



# What Do Americans Think About Federal Tax Options to Support Transportation? Results from Year Eleven of a National Survey

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# MINETA TRANSPORTATION INSTITUTE

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REPORT 20-26

# WHAT DO AMERICANS THINK ABOUT FEDERAL TAX OPTIONS TO SUPPORT TRANSPORTATION? RESULTS FROM YEAR ELEVEN OF A NATIONAL SURVEY

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## I. INTRODUCTION

Over the past several decades, the transportation revenues available from state and federal gas taxes have fallen significantly in terms of inflation-adjusted dollars per mile traveled. At the same time, the transportation system requires critical – and expensive – system upgrades. Among other needs, a large portion of the national highway system requires major rehabilitation, and there is growing desire at all levels of government to substantially upgrade and expand infrastructure to support public transit, walking, bicycling, and micro-mobility modes such as electric kick-scooters.

This dilemma of growing needs and shrinking revenues can be resolved in only two ways: either the nation must dramatically lower its goals for system preservation and enhancement, or new revenues must be raised. If the latter is to happen, legislators must be convinced that increasing taxes or fees is politically feasible. One portion of the political calculus that legislators make when deciding whether or not to raise new revenues is, of course, the likelihood of public support for – or opposition to – raising different kinds of taxes.

This report contributes to the understanding of public sentiment about increasing transportation taxes by presenting results from the eleventh year of an annual survey investigating public opinion about a variety of federal-level transportation tax options. The survey data was collected in February 2020, just prior to the dramatic travel restrictions imposed nationally in response to the COVID-19 pandemic.

The specific taxes tested were six variants of a federal gas tax increase, two variants of a new mileage fee on all travel that would replace the federal gas tax, and three variants of a mileage fee for commercial travel that would be levied in addition to the federal gas tax. In addition to asking directly about support for these tax options, the survey collected data on respondents' views on the quality of their local transportation system, their priorities for federal transportation spending, their knowledge about gas taxes, their views on privacy and equity matters related to mileage fees, travel behavior, and standard sociodemographic variables. All this information was used to assess support levels for the tax options among different population subgroups.

The survey questionnaire described the various tax proposals in general terms only, so the study results cannot be assumed to reflect support for any actual proposal put forward. Nevertheless, the results show likely patterns of support and, more important, the public's relative preferences among different transportation tax options.

The report compares the results of the eleven surveys in the series to establish how public views may have changed since 2010. To permit reliable trend analysis, the surveys used identical question language each year to describe most of the tax options.<sup>1</sup> However, starting last year, the survey was administered using an online panel, unlike previous years that gathered data through a random-digit-dialing phone survey. Comparisons of results from before and after the change in survey mode should be interpreted with care, since changes in survey mode can affect responses.

The remaining chapters of the report are organized as follows. Chapter 2 describes the survey methodology and presents an overview of the questionnaire and details of the implementation procedure. Discussion of the survey findings follows in Chapter 3, Chapter 4, and Chapter 5. Chapter 6 summarizes the key findings and suggests policy implications and future research needs.

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## II. SURVEY DESIGN AND ADMINISTRATION

The online survey was completed by 2,515 U.S. adults, who were recruited by Qualtrics through an online panel sample. This chapter describes the questionnaire design, survey sampling and administration, and characteristics of the respondents.

### QUESTIONNAIRE DESIGN

The survey questionnaire was designed to test public support for variants on taxes that could be used to raise federal transportation revenues: an increase in the federal gas tax rate, a new national mileage fee to replace the federal gas tax, and a new mileage fee assessed only on commercial travel. The exact wording used for all questions can be found in Appendix A, which reproduces the survey questionnaire.

Because gas taxes and mileage fees are revenue options likely to receive considerable policy scrutiny in coming years, the survey tested support for different versions of each tax. Overall, 11 different federal tax options were tested: 6 variants of a gas tax increase, 2 variants of a new mileage fee on all travel to replace the federal gas tax, and 3 variants of a mileage fee for commercial travel that would be levied in addition to the gas tax. To permit trend analysis, most of the gas tax variants were described with identical language to that used in earlier years of the survey series. The two mileage fee variants were described with the same wording as last year.

To make these hypothetical taxes easier for respondents to understand, the survey gave specific amounts for the gas tax increases and mileage fee on all travel. The amounts were selected to be simple numbers within the range of mainstream current policy discussion.

**Gas-tax increases:** All variants of a federal gas tax increase involved raising the existing 18¢-per-gallon tax<sup>2</sup> to 28¢ per gallon, but each included a different set of information for respondents to consider. The six variations were:

- A “base-case” 10¢ increase in the gas tax, with respondents given no information other than the rate and that proceeds would be spent “for transportation.”
- A 10¢ increase in the gas tax, with the revenues to be spent only for projects to reduce local air pollution caused by the transportation system.
- A 10¢ increase in the gas tax, with the revenues to be spent only on projects to reduce the transportation system’s contribution to global warming.
- A 10¢ increase in the gas tax, with the revenues to be spent only on projects to maintain streets, roads, and highways.
- A 10¢ increase in the gas tax, with the revenues to be spent only on projects to reduce accidents and improve safety.
- A 10¢ increase in the gas tax, with the revenues to be spent only on projects to reduce traffic congestion. (This option was added to the survey in 2019.)

**New mileage fees to replace the gas tax:** Two variants of a mileage fee on all travel were presented. Both involved replacing the federal gasoline tax with a new fee that charges drivers for each mile driven and relies on electronic meters to track mileage.<sup>3</sup> Respondents were also told that someone driving 10,000 miles a year would pay \$100. The two variants, which differed only in the rate structure, were:

- “Flat-rate” variant: a one-cent-per-mile fee, with every car taxed at the same rate.
- “Green” variant: a mileage fee for which the average rate would be one cent per mile, but vehicles that pollute less would be charged less and vehicles that pollute more would be charged more.

**A “Business Road-Use Fee”:** New to this year’s survey was a question asking respondents about a hypothetical “Business Road-Use Fee” that would be assessed on miles that commercial vehicles drive on the job. Those vehicles would continue to pay the current gas tax as well. Respondents were asked if they would support such a tax on different types of commercial travel: delivery and freight trucks, taxis, and ridehailing vehicles.

The survey also asked several questions to test support for specific features of a hypothetical new mileage fee on all travel: whether respondents thought all-electric vehicles should pay a higher or lower rate than gas and diesel vehicles, whether they would be bothered having their mileage tracked, whether they see a mileage fee as more or less fair than a gas tax, and how often they would prefer to pay a new mileage fee (each time they buy gas or charge a vehicle, once a month, or annually).

To provide context for understanding respondents’ views on gas and mileage taxes, the questionnaire also asked respondents to rate the quality of transportation infrastructure and services in their community, their goals for improving transportation across the U.S., their priorities for different ways the federal government could spend gas tax revenues, their estimate of how recently gas tax rate has been raised nationally and in their state, simple travel behavior questions, and standard socio-demographic questions.

## **SURVEY ADMINISTRATION**

The survey was administered online, using a survey platform and panel of respondents managed by Qualtrics. Online surveys are increasingly popular, in part due to their low cost, speed at which they can be administered, convenience for respondents, and ability to include question design options that are difficult or impossible to implement via telephone or mail.<sup>4</sup> A 2019 analysis from the Pew Research Center found that 90% of Americans are online,<sup>5</sup> which suggests that online surveys are currently a reasonable method to reach a representative sample of US adults, despite evidence that some population subgroups are often underrepresented in online surveys. Groups less well represented include people who are older, low-income, have less formal education, live in rural communities, and do not have high-speed internet access at home.<sup>6</sup>

Through 2018, the surveys in the series gathered data through random-digit-dial telephone surveys. In 2019, we changed the survey mode to take advantage of the benefits of online surveys. Compared to a phone survey, online surveys are much less expensive and avoid some challenges specific to telephone surveys, such as their intrusive nature and increased use of call screening.<sup>7</sup>

Survey mode can impact question responses, so readers are cautioned that when trends are discussed in this report's findings, the change in survey mode could account for some of the difference between responses in 2018 and 2019. A study by the authors of this report, for example, found higher support levels for some of the same tax options described here were higher when responses were collected from the online panel "SurveyMonkey Audience" than when responses were collected with a random-digit-dial phone survey.<sup>8</sup> However, research suggests that questions about abstract policy matters (like those in this survey) are less affected by survey mode than questions about potentially embarrassing personal topics where respondents may feel pressured to give socially acceptable answers. Researcher have also found that respondents to online polls are also less likely to answer rating questions with the most positive answers than are phone survey respondents.<sup>9</sup>

## Sampling Approach

Quota sampling was used in order a sample that closely represents the US adult population. The authors requested a nationally-representative sample, as defined by American Community Survey (ACS) data on gender, race and ethnicity, employment status, annual household income, and age. Table 1 shows the ACS values used to build the quotas.

**Table 1. Quotas Used for Sampling**

Characteristic		U.S. adult population <sup>a</sup> (%)
Gender	Male	49
	Female	51
Race/ethnicity	White only	52
	Hispanic/Latino origin/descent	18
	Black/African-American only	12
	Asian/Asian-American only	12
	Other, including multiracial	6
Income (annual household)	\$0 – \$50,000	42
	\$50,001 – \$99,999	30
	\$100,000 – \$149,999	15
	\$150,000+	13
Age (years)	18 – 34	30
	35 – 54	33
	55+	36

<sup>a</sup> All data are for adults 18 years and older, with the exception of household income, which is for all U.S. households. *Source:* U.S. Census Bureau's 2014-2018 American Community Survey 5-Year Public Use Microdata Samples, downloaded from [data.census.gov](https://data.census.gov).



Interviews were conducted from February 14 to February 28, 2020. The median time to complete each survey was 10 minutes, and the mean time was 13 minutes. A total of 2,515 adults responded with usable data. We did not calculate response or frequency rates because the Qualtrics sampling method does not track how many people received the survey invitation.

## **SURVEY RESPONDENTS**

The 2,515 adult survey respondents with usable data were generally representative of the U.S. population in terms of Census region and sociodemographic characteristics (Table 3). For the survey findings and analysis presented in this report, we lightly weighted the data using a raking method to match the Census Bureau's 2018 American Community Survey five-year estimates with respect to gender, race, Hispanic ethnicity, education level, household income, and age.<sup>10</sup>

**Table 2. Comparison of Survey Respondents to the U.S. Population**

Characteristic		Sample (%)	U.S. adults <sup>a</sup> (%)
Census region <sup>b</sup>	Northeast	22	18
	Midwest	18	21
	South	39	38
	West	22	24
Gender	Male	49	49
	Female	51	51
	Other	<1	--
Of Hispanic/Latino origin/descent		18	16
Race	White only	63	74
	Black/African-American only	13	12
	Asian/Asian-American only	12	6
	Other, including multiracial	12	8
Education	Less than high school graduate	3	11
	High school graduate	20	36
	Some college	33	24
	College graduate	29	18
	Graduate degree	16	11
Employment status	Working for pay	55	61
	Unemployed, but looking for work	12	4
	Not working by choice (retired, etc.)	33	35
Income (annual household)	\$0 – \$24,999	20	18
	\$25,000 – \$49,999	22	20
	\$50,000 – \$74,999	18	17
	\$75,000 – \$99,999	12	12
	\$100,000 – \$149,999	15	15
	\$150,000 – \$199,999	7	7
	\$200,000+	6	11
Age (years)	18 – 24	10	12
	25 – 34	20	18
	35 – 44	21	16
	45 – 54	13	17
	55 – 64	18	17
	65 – 74	16	11
	75 – 84	3	6
	85+	<1	2

<sup>a</sup> All data are for adults 18 years and older, with the exception of household income, which is for all U.S. households. Source: Steven Ruggles, Sarah Flood, Ronald Goeken, Josiah Grover, Erin Meyer, Jose Pacas and Matthew Sobek. IPUMS USA: Version 10.0 [dataset]. Minneapolis, MN: IPUMS, 2020. <https://doi.org/10.18128/D010.V10.0>.

<sup>b</sup> Census regions are defined at U.S. Census Bureau, "Census Regions and Divisions of the United States with State FIPS Codes," [http://www2.census.gov/geo/docs/maps-data/maps/reg\\_div.txt](http://www2.census.gov/geo/docs/maps-data/maps/reg_div.txt).

*Note:* Some percentages do not sum to 100% due to rounding.

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### III. FINDINGS RELATED TO RESPONDENTS' VIEWS ON TRANSPORTATION SYSTEM NEEDS

This chapter presents key findings from a set of questions asking respondents their views on the quality of the current transportation system and priorities for improving it. (Appendix A presents the exact questionnaire language and complete top-line results.)

#### PERCEIVED QUALITY OF THE LOCAL TRANSPORTATION SYSTEM

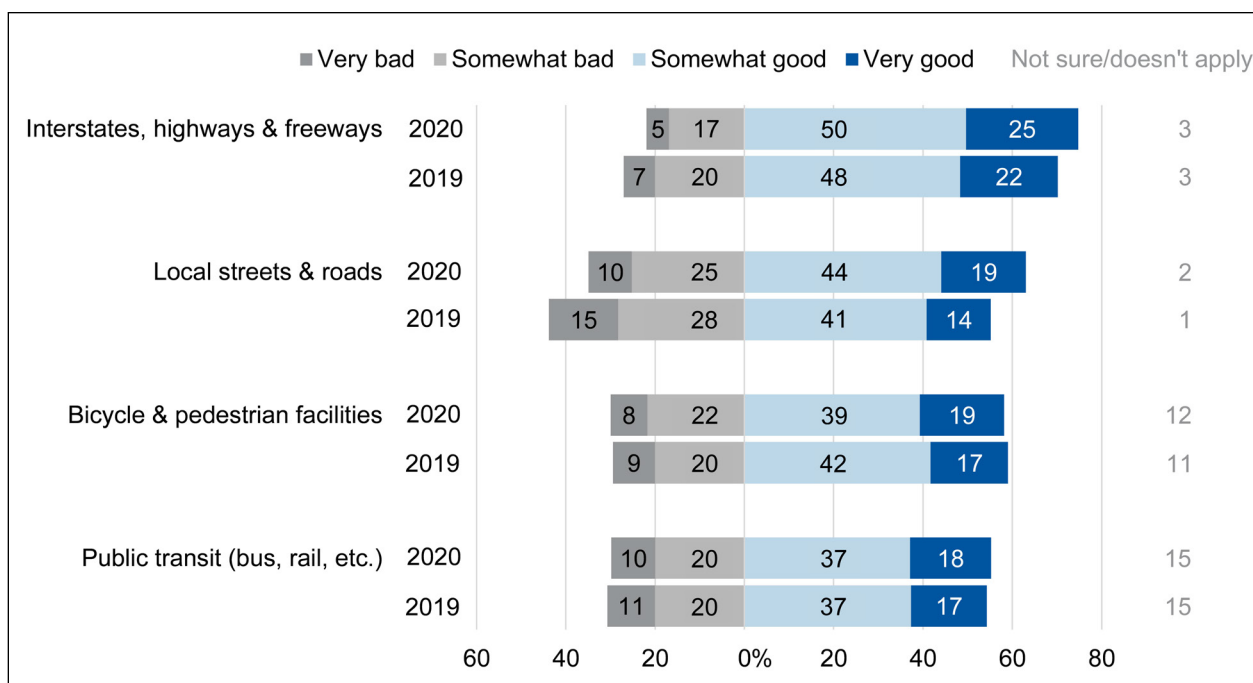
Figure 1 shows how respondents assessed the quality of transportation infrastructure and services in their own community. The grey bars to the left indicate the percent of respondents who assessed each type of transportation infrastructure or service negatively (as somewhat or very bad), while the blue bars to the left show the percentage of respondents who assessed each item positively (as somewhat or very good). The figure also shows the percent of respondents who responded “not sure/doesn’t apply.”

The majority of respondents rated the transportation system positively, though with some reservations. For every item, more than half of respondents rated it as “somewhat” or “very” good. However, more people selected “somewhat” rather than “very” good.

Comparing responses across the four items, interstates, highways, and freeways were rated positively by the largest percent of respondents (75%). The other three items were rated positively by somewhat smaller majorities: 63% for local streets and roads, 58% for bicycle and pedestrian facilities, and 55% for public transit. Considerably more people responded “don’t know” about bicycle and pedestrian facilities and public transit than for the two types of road infrastructure.

Responses in 2020 followed roughly the same pattern as in 2019, though slightly more people had positive ratings in 2020 for all but bicycle and pedestrian facilities.

A separate question asked respondents if they were concerned about traffic congestion in their community. Thirty-four percent were very concerned, 42% were somewhat concerned, and only 24% were not at all concerned.

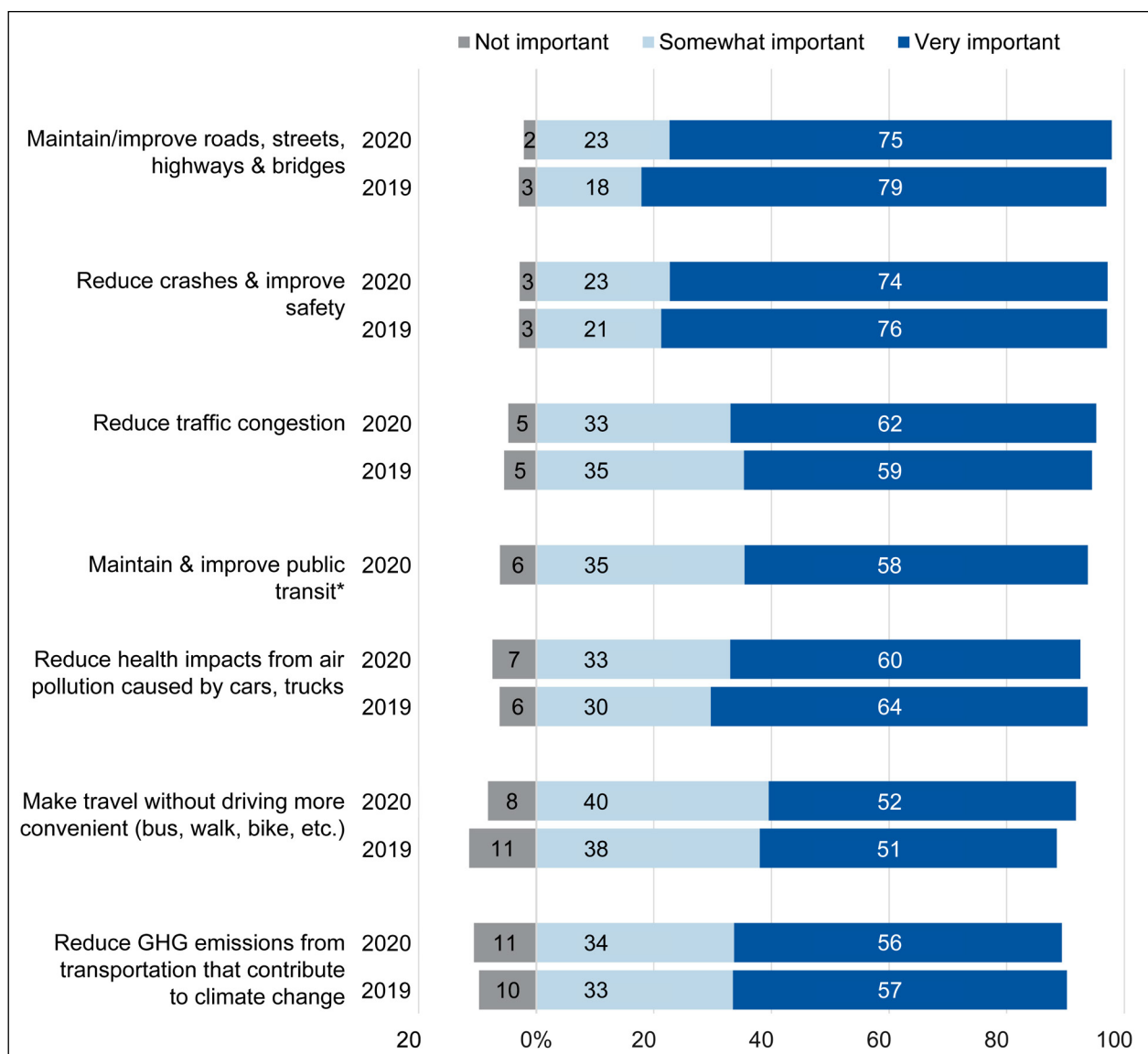


**Figure 1. Assessment of the Quality of Transportation Infrastructure and Services in “Your Community,” 2019 – 2020**

## PRIORITIES FOR THE NATIONAL TRANSPORTATION SYSTEM

The next set of survey questions asked respondents about their priorities for improvements to the transportation system, asking first about national goals and then about preferred ways to spend federal gas tax revenues.

Figure 2 shows the importance that respondents placed on each of seven goals for improving the national transportation system, comparing 2020 and 2019 data for the six goals tested both years. The blue bars to the right indicate the percentages rating each goal as “somewhat” or “very” important, and the grey bars to the left represent the proportion rating the goal as “not important.” Across both years, virtually all respondents (89% or more) rated each of the seven goals as “somewhat” or “very” important, with more selecting “very” than “somewhat” important. In 2020, for example, 75% of respondents said it was “very” important to maintain and improve roads, streets, highways, and bridges, and 58% said it was “very” important to maintain and improve public transit. The two most popular goals in both years were to improve maintenance on roads, streets, highways, and bridges and to improve safety.



**Figure 2. Assessment of the Importance of Transportation-Related Goals for the U.S., 2019 – 2020**

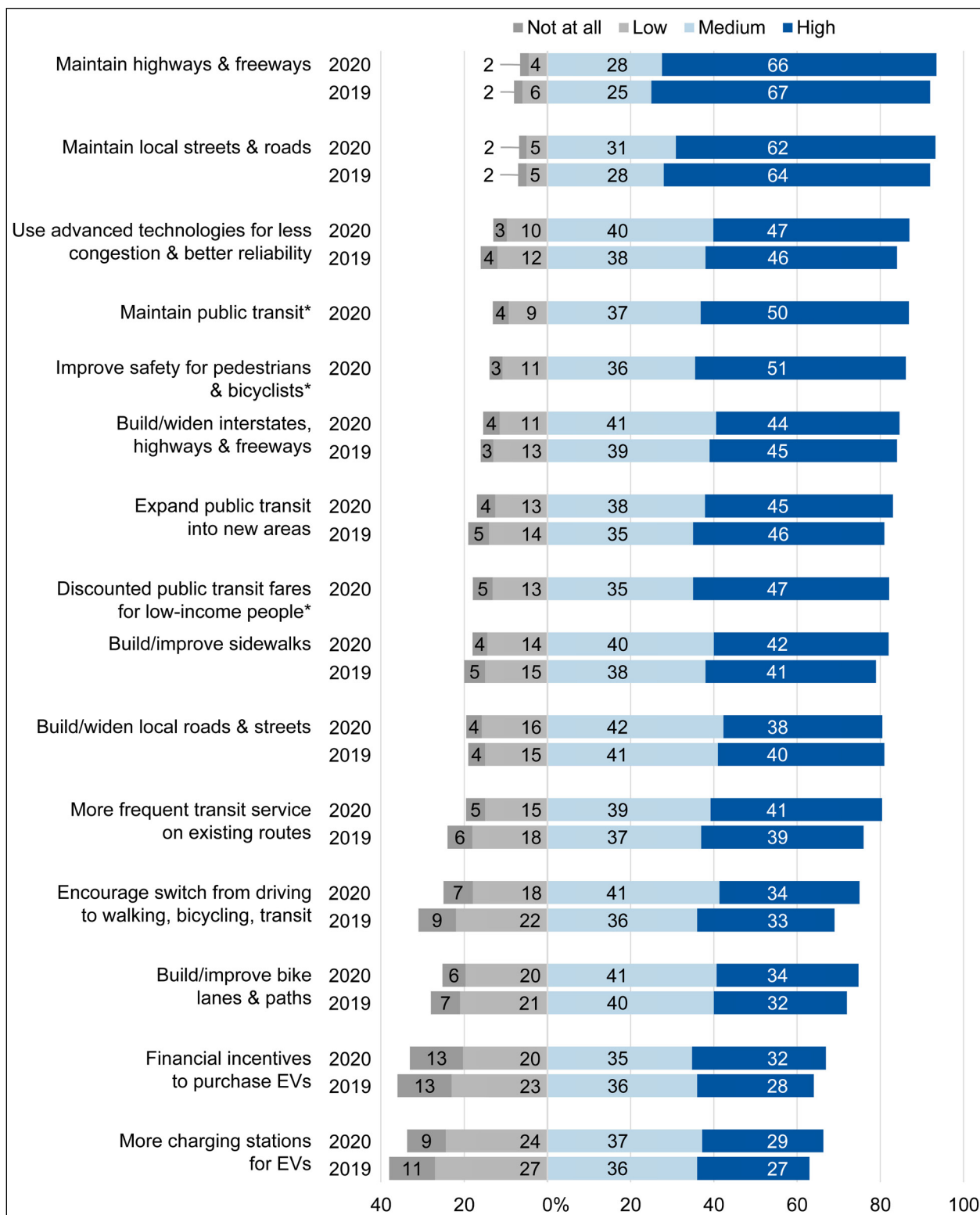
\*Option not included in the 2019 survey.

The questionnaire then explained that the federal government collects a tax on gasoline and asked respondents to indicate how much of a priority they would place on each of 13 different categories of spending. Figure 3 presents the results from both 2020 and 2019. There was no major variation from year to year. In both years, the great majority of respondents indicated that all these options are of medium to high priority. Also, in neither year did any spending option have more than 13% rate it as “not at all” a priority.

Looking at respondents' relative priorities, maintenance was a very high priority. The options to maintain highways and freeways and to maintain local streets and roads were both a priority for the largest number of respondents (94% and 93%, respectively, in 2020). Maintenance of public transit was important to almost as many (87% in 2020).

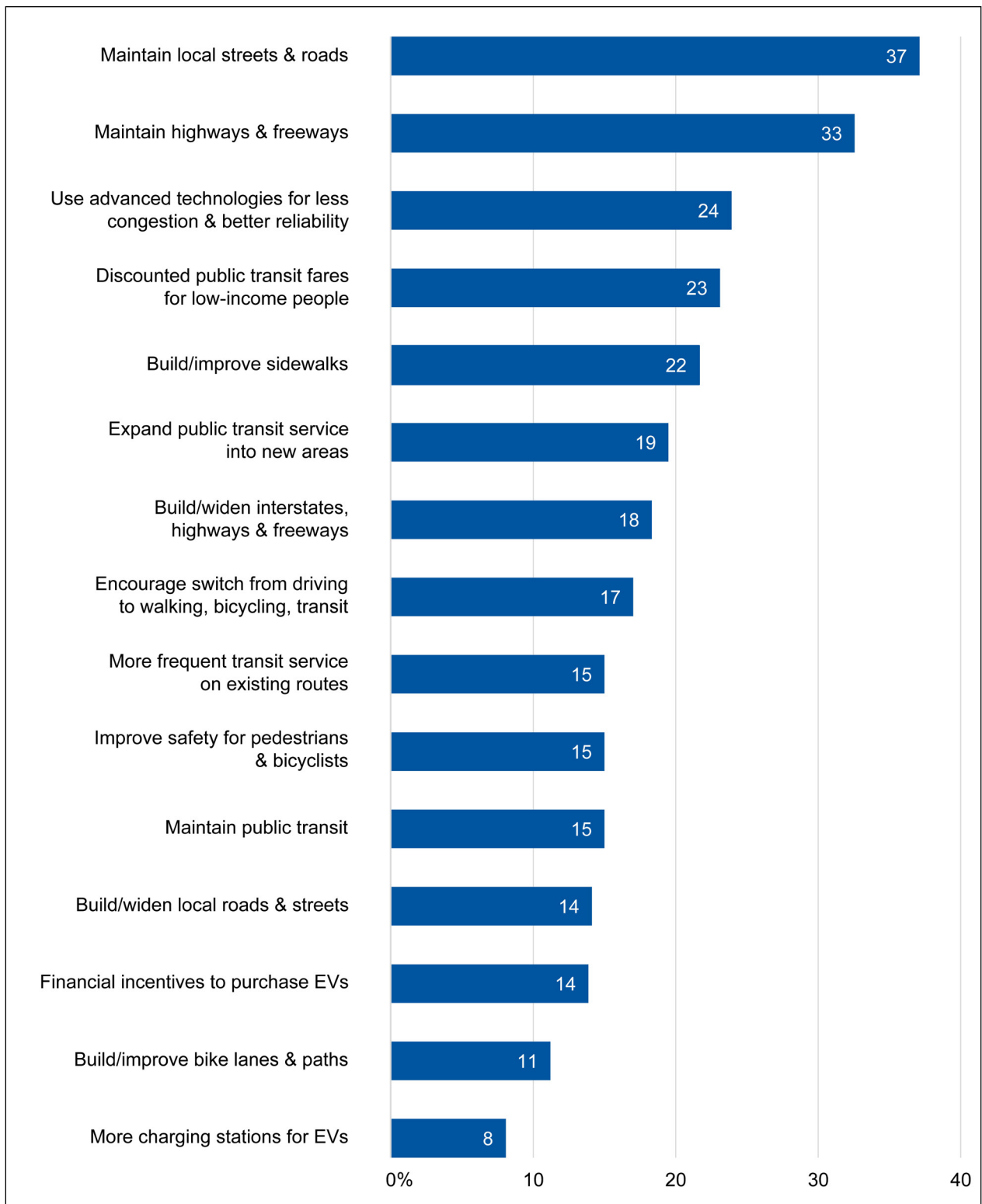
Large majorities also supported both road and public-transit related options, from building and widening local streets, roads, and highways, to adding more frequent transit service and offering discounted fares to low-income riders. The two options with the lowest support both related to encouraging use of electric vehicles, but even here clear majorities supported the options as at least a “medium” priority.

Finally, a follow-up question asked respondents to choose their three highest priorities from the list of 13 possible spending categories. As Figure 4 shows, there was little consensus; no single option was selected by a majority of respondents. However, mirroring respondents' rating for each spending option, the most commonly selected top priority was maintenance: maintaining local streets and roads (37%) and maintaining highways and freeways (33%). The most popular public transit-related option, “discounted public transit fares for low-income people,” was selected by 23% of respondents. As for active transportation, building/improving sidewalks was a top priority for 22%, though only 11% selected “build and improve bike lanes and paths” as a priority. Measures to support EV use were a priority for comparatively few respondents, with 14% selecting “financial incentives to purchase EVs” and 8% selecting “more charging stations for EVs.”



**Figure 3. Priority Placed on Different Options for Spending Federal Gas Tax Revenue, 2019 – 2020**

\*Option not included in the 2019 survey.



**Figure 4. Options Selected as One of the Top Three Priorities for Spending Federal Gas Tax Revenue**



## IV. FINDINGS RELATED TO FEDERAL GAS TAXES

This chapter presents findings on questions related to knowledge and opinions about the federal gas tax. Topics covered include how much respondents think they pay in federal gas taxes and support for different variants on raising the federal gas tax rate. (Appendix A presents the exact questionnaire language and topline results.)

The chapter also examines how support levels for the different tax options varies by subgroups within the population. For example, we compare support levels for women versus men, and for urban vs. rural residents. The statistical test of two proportions was used to check whether differences among subgroups (e.g., men versus women) are statistically significant at the 95% and 99% confidence levels. In the tables presenting these results, the first subgroup listed for each population characteristic (e.g., age or race) is the base case against which the other subgroups are compared.

### KNOWLEDGE ABOUT FEDERAL AND STATE GAS TAX RATES

Considerable anecdotal evidence suggests most Americans are unaware of how much they pay in fuel taxes, and surveys such as the 2019 report in this series have documented that most people overestimate the federal gas tax rate.<sup>11</sup> This year, we decided to gather evidence on a related aspect of the public's knowledge about the gas tax: their best guess about how recently the gas tax rate had been raised by both the federal government and the respondent's home state. To make the questions easier to answer, respondents were asked to select a time range rather than specify the exact number of years. The options offered were up to 3 years ago, 4 to 10 years ago, 11 to 15 years ago, 16 to 20 years ago, and more than 20 years ago.

The survey found that virtually none of the respondents—only 3%—knew that the federal gas tax has not been raised in more than 20 years (Table 3). More than half simply said that they didn't know (55%), and a third believed that the tax had been raised within the past 10 years (34%).

**Table 3. Respondents' Belief About When the U.S. Congress Last Raised the Federal Gas Tax**

	%
1 to 3 years ago	20
4 to 10 years ago	14
11 to 15 years ago	6
16 to 20 years ago	2
More than 20 years ago (correct answer)	3
Don't know	55

Somewhat more respondents had an accurate sense of when the gas tax was last raised in their home state (Table 4). A quarter (25%) chose the correct time category. However, 14% thought that the rate had been raised longer ago than it had, and 11% thought it had been raised more recently than it had. Finally, half (49%) said they didn't know when their state gas tax rate had been raised.

**Table 4. Accuracy of Respondents' Belief About When Their State Gas Tax Was Last Raised**

How long ago respondents believe their state gas tax was last raised	Years since the state gas tax was last raised				
	Within the last 3 years	4 to 10 years	11 to 15 years	16 to 20 years	More than 20 years
1 to 3 years	23	3	<1	<1	3
4 to 10 years	9	3	<1	<1	3
11 to 15 years	3	1	<1	<1	<1
16 to 20 years	1	<1	0	<1	1
More than 20 years	1	<1	0	0%	<1
Don't know	32	6	1	<1	10

Note: Cells in green indicate that the respondent correctly identified when their state gas tax was last raised. Cells in blue indicate that the respondent believed it has been longer than it actually has since the state gas tax was last raised. Cells in yellow indicate that the respondents believe that the gas tax has been raised more recently than it actually has.

For knowledge about the federal gas tax, we also explored whether particular subgroups were more likely to correctly know that the rate had not been raised in over 20 years. Tables 5 through 8 present this analysis, highlighting the larger variations among subgroups. The tables identify variations between the reference subgroup in each category and other subgroups where the difference is statistically significant and at least ten percentage points. Readers should note that the differences highlighted below are not necessarily the only important differences that exist. Rather, the variations discussed are those that (1) fell within the cutoff point selected and (2) were statistically significant according to the particular statistical tests used. Choosing a different cutoff point would highlight a somewhat different set of variations. It is also important to keep in mind that “statistical significance” is not an automatic indicator of scientific or policy importance, as discussed in a 2016 statement from the American Statistical Association.<sup>12</sup>

The analysis of subgroups found statistically significant differences of ten or more percentage points by race, employment status, age, political affiliation, having paid a toll in the previous 30 days, and community type.

**Table 5. Respondents' Belief About When the Federal Gas Tax Was Last Raised, by Sociodemographic Characteristics**

Subgroup	1 to 10 years ago (%)	11 to 20 years ago (%)	More than 20 years ago (%)	Don't know (%)
<i>All respondents</i>	34	8	3	55
<b>Gender</b>				
Male	34	9	4	53
Female	33	6*	2*	58*
<b>Race</b>				
White	30	7	4	59
Black/African-American only	47**	12**	1**	40**
Asian/Asian-American only	31	4	1	64
Other	42**	7	1*	49**
<b>Of Latino/Hispanic descent</b>				
Yes	40	7	2	50
No	32**	8	3	57**
<b>Education</b>				
High school graduate or less	39	7	3	52
More than high school	31**	8	4	58**
<b>Employment status</b>				
Working for pay	37	9	3	51
Unemployed, but looking for work	46**	7	2	46
Not working by choice (retired, etc.)	25**	6*	4	65**
<b>Income (annual household)</b>				
0 – \$50,000	38	7	2	53
\$50,001 – \$100,000	30**	10**	4	56
\$100,001+	30**	7	4**	58*
<b>Age (years)</b>				
18 – 24	46	14	4	37
25 – 54	35**	7**	2	56**
55+	28**	6**	4	62**

\* Statistically significant at  $p < 0.05$ . \*\* Statistically significant at  $p < 0.01$ .

*Note:* The test of two proportions was used to check if there is a statistically significant difference between subgroups. The first subgroup in each category is the reference case against which the proportion of respondents in other subgroups is compared. Values in blue cells are at least ten percentage points different from the reference case.

**Table 6. Respondents' Belief About When the Federal Gas Tax Was Last Raised, by Political Characteristics**

Subgroup	1 to 10 years ago (%)	11 to 20 years ago (%)	More than 20 years ago (%)	Don't know (%)
<i>All respondents</i>	34	8	3	55
Registered voter				
Yes	34	8	3	55
No	32	8	3	58
Likely voter <sup>a</sup>				
Yes	34	7	4	55
No	33	8	2*	57
Political affiliation				
Republican (and lean Republican) <sup>b</sup>	35	7	4	53
Democrat (and lean Democrat) <sup>b</sup>	35	9	2**	54
Independent, no party affiliation	27**	5	4	64**
Some other party <sup>c</sup>	23	2	2	73**

\*\* Statistically significant at  $p < 0.01$ .

<sup>a</sup> Likely voters are those respondents who said that they are registered voters and that they vote "all of the time" or "most of the time."

<sup>b</sup> Included registered members of the political party and those respondents who stated that they were independent or a member of another political party but chose to indicate which party they "leaned" towards.

<sup>c</sup> Registered member of any other party.

*Note:* The test of two proportions was used to check if there is a statistically significant difference between subgroups. The first subgroup in each category is the reference case against which the proportion of respondents in other subgroups is compared. Values in blue cells are at least ten percentage points different from the reference case.

**Table 7. Respondents' Belief About When the Federal Gas Tax Was Last Raised, by Travel Behavior**

Subgroup	Federal			
	1 to 10 years ago (%)	11 to 20 years ago (%)	More than 20 years ago (%)	Don't know (%)
<i>All respondents</i>	34	8	3	55
Annual miles driven				
1 – 7,500	37	7	3	53
7,501 – 12,500	30**	11**	4	56
12,501+	31*	9	4	56
Don't drive	31*	5	2	61**
Miles per gallona				
≤ 19	37	8	3	52
20 – 30	30**	7	4	59*
31+	41	10	1	47
Transit used in last 30 days				
Yes	39	8	4	49
No	32**	8	3	57**
Paid a toll in last 30 days				
Yes	39	10	4	46
No	32**	7*	3	57**

\* Statistically significant at  $p < 0.05$ . \*\* Statistically significant at  $p < 0.01$ .

<sup>a</sup> Categories drawn from EPA's "SmartWay" vehicle rating system (U.S. Environmental Protection Agency, "SmartWay Vehicle Thresholds MY 2015" (January 2014), <https://nepis.epa.gov/Exe/ZyPURL.cgi?Dockey=P100HP2R.TXT>).

*Note:* The test of two proportions was used to check if there is a statistically significant difference between subgroups. The first subgroup in each category is the reference case against which the proportion of respondents in other subgroups is compared. Values in blue cells are at least ten percentage points different from the reference case.

**Table 8. Respondents' Belief About When the Federal Gas Tax Was Last Raised, by Census Region and Community Type**

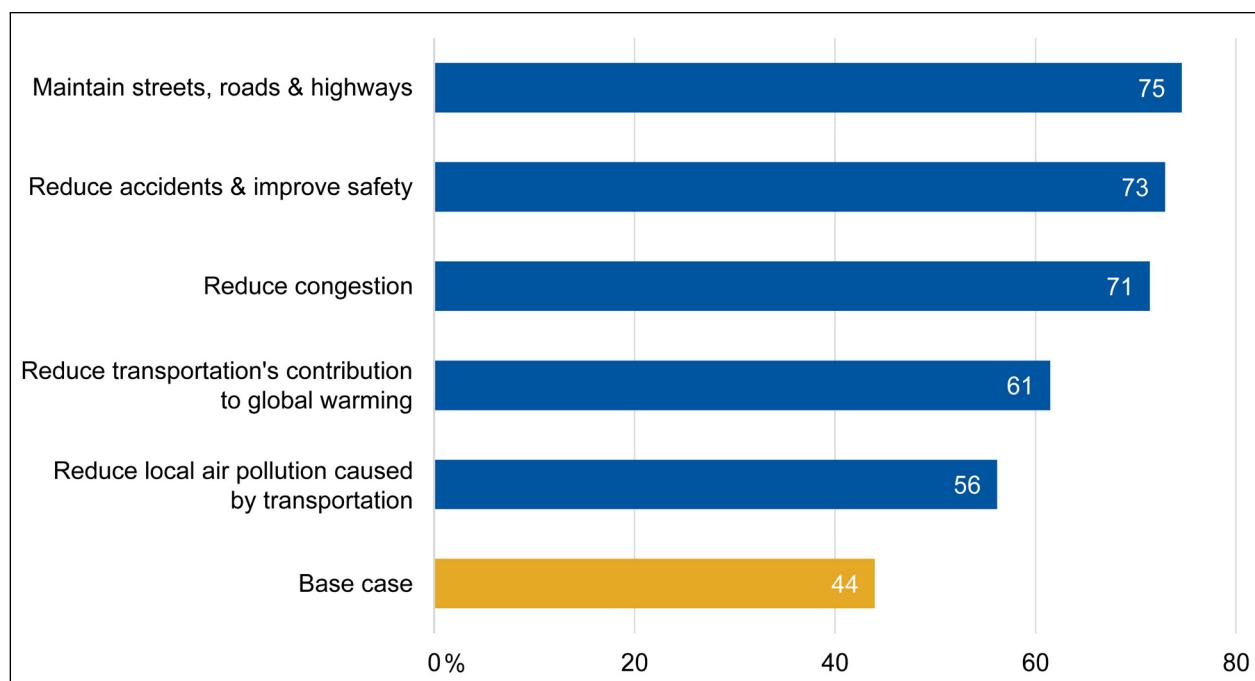
Subgroup	1 to 10 years ago (%)	11 to 20 years ago (%)	More than 20 years ago (%)	Don't know (%)
<i>All respondents</i>	34	8	3	55
Census region				
Northeast	32	9	5	54
Midwest	39*	7	3	51
South	33	8	3*	57
West	33	7	2*	58
Community type (self-reported)				
Urban	40	8	4	48
Suburban	30**	8	2	60**
Small town	37	6	5	52
Rural	31**	6	4	60**

\* Statistically significant at  $p < 0.05$ . \*\* Statistically significant at  $p < 0.01$ .

Note: The test of two proportions was used to check if there is a statistically significant difference between subgroups. The first subgroup in each category is the reference case against which the proportion of respondents in other subgroups is compared. Values in blue cells are at least ten percentage points different from the reference case.

## SUPPORT FOR RAISING THE FEDERAL GAS TAX RATE

The survey results show that a majority of Americans would support higher taxes for transportation – under certain conditions (Figure 5). Less than half of respondents (44%) supported the base-case 10¢-per-gallon gas tax increase, for which respondents were told only that the tax revenues would be spent for transportation purposes. However, the five variants on that idea of a 10¢-per-gallon gas tax increase received from 56% to 75% support. The very highest level of support among all the tax options tested was for a gas tax increase of 10¢ per gallon, with the proceeds dedicated to street, road, and highway maintenance. Seventy-five percent of respondents supported this option, an increase of 31 percentage points over support for the base-case gas tax increase. The next most popular options were a gas tax increase with funds devoted to reducing accidents and improving safety (73% support) or one with funds devoted to reducing congestion (71%). The two options that linked a gas tax increase to environment objectives had strong but somewhat lower support levels: 61% for the variant related to reducing global warming emissions and 56% support for the variant related to reducing local air pollution caused by transportation.



**Figure 5. Percent of Respondents Who Supported<sup>a</sup> the Gas Tax Options**

<sup>a</sup> "Support" is the sum of those who said that they "strongly" or "somewhat" support the tax option.

As in the preceding chapter, we looked for variations in support among respondents with different characteristics. The results of this analysis are shown in Tables 9 through 14, where cells highlighted in blue indicate subgroups that are ten percentage points or more different from the reference case. Overall, there were relative few subgroups that were notably more supportive. Among the variations that met the ten-point threshold, very few were related to the maintenance and safety options, while there were somewhat more for the base-case and two environmentally-focused tax options. Subgroups that stood out as notably more supportive of the taxes across the board were respondents aged 18 – 24, who leaned towards the Democratic party, drove the least (1 to 7,500 miles annually), thought the federal gas tax had been raised within the last ten years (as opposed to 11 to 20 years ago), spent the least on fuel (\$1 to \$50 monthly), and lived in urban areas.

We also looked at whether support for the gas tax increases is correlated with support for spending gas tax revenue on public transit, a topic discussed at more length in the next section. The pattern is strikingly clear, with people who supported the principle of spending gas tax revenue on transit being more likely to support all six of the gas tax variants (Table 14). The magnitude of the differences is also among the largest to show up in the subgroup analysis. There is a 12-percentage point difference even for the gas tax variant for maintenance, which is the most universally popular among the gas tax options. For the other variants, the percentage point difference rose much higher, including a 33 percentage-point difference in support for the base-case gas tax increase.

**Table 9. Percent of Respondents Who Supported<sup>a</sup> the Gas Tax Options, by Sociodemographic Characteristics (2020)**

Subgroup	Revenue to . . .					
	Base-case 10¢ increase	Reduce local air pollution (%)	Reduce global warming (%)	Maintain streets/ highways (%)	Improve safety (%)	Reduce congestion (%)
<i>All respondents</i>	44	56	61	75	73	71
<b>Gender</b>						
Male	42	56	60	73	70	69
Female	46	56	62	76	77**	74**
<b>Race</b>						
White	40	54	60	74	72	70
Black/African-American only	58**	60	64	73	76	75*
Asian/Asian-American only	47	66*	68	80	80	82**
Other	46	60	64	78	73	74
<b>Of Latino/Hispanic descent</b>						
Yes	52	62	67	76	78	75
No	42**	55**	60**	74	72**	71
<b>Education</b>						
High school graduate or less	48	55	59	73	73	70
More than high school	42**	57	63	75	73	72
<b>Employment status</b>						
Working for pay	48	56	62	72	72	70
Unemployed, but looking for work	51	64**	69*	75	75	73
Not working by choice (retired, etc.)	36**	54	58*	77**	74	72
<b>Income (annual household)</b>						
0 – \$50,000	44	60	64	77	76	73
\$50,001 – \$100,000	41	50**	58*	75	70**	71
\$100,001+	47	54**	61	70**	70**	69
<b>Age (years)</b>						
18 – 24	56	67	75	76	76	71
25 – 54	49*	54**	59**	72	72	70
55+	34**	55**	60**	78	73	73

\* Statistically significant at  $p < 0.05$ . \*\* Statistically significant at  $p < 0.01$ .

<sup>a</sup> Sum of those who “strongly” or “somewhat” supported the option.

*Note:* The test of two proportions was used to check if there is a statistically significant difference between subgroups. The first subgroup in each category is the reference case against which the proportion of respondents in other subgroups is compared. Values in blue cells are at least ten percentage points different from the reference case.



**Table 10. Percent of Respondents Who Supported<sup>a</sup> the Gas Tax Options, by Political Characteristics**

Subgroup	Revenue to . . .					
	Base-case 10¢ increase (%)	Reduce local air pollution (%)	Reduce global warming (%)	Maintain streets/ highways (%)	Improve safety (%)	Reduce congestion (%)
<i>All respondents</i>	44	56	61	75	73	71
Registered voter						
Yes	43	55	61	75	73	72
No	48	62**	62	72	74	71
Likely voter <sup>b</sup>						
Yes	43	55	61	75	72	71
No	47*	59*	63	74	76*	71
Political affiliation						
Republican (and lean Republican) <sup>c</sup>	36	45	48	71	67	65
Democrat (and lean Democrat) <sup>c</sup>	49**	65**	73**	78**	77**	76**
Independent, no party affiliation	48**	59**	60**	72	71	70
Some other party <sup>d</sup>	40	49	63*	84	83*	81*

\* Statistically significant at  $p < 0.05$ . \*\* Statistically significant at  $p < 0.01$ .

<sup>a</sup> Sum of those who said that they “strongly” or “somewhat” supported the option.

<sup>b</sup> Likely voters are those respondents who said that they are registered voters and that they vote “all of the time” or “most of the time.”

<sup>c</sup> Included registered members of the political party and those respondents who stated that they were independent or a member of another political party but chose to indicate which party they “leaned” towards.

<sup>d</sup> Registered member of any other party.

*Note:* The test of two proportions was used to check if there is a statistically significant difference between support levels among subgroups. The first subgroup listed in each category is the reference case for the test; the proportion of respondents who supported the individual policies in each of the other subgroups within that category is compared to the reference case.

**Table 11. Support<sup>a</sup> for the Gas Tax Options, by Travel Behavior**

Subgroup	Base-case 10¢ increase (%)	Revenue to ...				
		Reduce local air pollution (%)	Reduce global warming (%)	Maintain streets/ highways (%)	Improve safety (%)	Reduce congestion (%)
<i>All respondents</i>	44	56	61	75	73	71
Annual miles driven						
1 – 7,500	43	58	65	77	76	75
7,501 – 12,500	38	52*	58**	72*	68**	68**
12,501+	42	47**	53**	71*	64**	64**
Don't drive	57**	65*	64	76	79	71
Miles per gallon <sup>b</sup>						
≤ 19	39	49	58	71	72	72
20 – 30	38	56*	62	76*	73	71
31+	50**	57*	61	76*	70	73
Transit used in last 30 days						
Yes	57	63	66	76	76	75
No	40**	54**	60*	74	72*	70*
Paid a toll in last 30 days						
Yes	49	56	62	75	72	71
No	39**	54	61	74	72	71

\* Statistically significant at  $p < 0.05$ . \*\* Statistically significant at  $p < 0.01$ .

<sup>a</sup> Sum of those who “strongly” or “somewhat” supported the option.

<sup>b</sup> Categories drawn from EPA’s “SmartWay” vehicle rating system (U.S. Environmental Protection Agency, “SmartWay Vehicle Thresholds MY 2015” (January 2014), <https://nepis.epa.gov/Exe/ZyPURL.cgi?Dockkey=P100HP2R.TXT>).

*Note:* The test of two proportions was used to check if there is a statistically significant difference between subgroups. The first subgroup in each category is the reference case against which the proportion of respondents in other subgroups is compared. Values in blue cells are at least ten percentage points different from the reference case.

**Table 12. Support<sup>a</sup> for the Gas Tax Options, by Opinion on When Federal Gas Tax Was Last Raised and Monthly Fuel Expenditures**

Respondents' estimates	Base- case 10¢ increase (%)	Revenue to ...				
		Reduce local air pollution (%)	Reduce global warming (%)	Maintain streets/ highways (%)	Improve safety (%)	Reduce congestion (%)
<i>All respondents</i>	44	56	61	75	73	71
Estimates on when federal gas tax was last raised						
1 to 10 years ago	51	61	67	78	77	76
11 to 20 years ago	60*	51**	60	60**	56**	59**
More than 20 years ago	41	64	63	85	72	76
Don't know	37**	54**	58**	74*	73*	70**
Estimated monthly fuel expenditures						
\$1 – \$50	41	56	60	74	73	74
\$51 – \$100	40	57	63	77	73	72
\$101 – \$150	45	53	59	72	70	71
\$151 – \$200	37	42**	63	76	73	68
\$201+	47	48	51	62*	58**	55**

\* Statistically significant at  $p < 0.05$ . \*\* Statistically significant at  $p < 0.01$ .

<sup>a</sup> Sum of those who said that they “strongly” or “somewhat” supported the option.

*Note:* The test of two proportions was used to check if there is a statistically significant difference between subgroups. The first subgroup in each category is the reference case against which the proportion of respondents in other subgroups is compared. Values in blue cells are at least ten percentage points different from the reference case.

**Table 13. Support<sup>a</sup> for the Gas Tax Options, by Census Region and Community Type**

Subgroup	Revenue to ...					
	Base-case 10¢ increase (%)	Reduce local air pollution (%)	Reduce global warming (%)	Maintain streets/ highways (%)	Improve safety (%)	Reduce congestion (%)
<i>All respondents</i>	44	56	61	75	73	71
Census region						
Northeast	46	57	61	74	73	71
Midwest	41	56	63	78	75	70
South	45	55	59	73	71	70
West	42	58	66	74	75	76*
Community type (self-reported)						
Urban	55	62	67	77	77	78
Suburban	42**	55**	60**	72**	71**	71**
Small town	33**	55*	58**	77	74	64**
Rural	36**	50**	57**	76	67**	67**

\* Statistically significant at  $p < 0.05$ . \*\* Statistically significant at  $p < 0.01$ .

<sup>a</sup> Sum of those who “strongly” or “somewhat” supported the option.

*Note:* The test of two proportions was used to check if there is a statistically significant difference between support levels among subgroups. The first subgroup listed in each category is the reference case for the test; the proportion of respondents who support the individual policies in each of the other subgroups within that category is compared to the reference case.

**Table 14. Support<sup>a</sup> for the Gas Tax Options, by Opinion on Spending Some Gas Tax Revenue for Transit**

Opinion	Revenue to ...					
	Base-case 10¢ increase (%)	Reduce local air pollution (%)	Reduce global warming (%)	Maintain streets/ highways (%)	Improve safety (%)	Reduce congestion (%)
<i>All respondents</i>	44	56	61	75	73	71
Support spending gas tax on transit	54	63	69	78	78	75
Oppose spending gas tax on transit	20**	38**	43**	67**	61**	63**

\*\* Statistically significant at  $p < 0.01$ .

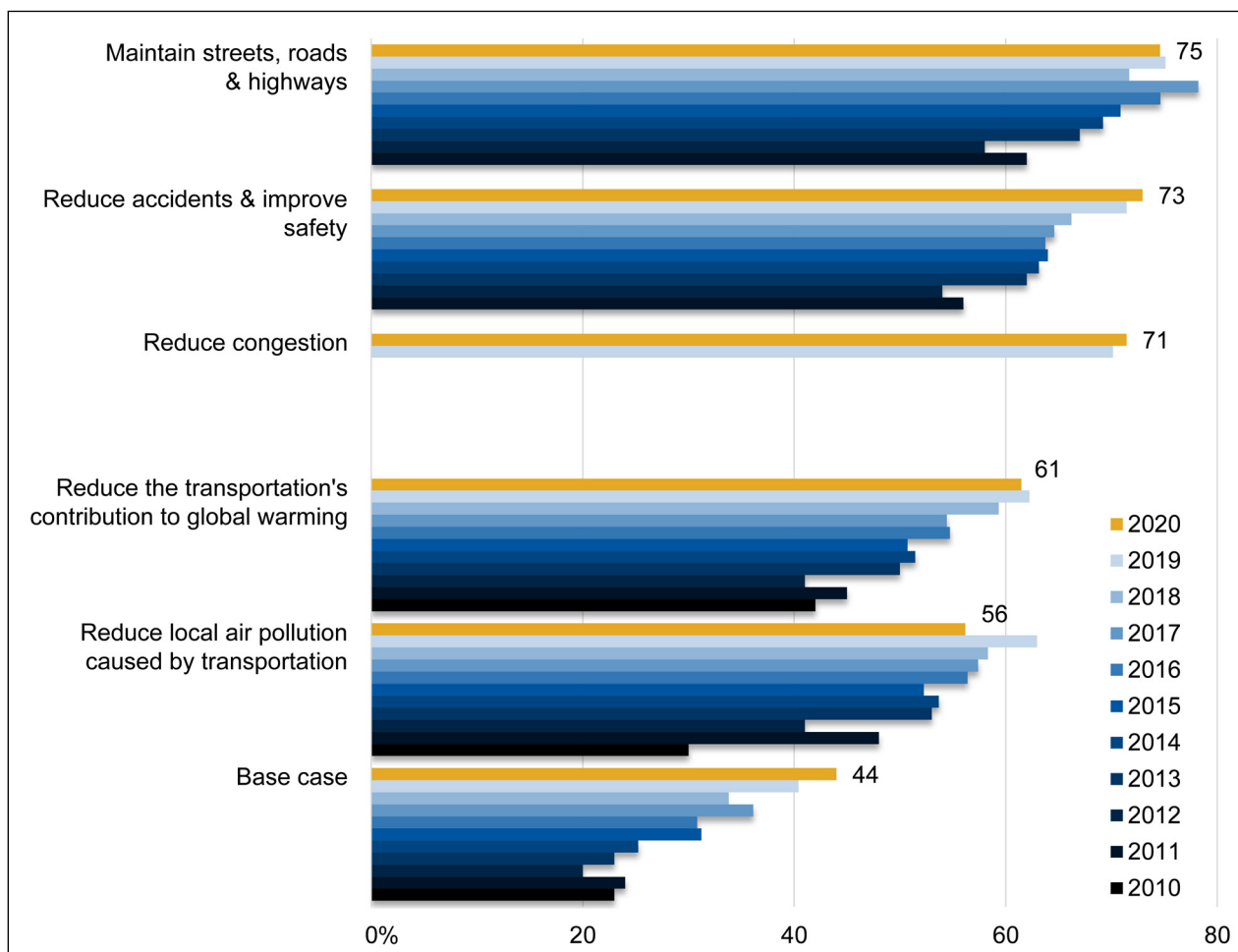
<sup>a</sup> Sum of those who said that they “strongly” or “somewhat” supported the option.

*Note:* The test of two proportions was used to check if there is a statistically significant difference between subgroups. The first subgroup in each category is the reference case against which the proportion of respondents in other subgroups is compared. Values in blue cells are at least ten percentage points different from the reference case.

## TRENDS IN SUPPORT OVER TIME (2010 – 2020)

The surveys have asked about support for many of the same gas tax variants each year, to allow an assessment of trends. Figure 6 and Table 15 both show support for these five tax options over time. In the past year, support for the tax options has varied little. Looking back to 2011, in every case where the question has been asked annually, support has risen over the years, with an increase of more than 10 percentage points for all but the air pollution variant.

When interpreting the trends, readers should note that the survey mode changed in 2019; earlier surveys collected data from an RDD phone survey, whereas this year's respondents came from an online panel survey. Evidence suggests that changes in survey mode can influence both who responds and how people respond to surveys. For example, Nixon and Agrawal ran a survey experiment with the same gas tax questions presented here, using both an RDD phone survey and an online panel from SurveyMonkey. That study found systematically higher support for the taxes among the online respondents as compared to the phone survey respondents, even though both samples were weighted to match the U.S. population across age, gender, ethnicity, race, and income.<sup>13</sup>



**Figure 6. Trends in Support<sup>a</sup> for the Gas Tax Options, 2010 – 2020**

<sup>a</sup> "Support" is the sum of those who "strongly" or "somewhat" supported the tax option.

*Note:* In 2019, the survey mode changed from a random-digit-dial phone survey to an online panel survey. Comparisons of results from before and after should be interpreted with care, since changes in survey mode can effect responses.

**Table 15. Trends in Support<sup>a</sup> for the Gas Tax Options, 2010 – 2020**

Tax option	2010 (%)	2011 (%)	2012 (%)	2013 (%)	2014 (%)	2015 (%)	2016 (%)	2017 (%)	2018 (%)	2019 <sup>b</sup> (%)	2020 (%)	Differences	
												2020-2011 (%)	2020-2019 (%)
Base case	23	24	20	23	25	31	31	36	34	40	44	20**	4**
Revenues spent to reduce local air pollution	30	48	41	53	54	52	56	57	58	63	56	8**	-7**
Revenues spent to reduce global warming	42	45	41	50	51	51	55	54	59	62	61	16**	-1
Revenues spent to maintain streets, roads, and highways	-- <sup>c</sup>	62	58	67	69	71	75	78	72	75	75	13**	-1
Revenues spent to reduce accidents and improve safety	-- <sup>c</sup>	56	54	62	63	64	64	65	66	71	73	17**	1
Revenues spent to reduce congestion	-- <sup>d</sup>	-- <sup>d</sup>	-- <sup>d</sup>	-- <sup>d</sup>	-- <sup>d</sup>	-- <sup>d</sup>	-- <sup>d</sup>	-- <sup>d</sup>	-- <sup>d</sup>	70	71	-- <sup>d</sup>	>1

\*\* Statistically significant at p<0.01.

<sup>a</sup> Sum of those who “strongly” or “somewhat” supported the option.

<sup>b</sup> In 2019, the survey mode changed from a random-digit-dial phone survey to an online panel survey. Comparisons of results from before and after should be interpreted with care, since changes in survey mode can affect responses.

<sup>c</sup> This option was not included in the 2010 survey.

<sup>d</sup> This option was added in 2019.

*Note:* The test of two proportions was used to check if there is a statistically significant difference in support for the different tax options from 2011 to 2020 and from 2019 to 2020.

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## **SUPPORT FOR SPENDING SOME GAS TAX REVENUES ON PUBLIC TRANSIT**

Another survey question probed support for spending some gas tax revenue on public transit. The question was worded as follows:

Some people say that money from gas taxes should only be spent on roads and highways, since drivers pay the tax. Other people say gas tax money should be used to pay for public transit in addition to roads and highways, because transit helps reduce traffic congestion and wear-and-tear on the roads. Would you support or oppose spending some gas tax money on public transit?<sup>14</sup>

More than two-thirds of respondents (71%) agreed with the concept of using some gas tax revenue to support public transit.

Tables 16 to 19 compare how different subgroups answer the question. Unlike many other tax-related questions in this survey, this question generated many statistically significant variations of ten percentage points or more between subgroups. In fact, there are significant differences subgroups in most categories (age, income, etc.). The subgroups of respondents at least 10 percentage points more likely to support the concept were female, Black/African-American or of "other" race, of Latino/Hispanic origin/descent, employed or unemployed but looking for work, living in households with annual incomes from \$0 to \$50,000, from 18 to 24 years old, leaned to the Democratic party or were party-independent, did not drive, had used transit in the preceding month, and lived in an urban or suburban community.

**Table 16. Support for Spending Some Gas Tax Revenue for Transit, by Sociodemographic Characteristics**

Subgroup	Support for using gas tax revenues for transit (%)
<i>All respondents</i>	71
Gender	
Male	66
Female	76**
Race	
White	68
Black/African-American only	82**
Asian/Asian-American only	75
Other	78**
Of Latino/Hispanic descent	
Yes	83
No	68**
Education	
High school graduate or less	76
More than high school	68**
Employment status	
Working for pay	74
Unemployed, but looking for work	78
Not working by choice (retired, etc.)	64**
Income (annual household)	
0 – \$50,000	77
\$50,001 – \$100,000	64**
\$100,001+	68**
Age (years)	
18 – 24	85
25 – 54	75**
55+	61**

\*\* Statistically significant at  $p < 0.01$ .

*Note:* The test of two proportions was used to check if there is a statistically significant difference between subgroups. The first subgroup in each category is the reference case against which the proportion of respondents in other subgroups is compared. Values in blue cells are at least ten percentage points different from the reference case.



**Table 17. Support for Spending Some Gas Tax Revenue for Transit, by Political Characteristics (2020)**

Subgroup	Support for using gas tax revenues for transit (%)
<i>All respondents</i>	71
Registered voter	
Yes	71
No	74
Likely voter <sup>a</sup>	
Yes	70
No	75*
Political affiliation	
Republican (and lean Republican) <sup>b</sup>	58
Democrat (and lean Democrat) <sup>b</sup>	82**
Independent, no party affiliation	70**
Some other party <sup>c</sup>	68

\* Statistically significant at  $p < 0.05$ . \*\* Statistically significant at  $p < 0.01$ .

<sup>a</sup> Likely voters are those respondents who said that they are registered voters and that they vote “all of the time” or “most of the time.”

<sup>b</sup> Included registered members of the political party and those respondents who stated that they were independent or a member of another political party but chose to indicate which party they “leaned” towards.

<sup>c</sup> Registered member of any other party.

*Note:* The test of two proportions was used to check if there is a statistically significant difference between subgroups. The first subgroup in each category is the reference case against which the proportion of respondents in other subgroups is compared. Values in blue cells are at least ten percentage points different from the reference case.

**Table 18. Support for Spending Some Gas Tax Revenue for Transit, by Travel Behavior**

Subgroup	Support for using gas tax revenues for transit (%)
<i>All respondents</i>	71
Annual miles driven	
1 – 7,500	72
7,501 – 12,500	65**
12,501+	66*
Don't drive	85**
Miles per gallon <sup>a</sup>	
≤ 19	71
20 – 30	66
31+	73
Transit used in last 30 days	
Yes	85
No	67**
Paid a toll to drive on a bridge, tunnel, or road in last 30 days	
Yes	75
No	66**

\* Statistically significant at  $p < 0.05$ . \*\* Statistically significant at  $p < 0.01$ .

<sup>a</sup> Categories drawn from EPA's "SmartWay" vehicle rating system (U.S. Environmental Protection Agency, "SmartWay Vehicle Thresholds MY 2015" (January 2014), <https://nepis.epa.gov/Exe/ZyPURL.cgi?Dockkey=P100HP2R.TXT>).

*Note:* The test of two proportions was used to check if there is a statistically significant difference between support levels among subgroups. The first subgroup listed in each category is the reference case for the test; the proportion of respondents who supported the individual policies in each of the other subgroups within that category is compared to the reference case.

**Table 19. Support for Spending Some Gas Tax Revenue for Transit, by Census Region and Community Type**

Subgroup	Support for using gas tax revenues for transit (%)
<i>All respondents</i>	71
Census region	
Northeast	75
Midwest	71
South	70*
West	71
Community type (self-reported)	
Urban	81
Suburban	71**
Small town	66**
Rural	58**

\* Statistically significant at  $p < 0.05$ . \*\* Statistically significant at  $p < 0.01$ .

*Note:* The test of two proportions was used to check if there is a statistically significant difference between subgroups. The first subgroup in each category is the reference case against which the proportion of respondents in other subgroups is compared. Values in blue cells are at least ten percentage points different from the reference case.

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## V. FINDINGS ABOUT MILEAGE FEES

The survey asked several types of questions related to mileage fees, including respondents' opinions about privacy and fairness, their support for two variants on replacing the gas tax with a mileage fee, opinion about whether EVs should pay the same rate as gas and diesel vehicles, support for several versions of a "business road-use fee" assessed on commercial travel, and their preferred way to pay for a mileage fee.

### OPINIONS ABOUT PRIVACY AND FAIRNESS

The survey asked respondents one question related to potential privacy concerns and two related to their views on the equity of mileage taxes as compared to gas taxes.

The privacy question was worded as follows: "How much do you agree or disagree with the following statement? I'm already tracked everywhere I go through my phone, so having my mileage tracked for a mileage fee wouldn't really bother me." Forty-five percent agreed with this statement about privacy concerns, while 55% said that they disagreed, implying that they would have privacy concerns. Tables 20 – 23 present the analysis of agreement among different subgroups. Subgroups that were particularly unconcerned included respondents who were aged 18 to 24, working for pay, and living in urban areas.

The first question on fairness asked respondents to choose which of two statements was closer to their opinion:

- A mileage fee is MORE fair than the gas tax because everyone pays the same for use of the roads, regardless of vehicle fuel efficiency or vehicle type (electric vs. gas vehicles)
- A mileage fee is LESS fair than the gas tax because the mileage fee doesn't give a break to people who buy cleaner vehicles.

Respondents were evenly split, with 50% agreeing with each statement. Tables 24 – 27 present the analysis of agreement among different subgroups, which found only a single case of a characteristic that generated a difference over ten percentage points: respondents who were not in the labor force, as compared to those who were unemployed but looking for work.

The second question on fairness again probed how respondents think about the fairness of mileage fees vs. gas taxes, this time by asking if the rate charged to EV drivers should be less than the rate for gasoline and diesel vehicles, half as much, or zero (EVs would be exempt from paying). Fifty-seven percent of respondents thought EVs should pay a lower rate than gas and diesel vehicles; 20% wanted to see no charge at all and 37% thought that EVs should pay half the rate. The other 43% of respondents thought that EVs should pay the same rate as gas and diesel vehicles.

This question generated numerous differences among subgroups (Tables 28 through 32). There were differences of ten or more percentage points by gender, race, age, voter registration status, likely voter status, political affiliation, annual miles driven, concern about privacy, and opinion about the fairness of mileage fees as compared to gas taxes. The differences were by far the greatest by political affiliation. For example, 56% of Republican-leaning respondents but 35% of Democratic-leaning respondents thought EVs should pay the same rate as gas and diesel vehicles.

**Table 20. Percent of Respondents Not Concerned About the Privacy Implications of a Mileage Fee, by Sociodemographic Characteristics<sup>a</sup>**

Subgroup	Not concerned (%)
<i>All respondents</i>	45
Gender	
Male	46
Female	44
Race	
White	42
Black/African-American only	58**
Asian/Asian-American only	55*
Other	43
Of Latino/Hispanic descent	
Yes	52
No	43**
Education	
High school graduate or less	51
More than high school	42**
Employment status	
Working for pay	49
Unemployed, but looking for work	53
Not working by choice (retired, etc.)	38**
Income (annual household)	
0 – \$50,000	48
\$50,001 – \$100,000	41**
\$100,001+	43*
Age (years)	
18 – 24	56
25 – 54	49*
55+	37**

\* Statistically significant at  $p < 0.05$ . \*\* Statistically significant at  $p < 0.01$ .

<sup>a</sup> Percent of respondents agreeing with this statement: “I’m already tracked everywhere I go through my phone, so having my mileage tracked for a mileage fee wouldn’t really bother me.”

*Note:* The test of two proportions was used to check if there is a statistically significant difference between subgroups. The first subgroup in each category is the reference case against which the proportion of respondents in other subgroups is compared. Values in blue cells are at least ten percentage points different from the reference case.

**Table 21. Percent of Respondents Not Concerned About the Privacy Implications of a Mileage Fee, by Political Characteristics<sup>a</sup>**

Subgroup	Agree (%)
<i>All respondents</i>	45
Registered voter	
Yes	46
No	44
Likely voter <sup>b</sup>	
Yes	45
No	45
Political affiliation	
Republican (and lean Republican) <sup>c</sup>	42
Democrat (and lean Democrat) <sup>c</sup>	49**
Independent, no party affiliation	44
Some other party <sup>d</sup>	23*

\* Statistically significant at  $p < 0.05$ . \*\* Statistically significant at  $p < 0.01$ .

<sup>a</sup> Percent of respondents agreeing with this statement: "I'm already tracked everywhere I go through my phone, so having my mileage tracked for a mileage fee wouldn't really bother me."

<sup>b</sup> Likely voters are those respondents who said that they are registered voters and that they vote "all of the time" or "most of the time."

<sup>c</sup> Included registered members of the political party and those respondents who stated that they were independent or a member of another political party but chose to indicate which party they "leaned" towards.

<sup>d</sup> Registered member of any other party.

*Note:* The test of two proportions was used to check if there is a statistically significant difference between subgroups. The first subgroup in each category is the reference case against which the proportion of respondents in other subgroups is compared. Values in blue cells are at least ten percentage points different from the reference case.

**Table 22. Percent of Respondents Not Concerned About the Privacy Implications of a Mileage Fee, by Travel Behavior<sup>a</sup>**

Subgroup	Agree (%)
<i>All respondents</i>	45
Annual miles driven	
1 – 7,500	47
7,501 – 12,500	44
12,501+	38**
Don't drive	48
Miles per gallon <sup>b</sup>	
≤ 19	45
20 – 30	43
31+	46
Transit used in last 30 days	
Yes	55
No	42**
Paid a toll to drive on a bridge, tunnel, or road in last 30 days	
Yes	50
No	43**

\*\* Statistically significant at  $p < 0.01$ .

<sup>a</sup> Percent of respondents agreeing with this statement: “I’m already tracked everywhere I go through my phone, so having my mileage tracked for a mileage fee wouldn’t really bother me.”

<sup>b</sup> Categories drawn from EPA’s “SmartWay” vehicle rating system (U.S. Environmental Protection Agency, “SmartWay Vehicle Thresholds MY 2015” (January 2014), <https://nepis.epa.gov/Exe/ZyPURL.cgi?Dockkey=P100HP2R.TXT>).

Note: The test of two proportions was used to check if there is a statistically significant difference between subgroups. The first subgroup in each category is the reference case against which the proportion of respondents in other subgroups is compared. Values in blue cells are at least ten percentage points different from the reference case.

**Table 23. Percent of Respondents Not Concerned About the Privacy Implications of a Mileage Fee, by Census Region and Community Type<sup>a</sup>**

Subgroup	Agree (%)
<i>All respondents</i>	45
Census region	
Northeast	48
Midwest	42
South	45
West	46
Community type (self-reported)	
Urban	55
Suburban	44**
Small town	34**
Rural	39**

\*\* Statistically significant at  $p < 0.01$ .

<sup>a</sup> Percent of respondents agreeing with this statement: “I’m already tracked everywhere I go through my phone, so having my mileage tracked for a mileage fee wouldn’t really bother me.”

Note: The test of two proportions was used to check if there is a statistically significant difference between subgroups. The first subgroup in each category is the reference case against which the proportion of respondents in other subgroups is compared. Values in blue cells are at least ten percentage points different from the reference case.

**Table 24. Respondents' Opinion About Whether Mileage Fees are More or Less Fair than Gas Taxes, by Sociodemographic Characteristics<sup>a</sup>**

Subgroup	More Fair (%)	Less Fair (%)
<i>All respondents</i>	50	50
Gender		
Male	51	49
Female	49	51
Race		
White	51	49
Black/African-American only	48	52
Asian/Asian-American only	51	49
Other	46	54
Of Latino/Hispanic descent		
Yes	45	55
No	51**	49**
Education		
High school graduate or less	48	52
More than high school	52*	48*
Employment status		
Working for pay	49	51
Unemployed, but looking for work	42*	58*
Not working by choice (retired, etc.)	55**	45**
Income (annual household)		
0 – \$50,000	48	52
\$50,001 – \$100,000	53	47
\$100,001+	51	49
Age (years)		
18 – 24	47	53
25 – 54	48	52
55+	55*	45*

\* Statistically significant at  $p < 0.05$ . \*\* Statistically significant at  $p < 0.01$ .

<sup>a</sup> Respondents were asked which statement is closer to their opinion: "A mileage fee is MORE fair than the gas tax because everyone pays the same for use of the roads, regardless of vehicle fuel efficiency or vehicle type (electric vs. gas vehicles)" or "A mileage fee is LESS fair than the gas tax because the mileage fee doesn't give a break to people who buy cleaner vehicles."

*Note:* The test of two proportions was used to check if there is a statistically significant difference between subgroups. The first subgroup in each category is the reference case against which the proportion of respondents in other subgroups is compared.

**Table 25. Respondents' Opinion About Whether Mileage Fees are More or Less Fair than Gas Taxes, by Political Characteristics<sup>a</sup>**

Subgroup	More Fair (%)	Less Fair (%)
<i>All respondents</i>	50	50
Registered voter		
Yes	51	49
No	47	53
Likely voter <sup>b</sup>		
Yes	51	49
No	48	52
Political affiliation		
Republican (and lean Republican) <sup>c</sup>	53	47
Democrat (and lean Democrat) <sup>c</sup>	49*	51*
Independent, no party affiliation	46*	54*
Some other party <sup>d</sup>	51	49

\* Statistically significant at  $p < 0.05$ . \*\* Statistically significant at  $p < 0.01$ .

<sup>a</sup> Respondents were asked which statement is closer to their opinion: "A mileage fee is MORE fair than the gas tax because everyone pays the same for use of the roads, regardless of vehicle fuel efficiency or vehicle type (electric vs. gas vehicles)" or "A mileage fee is LESS fair than the gas tax because the mileage fee doesn't give a break to people who buy cleaner vehicles."

<sup>b</sup> Likely voters are those respondents who said that they are registered voters and that they vote "all of the time" or "most of the time."

<sup>c</sup> Included registered members of the political party and those respondents who stated that they were independent or a member of another political party but chose to indicate which party they "leaned" towards.

<sup>d</sup> Registered member of any other party.

*Note:* The test of two proportions was used to check if there is a statistically significant difference between subgroups. The first subgroup in each category is the reference case against which the proportion of respondents in other subgroups is compared.



**Table 26. Respondents' Opinion About Whether Mileage Fees are More or Less Fair than Gas Taxes, by Travel Behavior<sup>a</sup>**

Subgroup	More Fair (%)	Less Fair (%)
<i>All respondents</i>	50	50
Annual miles driven		
1 – 7,500	50	50
7,501 – 12,500	52	48
12,501+	48	52
Don't drive	49	51
Miles per gallon <sup>b</sup>		
≤ 19	51	49
20 – 30	52	48
31+	46	54
Transit used in last 30 days		
Yes	46	54
No	51*	49*
Paid a toll to drive on a bridge, tunnel, or road in last 30 days		
Yes	50	50
No	51	49

\* Statistically significant at  $p < 0.05$ . \*\* Statistically significant at  $p < 0.01$ .

<sup>a</sup> Respondents were asked which statement is closer to their opinion: "A mileage fee is MORE fair than the gas tax because everyone pays the same for use of the roads, regardless of vehicle fuel efficiency or vehicle type (electric vs. gas vehicles)" or "A mileage fee is LESS fair than the gas tax because the mileage fee doesn't give a break to people who buy cleaner vehicles."

<sup>b</sup> Categories drawn from EPA's "SmartWay" vehicle rating system (U.S. Environmental Protection Agency, "SmartWay Vehicle Thresholds MY 2015" (January 2014), <https://nepis.epa.gov/Exe/ZyPURL.cgi?Dockkey=P100HP2R.TXT>).

*Note:* The test of two proportions was used to check if there is a statistically significant difference between subgroups. The first subgroup in each category is the reference case against which the proportion of respondents in other subgroups is compared.

**Table 27. Respondents' Opinion About Whether Mileage Fees are More or Less Fair than Gas Taxes, by Census Region and Community Type<sup>a</sup>**

Subgroup	More Fair (%)	Less Fair (%)
<i>All respondents</i>	50	50
Census region		
Northeast	50	50
Midwest	51	49
South	49	51
West	52	48
Community type (self-reported)		
Urban	52	48
Suburban	50	50
Small town	51	49
Rural	46	54

\* Statistically significant at  $p < 0.05$ . \*\* Statistically significant at  $p < 0.01$ .

<sup>a</sup> Respondents were asked which statement is closer to their opinion: "A mileage fee is MORE fair than the gas tax because everyone pays the same for use of the roads, regardless of vehicle fuel efficiency or vehicle type (electric vs. gas vehicles)" or "A mileage fee is LESS fair than the gas tax because the mileage fee doesn't give a break to people who buy cleaner vehicles."

*Note:* The test of two proportions was used to check if there is a statistically significant difference between subgroups. The first subgroup in each category is the reference case against which the proportion of respondents in other subgroups is compared.

**Table 28. Preferred Mileage Fee Rate for Electric Vehicles, as Compared to the Rate for Gas and Diesel Vehicles, by Sociodemographics<sup>a</sup> (2020)**

Subgroup	Same rate (%)	Half the rate (%)	Free (%)
<i>All respondents</i>	43	37	20
<b>Gender</b>			
Male	47	31	22
Female	39**	43**	19*
<b>Race</b>			
White	45	33	22
Black/African-American only	37**	44**	19
Asian/Asian-American only	36*	46**	18
Other	38*	48**	14**
<b>Of Latino/Hispanic descent</b>			
Yes	39	42	19
No	44*	35**	21
<b>Education</b>			
High school graduate or less	42	37	21
More than high school	43	37	20
<b>Employment status</b>			
Working for pay	42	38	20
Unemployed, but looking for work	33**	46**	21
Not working by choice (retired, etc.)	48**	31**	21
<b>Income (annual household)</b>			
0 – \$50,000	41	36	23
\$50,001 – \$100,000	46	36	18*
\$100,001+	43	38	18*
<b>Age (years)</b>			
18 – 24	39	47	13
25 – 54	39	40**	21**
55+	49**	29**	22**

\* Statistically significant at  $p < 0.05$ . \*\* Statistically significant at  $p < 0.01$ .

<sup>a</sup> The question asked: “A different variation on the mileage fee concept is to replace the gas tax with a mileage fee of one penny per mile for all gas and diesel vehicles, but with a different rate for all-electric vehicles. What rate per mile do you think electric vehicles should pay?”

*Note:* The test of two proportions was used to check if there is a statistically significant difference between subgroups. The first subgroup in each category is the reference case against which the proportion of respondents in other subgroups is compared. Values in blue cells are at least ten percentage points different from the reference case.

**Table 29. Preferred Mileage Fee Rate for Electric Vehicles, as Compared to the Rate for Gas and Diesel Vehicles, by Political Characteristics<sup>a</sup>**

Subgroup	Same rate (%)	Half the rate (%)	Free (%)
<i>All respondents</i>	43	37	20
Registered voter			
Yes	45	36	19
No	34**	41*	25**
Likely voter <sup>b</sup>			
Yes	47	34	18
No	32**	43**	25**
Political affiliation			
Republican (and lean Republican) <sup>c</sup>	56	27	17
Democrat (and lean Democrat) <sup>c</sup>	35**	44**	21*
Independent, no party affiliation	36**	37**	27**
Some other party <sup>d</sup>	33**	40	27

\* Statistically significant at  $p < 0.05$ . \*\* Statistically significant at  $p < 0.01$ .

<sup>a</sup> The question asked: “A different variation on the mileage fee concept is to replace the gas tax with a mileage fee of one penny per mile for all gas and diesel vehicles, but with a different rate for all-electric vehicles. What rate per mile do you think electric vehicles should pay?”

<sup>b</sup> Likely voters are those respondents who said that they are registered voters and that they vote “all of the time” or “most of the time.”

<sup>c</sup> Included registered members of the political party and those respondents who stated that they were independent or a member of another political party but chose to indicate which party they “leaned” towards.

<sup>d</sup> Registered member of any other party.

*Note:* The test of two proportions was used to check if there is a statistically significant difference between subgroups. The first subgroup in each category is the reference case against which the proportion of respondents in other subgroups is compared. Values in blue cells are at least ten percentage points different from the reference case.

**Table 30. Preferred Mileage Fee Rate for Electric Vehicles, as Compared to the Rate for Gas and Diesel Vehicles, by Travel Behavior<sup>a</sup>**

Subgroup	Same rate (%)	Half the rate (%)	Free (%)
<i>All respondents</i>	43	37	20
Annual miles driven			
1 – 7,500	42	40	18
7,501 – 12,500	46	34*	19
12,501+	50**	29**	20
Don't drive	35*	35	29**
Miles per gallon <sup>b</sup>			
≤ 19	51	33	16
20 – 30	43**	37	20
31+	40**	41**	19
Transit used in last 30 days			
Yes	36	41	23
No	45**	35**	20
Paid a toll to drive on a bridge, tunnel, or road in last 30 days			
Yes	43	39	18
No	45	36	19

\* Statistically significant at  $p < 0.05$ .

<sup>a</sup> The question asked: "A different variation on the mileage fee concept is to replace the gas tax with a mileage fee of one penny per mile for all gas and diesel vehicles, but with a different rate for all-electric vehicles. What rate per mile do you think electric vehicles should pay?"

<sup>b</sup> Categories drawn from EPA's "SmartWay" vehicle rating system (U.S. Environmental Protection Agency, "SmartWay Vehicle Thresholds MY 2015" (January 2014), <https://nepis.epa.gov/Exe/ZyPURL.cgi?Dockkey=P100HP2R.TXT>).

*Note:* The test of two proportions was used to check if there is a statistically significant difference between subgroups. The first subgroup in each category is the reference case against which the proportion of respondents in other subgroups is compared. Values in blue cells are at least ten percentage points different from the reference case.

**Table 31. Preferred Mileage Fee Rate for Electric Vehicles, as Compared to the Rate for Gas and Diesel Vehicles, by Census Region and Community Type<sup>a</sup>**

Subgroup	Same rate (%)	Half the rate (%)	Free (%)
<i>All respondents</i>	43	37	20
Census region			
Northeast	41	38	21
Midwest	42	34	23
South	43	38	19
West	45	34	21
Community type (self-reported)			
Urban	43	38	19
Suburban	41	36	23*
Small town	42	38	20
Rural	50*	33	17

\* Statistically significant at  $p < 0.05$ . \*\* Statistically significant at  $p < 0.01$ .

<sup>a</sup> The question asked: “A different variation on the mileage fee concept is to replace the gas tax with a mileage fee of one penny per mile for all gas and diesel vehicles, but with a different rate for all-electric vehicles. What rate per mile do you think electric vehicles should pay?”

*Note:* The test of two proportions was used to check if there is a statistically significant difference between subgroups. The first subgroup in each category is the reference case against which the proportion of respondents in other subgroups is compared.

**Table 32. Preferred Mileage Fee Rate for Electric Vehicles, as Compared to the Rate for Gas and Diesel Vehicles, by Opinions About Mileage Fees<sup>a</sup>**

Subgroup	Same rate (%)	Half the rate (%)	Free (%)
<i>All respondents</i>	43	37	20
Agreement with statement that mileage fees are not a privacy concern <sup>b</sup>			
Agree (somewhat or strongly)	44	41	15
Disagree (somewhat or strongly)	42	33**	25**
Opinion about the fairness of mileage fees compared to gas taxes <sup>c</sup>			
A mileage fee is more fair	49	36	15
A mileage fee is less fair	37**	37	26**

\*\* Statistically significant at  $p < 0.01$ .

<sup>a</sup> The question asked: “A different variation on the mileage fee concept is to replace the gas tax with a mileage fee of one penny per mile for all gas and diesel vehicles, but with a different rate for all-electric vehicles. What rate per mile do you think electric vehicles should pay?”

<sup>b</sup> Percent of respondents somewhat or strongly agreeing or disagreeing with this statement: “I’m already tracked everywhere I go through my phone, so having my mileage tracked for a mileage fee wouldn’t really bother me.”

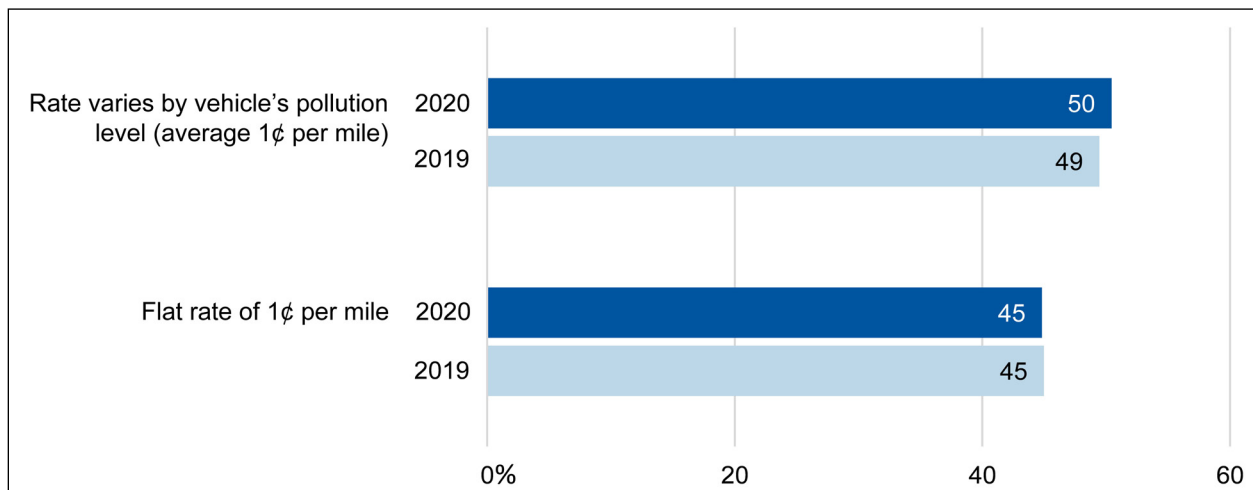
<sup>c</sup> Respondents were asked which statement is closer to their opinion: “A mileage fee is MORE fair than the gas tax because everyone pays the same for use of the roads, regardless of vehicle fuel efficiency or vehicle type (electric vs. gas vehicles)” or “A mileage fee is LESS fair than the gas tax because the mileage fee doesn’t give a break to people who buy cleaner vehicles.”

*Note:* The test of two proportions was used to check if there is a statistically significant difference between subgroups. The first subgroup in each category is the reference case against which the proportion of respondents in other subgroups is compared. Values in blue cells are at least ten percentage points different from the reference case.

## SUPPORT FOR REPLACING THE GAS TAX WITH A MILEAGE FEE

Overall, 45% of respondents supported replacing the gas tax with a flat-rate mileage fee of one cent per mile, and 49% supported a “green” version, for which the average rate would be one cent per mile, but vehicles that pollute less would be charged less and vehicles that pollute more would be charged more (Figure 7).

Tables 33 through 37 look at support for the mileage fees by subgroup. The respondents who were statistically significantly more likely to support both mileage fee variants by ten points or more were Black/African-American, of Latino/Hispanic origin/descent, working for pay, 18 – 25 years old, drove from 1 to 7,500 miles per year, had ridden transit in the past 30 days, lived in urban communities, and agreed with the statement that, “I’m already tracked everywhere I go through my phone, so having my mileage tracked for a mileage fee wouldn’t really both me.” The size of the differences was by far the biggest according to concern about tracking. Respondents who were not concerned about being tracked were 44 percentage points more likely to support the flat mileage fee and 37 percentage points more likely to support the green mileage fee.



**Figure 7. Support<sup>a</sup> for the Mileage Fee Options, 2019 – 2020**

<sup>a</sup> “Support” is the sum of those who “strongly” or “somewhat” supported the tax option.

**Table 33. Support<sup>a</sup> for the Mileage Fee Options, by Sociodemographic Characteristics**

Subgroup	Flat (%)	Green (%)
<i>All respondents</i>	45	49
<b>Gender</b>		
Male	45	45
Female	45	54**
<b>Race</b>		
White	43	46
Black/African-American only	53**	60**
Asian/Asian-American only	50	63**
Other	47	54*
<b>Of Latino/Hispanic origin/descent</b>		
Yes	53	58
No	43**	47**
<b>Education</b>		
High school graduate or less	48	50
More than high school	43*	49
<b>Employment status</b>		
Working for pay	48	54
Unemployed, but looking for work	51	56
Not working by choice (retired, etc.)	38**	40**
<b>Income (annual household)</b>		
0 – \$50,000	46	49
\$50,001 – \$100,000	42	46
\$100,001+	47	54*
<b>Age (years)</b>		
18 – 24	58	58
25 – 54	47**	55
55+	37**	39**

\* Statistically significant at  $p < 0.05$ . \*\* Statistically significant at  $p < 0.01$ .

<sup>a</sup> Sum of those who “strongly” or “somewhat” supported the option.

*Note:* The test of two proportions was used to check if there is a statistically significant difference between subgroups. The first subgroup in each category is the reference case against which the proportion of respondents in other subgroups is compared. Values in blue cells are at least ten percentage points different from the reference case.



**Table 34. Support<sup>a</sup> for the Mileage Fee Options, by Political Characteristics**

Subgroup	Flat (%)	Green (%)
<i>All respondents</i>	45	49
Registered voter		
Yes	45	50
No	47	47
Likely voter <sup>b</sup>		
Yes	45	49
No	46	50
Political affiliation		
Republican (and lean Republican) <sup>c</sup>	42	40
Democrat (and lean Democrat) <sup>c</sup>	48*	57**
Independent, no party affiliation	44	49**
Some other party <sup>d</sup>	32	35

\* Statistically significant at  $p < 0.05$ . \*\* Statistically significant at  $p < 0.01$ .

<sup>a</sup> Sum of those who “strongly” or “somewhat” supported the option.

<sup>b</sup> Likely voters are those respondents who said that they are registered voters and that they vote “all of the time” or “most of the time.”

<sup>c</sup> Included registered members of the political party and those respondents who stated that they were independent or a member of another political party but chose to indicate which party they “leaned” towards.

<sup>d</sup> Registered member of any other party.

*Note:* The test of two proportions was used to check if there is a statistically significant difference between subgroups. The first subgroup in each category is the reference case against which the proportion of respondents in other subgroups is compared. Values in blue cells are at least ten percentage points different from the reference case.

**Table 35. Support<sup>a</sup> for the Mileage Fee Options, by Travel Behavior**

Subgroup	Flat (%)	Green (%)
<i>All respondents</i>	45	49
Annual miles driven		
1 – 7,500	48	52
7,501 – 12,500	37**	42**
12,501+	39**	43**
Don't drive	54*	58*
Miles per gallon <sup>b</sup>		
≤ 19	47	49
20 – 30	41*	45
31+	42	54
Transit used in last 30 days		
Yes	52	61
No	43**	46**
Paid a toll to drive on a bridge, tunnel, or road in last 30 days		
Yes	53	54
No	39**	46**

\* Statistically significant at  $p < 0.05$ . \*\* Statistically significant at  $p < 0.01$ .

<sup>a</sup> Sum of those who “strongly” or “somewhat” supported the option.

<sup>b</sup> Categories drawn from EPA’s “SmartWay” vehicle rating system (U.S. Environmental Protection Agency, “SmartWay Vehicle Thresholds MY 2015” (January 2014), <https://nepis.epa.gov/Exe/ZyPURL.cgi?Dockkey=P100HP2R.TXT>).

*Note:* The test of two proportions was used to check if there is a statistically significant difference between subgroups. The first subgroup in each category is the reference case against which the proportion of respondents in other subgroups is compared. Values in blue cells are at least ten percentage points different from the reference case.

**Table 36. Support<sup>a</sup> for the Mileage Fee Options, by Census Region and Community Type**

Subgroup	Flat (%)	Green (%)
<i>All respondents</i>	45	49
Census region		
Northeast	49	55
Midwest	41**	41**
South	43*	51
West	48	48*
Community type (self-reported)		
Urban	54	63
Suburban	42**	49**
Small town	39**	35**
Rural	40**	37**

\* Statistically significant at  $p < 0.05$ . \*\* Statistically significant at  $p < 0.01$ .

<sup>a</sup> Sum of those who “strongly” or “somewhat” supported the option.

*Note:* The test of two proportions was used to check if there is a statistically significant difference between subgroups. The first subgroup in each category is the reference case against which the proportion of respondents in other subgroups is compared. Values in blue cells are at least ten percentage points different from the reference case.

**Table 37. Support<sup>a</sup> for the Mileage Fee Options, by Opinions About Privacy and Fairness**

Subgroup	Flat (%)	Green (%)
<i>All respondents</i>	45	49
Agreement with statement that mileage fees are not a privacy concern <sup>b</sup>		
Agree (somewhat or strongly)	69	70
Disagree (somewhat or strongly)	25**	33**
Opinion about the fairness of mileage fees compared to gas taxes <sup>c</sup>		
A mileage fee is more fair	55	53
A mileage fee is less fair	35**	46**

\*\* Statistically significant at  $p < 0.01$ .

<sup>a</sup> Sum of those who strongly or somewhat supported the option

<sup>b</sup> Percent of respondents somewhat or strongly agreeing or disagreeing with this statement: "I'm already tracked everywhere I go through my phone, so having my mileage tracked for a mileage fee wouldn't really bother me."

<sup>c</sup> Respondents were asked which statement is closer to their opinion: "A mileage fee is MORE fair than the gas tax because everyone pays the same for use of the roads, regardless of vehicle fuel efficiency or vehicle type (electric vs. gas vehicles)" or "A mileage fee is LESS fair than the gas tax because the mileage fee doesn't give a break to people who buy cleaner vehicles."

Note: The test of two proportions was used to check if there is a statistically significant difference between subgroups. The first subgroup in each category is the reference case against which the proportion of respondents in other subgroups is compared. Values in blue cells are at least ten percentage points different from the reference case.

## PREFERRED WAY TO PAY FOR MILEAGE FEES

A final question about mileage fees asked respondents to select their preferred way to pay for the fees, should these be introduced. The options were to pay at the time of gas purchase or when charging an electric vehicle, pay a monthly bill, or pay an annual bill.

The most popular option, selected by 47% of respondents, was to "Pay each time I purchase gas/diesel or charge an electric vehicle." The same pattern holds for the subgroups; paying with each gas purchase or charging session was the most popular option for every subgroup (Tables 38 through 42). Comparing the billing options, a monthly bill was preferred by somewhat more than an annual bill (30% vs. 23%), and all but two of the subgroups tested had the same relative preferences.

As the analysis of subgroups in Tables 38 through 42 shows, there were very few subgroups with a meaningfully higher rate of support for any of the options. Where there were differences, these were mostly for the pay-when-refueling-or-charging option. That payment choice was preferred by least ten percentage points among respondents who were men, white, not working by choice, 25 years and older, urban, and concerned about the privacy implications of mileage fees. The only notable differences by characteristic for the monthly and annual billing options related to age, political party, and community type.

**Table 38. Preferred Frequency for Paying a Mileage Fee, by Sociodemographic Characteristics**

Subgroup	Annually (%)	Monthly (%)	When refueling (%)
<i>All respondents</i>	23	30	47
Gender			
Male	19	29	51
Female	27**	32	42**
Race			
White	20	30	50
Black/African-American only	27**	36*	37**
Asian/Asian-American only	27	31	41
Other	29**	26	45
Of Latino/Hispanic descent			
Yes	24	32	43
No	22	30	48
Education			
High school graduate or less	22	31	47
More than high school	23	30	47
Employment status			
Working for pay	25	32	43
Unemployed, but looking for work	24	31	45
Not working by choice (retired, etc.)	19**	28*	53**
Income (annual household)			
0 – \$50,000	20	31	48
\$50,001 – \$100,000	23	31	47
\$100,001+	27**	29	44
Age (years)			
18 – 24	29	42	29
25 – 54	27	28**	45**
55+	15**	30**	55**

\* Statistically significant at  $p < 0.05$ . \*\* Statistically significant at  $p < 0.01$ .

Note: The test of two proportions was used to check if there is a statistically significant difference between subgroups. The first subgroup in each category is the reference case against which the proportion of respondents in other subgroups is compared. Values in blue cells are at least ten percentage points different from the reference case.

**Table 39. Preferred Frequency for Paying a Mileage Fee, by Political Characteristics**

Subgroup	Annually (%)	Monthly (%)	When refueling (%)
<i>All respondents</i>	23	30	47
Registered voter			
Yes	23	30	48
No	23	35*	42*
Likely voter <sup>a</sup>			
Yes	23	29	48
No	23	33	44
Political affiliation			
Republican (and lean Republican) <sup>b</sup>	22	31	47
Democrat (and lean Democrat) <sup>b</sup>	22	30	48
Independent, no party affiliation	25	31	44
Some other party <sup>c</sup>	33	29	38

\* Statistically significant at  $p < 0.05$ .

<sup>a</sup> Likely voters are those respondents who said that they are registered voters and that they vote “all of the time” or “most of the time.”

<sup>b</sup> Included registered members of the political party and those respondents who stated that they were independent or a member of another political party but chose to indicate which party they “leaned” towards.

<sup>c</sup> Registered member of any other party.

*Note:* The test of two proportions was used to check if there is a statistically significant difference between subgroups. The first subgroup in each category is the reference case against which the proportion of respondents in other subgroups is compared.

**Table 40. Preferred Frequency for Paying a Mileage Fee, by Travel Behavior**

Subgroup	Annually (%)	Monthly (%)	When refueling (%)
<i>All respondents</i>	23	30	47
Annual miles driven			
1 – 7,500	23	32	45
7,501 – 12,500	22	28	50
12,501+	22	28	49
Don't drive	25	31	44
Miles per gallon <sup>a</sup>			
≤ 19	22	34	43
20 – 30	20	29	50*
31+	26	28	45
Transit used in last 30 days			
Yes	28	31	41
No	21**	30	49**
Paid a toll to drive on a bridge, tunnel, or road in last 30 days			
Yes	26	32	43
No	21*	30	49**

\* Statistically significant at  $p < 0.05$ . \*\* Statistically significant at  $p < 0.01$ .

<sup>a</sup> Categories drawn from EPA's “SmartWay” vehicle rating system (U.S. Environmental Protection Agency, “SmartWay Vehicle Thresholds MY 2015” (January 2014), <https://nepis.epa.gov/Exe/ZyPURL.cgi?Dockkey=P100HP2R.TXT>).

*Note:* The test of two proportions was used to check if there is a statistically significant difference between subgroups. The first subgroup in each category is the reference case against which the proportion of respondents in other subgroups is compared.

**Table 41. Preferred Frequency for Paying a Mileage Fee, by Census Region and Community Type**

Subgroup	Annually (%)	Monthly (%)	When refueling (%)
<i>All respondents</i>	23	30	47
Census region			
Northeast	28	29	42
Midwest	20**	31	49*
South	22**	31	47
West	21**	30	49*
Community type (self-reported)			
Urban	27	30	43
Suburban	22*	32	46
Small town	23	31	47
Rural	16**	26	57**

\* Statistically significant at  $p < 0.05$ . \*\* Statistically significant at  $p < 0.01$ .

Note: The test of two proportions was used to check if there is a statistically significant difference between subgroups. The first subgroup in each category is the reference case against which the proportion of respondents in other subgroups is compared.

**Table 42. Preferred Frequency for Paying a Mileage Fee, by Opinions About Mileage Fees**

Subgroup	Annually (%)	Monthly (%)	When refueling (%)
<i>All respondents</i>	23	30	47
Agreement with statement that mileage fees are not a privacy concern <sup>a</sup>			
Agree (somewhat or strongly)	24	36	41
Disagree (somewhat or strongly)	22	26**	52**
Opinion about the fairness of mileage fees compared to gas taxes <sup>b</sup>			
A mileage fee is more fair	22	32	45
A mileage fee is less fair	23	29*	48

\* Statistically significant at  $p < 0.05$ . \*\* Statistically significant at  $p < 0.01$ .

<sup>a</sup> Percent of respondents agreeing with this statement: "I'm already tracked everywhere I go through my phone, so having my mileage tracked for a mileage fee wouldn't really both me."

<sup>b</sup> Respondents were asked which statement is closer to their opinion: "A mileage fee is MORE fair than the gas tax because everyone pays the same for use of the roads, regardless of vehicle fuel efficiency or vehicle type (electric vs. gas vehicles)" or "A mileage fee is LESS fair than the gas tax because the mileage fee doesn't give a break to people who buy cleaner vehicles."

Note: The test of two proportions was used to check if there is a statistically significant difference between subgroups. The first subgroup in each category is the reference case against which the proportion of respondents in other subgroups is compared. Values in blue cells are at least ten percentage points different from the reference case.

## SUPPORT FOR A BUSINESS ROAD-USE FEE

New to this year's survey was a question asking respondents about a hypothetical "Business Road-Use Fee" that would be assessed only on miles that commercial vehicles drive on the job. Those vehicles would continue to pay the current gas tax as well. Respondents were

asked if they would support such a tax on different types of commercial travel: delivery and freight trucks, taxis, and ridehailing vehicles. Support for all three options was just over 50%, with marginally higher support for the fee on deliveries and freight.

As Tables 43 through 47 show, there were very few meaningful differences in support among subgroups. However, those subgroups that had different views were consistently more supportive of fees on all three types of commercial travel. The subgroups that were more supportive were respondents who leaned Democrat, lived in urban areas, and agreed with the statement that, “I’m already tracked everywhere I go through my phone, so having my mileage tracked for a mileage fee wouldn’t really bother me.”

**Table 43. Support<sup>a</sup> for a Business Road-Use Fee, by Sociodemographic Characteristics**

Subgroup	Delivery/Freight (%)	Taxis (%)	Ridehail (%)
<i>All respondents</i>	54	52	52
Gender			
Male	54	53	52
Female	55	52	51
Race			
White	53	53	50
Black/African-American only	57	53	58*
Asian/Asian-American only	62	57	58
Other	54	47	49
Of Latino/Hispanic descent			
Yes	55	55	52
No	54	51	52
Education			
High school graduate or less	51	52	53
More than high school	57**	53	51
Employment status			
Working for pay	56	52	53
Unemployed, but looking for work	55	56	55
Not working by choice (retired, etc.)	52	51	49
Income (annual household)			
0 – \$50,000	53	54	53
\$50,001 – \$100,000	56	53	52
\$100,001+	55	48*	50
Age (years)			
18 – 24	55	52	53
25 – 54	56	53	52
55+	52	51	50

\* Statistically significant at  $p < 0.05$ . \*\* Statistically significant at  $p < 0.01$ .

<sup>a</sup> Sum of those who “strongly” or “somewhat” supported the option.

*Note:* The test of two proportions was used to check if there is a statistically significant difference between subgroups. The first subgroup in each category is the reference case against which the proportion of respondents in other subgroups is compared.

**Table 44. Support<sup>a</sup> for a Business Road-Use Fee, by Political Characteristics**

Subgroup	Delivery/Freight (%)	Taxis (%)	Ridehail (%)
<i>All respondents</i>	54	52	52
Registered voter			
Yes	53	52	51
No	60**	55	57*
Likely voter <sup>b</sup>			
Yes	54	52	51
No	54	53	52
Political affiliation			
Republican (and lean Republican) <sup>c</sup>	46	45	44
Democrat (and lean Democrat) <sup>c</sup>	61**	58**	57**
Independent, no party affiliation	54*	53*	53*
Some other party <sup>d</sup>	45	43	50

\* Statistically significant at  $p < 0.05$ . \*\* Statistically significant at  $p < 0.01$ .

<sup>a</sup> Sum of those who “strongly” or “somewhat” supported the option.

<sup>b</sup> Likely voters are those respondents who said that they are registered voters and that they vote “all of the time” or “most of the time.”

<sup>c</sup> Included registered members of the political party and those respondents who stated that they were independent or a member of another political party but chose to indicate which party they “leaned” towards.

<sup>d</sup> Registered member of any other party.

*Note:* The test of two proportions was used to check if there is a statistically significant difference between subgroups. The first subgroup in each category is the reference case against which the proportion of respondents in other subgroups is compared. Values in blue cells are at least ten percentage points different from the reference case.



**Table 45. Support<sup>a</sup> for a Business Road-Use Fee, by Travel Behavior**

Subgroup	Delivery/Freight (%)	Taxis (%)	Ridehail (%)
<i>All respondents</i>	54	52	52
Annual miles driven			
1 – 7,500	55	53	52
7,501 – 12,500	54	51	50
12,501+	55	48	51
Don't drive	52	55	55
Miles per gallon <sup>b</sup>			
≤ 19	52	50	50
20 – 30	53	51	50
31+	60*	56	53
Transit used in last 30 days			
Yes	52	53	53
No	55	52	51
Taxi used in last 30 days			
Yes	61	57	60
No	54	52	51*
Ridehail used in last 30 days			
Yes	60	55	53
No	53*	52	51
Paid a toll to drive on a bridge, tunnel, or road in last 30 days			
Yes	55	49	53
No	55	53	50

\* Statistically significant at  $p < 0.05$ .

<sup>a</sup> Sum of those who “strongly” or “somewhat” supported the option.

<sup>b</sup> Categories drawn from EPA’s “SmartWay” vehicle rating system (U.S. Environmental Protection Agency, “SmartWay Vehicle Thresholds MY 2015” (January 2014), <https://nepis.epa.gov/Exe/ZyPURL.cgi?Dockkey=P100HP2R.TXT>).

*Note:* The test of two proportions was used to check if there is a statistically significant difference between subgroups. The first subgroup in each category is the reference case against which the proportion of respondents in other subgroups is compared.

**Table 46. Support<sup>a</sup> for a Business Road-Use Fee, by Census Region and Community Type**

Subgroup	Delivery/Freight (%)	Taxis (%)	Ridehail (%)
<i>All respondents</i>	54	52	52
Census region			
Northeast	59	53	56
Midwest	54	54	51
South	52*	51	51*
West	53*	53	50*
Community type (self-reported)			
Urban	57	56	57
Suburban	56	53	51*
Small town	46**	42**	44**
Rural	52	52	48**

\* Statistically significant at  $p < 0.05$ . \*\* Statistically significant at  $p < 0.01$ .

<sup>a</sup> Sum of those who “strongly” or “somewhat” supported the option.

*Note:* The test of two proportions was used to check if there is a statistically significant difference between subgroups. The first subgroup in each category is the reference case against which the proportion of respondents in other subgroups is compared. Values in blue cells are at least ten percentage points different from the reference case.

**Table 47. Support<sup>a</sup> for a Business Road-Use Fee, by Opinions About Mileage Fees**

Subgroup	Delivery/Freight (%)	Taxis (%)	Ridehail (%)
<i>All respondents</i>	54	52	52
Agreement with statement that mileage fees are not a privacy concern <sup>b</sup>			
Agree (somewhat or strongly)	61	60	62
Disagree (somewhat or strongly)	49**	45**	43**
Opinion about the fairness of mileage fees compared to gas taxes <sup>c</sup>			
A mileage fee is more fair	55	54	54
A mileage fee is less fair	54	50	49*

\* Statistically significant at  $p < 0.05$ . \*\* Statistically significant at  $p < 0.01$ .

<sup>a</sup> Sum of those who “strongly” or “somewhat” supported the option.

<sup>b</sup> Percent of respondents agreeing with this statement: “I’m already tracked everywhere I go through my phone, so having my mileage tracked for a mileage fee wouldn’t really bother me.”

<sup>c</sup> Respondents were asked which statement is closer to their opinion: “A mileage fee is MORE fair than the gas tax because everyone pays the same for use of the roads, regardless of vehicle fuel efficiency or vehicle type (electric vs. gas vehicles)” or “A mileage fee is LESS fair than the gas tax because the mileage fee doesn’t give a break to people who buy cleaner vehicles.”

*Note:* The test of two proportions was used to check if there is a statistically significant difference between subgroups. The first subgroup in each category is the reference case against which the proportion of respondents in other subgroups is compared. Values in blue cells are at least ten percentage points different from the reference case.

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## VI. CONCLUSIONS

This section concludes the report with a summary of ten key survey findings on public opinion and knowledge about federal transportation taxes and fees. These findings about public priorities suggest opportunities for policymakers to build support for transportation tax measures through careful program design. The discussion is organized into conclusions about public priorities related to the transportation system, knowledge and opinions about gas taxes, opinions about mileage fees, and variations in opinions among different population subgroups.

### PUBLIC PRIORITIES FOR IMPROVING THE TRANSPORTATION SYSTEM

**1. Large majorities value transportation improvements across modes.** When respondents were asked to indicate their priorities for improvements to the transportation system, large majorities supported both road and public-transit related options. For example, 75% of respondents said it was “very” important to maintain and improve roads, streets, highways, and bridges, and 58% said it was “very” important to maintain and improve public transit.

**2. The majority value linking transportation taxes to environmental objectives.** For example, the gas tax increase variants that linked the increase to projects reducing air pollution and global warming both had clear majority support (56% and 61%, respectively). Also, the green mileage tax variant was slightly more popular than the flat-rate version (50% vs. 45% support), and 57% of respondents thought that EV drivers should pay a lower rate than that for gasoline and diesel vehicles.

### GAS TAXES

**3. Most people do not know how recently the gas tax rate was raised by the federal government or in their state.** Only 3% of respondents knew that the federal gas tax rate was last raised more than 20 years ago, and only 25% knew approximately when their state had last raised its gas tax rate. About half of respondents said they simply didn’t know when the federal and state rates were last raised.

**4. Support for raising the gas tax rate depends on how the revenue will be spent.** When it comes to earning public support, all gas taxes are not alike. Policymakers can increase support by crafting tax measures that dedicate the revenues to purposes valued by the public. For example, people want better maintenance – and will pay for it. The gas tax variant with proceeds dedicated for maintenance was the most popular variant tested, with 75% supporting this increase. By comparison, only 44% supported the “base case” gas tax for which the proceeds would be dedicated more generally to “transportation.”

**5. Support for raising the gas tax has risen slowly but steadily since 2010.** For all five of the gas tax variants that were tested throughout the survey series, support has risen since 2010. The change ranges from an 8-percentage point increase to a 20-percentage point increase.

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## MILEAGE FEES

**6. Roughly half of people support some form of a mileage fee, whether it is assessed on all travel or just on commercial travel.** Forty-five percent of respondents supported replacing the gas tax with a flat-rate mileage fee of one cent per mile, and 49% supported a “green” version for which the average rate would be one cent per mile, but vehicles that pollute less would be charged less and vehicles that pollute more would be charged more. Just over half of respondents also supported a “business road-use fee” assessed on the miles that commercial vehicles drive on the job. (These vehicles would continue to pay the gas tax, too.) Fifty-four percent of respondents supported such a fee on delivery and freight trucks, and 52% supported such as fee on either taxis or ridehailing vehicles.

**7. Three-quarters of people want to pay a mileage fee in small installments instead of paying one large, annual bill.** Respondents were asked if they would prefer to pay for mileage fees at the pump or time of vehicle charging, monthly, or annually. The first option was the most popular of the three (47%) and the annual billing option the least popular (23%).

**8. People concerned about privacy are much less likely to support the mileage fee concept.** Fifty-five percent of respondents expressed concern with the idea of being tracked for a mileage fee program. This group was considerably less likely to support either the flat-rate or green mileage fees on all travel, or the business road-use fee. The lack of enthusiasm was particularly stark for the flat-rate fee on all travel; here, only 25% of respondents concerned about tracking supported the fee, as compared to 69% of respondents who were not concerned about being tracked.

## VARIATIONS BY PERSONAL CHARACTERISTICS

**9. Looking across the survey as a whole, there were usually modest differences in opinion related to personal characteristics.** We assessed whether responses to the survey questions about taxes and fees differed by socio-demographics, political characteristics, travel behavior, census region, and community type. For most survey questions, the variation in responses was less than 10 percentage points across these characteristics (e.g., comparing men vs. women, or people who driving different numbers of miles annually). Future analyses should consider multivariate models to further tease out potential differences by personal characteristics.

**10. The personal characteristics most often associated with divergent views were age, political affiliation, and community type.** For example, support for the gas tax and mileage fee options was higher among the youngest group (18 to 25 years old) than the older groups. Also, people living in urban communities were more likely to support the gas tax and mileage fee options than those living in rural communities.

## APPENDIX A: SURVEY QUESTIONNAIRE AND TOPLINE RESULTS

This appendix presents the survey questionnaire and results for the 2020 survey.

The results have been weighted to match the Census Bureau's 2014 – 2018 American Community Survey five-year estimates with respect to gender, race, Hispanic ethnicity, education level, annual household income, and age.<sup>15</sup>

The authors removed missing and refused responses from the dataset before calculating the response rates.

Note that some categories in the tables do not sum to 100% due to rounding.

\* \* \*

Researchers at the Mineta Transportation Institute, San Jose State University, are conducting a survey to gather your thoughts about transportation in the United States. Your opinions are very important, no matter how much or little you travel. Public officials can use the survey results to shape transportation services in communities throughout the country. The survey takes about 10 minutes and is anonymous. Your participation is completely voluntary. You can refuse to participate or stop the survey at any time without any negative effect on your relations with San Jose State University. If you participate, there are no anticipated risks to you and no anticipated benefits other than the satisfaction of sharing your views with the researchers. For more information about the study, contact Professor Asha W. Agrawal at [asha.weinstein.agrawal@sjsu.edu](mailto:asha.weinstein.agrawal@sjsu.edu). By agreeing to participate in the study, it is implied that you have read and understand the above information. Please do not write any identifying information on the survey/questionnaire.

We are interested in your opinions about the transportation system. The “transportation system” means local streets and roads, highways, and public transit services like buses, light rail, and trains.

Q1. In your community, how is the quality of:

	Very good (%)	Somewhat good (%)	Somewhat bad (%)	Very bad (%)	Not sure / doesn't apply (%)
Interstates, highways, and freeways	25	50	17	5	3
Local streets and roads	19	44	25	10	2
Bicycle and pedestrian facilities	19	39	22	8	12
Public transit (bus, rail, etc.)	18	37	20	10	15

Q2. How concerned are you about traffic congestion in your community?

	(%)
Very concerned	34
Somewhat concerned	42
Not at all concerned	24

The next questions ask for your opinion about what government can do to improve transportation in the United States.

Q3. How important are the following transportation-related goals for the United States?

	Very important (%)	Somewhat important (%)	Not important (%)
Reduce traffic congestion	62	33	5
Reduce crashes and improve safety	74	23	3
Reduce health impacts caused by air pollution from cars and trucks	60	33	7
Reduce greenhouse gas emissions from transportation sources that contribute to climate change	56	34	11
Maintain and improve roads, streets, highways, and bridges	75	23	2
Maintain and improve public transit (bus, light-rail, ferry, etc.)	58	35	6
Make it more convenient to go places without driving (bus, walking, bike, etc.)	52	40	8

Q4. As you may be aware, the federal government charges a gas tax and spends the money collected for transportation. Listed below are different ways the government could spend that money to improve the transportation system. How much of a priority should each one be?

	High (%)	Medium (%)	Low (%)	Not at all (%)
Build/improve sidewalks	42	40	14	4
Provide discounted public transit fares for low-income people	47	35	13	5
Develop programs that encourage people to switch from driving their cars to walking, biking, or using transit	34	41	18	7
Provide financial incentives for people to purchase electric vehicles	32	35	20	13
Build/improve bike lanes and bike paths	34	41	20	6
Use advanced technologies to reduce congestion and increase reliability	47	40	10	3
Install more charging stations for electric vehicles	29	37	24	9
Add more frequent public transit service on existing routes	41	39	15	5
Improve safety for pedestrians and bicyclists	51	36	11	3
Expand public transit service into new areas not already served	45	38	13	4
Maintain local streets and roads	62	31	5	2
Build/widen local roads and streets	38	42	16	4
Build/widen interstates, highways, and freeways	44	41	11	4
Maintain interstates, highways, and freeways	66	28	4	2
Maintain public transit (rail, buses, etc.)	50	37	9	4

Q5. Here is the same list of transportation purposes that the federal government could spend the gas tax money on. Select the three you think are most important.

	Selected at top 3 (%)
Build/improve sidewalks	22
Provide discounted public transit fares for low-income people	23
Develop programs that encourage people to switch from driving their cars to walking, biking, or using transit	17
Provide financial incentives for people to purchase electric vehicles	14
Build/improve bike lanes and bike paths	11
Use advanced technologies to reduce congestion and increase reliability	24
Install more charging stations for electric vehicles	8
Add more frequent public transit service on existing routes	15
Improve safety for pedestrians and bicyclists	15
Expand public transit service into new areas not already served	20
Maintain local streets and roads	37
Build/widen local roads and streets	14
Build/widen interstates, highways, and freeways	18
Maintain interstates, highways, and freeways	33
Maintain public transit (rail, buses, etc.)	15

Q6. In the last 30 days, which types of transportation have you used? Check all that apply.

	Used in last 30 days (%)
Drive yourself (car, truck, motorcycle, etc.)	76
Ride as a passenger in a personal vehicle (exclude trips in taxis, rideshare like Uber/Lyft, etc.)	40
Public transit (bus, light-rail, ferry, etc.)	24
Taxi	7
Ridesharing service like Uber or Lyft	16
Walk	45
Bicycle	12
Electric kick-scooter, skateboard, or other small device	2
Airplane	6
Other	1

Q7. About how many miles did you, personally, drive during the past 12 months in all motorized vehicles? If you work, include the commute to and from work, but not any miles driven while on the job.

	(%)
Don't drive	15
1 to 5,000 miles	31
5,001 to 7,500 miles	18
7,500 to 10,000 miles	12
10,001 to 12,500 miles	10
12,501 to 15,000 miles	7
15,001 to 20,000 miles	4
20,001 or more	4

Now think about the vehicle you drove the most in the past 12 months, to get around for personal reasons like shopping, commuting to work, or vacation trips.

Q8. Is this vehicle a 100% all-electric vehicle? [If yes, skip to Q11]

	(%)
Yes	2
No	98

Q9. How many miles per gallon does the vehicle get? Your best guess is fine.

	(%)
Less than 19 mpg	19
20 to 30 mpg	46
More than 30 mpg	18
Don't know	17

Q10. For that vehicle, how much do you spend buying fuel (gas, diesel, etc.) in a typical month?

	(%)
\$1 to \$50	32
\$51 to \$100	35
\$101 to \$150	20
\$151 to \$200	9
\$201 or more	4

Q11. In the past 30 days, have you paid a toll to drive on a bridge, tunnel, or road?

	(%)
Yes	28
No	72

There are many ways the U.S. Congress could raise money to pay for maintaining and improving the transportation system. The next few questions ask your opinion about some of these options. In each case, assume that the money collected would be spent only for transportation purposes.

Q12. Right now the federal government collects a tax of 18¢ per gallon when people buy gasoline. One idea to raise money for transportation is to increase the federal gas tax by 10¢ a gallon, from 18¢ to 28¢. Would you support or oppose this gas tax increase?

	(%)
Strongly support	14
Somewhat support	30
Somewhat oppose	26
Strongly oppose	30



Q13. Now, imagine that the U.S. Congress decided that the best option to raise money for transportation is to increase the federal gas tax by ten cents per gallon. Would you support or oppose the gas tax increase if the new money were spent only on the following types of projects?

	Strongly support (%)	Somewhat support (%)	Somewhat oppose (%)	Strongly oppose (%)
Reduce local air pollution caused by the transportation system	23	33	22	22
Reduce the transportation system's contribution to global warming	30	32	19	20
Maintain streets, roads, and highways	42	33	13	12
Reduce accidents and improve safety	41	32	13	14
Reduce traffic congestion	37	34	15	14

Q14. Some people say that money from gas taxes should only be spent on roads and highways, since drivers pay the tax. Other people say gas tax money should be used to pay for public transit in addition to roads and highways, because transit helps reduce traffic congestion and wear-and-tear on the roads. Would you support or oppose spending some gas tax money on public transit?

	(%)
Support	71
Oppose	29

Note on Q14: Half of respondents received the question as worded here, and the other half received the question with the two statements in reverse order: Some people say gas tax money should be used to pay for public transit in addition to roads and highways, because transit helps reduce traffic congestion and wear-and-tear on the roads. Other people say that money from gas taxes should only be spent on roads and highways, since drivers pay the tax. Would you support or oppose spending some gas tax money on public transit?

Now, imagine that the US Congress decides to replace the gas tax with a mileage fee of one penny per mile driven. That means someone driving 10,000 miles a year would pay \$100. Vehicles would have an electronic meter to keep track of the miles driven.

Q15. Would you support or oppose replacing the gas tax with such a mileage fee?

	(%)
Strongly support	15
Somewhat support	29
Somewhat oppose	22
Strongly oppose	33

Q16. A variation on the mileage tax just described is to have the tax rate vary depending upon how much the vehicle pollutes. On average, vehicles would be charged 1¢ per mile, but vehicles that pollute less would be charged less, and vehicles that pollute more would be charged more. Would you support or oppose this new mileage tax?

	(%)
Strongly support	15
Somewhat support	34
Somewhat oppose	23
Strongly oppose	28

Q17. A different variation on the mileage fee concept is to replace the gas tax with a mileage fee of one penny per mile for all gas and diesel vehicles, but with a different rate for all-electric vehicles. What rate per mile do you think electric vehicles should pay?

	(%)
The same rate as gas/diesel vehicles	43
Half the rate set for gas/diesel vehicles	37
Nothing (electric vehicles pay no fee)	20

Q18. Now imagine that the US Congress decides to keep the gas tax, but to add a new per-mile “Business Road-Use Fee” for miles that commercial vehicles drive on the job. (These vehicles would continue to pay the current gas tax, as well.) Would you support or oppose this new Business Road-Use Fee for the following types of commercial vehicles?

	Strongly support (%)	Somewhat support (%)	Somewhat oppose (%)	Strongly oppose (%)
Delivery & freight trucks	21	33	25	21
Taxis	20	32	25	22
Ridehailing vehicles	20	32	27	21

Q19. How much do you agree or disagree with the following statement? I’m already tracked everywhere I go through my phone, so having my mileage tracked for a mileage fee wouldn’t really bother me.

	(%)
Strongly agree	17
Somewhat agree	28
Somewhat disagree	23
Strongly disagree	32

Q20. Which statement is closer to your opinion?

	(%)
A mileage fee is MORE fair than the gas tax because everyone pays the same for use of the roads, regardless of vehicle fuel efficiency or vehicle type (electric vs. gas vehicles)	50
A mileage fee is LESS fair than the gas tax because the mileage fee doesn't give a break to people who buy cleaner vehicles.	50

Q21. If Congress does create a federal mileage fee, how would you prefer to pay? Remember that the total amount you pay annually would be the same in each option.

	(%)
Pay a bill that comes once a year	23
Pay a bill that comes once a month	30
Pay each time I purchase gas/diesel or charge an electric vehicle	47

Q22. As best you remember, when did the U.S. Congress last raise the federal gas tax?

	(%)
1 to 3 years ago	20
4 to 10 years ago	14
11 to 15 years ago	6
16 to 20 years ago	2
More than 20 years ago	3
Don't know	55

Q23. Now we have a question about the state where you live. As best you remember, when did your state government last raise the state gas tax?

	(%)
1 to 3 years ago	30
4 to 10 years ago	14
11 to 15 years ago	4
16 to 20 years ago	1
More than 20 years ago	1
Don't know	30

## ENDNOTES

1. For the results of the first ten years of polling in this series, see Asha Weinstein Agrawal and Hilary Nixon, *What Do Americans Think about Federal Transportation Tax Options? Results from a National Survey* (San José, CA: Mineta Transportation Institute, June 2010), [http://transweb.sjsu.edu/MTIportal/research/publications/documents/2928\\_09-18.pdf](http://transweb.sjsu.edu/MTIportal/research/publications/documents/2928_09-18.pdf); Asha Weinstein Agrawal and Hilary Nixon, *What Do Americans Think About Federal Transportation Tax Options? Results from Year 2 of a National Survey* (San José, CA: Mineta Transportation Institute, June 2011), [http://transweb.sjsu.edu/PDFs/research/Transportation\\_taxes\\_public\\_opinion\\_1031.pdf](http://transweb.sjsu.edu/PDFs/research/Transportation_taxes_public_opinion_1031.pdf); Asha Weinstein Agrawal, Hilary Nixon, and Vinay Murthy, *What Do Americans Think About Federal Tax Options to Support Public Transit, Highways, and Local Streets and Roads? Results from Year 3 of a National Survey* (San José, CA: Mineta Transportation Institute, June 2012), <http://transweb.sjsu.edu/PDFs/research/1128-american-survey-federal-taxes-public-transit-highways-streets-roads.pdf>; Asha Weinstein Agrawal and Hilary Nixon, *What Do Americans Think About Federal Tax Options to Support Public Transit, Highways, and Local Streets and Roads? Results from Year 4 of a National Survey* (San José, CA: Mineta Transportation Institute, June 2013), <http://transweb.sjsu.edu/PDFs/research/1228-American-tax-poll-2013-public-transit-highways-streets-roads.pdf>; Asha Weinstein Agrawal and Hilary Nixon, *What Do Americans Think About Federal Tax Options to Support Public Transit, Highways, and Local Streets and Roads? Results from Year 5 of a National Survey* (San José, CA: Mineta Transportation Institute, June 2014), <http://transweb.sjsu.edu/PDFs/research/1328-road-tax-public-opinion-poll-2014.pdf>; Asha Weinstein Agrawal and Hilary Nixon, *What Do Americans Think About Federal Tax Options to Support Public Transit, Highways, and Local Streets and Roads? Results from Year 6 of a National Survey* (San José, CA: Mineta Transportation Institute, June 2015), <http://transweb.sjsu.edu/PDFs/research/1428-road-tax-public-opinion-poll-2015.pdf>; Asha Weinstein Agrawal and Hilary Nixon, *What Do Americans Think About Federal Tax Options to Support Public Transit, Highways, and Local Streets and Roads? Results from Year 7 of a National Survey* (San José, CA: Mineta Transportation Institute, June 2016), <https://transweb.sjsu.edu/sites/default/files/1528-road-and-transit-taxes-public-opinion-survey-2016.pdf>; Asha Weinstein Agrawal and Hilary Nixon, *What Do Americans Think About Federal Tax Options to Support Public Transit, Highways, and Local Streets and Roads? Results from Year 8 of a National Survey* (San José, CA: Mineta Transportation Institute, June 2017), <http://transweb.sjsu.edu/PDFs/research/1728-what-do-americans-think-about-federal-tax-options-to-support-public-transit-highways-and-local-streets-and-roads.pdf>; Asha Weinstein Agrawal and Hilary Nixon, *What Do Americans Think About Federal Tax Options to Support Public Transit, Highways, and Local Streets and Roads? Results from Year 9 of a National Survey* (San José, CA: Mineta Transportation Institute, June 2018), <http://transweb.sjsu.edu/research/1828-Survey-Transportation-Tax-Year-Nine>; and Asha Weinstein Agrawal and Hilary Nixon, *What Do Americans Think About Federal Tax Options to Support Transportation? Results from Year 10 of a National Survey* (San José, CA: Mineta Transportation Institute, June 2019), <https://transweb.sjsu.edu/research/1927-Survey-Transportation-Tax-Year-Ten>.
2. The current federal tax on gasoline is 18.4¢ per gallon, but respondents were told that it was 18¢ per gallon, to make the survey simpler to understand.

3. The description of the mileage fee options in the 2020 and 2019 surveys is slightly different from the description presented in previous years' surveys.
4. Valerie M. Sue and Lois A. Ritter, *Conducting Online Surveys*, 2nd edition (Sage Publications, 2012), <https://dx.doi.org/10.4135/9781506335186>.
5. Monica Anderson, et al., "10% of Americans Don't Use the Internet; Who Are They?" Pew Research Center, April 22, 2019, <https://www.pewresearch.org/fact-tank/2019/04/22/some-americans-dont-use-the-internet-who-are-they/>.
6. Pew Research Center, *Collecting Survey Data* (no date), <https://www.pewresearch.org/methods/u-s-survey-research/collecting-survey-data/>.
7. Sue and Ritter, 2012.
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9. Courtney Kennedy and Claudia Deane, "What Our Transition to Online Polling Means for Decades of Phone Survey Trends," Pew Research Center, February 27, 2019, <https://www.pewresearch.org/fact-tank/2019/02/27/what-our-transition-to-online-polling-means-for-decades-of-phone-survey-trends/>.
10. The U.S. Census Bureau's 2014-2018 American Community Survey 5-Year Public Use Microdata Samples were downloaded from [data.census.gov](http://data.census.gov).
11. Agrawal and Nixon, 2019.
12. For more information about the use of p-values in scientific research, see: American Statistical Association, "Statement on Statistical Significant and P-values," *ASA News*, March 7, 2016, <https://www.amstat.org/newsroom/pressreleases/P-ValueStatement.pdf>.
13. Nixon and Agrawal, 2018.
14. Half of respondents received the question as worded here, and the other half received the question with the two statements in reverse order: "Some people say gas tax money should be used to pay for public transit in addition to roads and highways, because transit helps reduce traffic congestion and wear-and-tear on the roads. Other people say that money from gas taxes should only be spent on roads and highways, since drivers pay the tax. Would you support or oppose spending some gas tax money on public transit?"
15. The U.S. Census Bureau's 2014-2018 American Community Survey 5-Year Public Use Microdata Samples were downloaded from [data.census.gov](http://data.census.gov).

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