Non-Hybrid** | | | |
| Non-Hybrid | 1121 | 714 | ± 3.7% |
| Hybrid total | 179 | 104 | ± 9.6% |
| Hybrid – Oversample | 151 | 87** | ± 10.5% |
| Hybrid – Random | 28 | 17 | ± 23.8% |
| **Gender** | | | |
| Male | 584 | 381 | ± 5.0% |
| Female | 567 | 353 | ± 5.2% |

*Data was weighted to be proportionate by age among those who drive 10,000 miles per year or more (See methodology section for more information on weighting). Counts shown represent weighted data.
**The 87 completes from the hybrid oversample were garnered to have a sufficient sample size for analysis of this group. These completes were excluded from the total analysis to keep it representative of the total population.

# Mail Informational Materials

- Cover letter
- Concepts
- Background information
- 2009 Map

**"Received Less Information"**

**"Received More Information"**

Background:
An important issue for Highway Users, Commerce and the National Economy

The cost of maintaining the nation's highway system continues to grow, while congestion in larger cities is negatively affecting our quality of life. Transportation agencies are working on these concerns to find responsible solutions for these current and future challenges.

Today, gas taxes and registration fees are the major sources of funding to maintain and improve roadways across the country. These revenue sources are expected to diminish for several reasons, especially as more of the nation's vehicles become highly fuel-efficient, or are propelled by electricity or other alternative fuels.

While this may be a positive development overall, transportation agencies (nationally) need to explore ways to fairly replace funding that may be lost due to these trends today and in the future.

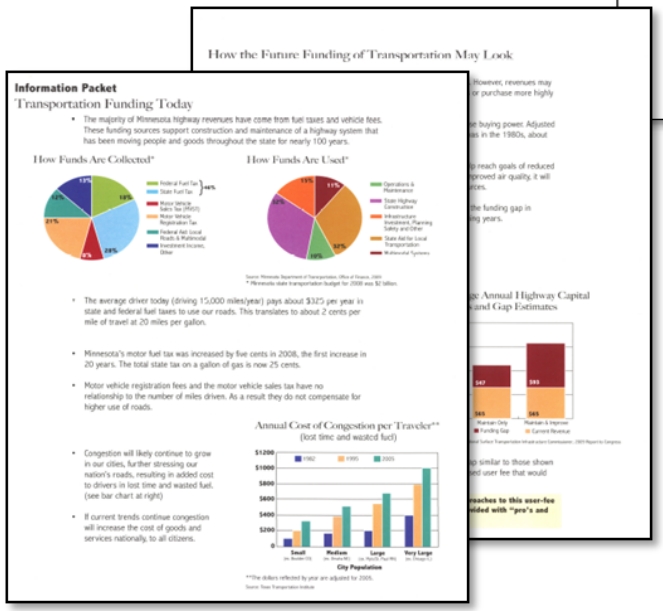
One proposed way to replace this lost revenue is to charge drivers according to the number of miles driven. While not the only solution, a miles-based road user-fee has been proposed or tested in various forms (though not fully implemented anywhere in the U.S.)

On the reverse side are two of several possible approaches to the concept.

With this as background, please review the following approaches to this user-fee concept before we call to get your opinions. They are provided with "pro's and con's" gathered from consumers like yourself.

The Dieringer Research Group, Inc.

Thank you!



How the Future Funding of Transportation May Look

Information Packet
Transportation Funding Today

- The majority of Minnesota highway revenues have come from fuel taxes and vehicle fees. These funding sources support construction and maintenance of a highway system that has been moving people and goods throughout the state for nearly 100 years.

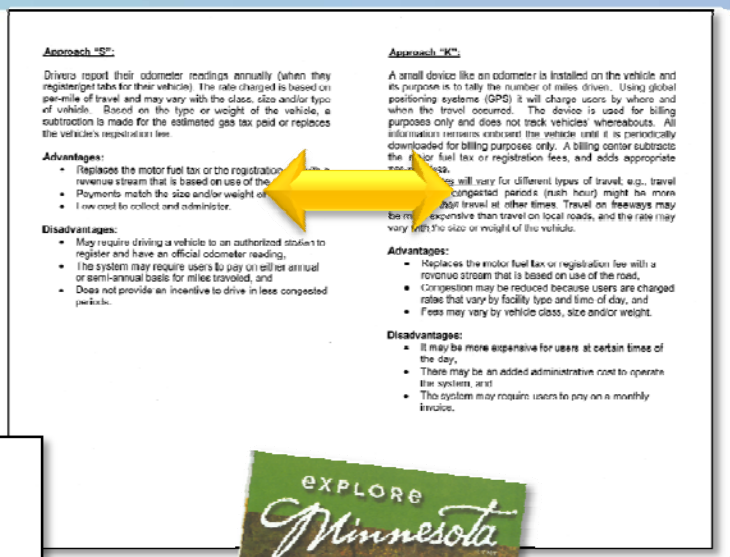
How Funds Are Collected*

How Funds Are Used*

- The average driver today (driving 15,000 miles/year) pays about $325 per year in state and federal fuel taxes to use our roads. This translates to about 2 cents per mile of travel at 20 miles per gallon.
- Minnesota's motor fuel tax was increased by five cents in 2008, the first increase in 20 years. The total state tax on a gallon of gas is now 25 cents.
- Motor vehicle registration fees and the motor vehicle sales tax have no relationship to the number of miles driven. As a result they do not compensate for higher use of roads.
- Congestion will likely continue to grow in our cities, further stressing our nation's roads, resulting in added cost to drivers in lost time and wasted fuel. (see bar chart at right)
- If current trends continue congestion will increase the cost of goods and services nationally, to all citizens.

Annual Cost of Congestion per Traveler**
(lost time and wasted fuel)

City Population



Approach "S":

Drivers report their odometer readings annually (when they register/get tabs for their vehicle). The rate charged is based on per-mile of travel and may vary with the class, size and/or type of vehicle. Based on the type or weight of the vehicle, a subtraction is made for the estimated gas tax paid or replaces the vehicle's registration fee.

Advantages:
- Replaces the motor fuel tax or the registration
- Payments match the size and/or weight of
- Low cost to collect and administer.

Disadvantages:
- May require driving a vehicle to an authorized station to register and have an official odometer reading,
- The system may require users to pay on either annual or semi-annual basis for miles traveled, and
- Does not provide an incentive to drive in less congested periods.

Approach "K":

A small device like an odometer is installed on the vehicle and its purpose is to tally the number of miles driven. Using global positioning systems (GPS) it will charge users by where and when the travel occurred. The device is used for billing purposes only and does not track vehicles' whereabouts. All information remains onboard the vehicle until it is periodically downloaded for billing purposes only. A billing center subtracts the [illegible] fuel tax or registration fees, and adds appropriate [illegible] fees.

[illegible] will vary for different types of travel, e.g., travel [illegible] congested periods (rush hour) might be more [illegible] travel at other times. Travel on freeways may be more expensive than travel on local roads, and the rate may vary with the size or weight of the vehicle.

Advantages:
- Replaces the motor fuel tax or registration fee with a revenue stream that is based on use of the road,
- Congestion may be reduced because users are charged rates that vary by facility type and time of day, and
- Fees may vary by vehicle class, size and/or weight.

Disadvantages:
- It may be more expensive for users at certain times of the day,
- There may be an added administrative cost to operate the system, and
- The system may require users to pay on a monthly invoice.