

Supplementary Material E. Survey Method

General Survey Approach

The survey was designed as a within-subject policy opinion survey, with voting opportunities measuring opinion change and educational experiences acting as treatments. Instead of a control group, a respondent's initial opinion in the survey, prior to education, acted as the control. The educational treatments were given in two rounds: in the first round, the respondent learned about how much the policy would cost them relative to their current expenditures (i.e., cost education), and in the second round, the respondent learned more about the motivation for a policy change, the equity of the policy, and the technological options for implementing the policy (i.e., policy education). After each round of education, the respondent was given another chance to vote. The order of the educational treatments was not randomized, so we cannot state the independent effect of the policy education.

Survey Flow

At the beginning of the survey, respondents were shown a series of attitudinal statements covering opinions about the government, personal freedoms, technology, environment and nature, and community awareness. Respondents indicated their level of agreement with each statement using a 5-point Likert scale.

Then, respondents were presented with their first ballot items. Each ballot item began with the following introduction paragraph: “[Your state] is considering alternatives to the gas tax. The current gas tax is struggling to collect funds in a fair way due to more fuel-efficient vehicles, more electric and hybrid vehicles, and increasing costs for roadway maintenance and construction. Alternatives to the gas tax would remain revenue neutral, so the total amount of money collected by the state would remain the same, but the amount paid by individual drivers may increase, decrease, or stay about the same.” After reading this paragraph, respondents were directed to vote “Yes” or “No” to replace the gas tax with a flat fee (**Figure 1A**) and a mileage fee (**Figure 1B**).

<p>Vermont plans to replace the current fuels tax with a flat fee of \$220 per year per vehicle.</p> <p>How would you vote?</p> <div style="border: 1px solid #ccc; padding: 5px; margin-bottom: 5px;"><input type="radio"/> Yes</div> <div style="border: 1px solid #ccc; padding: 5px;"><input type="radio"/> No</div>	<p>Vermont plans to replace the current fuels tax with a mileage-based user fee of 2 cents per mile.</p> <p>How would you vote?</p> <div style="border: 1px solid #ccc; padding: 5px; margin-bottom: 5px;"><input type="radio"/> Yes</div> <div style="border: 1px solid #ccc; padding: 5px;"><input type="radio"/> No</div>
(A)	(B)

FIGURE 1 First ballot items for a Vermont resident to replace their state gas tax with (A) a flat fee and (B) a mileage fee.

After the first ballot items, respondents received their first educational treatment consisting of gas tax education and cost education. Respondents were asked a series of quiz-style questions about their state's gas tax, including how it functions and what it funds. Correct answers were reinforced with explanations and concept checks. Next, respondents provided us with information about their primary vehicle, including vehicle type, fuel economy, and annual vehicle miles travelled (VMT). This allowed us to calculate how much they spent in gas taxes over the past year and how much they would hypothetically pay in flat fees and mileage fees.

After the first educational treatment, respondents were presented with the second ballot items. The ballot items were identical to the first ballot items in **Figure 1**, with the addition of cost estimates (**Figure 2**). Those who indicated they did not have access to a primary vehicle skipped the second vote, since we could not calculate cost estimates for them.

<p>Based on the information you provided about how much you drive and the vehicle you use, <u>we estimate you currently pay \$267 in gas taxes per year.</u></p> <p>Vermont plans to replace the current gas tax with a flat fee of \$220 per year per vehicle.</p> <p>How would you vote?</p> <p>Yes <input type="checkbox"/></p> <p>No <input type="checkbox"/></p>	<p>Based on the information you provided about how much you drive and the vehicle you use, <u>we estimate you currently pay \$267 in gas taxes per year.</u></p> <p>Vermont plans to replace the current fuels tax with a mileage-based user fee of 2 cents per mile. We estimate you would spend \$ 245 in this fee per year.</p> <p>How would you vote?</p> <p>Yes <input type="checkbox"/></p> <p>No <input type="checkbox"/></p>
(A)	(B)

FIGURE 2 Second ballot items for a Vermont resident to replace their state gas tax with (A) a flat fee and (B) a mileage fee.

After the second ballot items, respondents received their second educational treatment which discussed the equity implications of replacing the gas tax with a mileage fee or a flat fee and technological options for mileage collection under a mileage fee. This information was shown through a four-minute educational video developed for the purposes of this survey. The video was deliberately developed to be non-biased, sharing both pros and cons of the existing policy and the alternative policies. However, it is possible information absorption biases were introduced due to the survey and educational materials coming from the University of Vermont, which respondents may have certain political or ideological associations with. Restrictions were enabled so respondents could not fast forward and could not advance in the survey until the video was completed. The video was followed by concept check questions reinforcing the education in the video.

At the end of the second educational treatment, respondents were presented with their third and final ballot items. The ballot items were identical to the first ballot items in **Figure 1**. This final vote was followed by a series of questions asking respondents to reflect on the survey. We gathered information about the perceived fairness of mileage fees and preferences for the way mileage could be collected. At the very end of the survey, we collected socio-demographic information including respondent age, household size, and annual household income.