

Fuel Cost per Mile in California

Chart of the Week #2025-18

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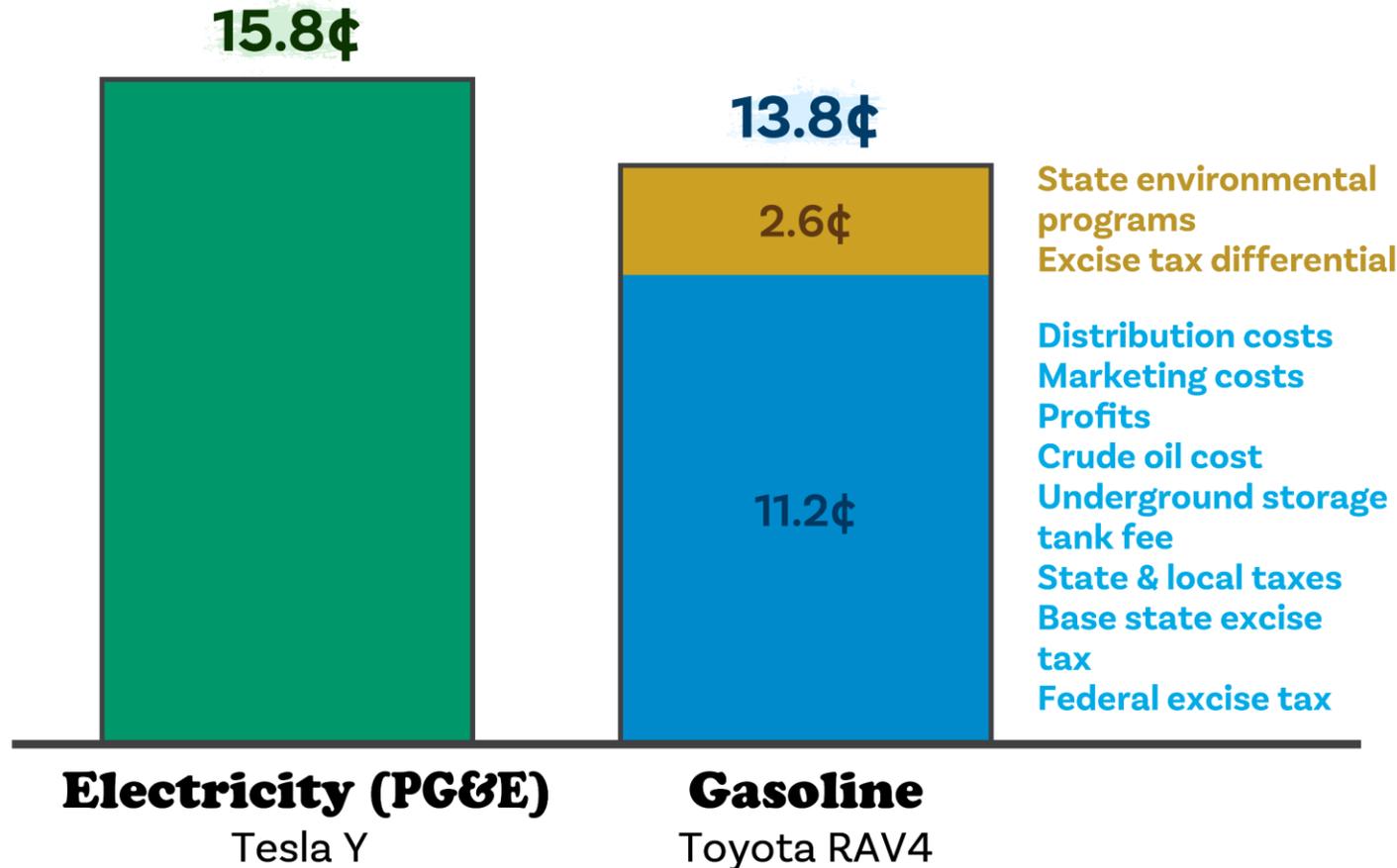
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A Comparison of Popular EV and Gasoline SUV Models



Sources: Energy Policy Research, PG&E, California Energy Commission, US EIA, and industry sources.

Data & assumptions: 1) Lowest residential rate (44 cents/kWh) from PG&E Time-of-Use Rate plans (effective Mar 1, 2025). 2) Average regular gasoline prices as of May 5, 2025 (\$4.552/gallon). 3) EV specs: Tesla Y Long-Range (81 kWh, but actual consumption of 90 kWh due to charger efficiency loss), RW hwy range 250 miles. 4) ICE specs: Full tank: 15 gallons, RW hwy mpg: 33. 5) Fuel cost per mile in this analysis exclusively pertains to electricity/gasoline costs and excludes other costs, such as equipment/ installation. 6) Charge/fillup from zero to full tank/charge. 7) California excise tax differential is the amount by which it exceeds the national average.

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- California has some of the highest energy prices in the United States. According to the U.S. Energy Information Administration, the state's average residential electricity price was nearly double the national average in February (31.7 cents/kWh vs. 16.4 cents/kWh). California also has among the highest gasoline prices in the nation, reaching \$4.6/gallon (regular), compared to the national average of \$3.1/gallon as of May 5.
- Based on PG&E's updated residential rate plans, the fuel cost of driving an EV could be significantly higher than that of an internal combustion engine (ICE) car in the state. Our comparison of two SUV models—Tesla Y and Toyota RAV 4—shows that the EV fuel "premium" in California could be in excess of 14% compared to its ICE alternative. When excluding California's environmental program fees and the state's excise tax differential over the national average (\$0.60/gallon vs. \$0.28/gallon), the gap would increase to 41%. Without the cap-and-trade program, the low-carbon fuel standards, and hefty excise taxes, the gasoline cost in California (11.2 cents/mile) would be much closer to the national average of 9.5 cents/mile.
- Various assumptions are involved in the study, so actual numbers will vary case by case. However, the analysis offers two main insights. First, despite the argument that EVs offer attractive fuel cost savings through electrification, gasoline remains cost-competitive in California. Second, without heavy taxes and environmental fees imposed on petroleum consumption, motorists in the state would see significant savings in vehicle fuel costs.
- For more information about this analysis, please contact batto@eprinc.org.