

VERMONT MILEAGE FEE RATE SETTING BRIEF



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MOTIVATION

Revenue from motor fuel taxes (colloquially, gas taxes) are declining due to increasing vehicle fuel efficiency, electric vehicle adoption, and inflation.

As per the 2025 Transportation Bill (Act 43, Sections 17-18), Vermont intends to use a mileage fee for BEV pleasure cars as an interim step to implementing a statewide mileage fee program. The BEV mileage fee will replace the current \$89 fee BEVs pay at registration. The statewide mileage fee is expected to replace the current state motor fuel taxes and the BEV and PHEV flat fees (\$89 and \$44.5, respectively).

Using the methods described in our full report, we recommend a mileage fee rate of **1.4 cents per mile**. We use similar methods from the 2024 Report to the Legislature with refinements based on best practices, our expertise and new studies in other states.

2024 REPORT	RATE = 1.8 ¢ / mile	OUR REPORT	RATE = 1.4 ¢ / mile
STATE GAS TAX		STATE GAS TAX	
State gas tax from the most recent quarter		5-year average state gas tax	
FUEL ECONOMY		FUEL ECONOMY	
Data from 2013		Most recent data (2023)	
Averages two measures of fuel economy		Only use one measure of fuel economy	
Includes some data from medium- and heavy-duty vehicles in average		Only uses data from light-duty vehicles in average	
Uses a harmonic average		Uses a distance-weighted harmonic average	
RATE ADJUSTMENTS		RATE ADJUSTMENTS	
Recommend increasing per mile fee to cover administrative costs		Recommend increasing vehicle registration or inspection fees to cover administrative costs	
No inflation adjustment		Recommend indexing to inflation	

MILEAGE FEE IMPACT: HOUSEHOLD COSTS

More efficient vehicles, including EVs, tend to pay less in current fuel taxes per mile: 0.7 to 0.9 cents per mile. Most EVs and PHEVs will see increases in costs with a 1.4 cent per mile fee.

On average, due to rounding the mileage fee to the nearest tenth of a cent, ICEV owners will see + \$10 cost increases. However, many gas and diesel vehicles currently pay more than 1.4 cents per mile, so many ICEV owners will see cost savings.

Household Vehicles	Average Current Fees [\$ / year]	Average Mileage Fees [\$ / year]	Expected Cost Differences (covers 95% of households)
BEV	\$89	\$158	-\$59 to +\$281
PHEV	\$113	\$166	-\$28 to +\$189
ICEV (GAS OR DIESEL)	\$142	\$152	-\$73 to +\$90

RATE CALCULATION

1.4 CENTS PER MILE

$$= \frac{\text{Five-year Average State Gas Tax}}{\text{Weighted Harmonic Average Light-Duty Fuel Economy}}$$

KEY RATE CALCULATION CONSIDERATIONS

Revenue Equivalence: The mileage fee rate is set to be approximately equivalent to what current light-duty gas and diesel vehicle owners pay in Vermont's state motor fuel taxes.

Multi-Year Average State Gas Tax: The Vermont state gas tax changes quarterly. It includes a fixed rate (13.1 cents per gallon), and two variable rates (4% and 2% of the average retail price of gasoline in the prior fiscal quarter). We recommend using a five-year average gasoline tax to smooth short-term fluctuations in gas market prices.

Fuel Economy Data: We use Vermont vehicle registration records to identify all light-duty (<10,000 lbs) gas and diesel vehicles actively registered in Vermont in 2023. Each vehicle is matched to EPA city-and-highway combined fuel economy ratings using their unique vehicle characteristics (model, year, axles, etc.). Using recent (2023) fuel economy data ensures the rate is roughly equivalent to what current vehicles pay in fuel taxes. This was the most recent data available to us.

Distance-Weighted Harmonic Average: Harmonic averages are the appropriate method for averaging rates: in this case, miles per gallon. Weighting the average by each vehicle's mileage (distance-weighting) reflects actual vehicle fuel consumption because vehicles are not all used the same. Vehicles that are driven more miles receive more weight in the average.

RATE ADJUSTMENTS WE DO RECOMMEND

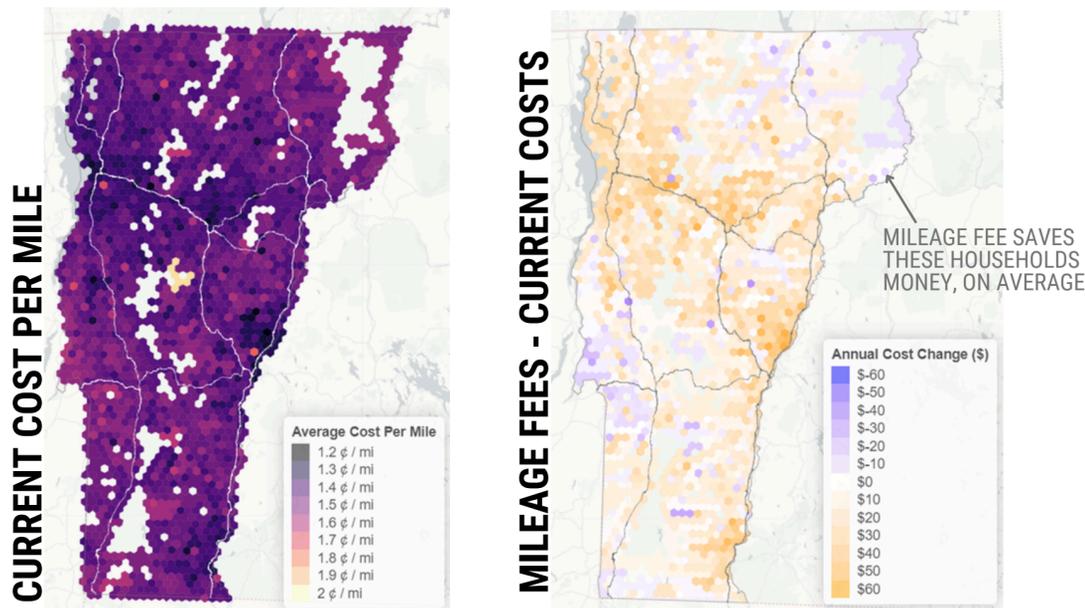
Index to Inflation: To preserve the purchasing power of transportation revenue, indexing the mileage fee to inflation is essential. There are multiple measures of inflation. We recommend indexing the mileage fee to a measure of inflation that captures changes in costs for the largest transportation budget items (for example, the National Highway Construction Cost Index for materials & equipment or the Consumer Price Index for administrative costs). We recommend annual mileage rate adjustments using the average change in the inflation index for the most recent 12-month period, rounded to the nearest tenth of a cent.

Administrative Costs: Mileage fee ongoing administrative costs are likely to scale with the number of vehicles registered in the program, rather than how many miles the vehicles in the program travel. We recommend increasing vehicle registration or inspection fees ("flat fees") to cover administrative costs rather than incorporating them into a per mile fee.

Below are some common Vermont vehicles and their expected change in costs under a statewide mileage fee program for light-duty vehicles.

Vehicle	Current Tax Cost per Mile	Fuel Economy [MPGe]	Current Taxes [\$ / year]	Mileage Fee [\$ / year]	Annual Cost Difference [\$ / year]
 Nissan Leaf	0.8 ¢ / mi	109.0	\$89	\$154	+\$65
 Toyota Prius	0.7 ¢ / mi	49.1	\$72	\$154	+\$82
 Toyota Rav4 Prime	0.9 ¢ / mi	65.0	\$99	\$154	+\$55
Internal Combustion Engine Vehicles (ICEVs): Gas or Diesel					
 Chevrolet Silverado	1.8 ¢ / mi	17.5	\$201	\$154	-\$47
 Toyota Tacoma	1.6 ¢ / mi	19.8	\$178	\$154	-\$24
 Subaru Outback	1.3 ¢ / mi	24.3	\$145	\$154	+\$9

Because vehicles are driven differently, annual cost differences will also vary based on what vehicles a household owns, how they use them, and where the household lives.



Households in rural Vermont tend to travel more miles per year.

While rural households will still pay more in mileage fees than urban households, they also tend to own less efficient vehicles. That means rural drivers will, on average, see lower cost increases than urban drivers.

MILEAGE FEE IMPACT: STATE REVENUE

Revenue projections are intended to show relative trends, not precise expected revenue in future years

Revenue, projected using EPA's MOVES vehicle fleet forecasting, shows that inflation, EV adoption, and increasing fuel efficiency are all key factors in the trend of declining transportation revenue and purchasing power.

Many states have indexed their gas taxes to measures of inflation (CA, FL, MD, MI, NC, RI, VA, IN, DC). If Vermont was to use this strategy, the State would still see declining revenue in nominal dollars due to decreasing gasoline consumption.

Mileage fees for BEVs are not enough. Without additional policy action, the gap between average BEV mileage fees and ICEV gas taxes will widen as ICEVs become more fuel efficient. Transitioning to a mileage fee for all light-duty vehicles is one way to preserve transportation revenue and purchasing power.

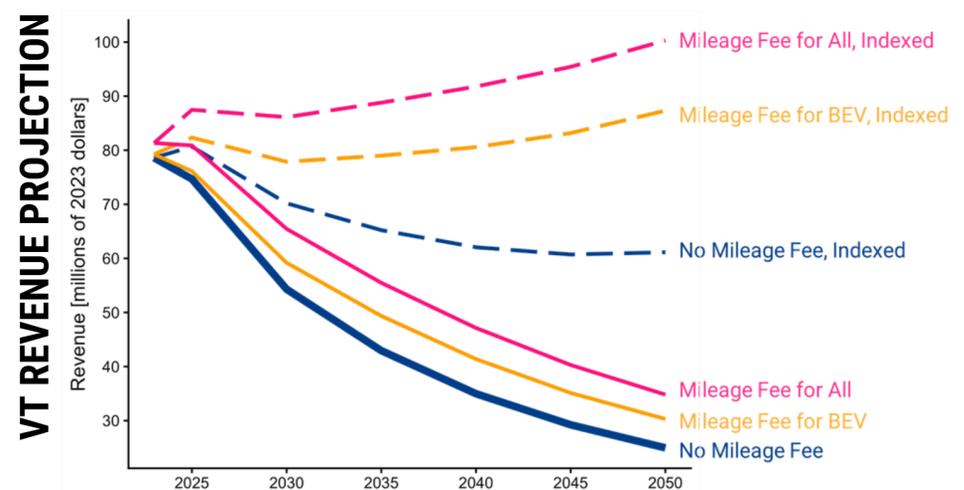
RATE ADJUSTMENTS WE DO NOT RECOMMEND

Vehicle Weight: Recent studies show roadway damage increases non-linearly with vehicle weight. Medium- and heavy-duty vehicles cause most damage. The difference in damage caused by light-duty vehicles of different weights is negligible. Therefore, we do not recommend adjusting the mileage fee based on vehicle weight for light-duty vehicles. Programs involving heavier vehicles should reconsider this.

Fuel Economy: Adjusting a mileage fee based on changes in LDV fuel economy would recreate the gas tax and the same issues it faces. We do not recommend this approach.

Mileage Fee Cap: States with voluntary mileage fee programs have used mileage fee "caps" (i.e., maximums) to encourage program enrollment. This ensures vehicles are guaranteed savings by enrolling but ultimately diminishes revenue. This also defeats part of the purpose of a mileage fee: to directly link transportation system user fees to actual system use. For these reasons, we do not recommend a mileage fee cap in Vermont.

Flat Fee Alternatives: States with voluntary mileage fee programs have used flat fees to encourage program enrollment. More vehicles enrolled generally means more revenue, regardless of whether they pay the flat fee or the mileage fee. High-mileage vehicles are incentivized to opt for the flat fee, which will likely reduce overall revenue. This also defeats the purpose of a mileage fee: to directly link transportation system user fees to actual system use. For these reasons, we do not recommend a flat fee alternative to the Vermont mileage fee.



In a transition to a statewide mileage fee it will be important to collect revenue from out-of-state drivers. To charge out-of-state drivers, Vermont could keep the gas tax. The state can then reimburse or charge Vermont drivers the difference between their estimated gas tax and mileage fee payments.