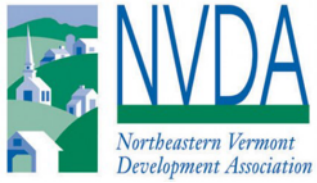
2019 ANNUAL PROGRESS REPORT
for VERMONT

Energy Action Network Members

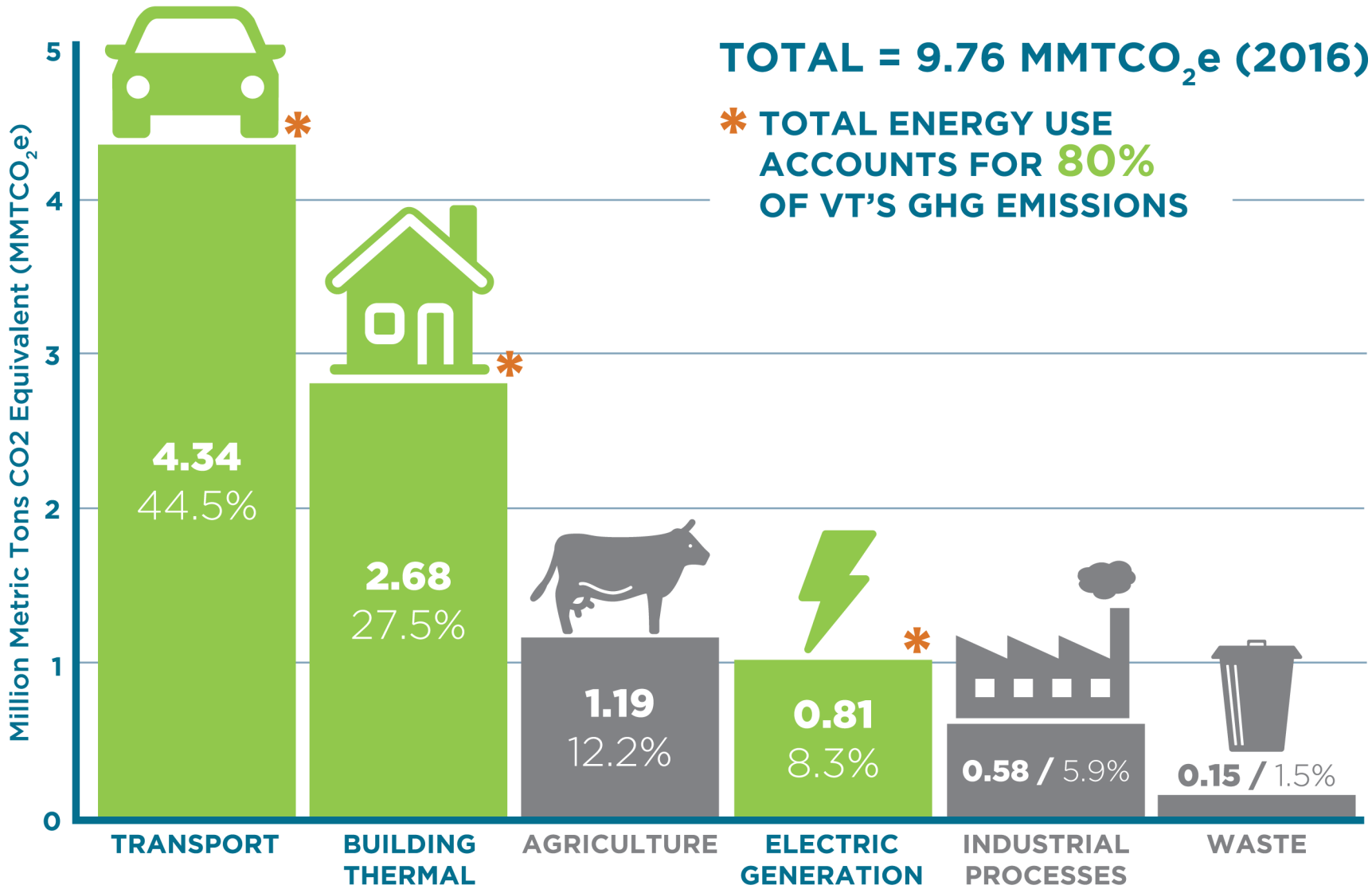
Over 100 Network Members

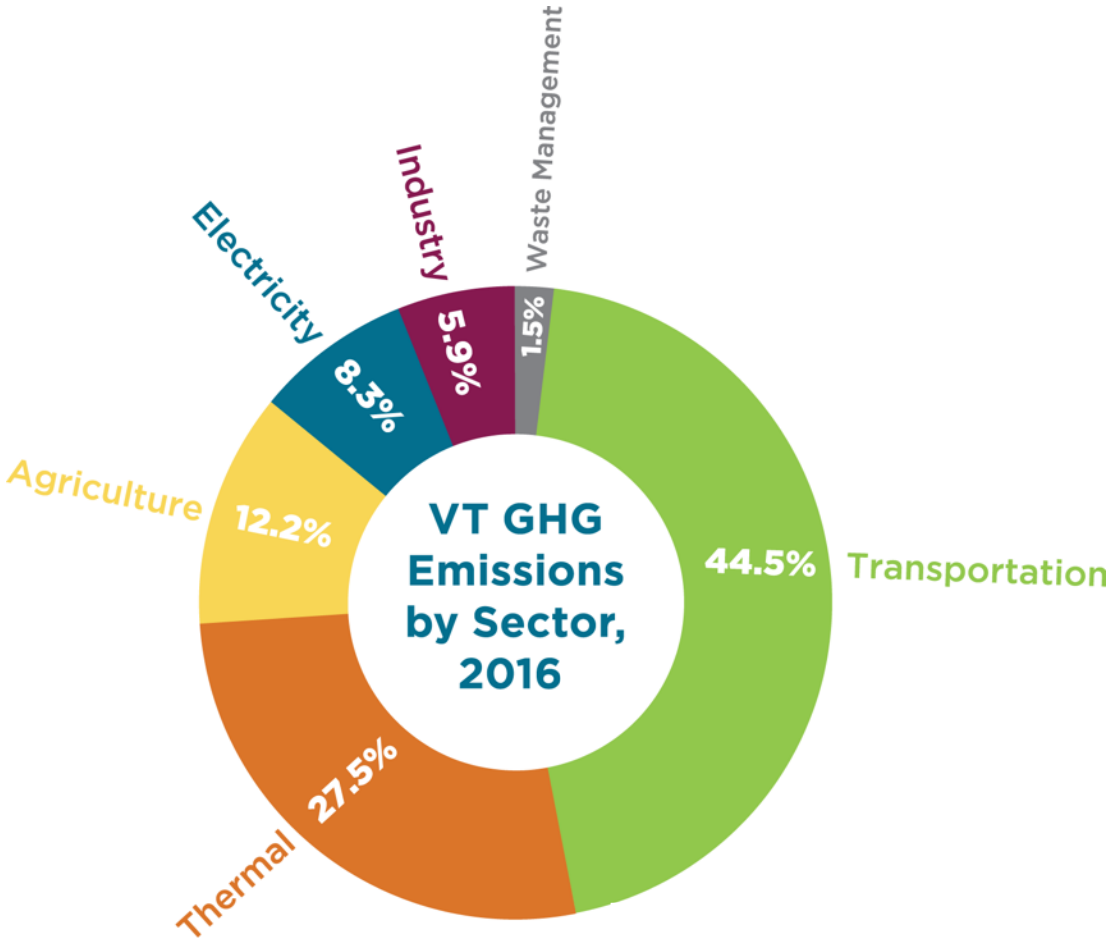
Energy Action Network Public Partners

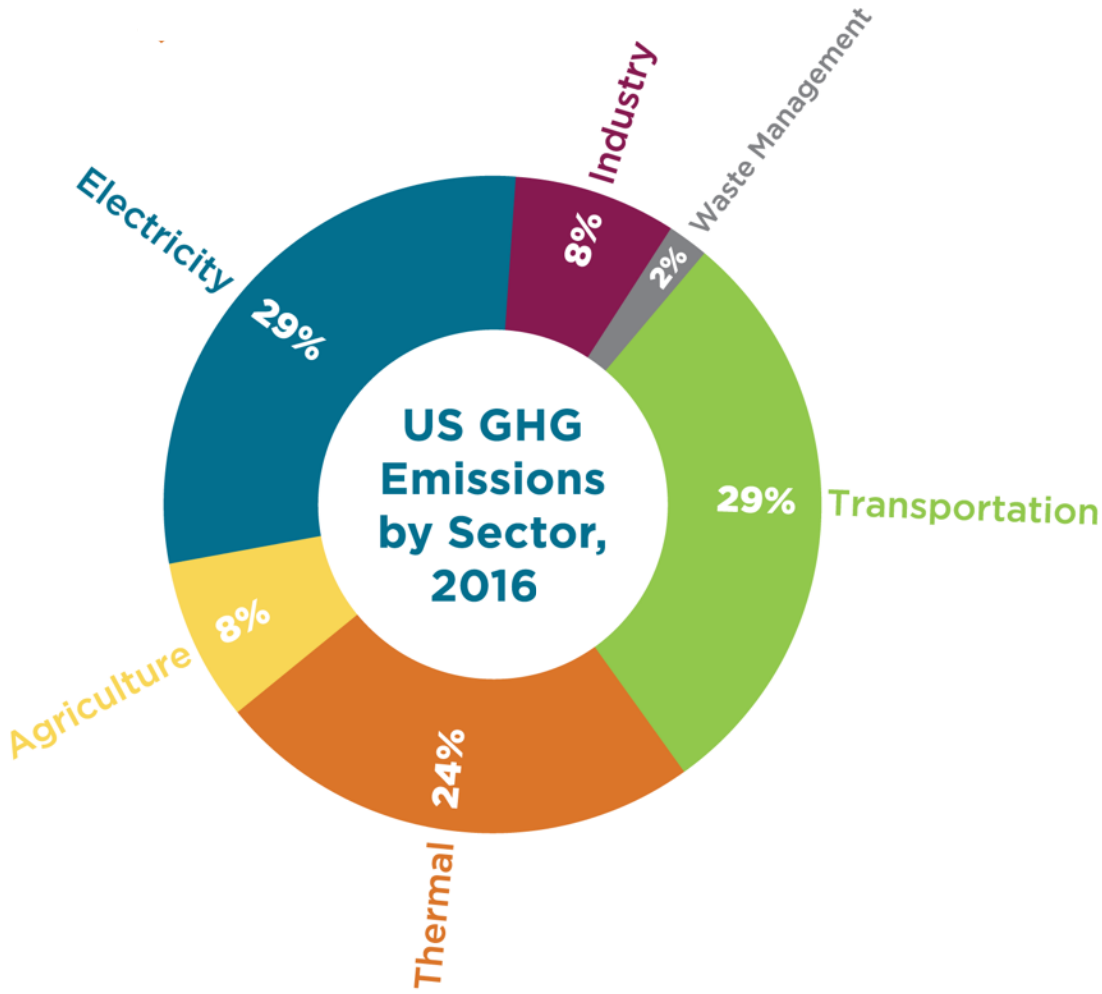
Over 100 Public Partners



Vermont's GHG emissions by sector

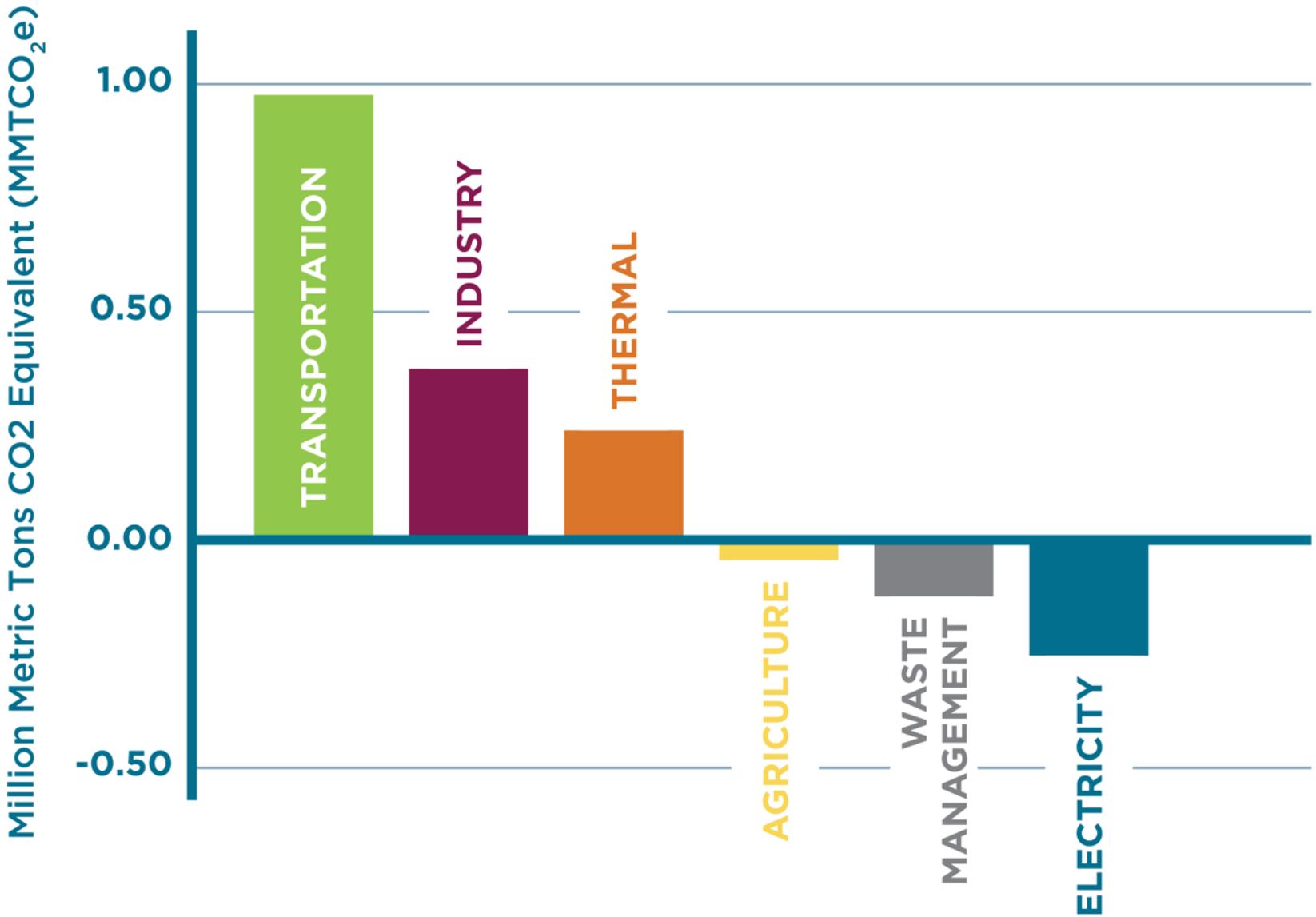






VT's Transportation Emissions Are Much Higher, as a Share of Total Emissions, Than the U.S.

Total net change in VT GHG emissions, 1990 vs 2016: 1.11 MMTCO2e

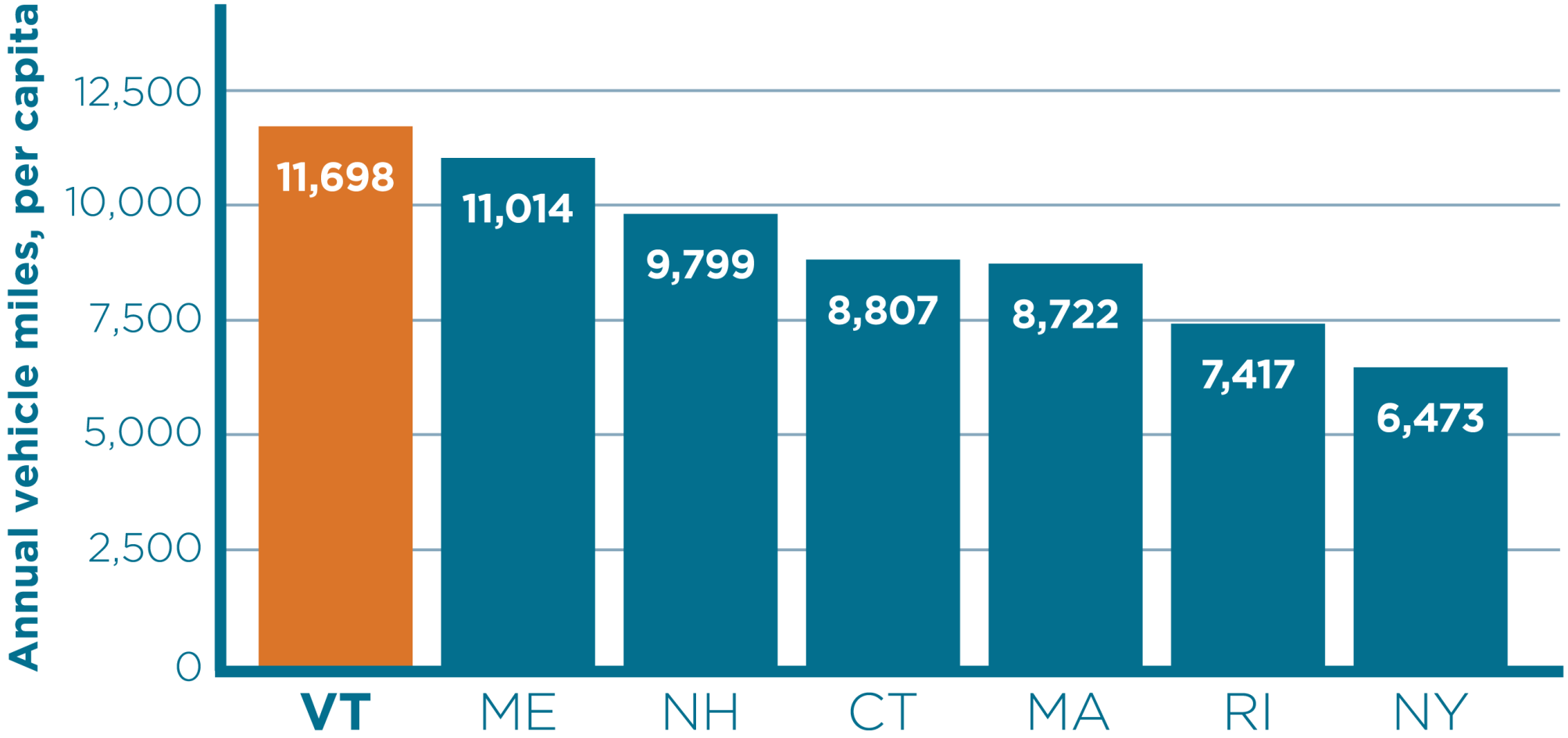


Vermont Has the Highest Per Capita GHG Emissions in the Region

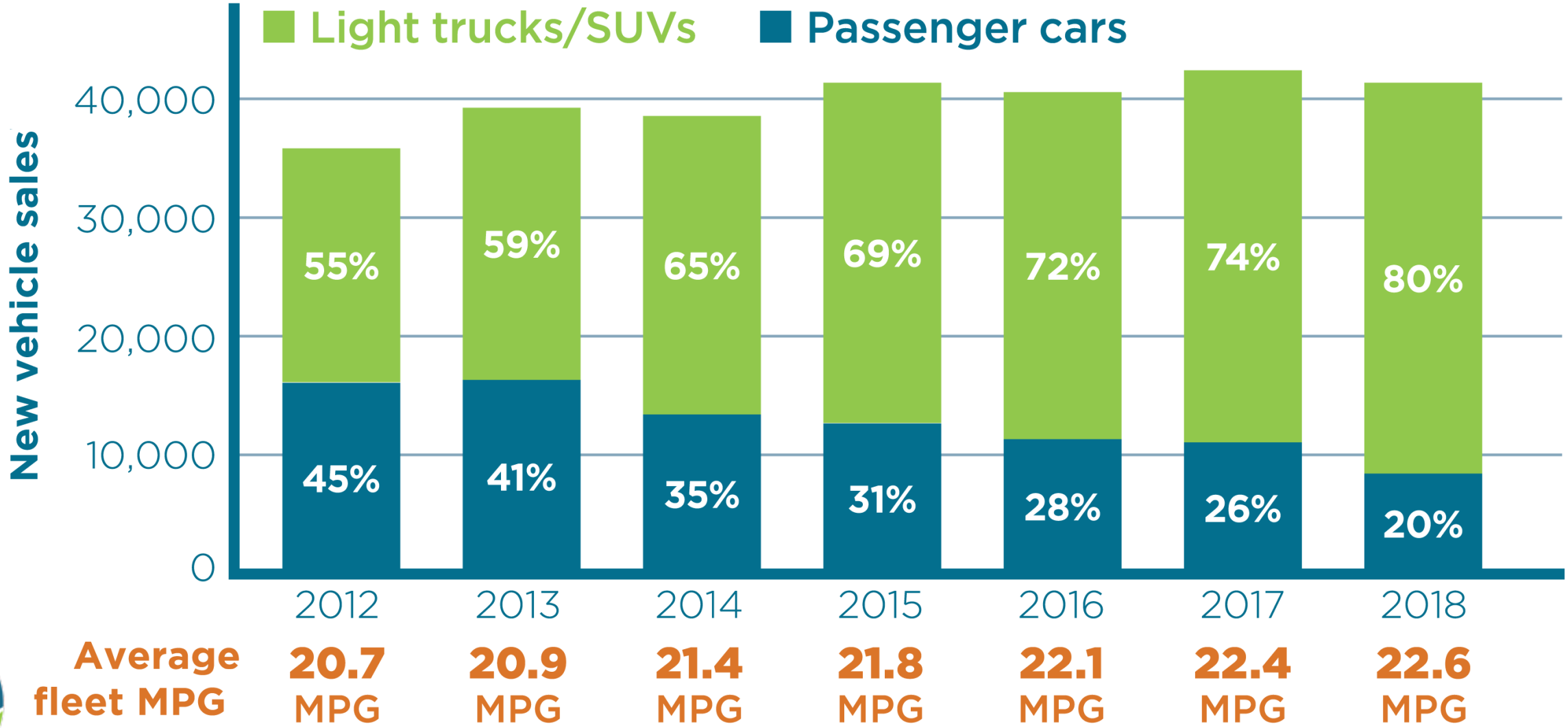
Per capita emissions

(metric tons CO2e per person)

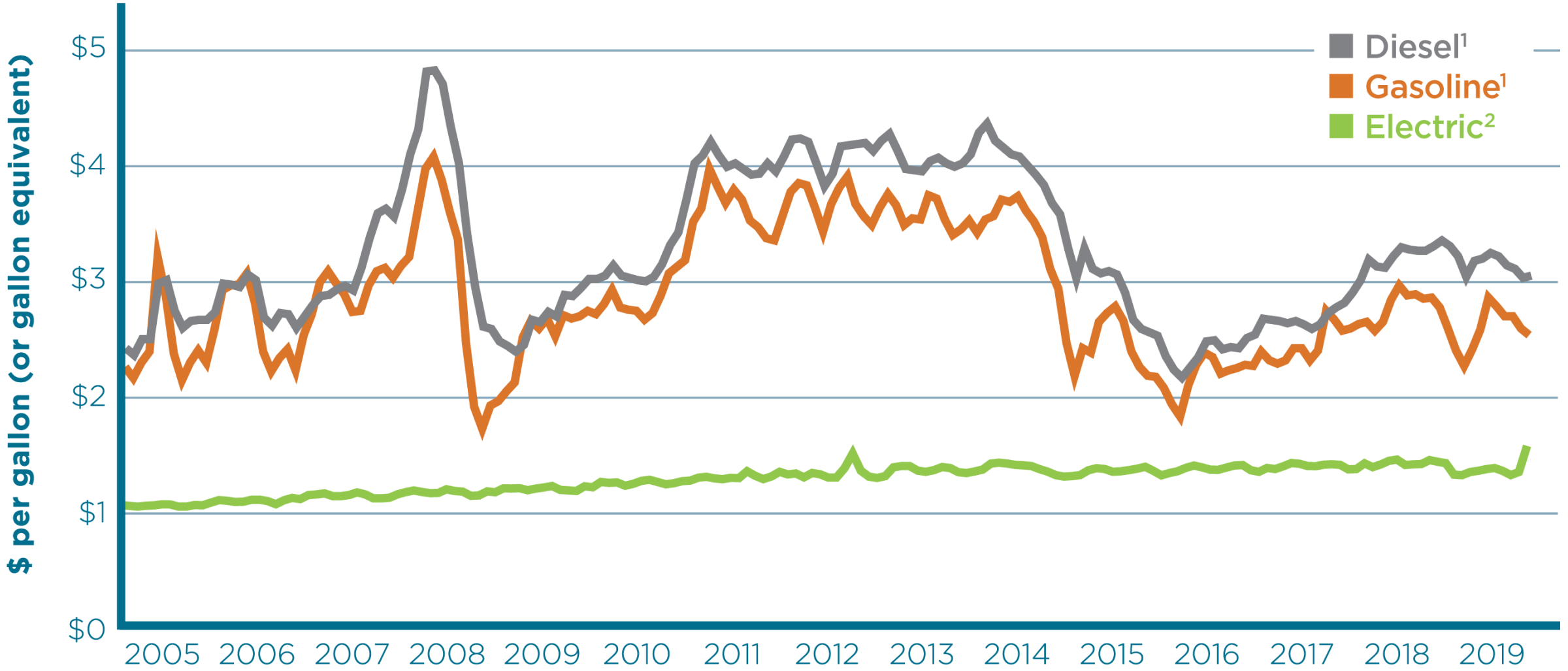
Vehicle miles traveled per capita, 2015



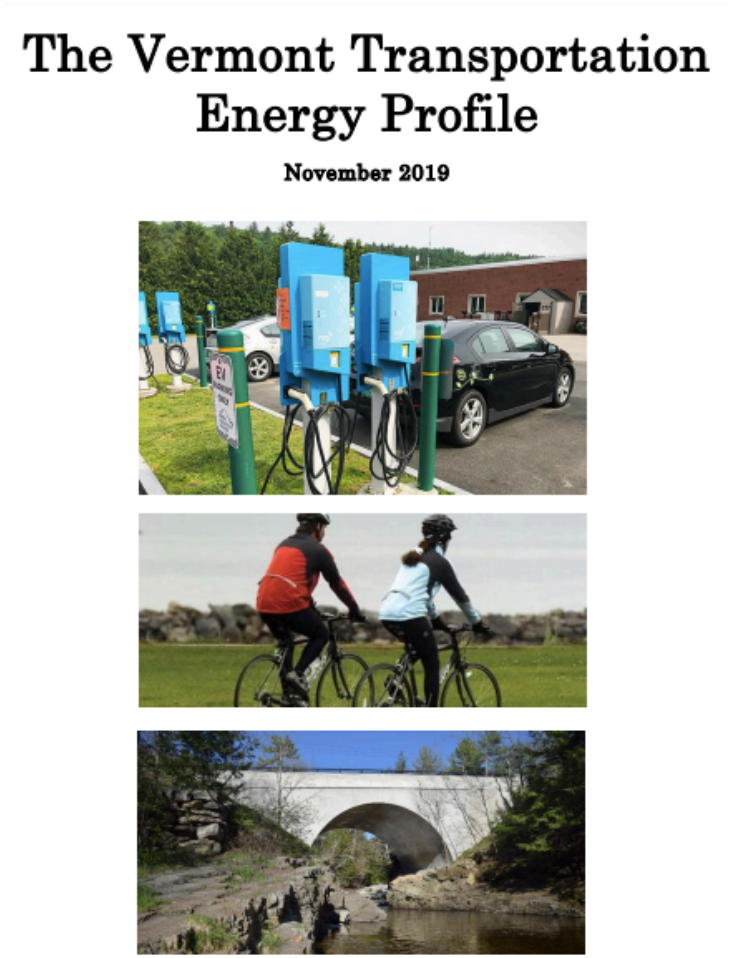
As cars get more efficient, we're buying bigger cars



Electric vehicles are less expensive to drive than gas vehicles



VTrans Transportation Energy Profile



Energy Equity: A Working Definition

Energy equity is based on the principle that **all people should have access to reliable, safe, and affordable sources of energy; protection from a disproportionate share of negative impacts or externalities associated with building and operating our energy supply and distribution systems; and equitable distribution of and access to benefits from these systems.**

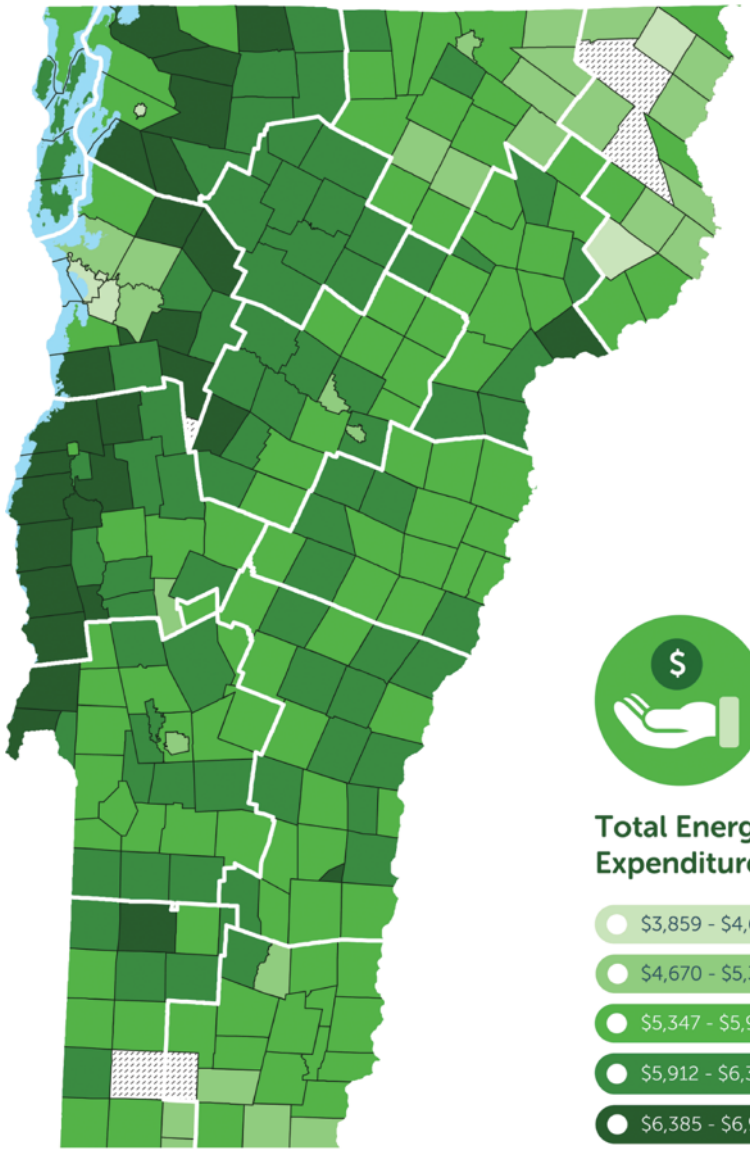
What is Energy Burden?

Quantity of energy consumed
x price of energy = Spending on energy

$$\frac{\text{Spending on energy}}{\text{Income}} = \text{Energy burden}$$

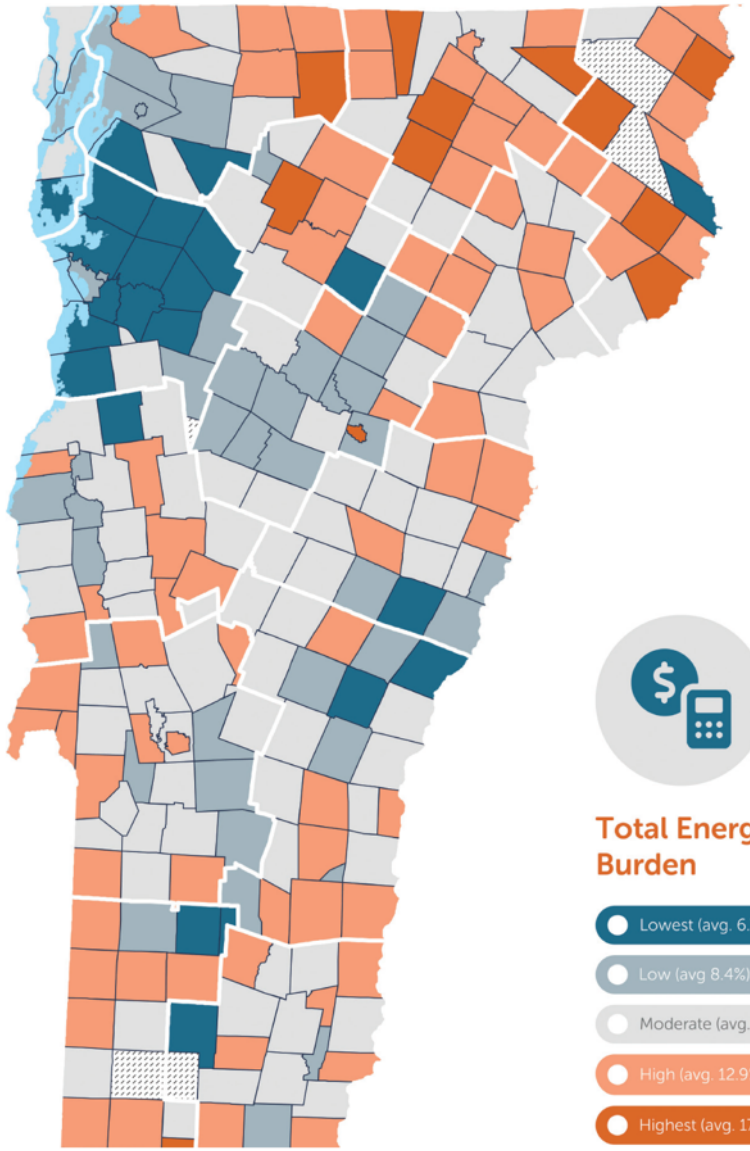
Energy burden measures the percent of income used for energy spending. This measurement allows us to acknowledge that energy spending does not affect everyone equally.

Energy Security and Justice Program of Vermont Law School's Institute for Energy and the Environment. *Energy costs and burdens in Vermont: Burdensome for whom?* 2014.



Total Energy Expenditure

- $3,859 - $4,669
- $4,670 - $5,346
- $5,347 - $5,911
- $5,912 - $6,384
- $6,385 - $6,949

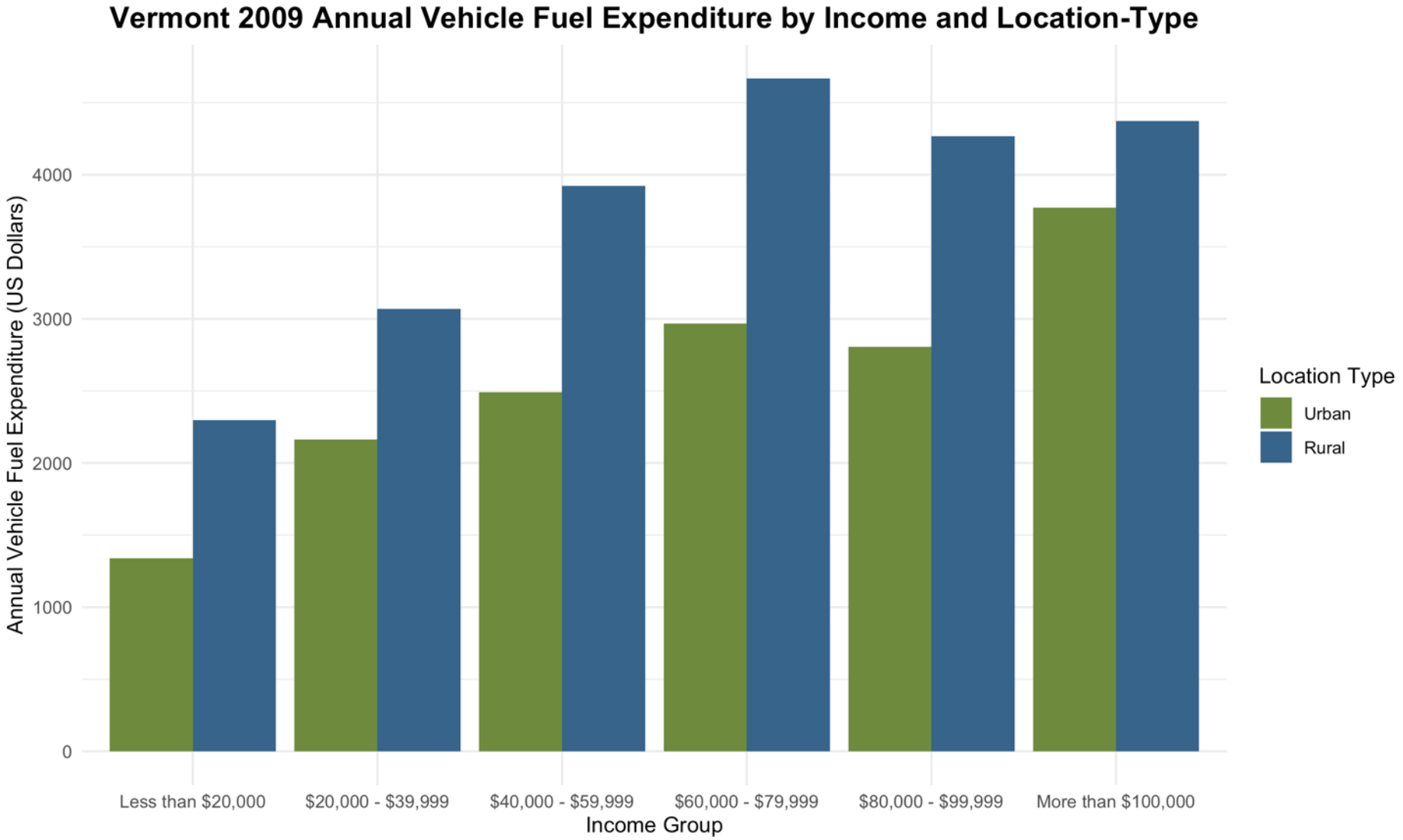


Total Energy Burden

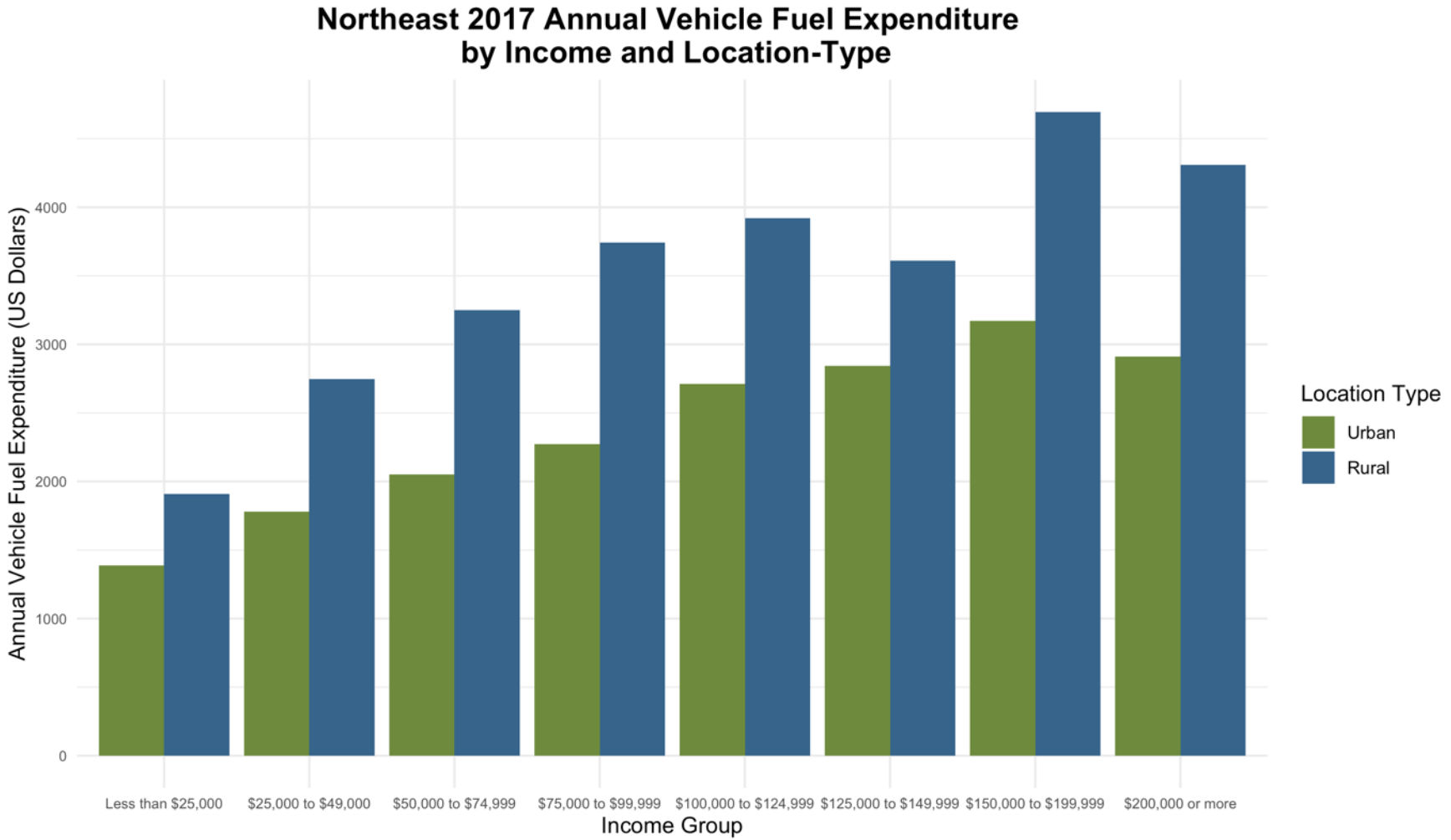
- Lowest (avg. 6.7%)
- Low (avg 8.4%)
- Moderate (avg. 10.1%)
- High (avg. 12.9%)
- Highest (avg. 17.4%)

Source: Efficiency Vermont

Upper-Income VTers Have Higher Avg. Vehicle Fuel Expenditures; Rural Drivers Higher than Urban

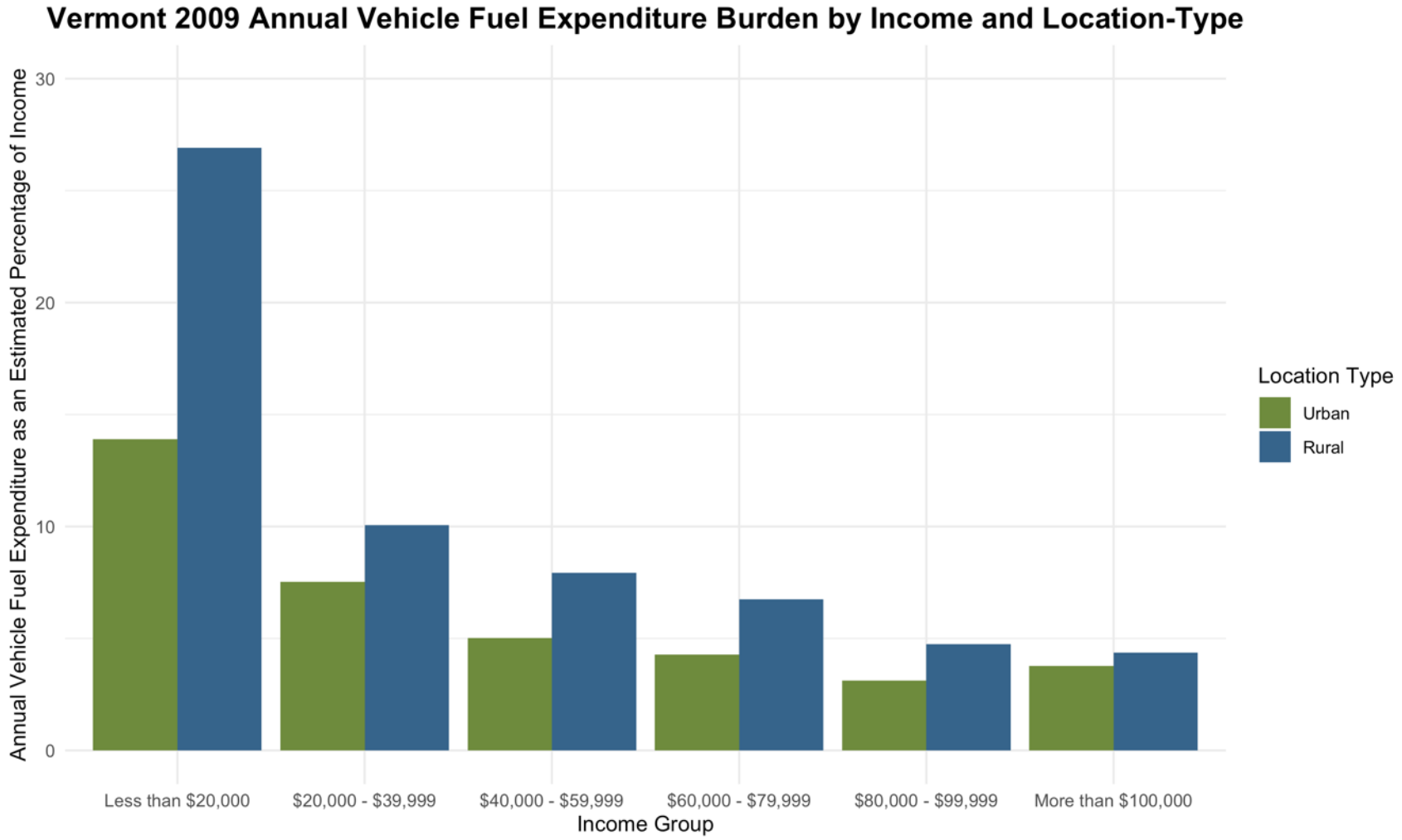


Upper-Income Northeasterners Have Higher Avg. Vehicle Fuel Expenditures; Rural Drivers Higher than Urban

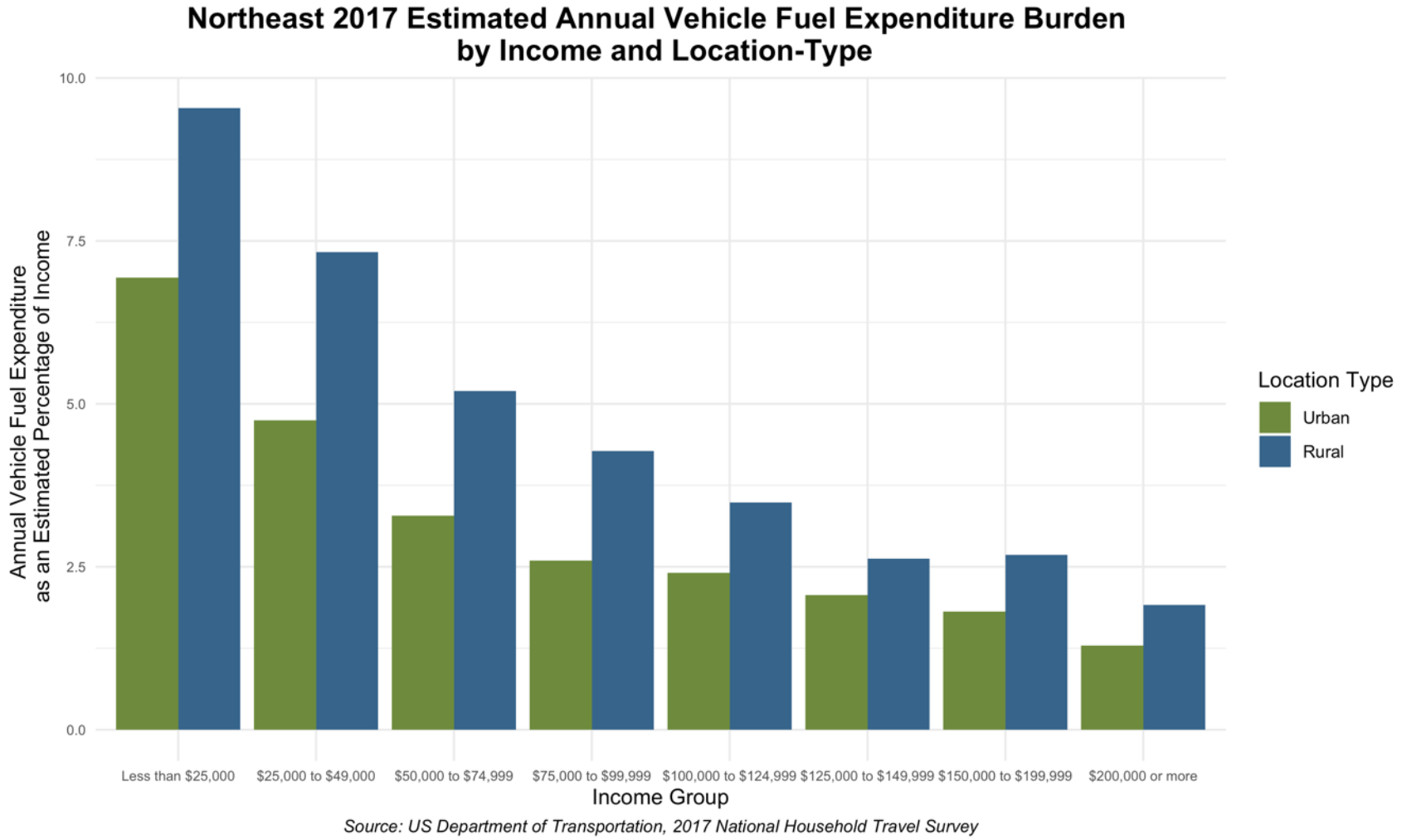


Source: US Department of Transportation, 2017 National Household Travel Survey

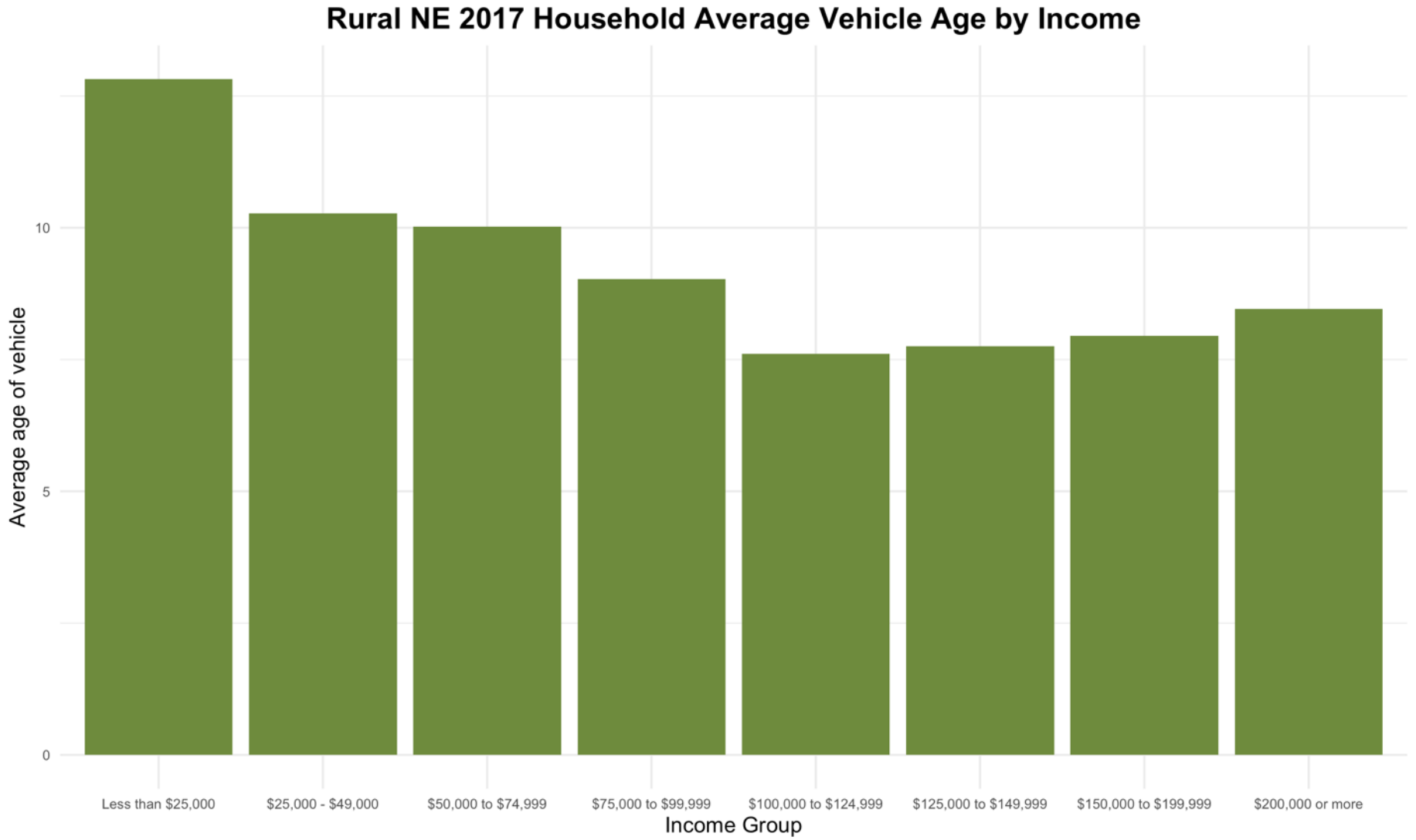
Lower-income VT'ers Spend a Higher Share of Income on Vehicle Fuel than Upper-income VT'ers



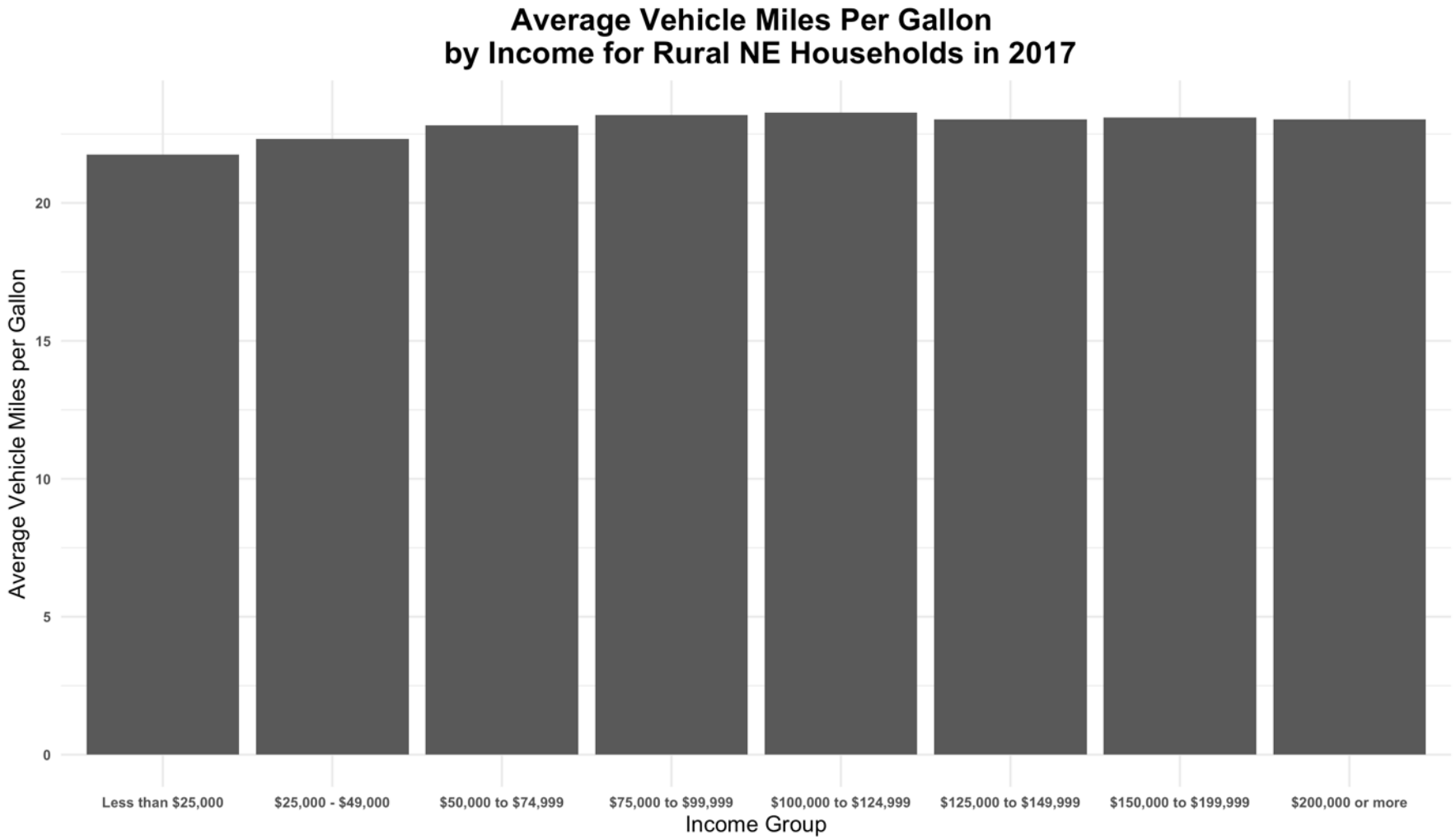
Lower-income Rural NE'ers Spend a Higher Share of Income on Vehicle Fuel than Upper-income Rural NE'ers



Lower-income Rural NE'ers Tend to Drive Older Vehicles Than Upper-income Rural NE'ers

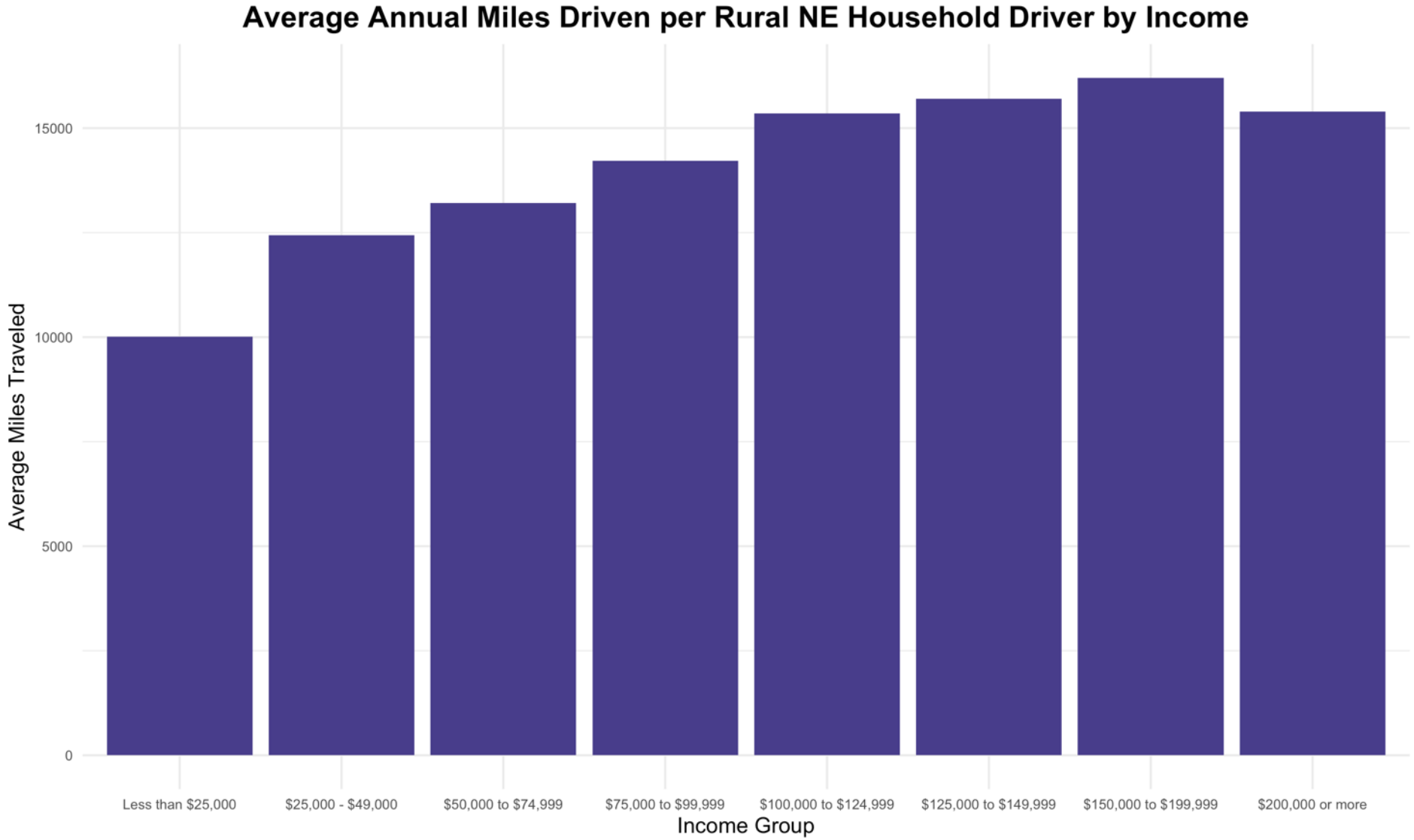


Not Large Differences in Avg. Fuel Efficiency of Vehicles by Income Group

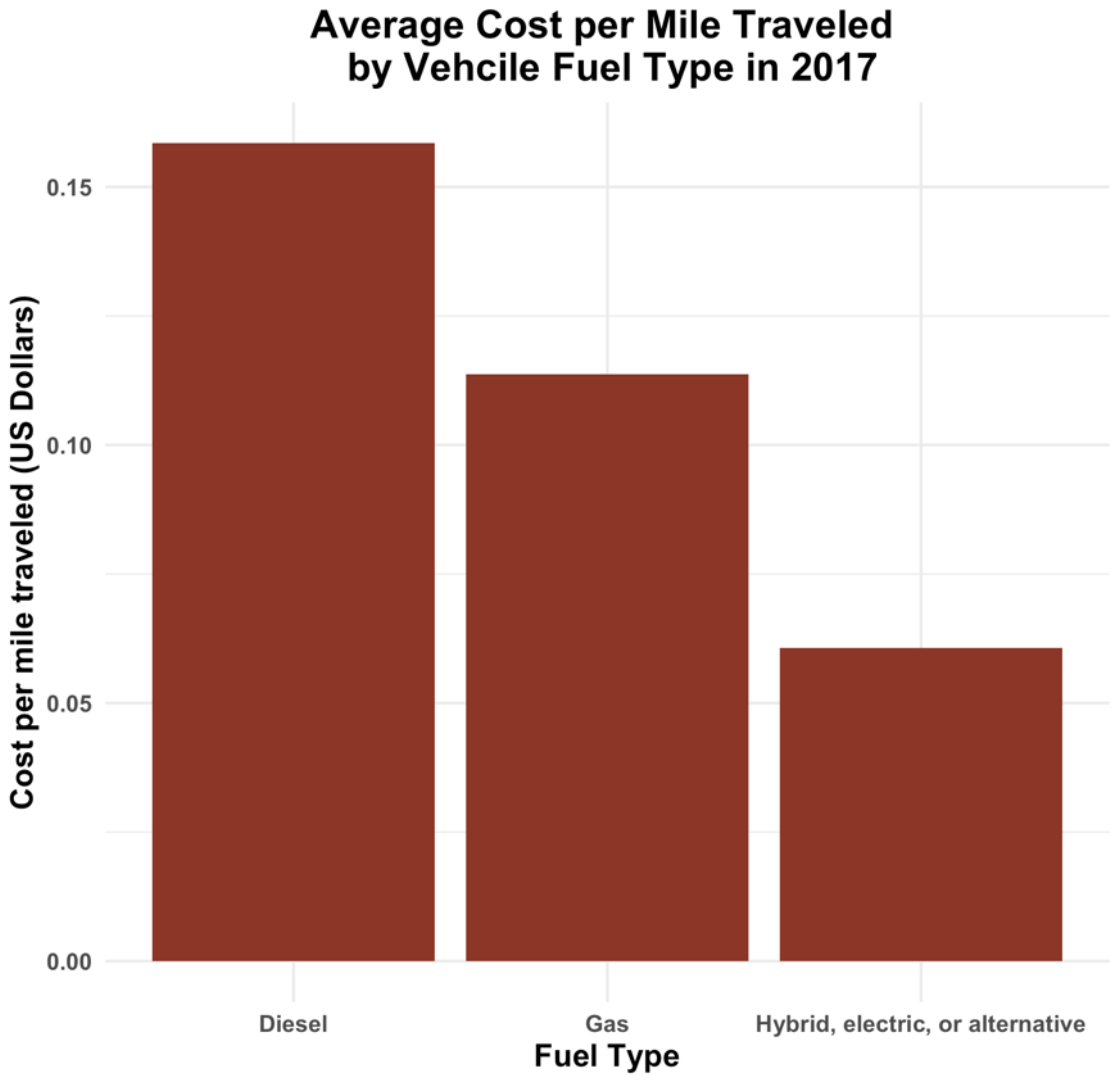


Source: US Department of Transportation, 2017 National Household Travel Survey

Upper-income Rural NE Drivers Drive More Miles On Avg. than Lower-income Rural NE Drivers



Electric and Hybrid Vehicles are Much Less Expensive to Drive, per Mile Traveled



Source: US Department of Transportation, 2017 National Household Travel Survey

UCS Report: Rural VT Drivers Can Save $1,900/year by Driving EVs

Clean Transportation Strategies for Rural Communities in the Northeast and Mid-Atlantic States

With Analysis of Maine, Vermont, Virginia, and Maryland

November 2020

After Incentives, EVs Often Have Lower Purchase or Lease Prices than Comparable Gas Models

Electric vehicle incentives

	NISSAN LEAF (ELECTRIC)		NISSAN SENTRA (GAS)
	Standard incentive	**Low income incentive**	
Starting Price	$31,600	$31,600	$19,310
Federal Tax Credit	-$7,500	-$7,500	-$0
State Incentive	-$2,500	-$4,500	-$0
OEM Discount	-$6,000	-$6,000	-$0
Utility Incentive	-$1,500	-$2,500	-$0
Price after Incentives	**$14,100**	**$11,600**	**$19,310**

Six Initial Takeaways

- Upper-income Vermonters consume more transportation fuel than lower-income Vermonters
- However, lower-income Vermonters spend a far higher share of their income on transportation fuels
- The lowest-income rural NE drivers drive vehicles about 12 years old (vs. upper-income, at approx. 8 years old)
- Upper-income rural NE drivers (>$100k household income) drive many more miles than the lowest-income NE drivers (<$25k hh income) -- 15k miles/yr. vs. 10k miles/yr.
- Electric and hybrid vehicles are much less expensive to drive per mile (fuel and maintenance savings).
- After incentives, many EVs are already less expensive up-front than comparable gas models

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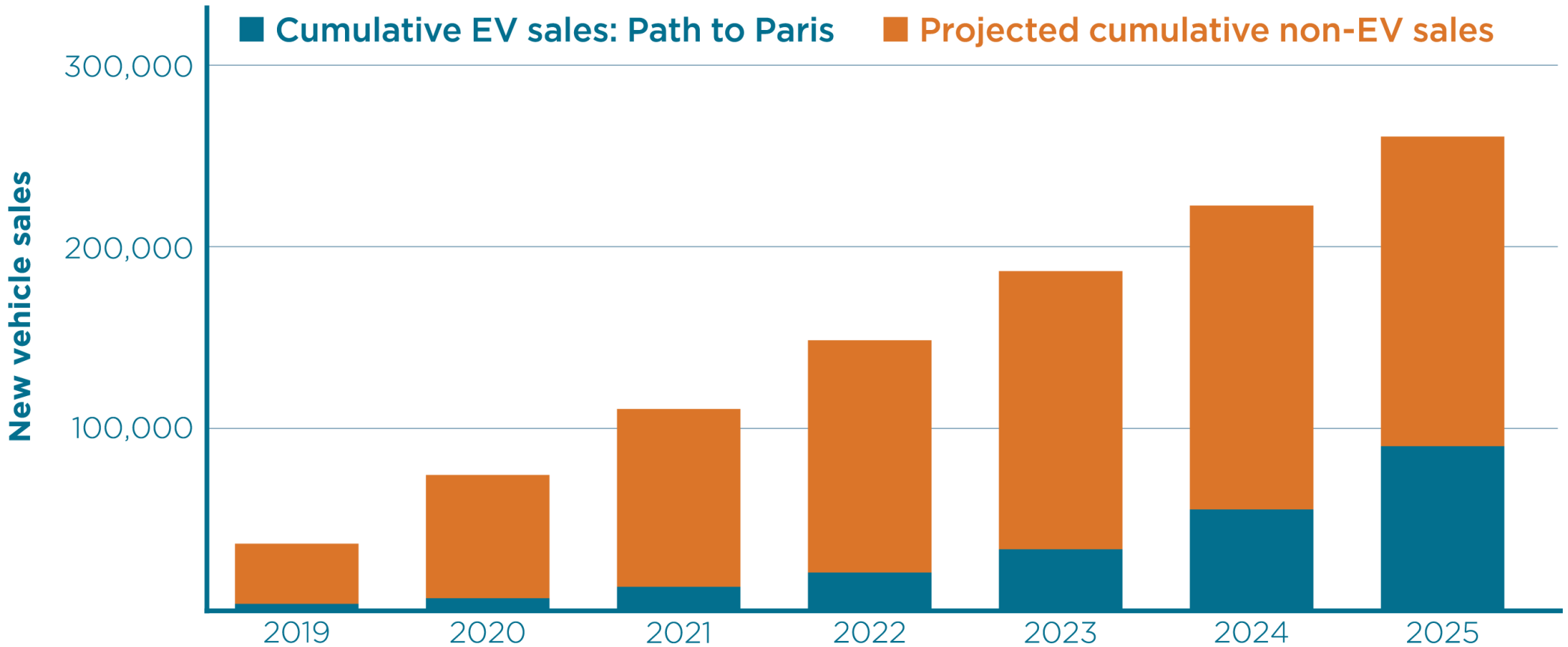
EVs need to make up at least a third of new vehicles sold through 2025



EVs now the majority of new vehicles sold in Norway