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Overview

This analysis compares the operating costs of gas-powered vehicles and electric vehicles (EVs) nationally and in various states. The three gas-powered cars featured in the analysis represent the most popular vehicles in the pickup truck, SUV, and sedan vehicle segments in the United States. The EVs included in this analysis are approximate analogues to the highlighted gas-powered vehicles. While they are imperfect corollaries to the gas-powered vehicles, these electric models nevertheless illustrate the substantial cost savings.

Key Takeaways on Cost to Drive an EV vs. a Gas-Powered Vehicle

Gas prices are inherently volatile—and they always will be. EVs, on the other hand, are not dependent on global oil and gas markets, so their operating costs are not subject to price shocks, disruptions, and supply shortages. Instead, EVs run on electricity, which is cheaper than gasoline and is domestically produced from increasingly renewable and local resources.

EVs are far cheaper to drive than gas-powered vehicles. Overall, as of April 2022, it is markedly cheaper to charge an EV battery than it is to fill up a gas-powered vehicle's tank. Additionally, EVs are far cheaper to drive per mile than driving a gas-powered vehicle both nationally and in each state we analyzed. Nationally, EVs are 3-5 times cheaper to drive per mile than gas-powered vehicles. In several states (including Arizona, Nevada, and North Carolina), some EVs are 5–6 times cheaper to drive per mile.

EVs are getting cheaper, and they will reach sticker price parity with gas-powered cars in just two years, if not sooner. EV sticker price parity with gas-powered cars is likely to occur between 2024–2025 for shorter-range and 2026–2028 for longer-range EVs, according to the [International Council on Clean Transportation](#). These projected EV sticker price decreases do not include any potential federal or state EV tax incentives, which will further lower EVs' consumer prices. In addition to their fuel cost savings, EVs require less maintenance than gas-powered vehicles. EVs can save drivers between \$1,800 and \$2,600 on operating and maintenance costs per year, according to [Consumer Reports](#).

EVs will cost less to buy if Congress passes clean energy tax incentives. The proposed EV tax credit expansion in President Biden's clean energy plan would further reduce EV sticker prices by up to \$12,500, making it cost less to both buy and drive an EV. Congress should pass these clean energy provisions to deliver cost parity between EVs and gas-powered vehicles even sooner than expected.

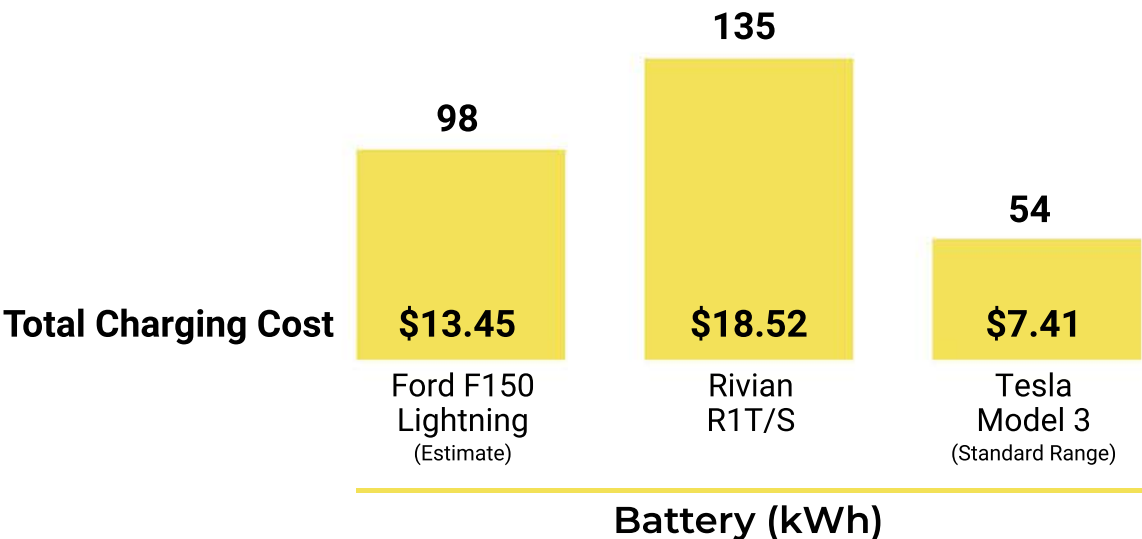
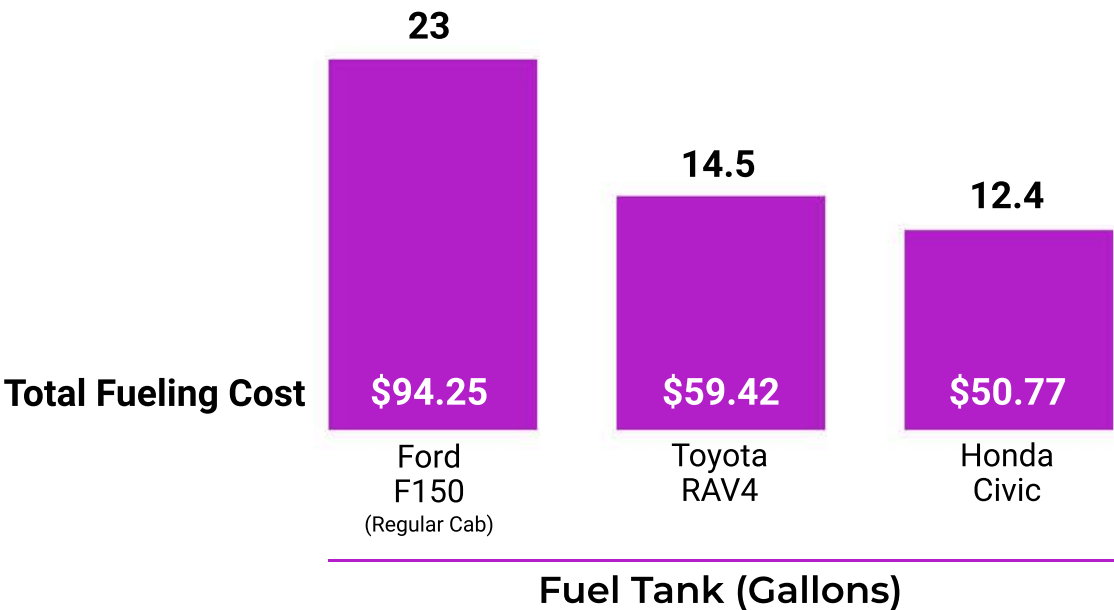
Comparing the Operating Costs of Gas-Powered and Electric Vehicles

National Average
Gas Price Per Gallon
(As of April 10)

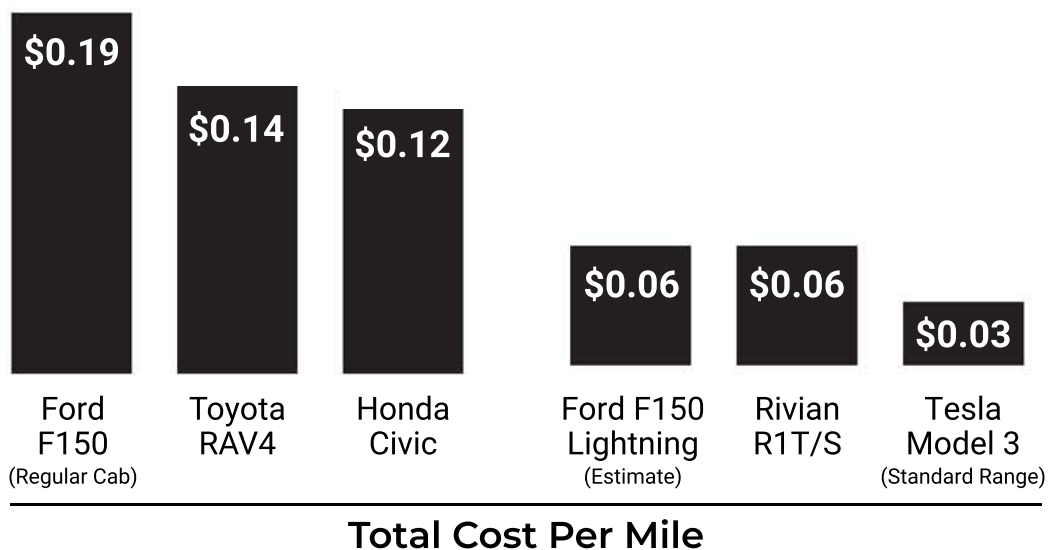
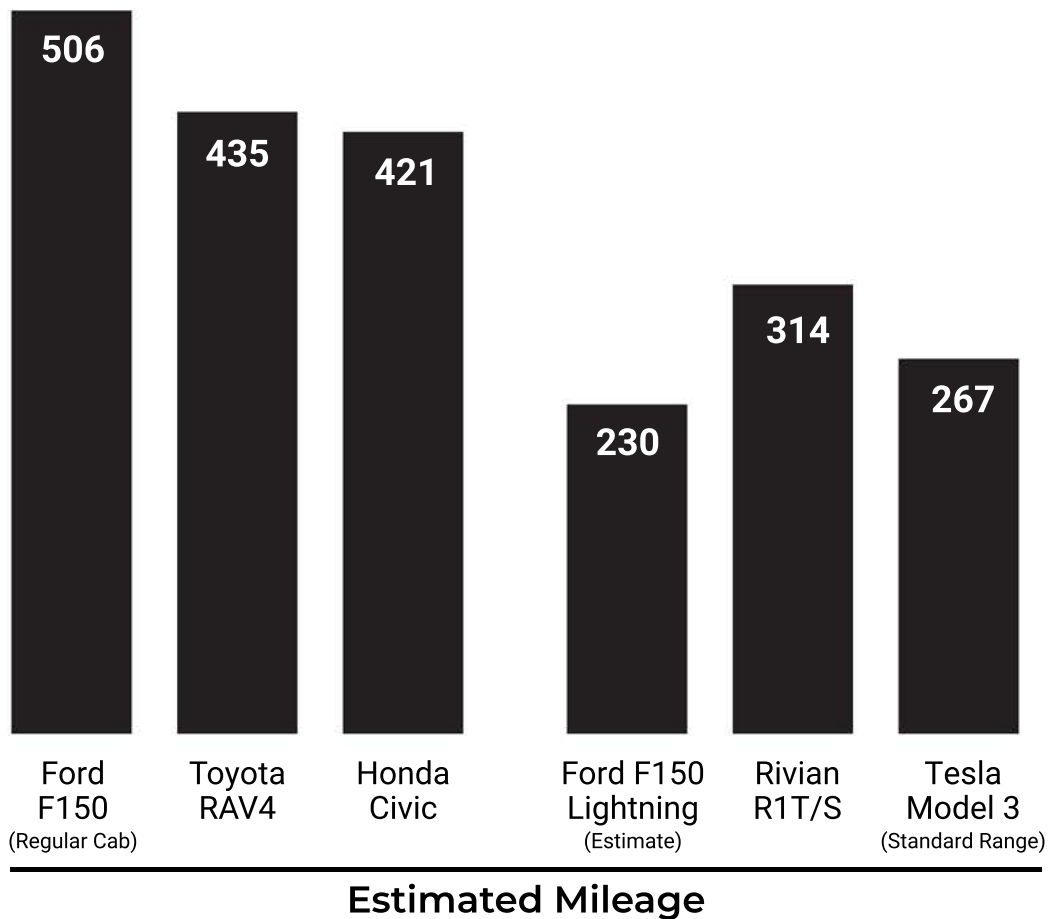
\$4.10

National Average Electricity
Price Per Kilowatt-hour
(As of January 2022)

\$0.14



Comparing The Operating Costs of Gas-Powered And Electric Vehicles



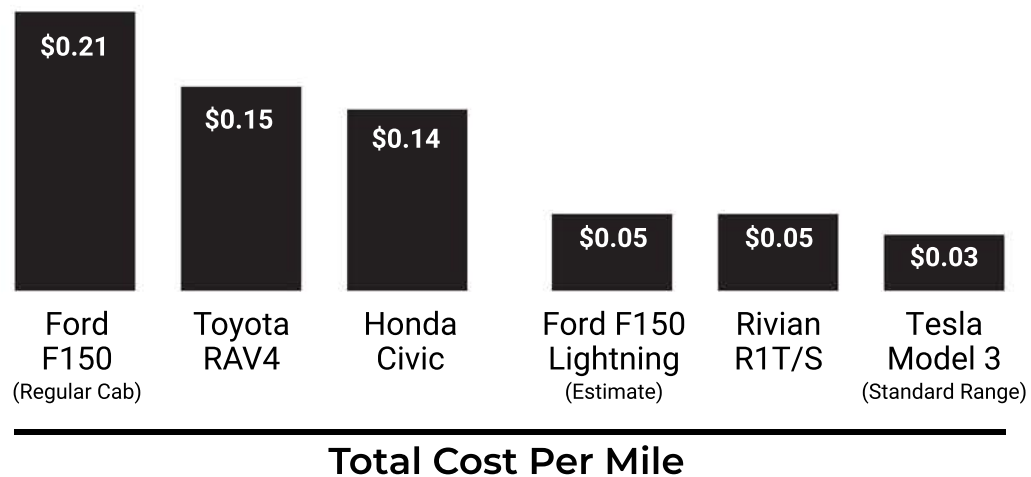
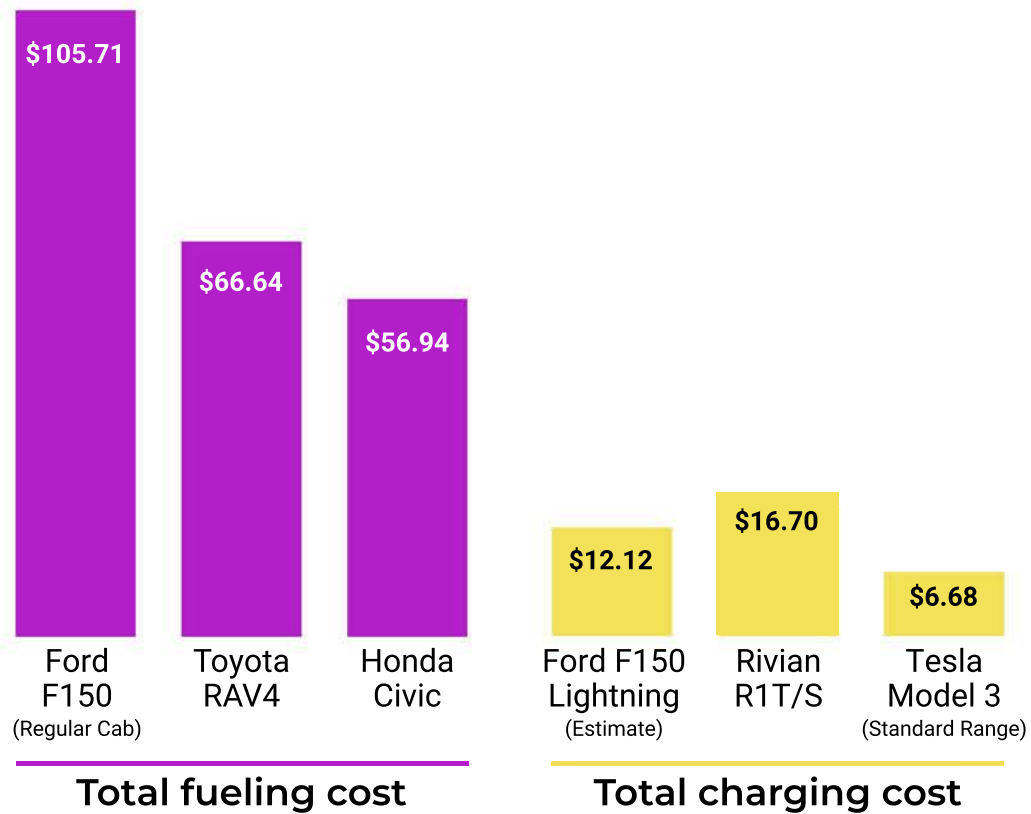
Arizona

Average Energy price
for Gallon of Gasoline

\$4.60

Average Energy price
for kWh in Electricity

\$0.12



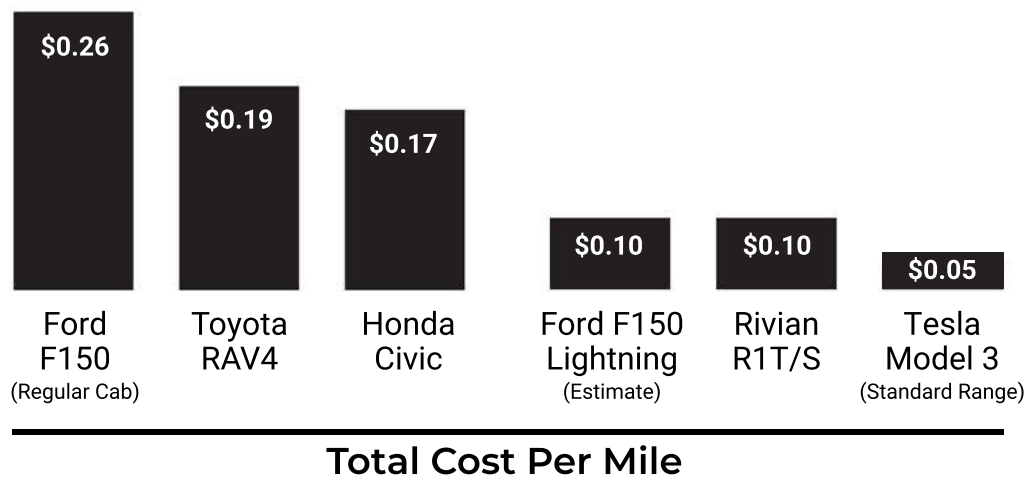
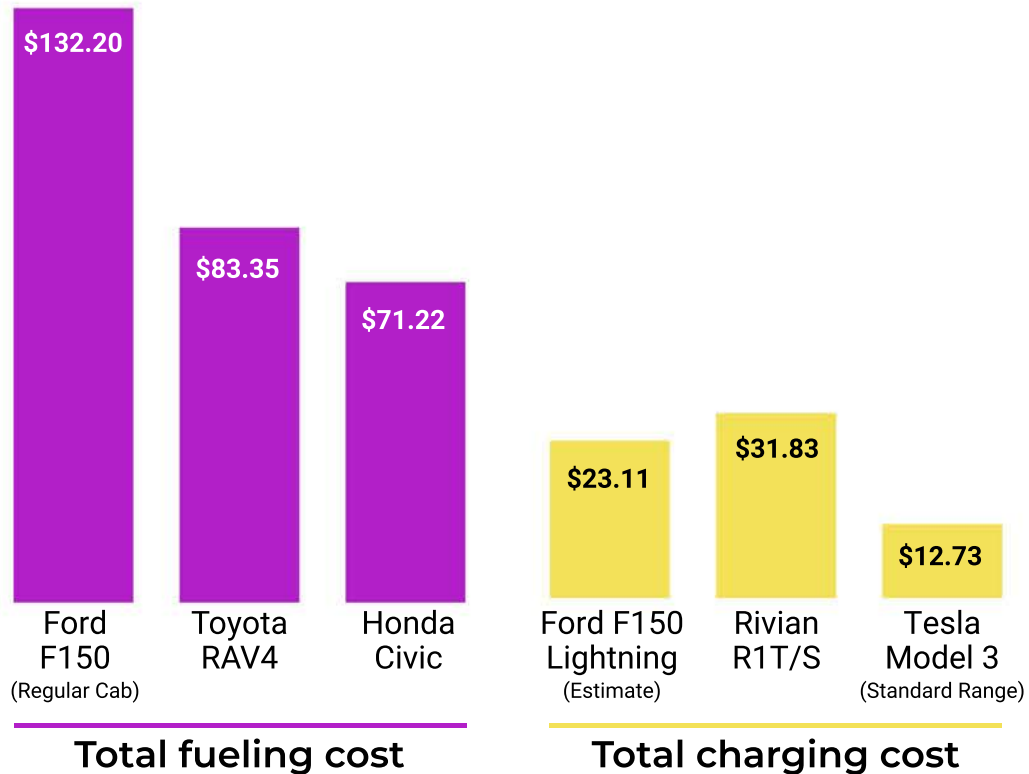
California

Average Energy price
for Gallon of Gasoline

\$5.75

Average Energy price
for kWh in Electricity

\$0.24



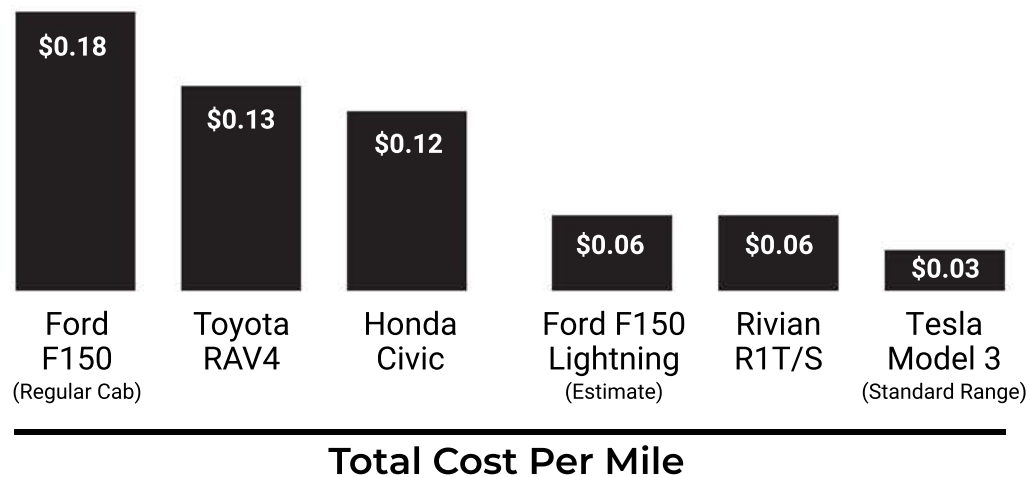
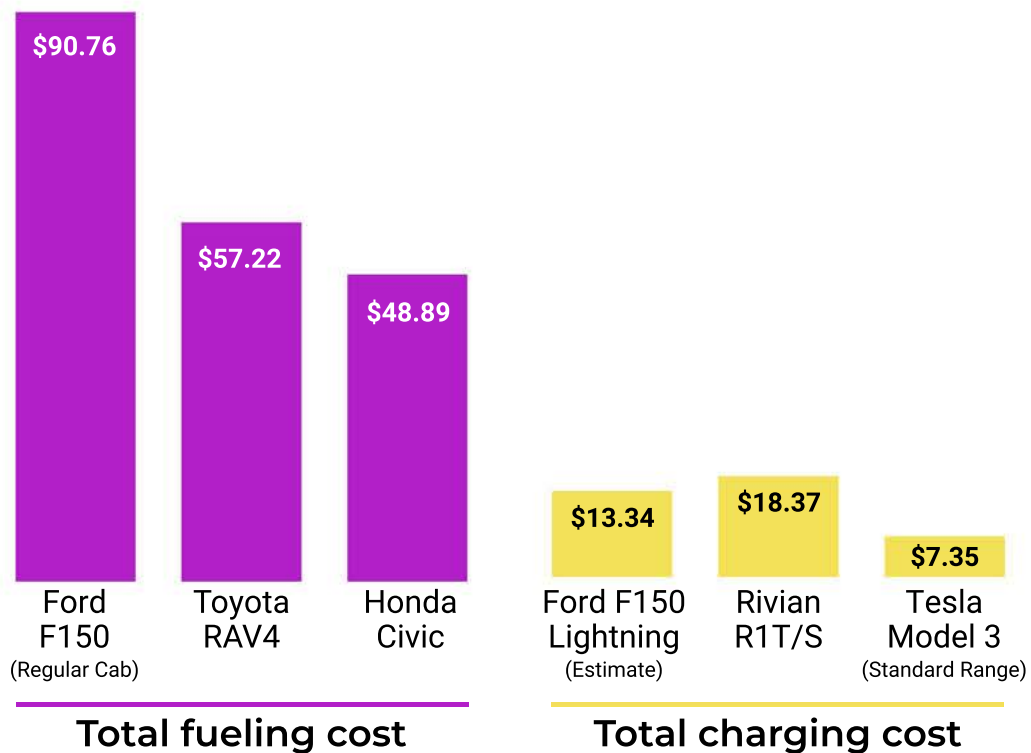
Colorado

Average Energy price
for Gallon of Gasoline

\$3.95

Average Energy price
for kWh in Electricity

\$0.14



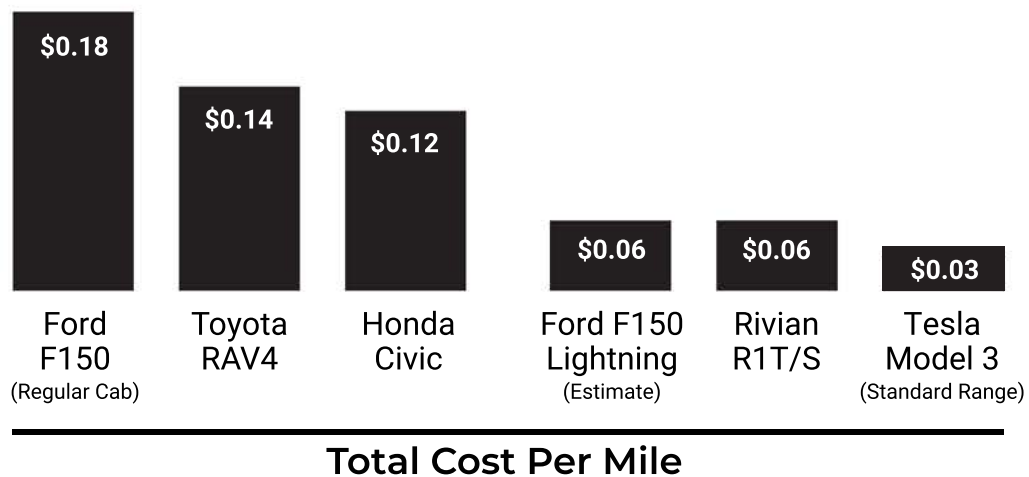
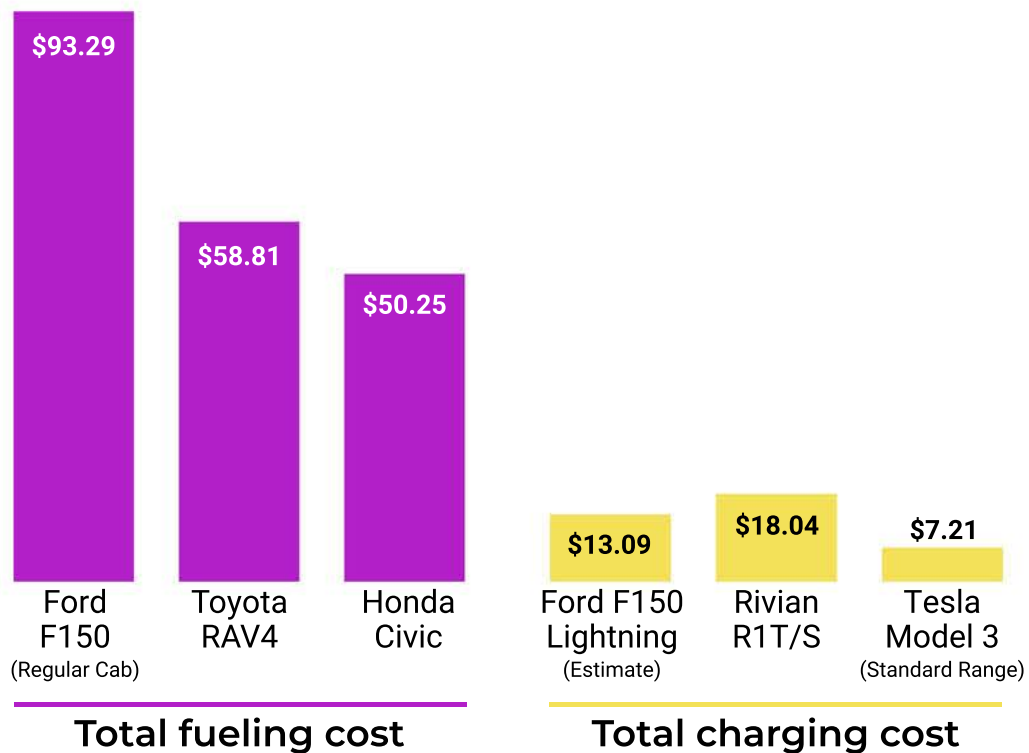
Florida

Average Energy price
for Gallon of Gasoline

\$4.06

Average Energy price
for kWh in Electricity

\$0.12



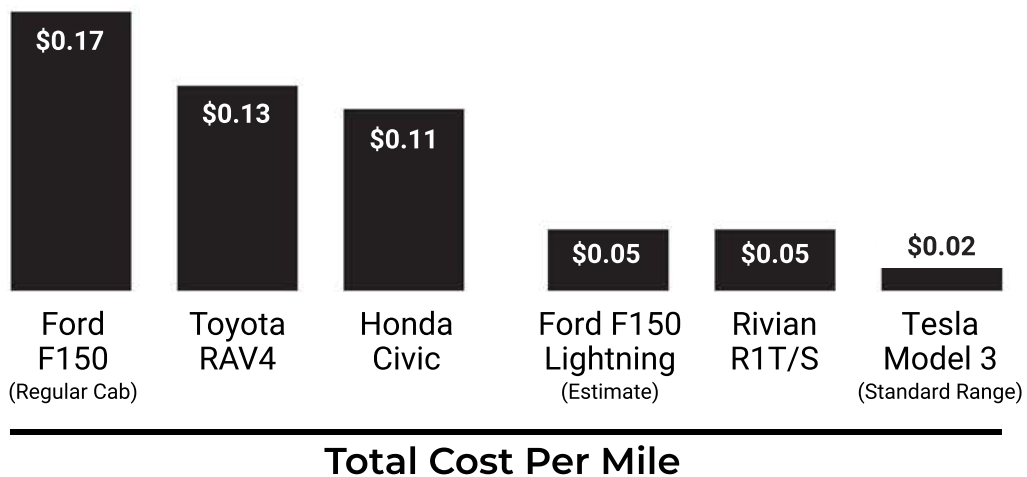
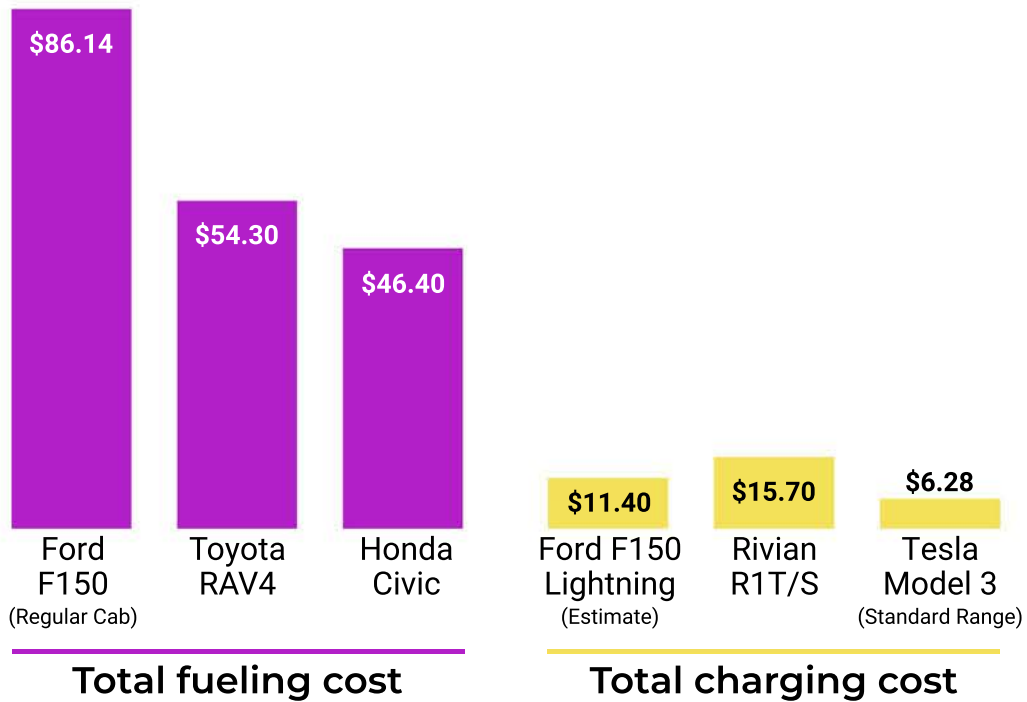
Georgia

Average Energy price
for Gallon of Gasoline

\$3.75

Average Energy price
for kWh in Electricity

\$0.12



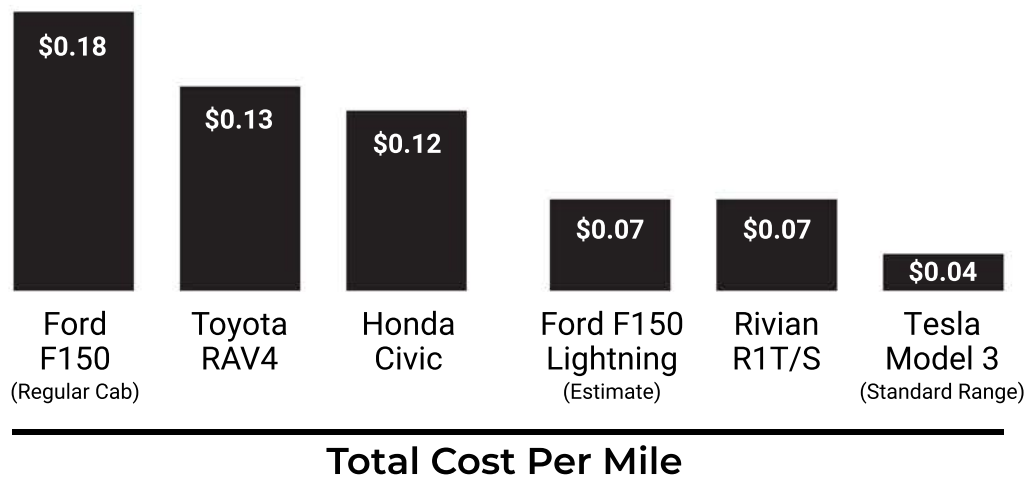
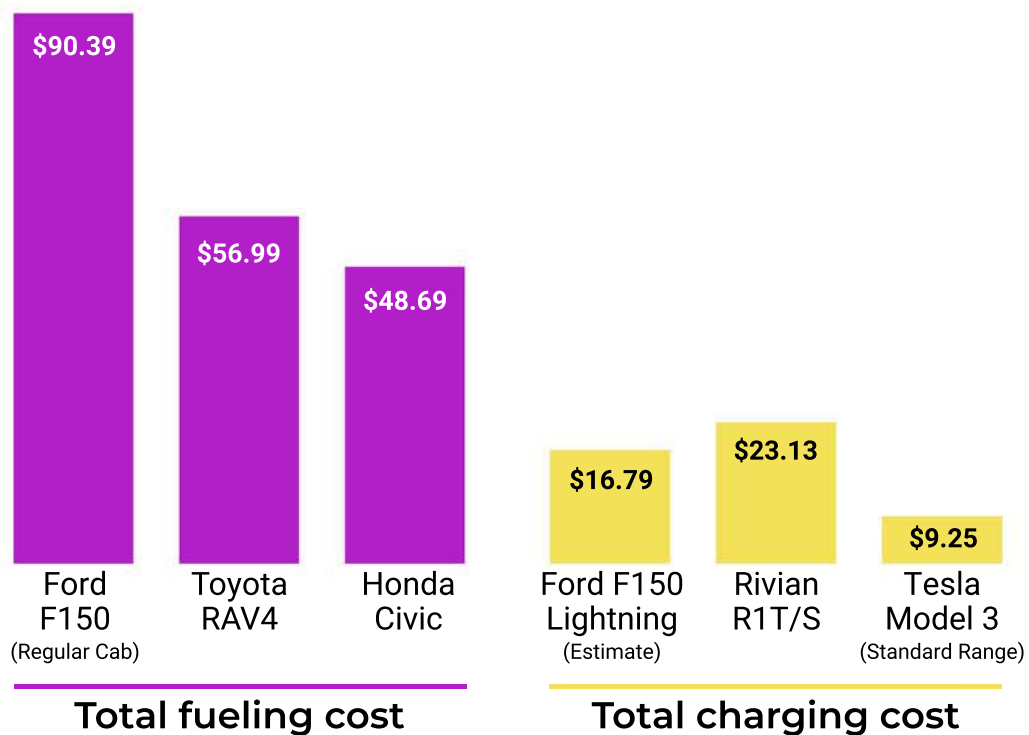
Michigan

Average Energy price
for Gallon of Gasoline

\$3.93

Average Energy price
for kWh in Electricity

\$0.17



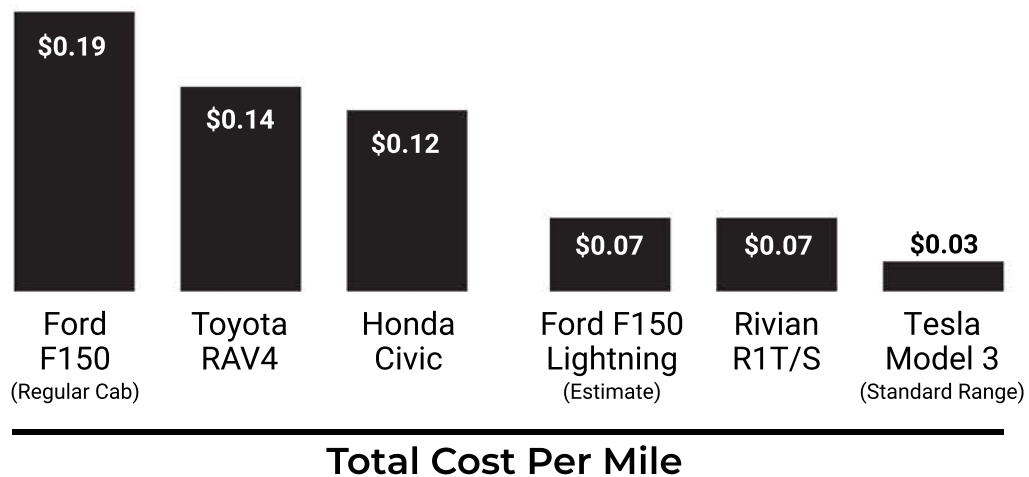
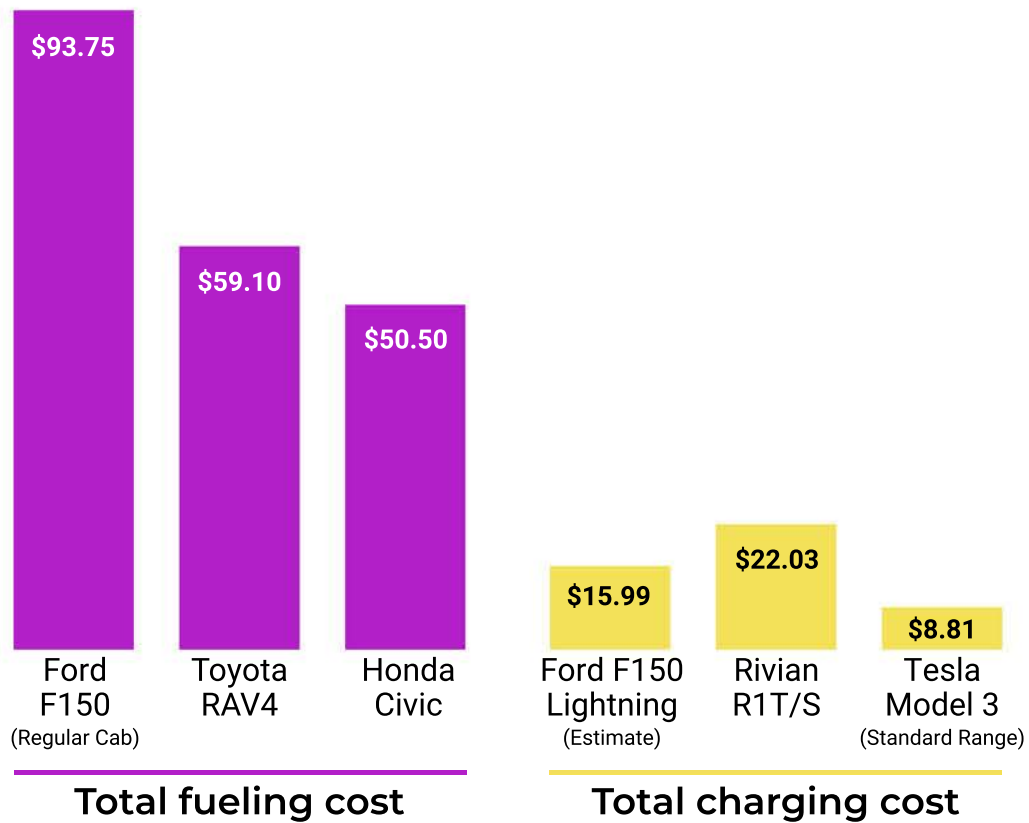
New Jersey

Average Energy price
for Gallon of Gasoline

\$4.08

Average Energy price
for kWh in Electricity

\$0.16



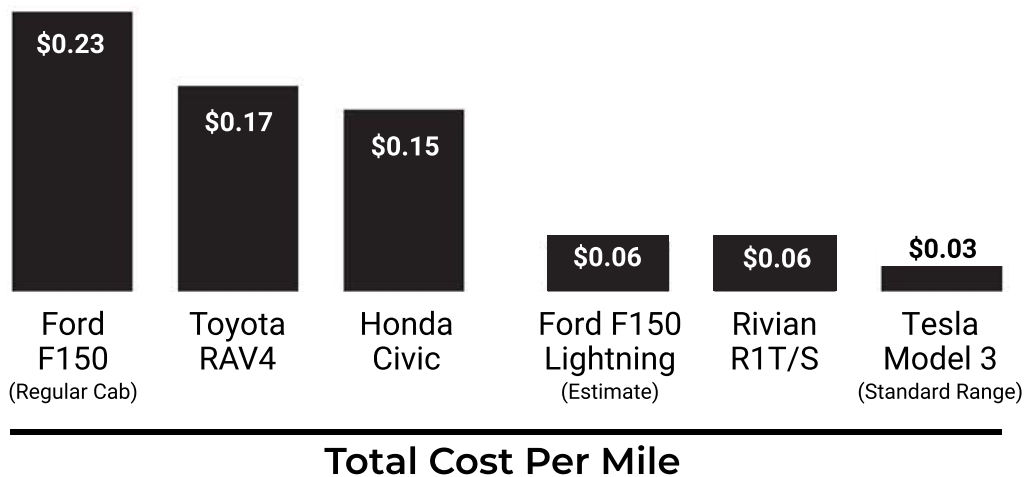
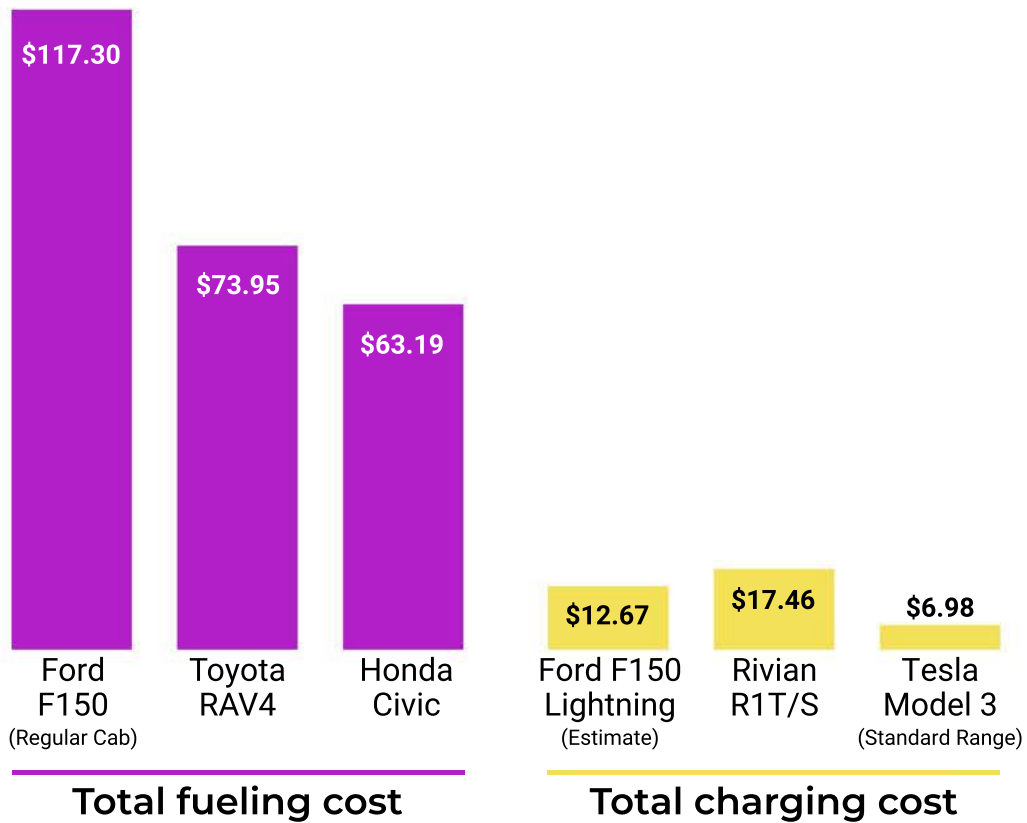
Nevada

Average Energy price
for Gallon of Gasoline

\$5.10

Average Energy price
for kWh in Electricity

\$0.13



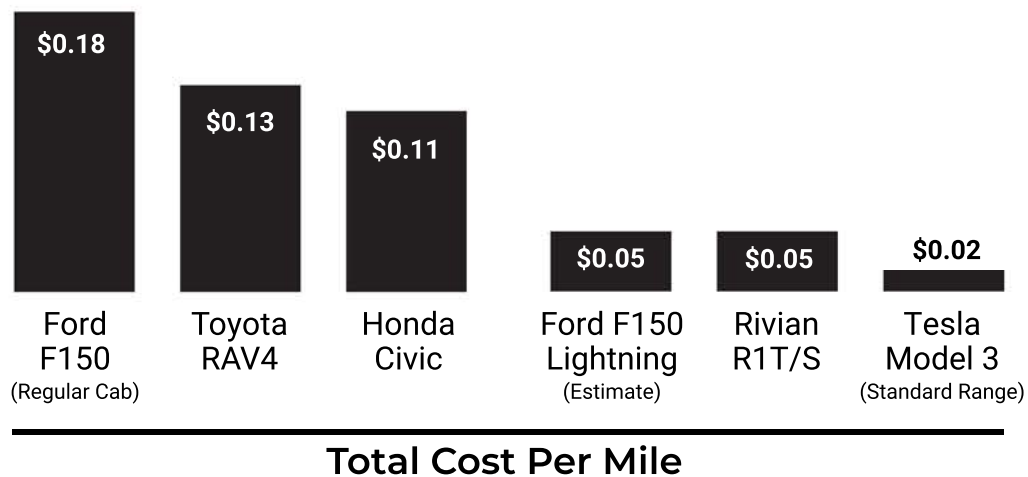
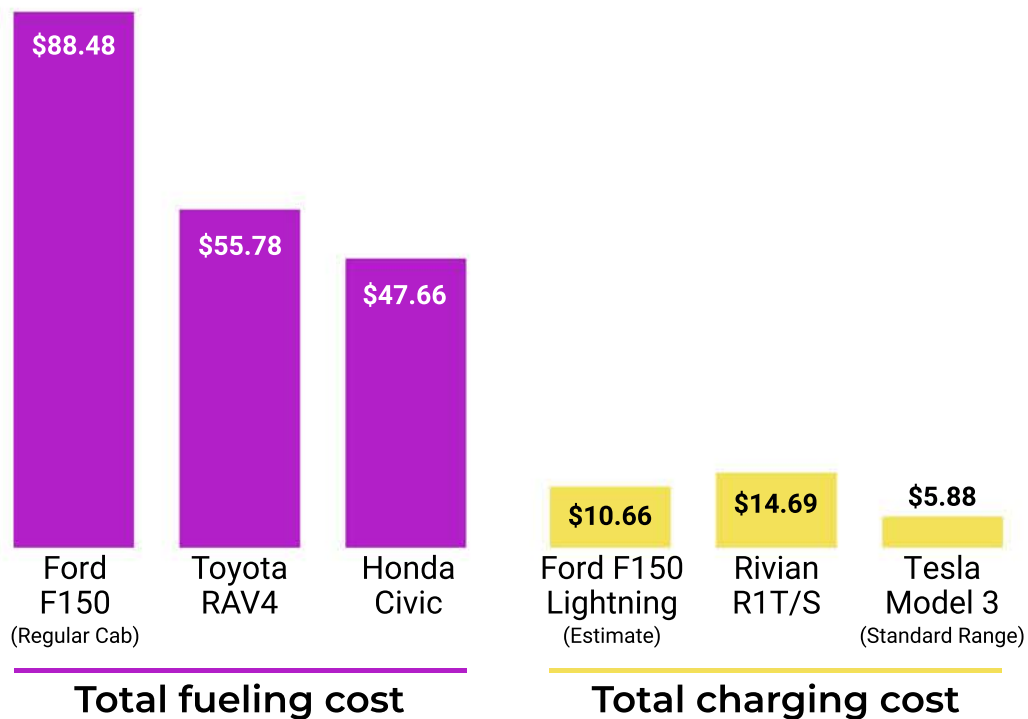
North Carolina

Average Energy price
for Gallon of Gasoline

\$3.85

Average Energy price
for kWh in Electricity

\$0.11



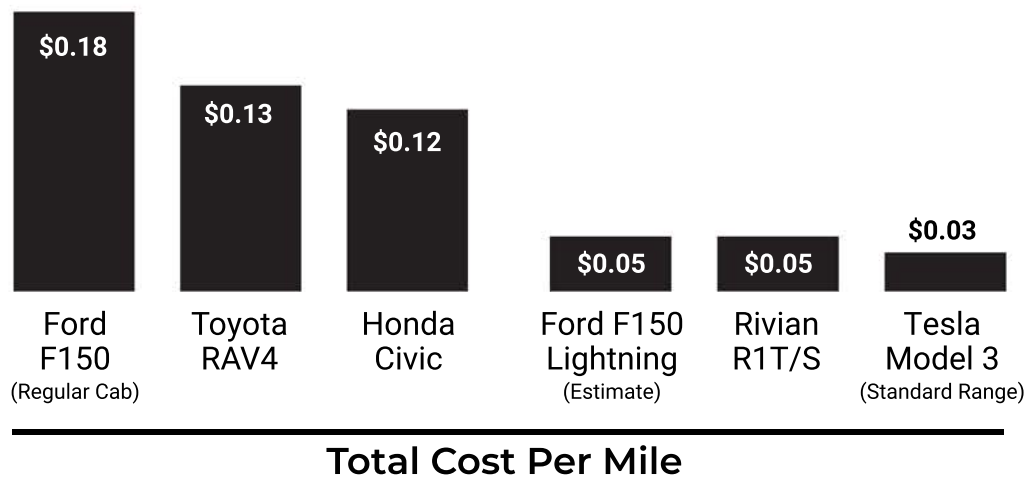
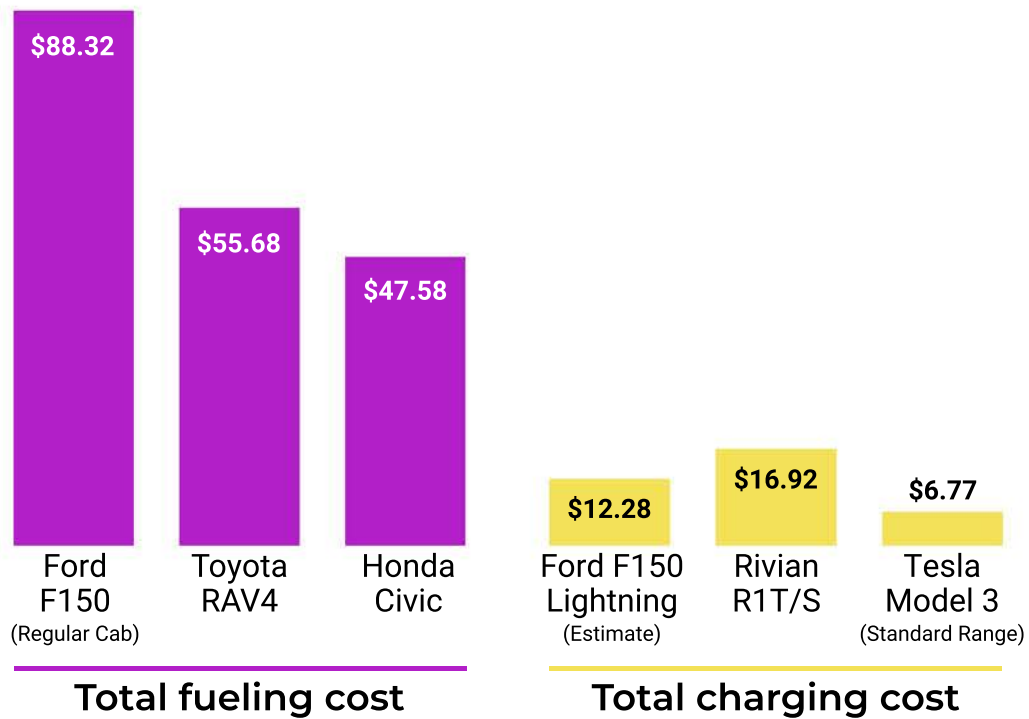
Ohio

Average Energy price
for Gallon of Gasoline

\$3.84

Average Energy price
for kWh in Electricity

\$0.13



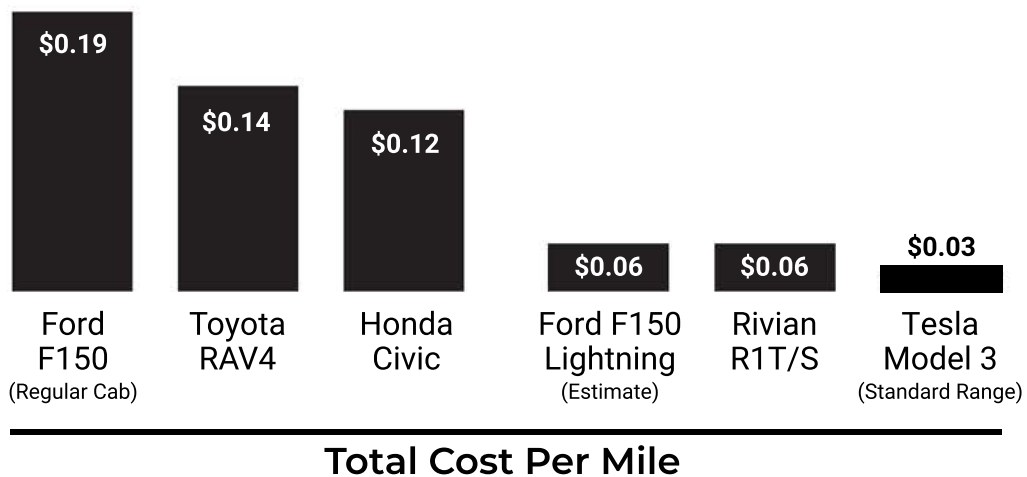
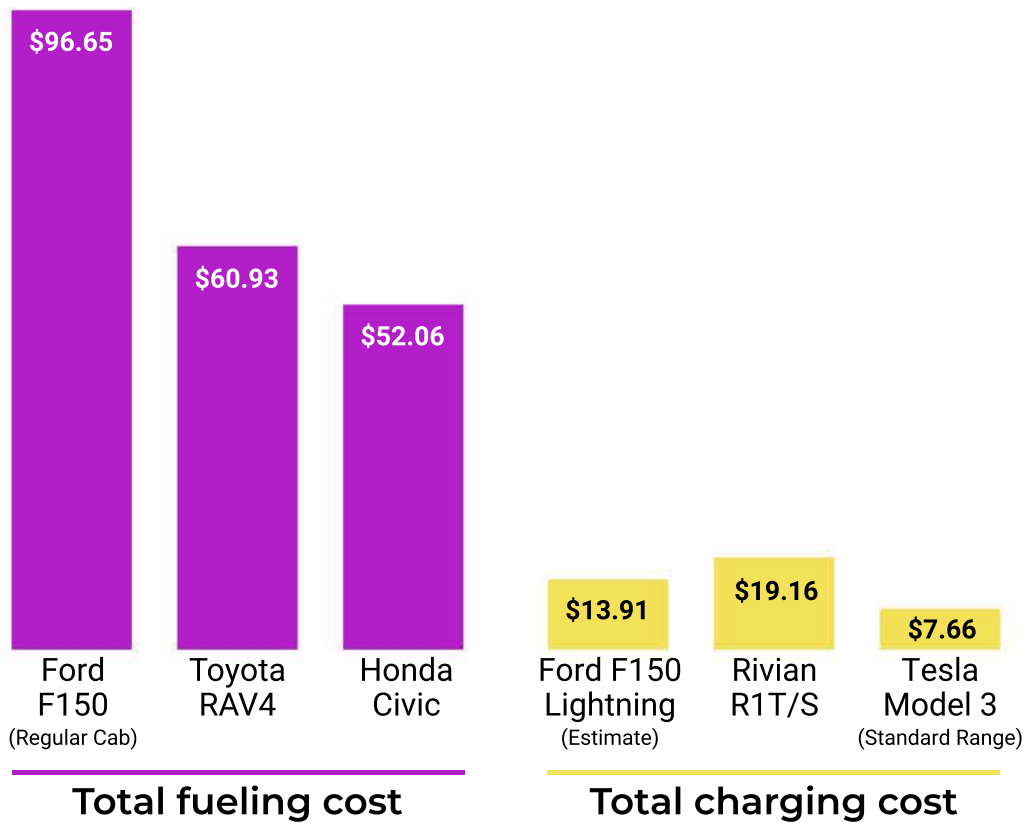
Pennsylvania

Average Energy price
for Gallon of Gasoline

\$4.20

Average Energy price
for kWh in Electricity

\$0.14



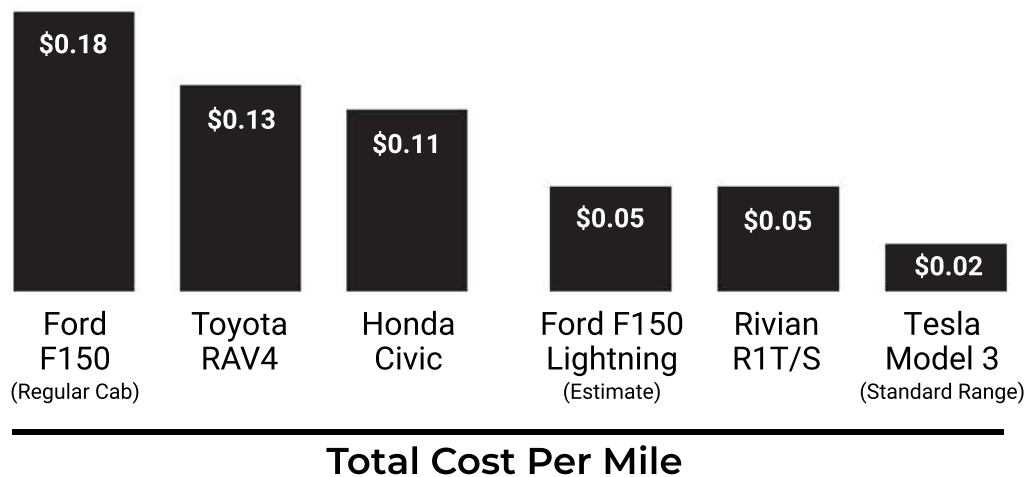
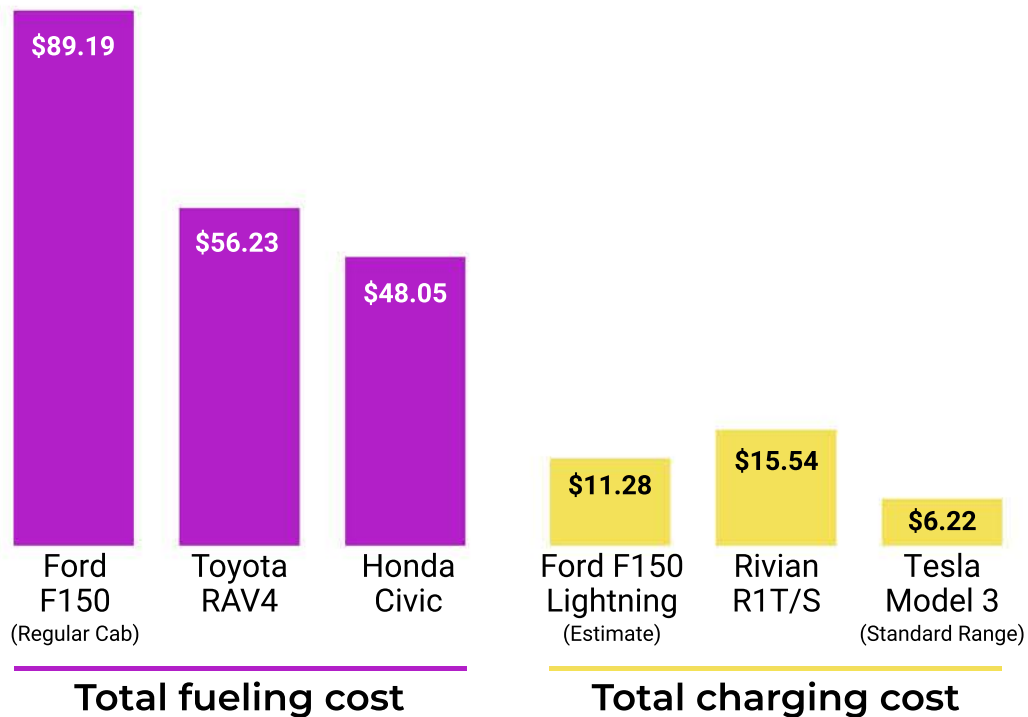
Tennessee

Average Energy price
for Gallon of Gasoline

\$3.88

Average Energy price
for kWh in Electricity

\$0.12



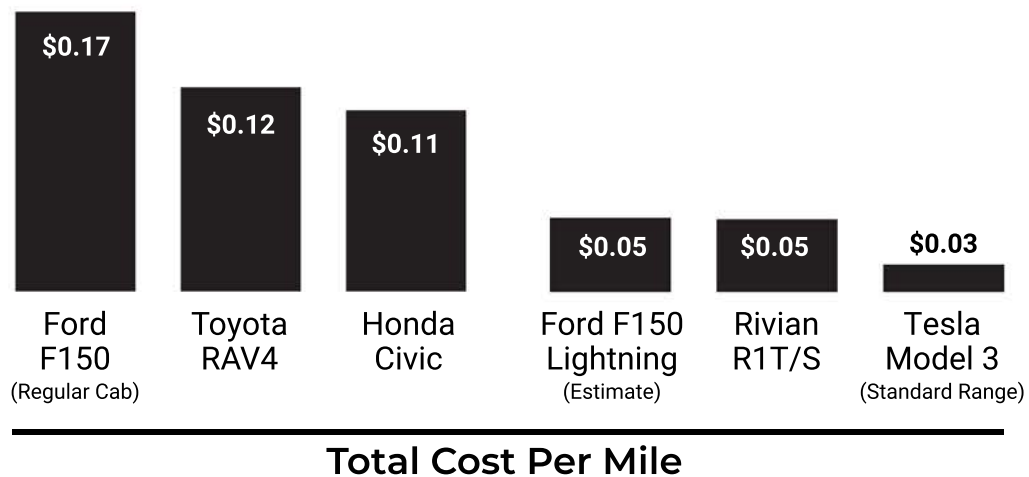
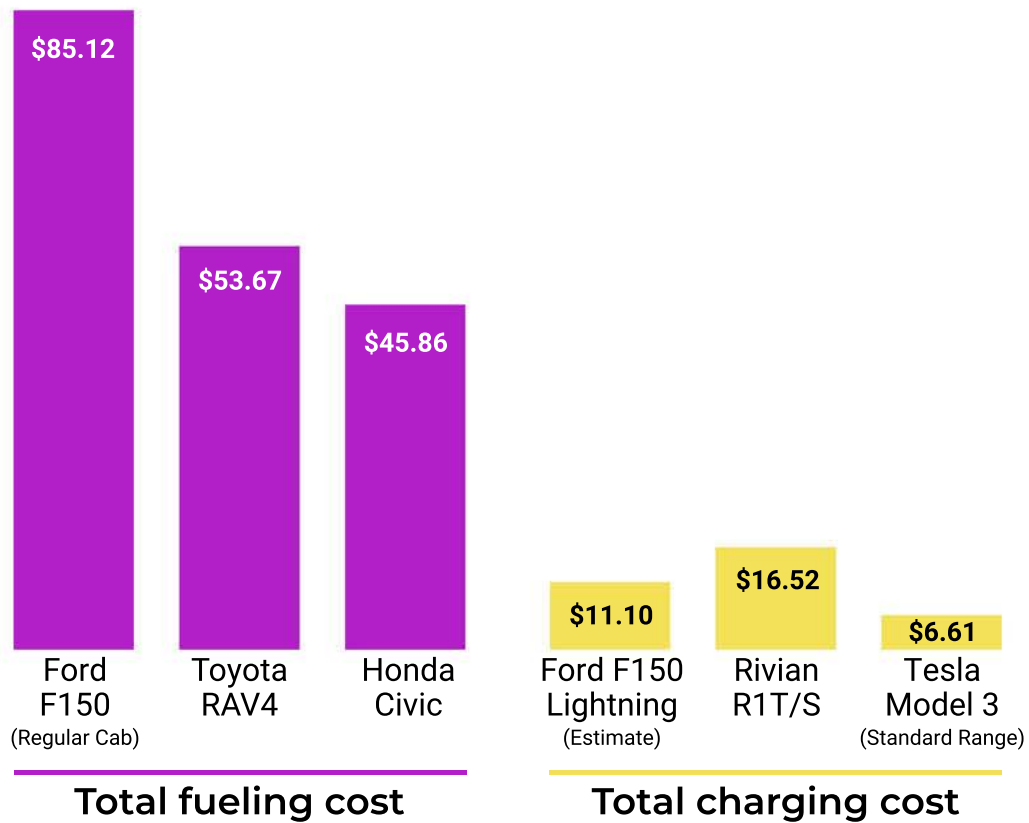
Texas

Average Energy price
for Gallon of Gasoline

\$3.70

Average Energy price
for kWh in Electricity

\$0.12



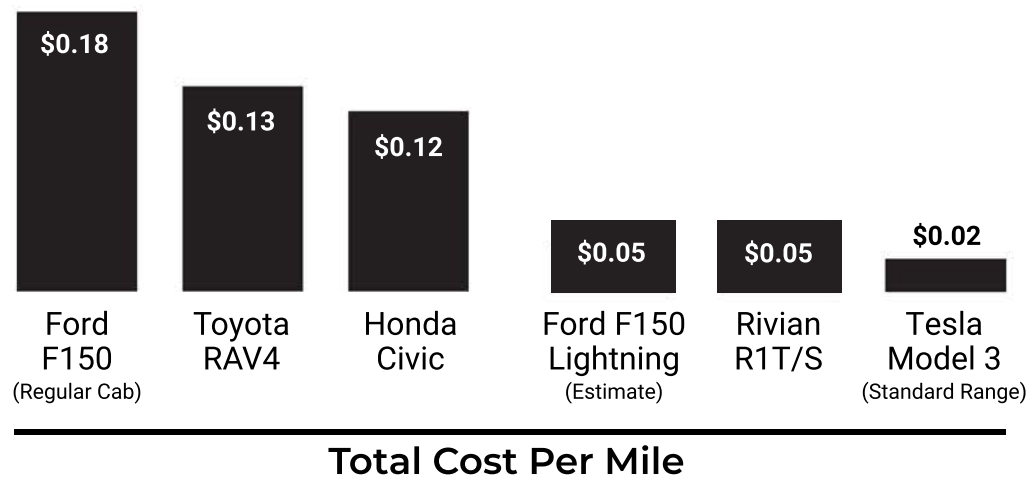
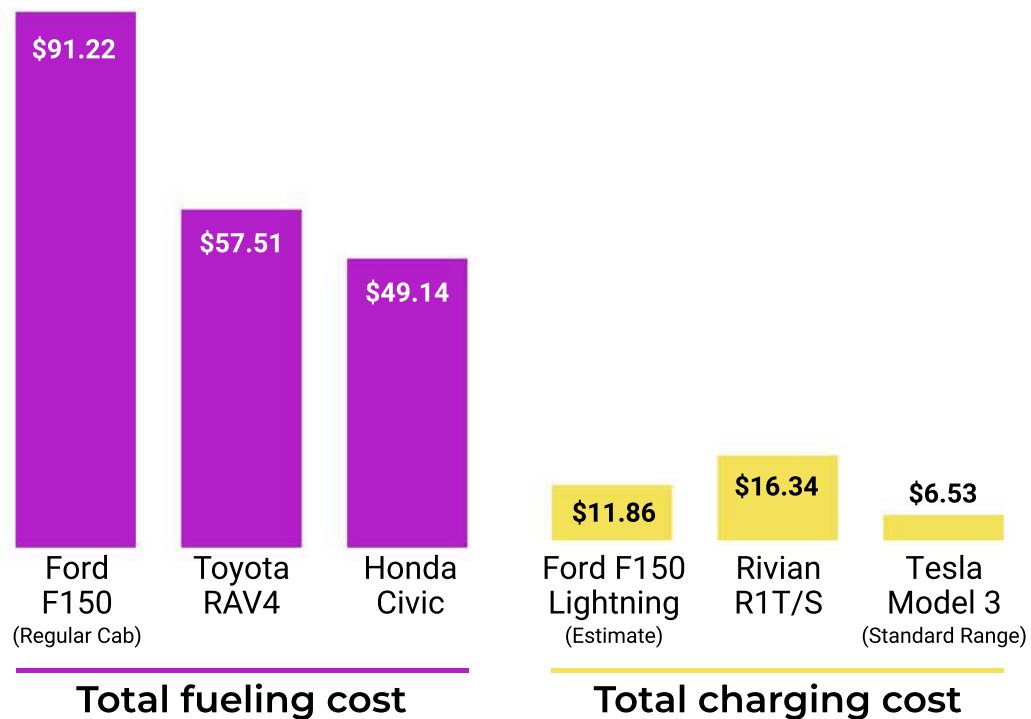
Virginia

Average Energy price
for Gallon of Gasoline

\$3.97

Average Energy price
for kWh in Electricity

\$0.12



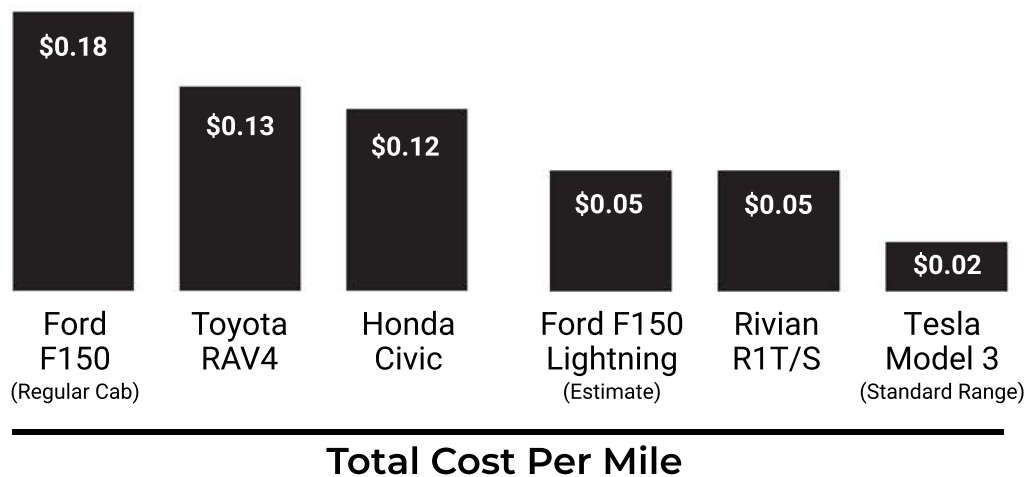
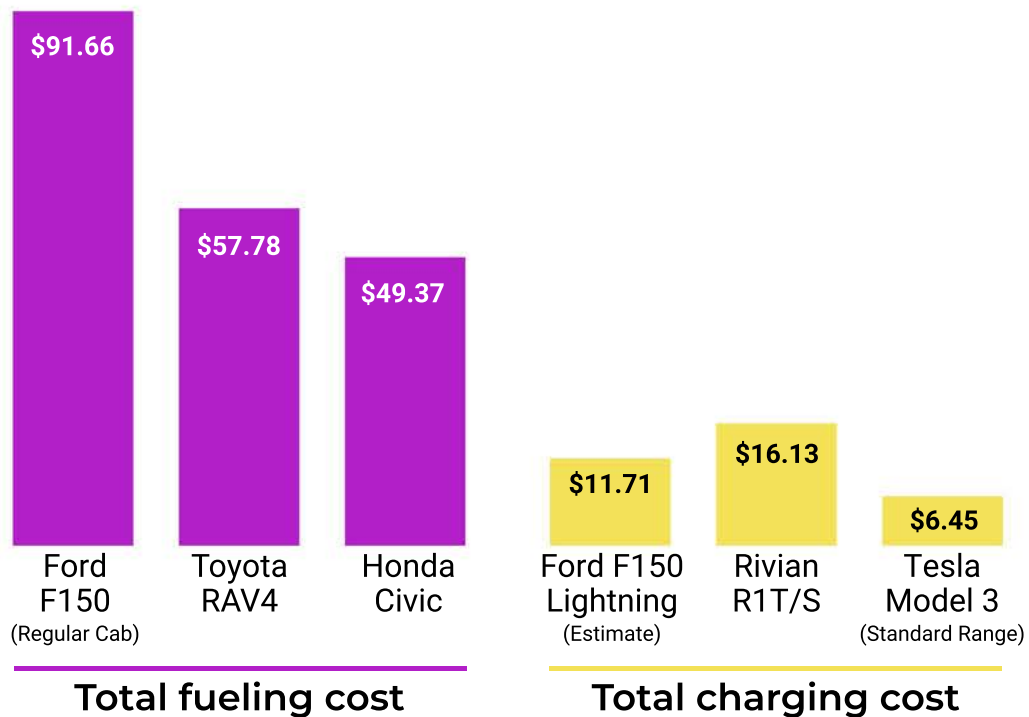
West Virginia

Average Energy price
for Gallon of Gasoline

\$3.99

Average Energy price
for kWh in Electricity

\$0.12



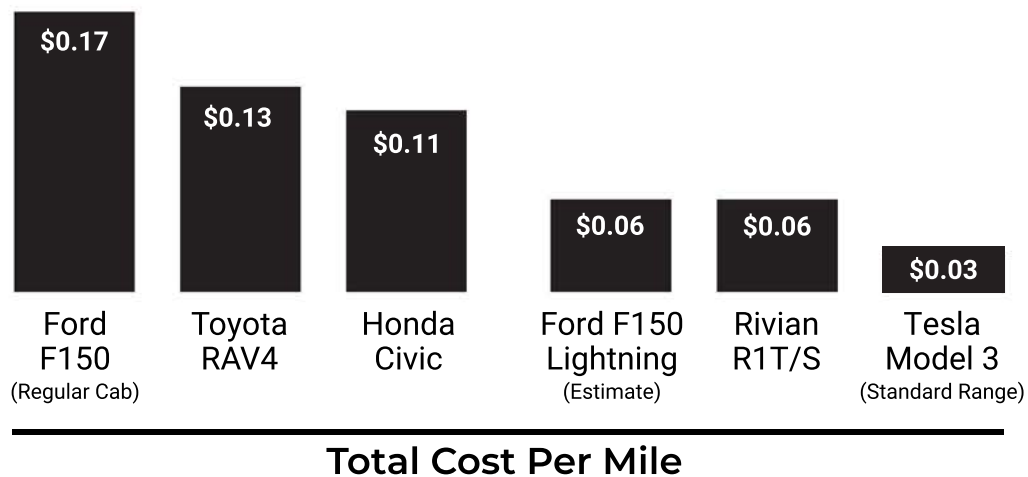
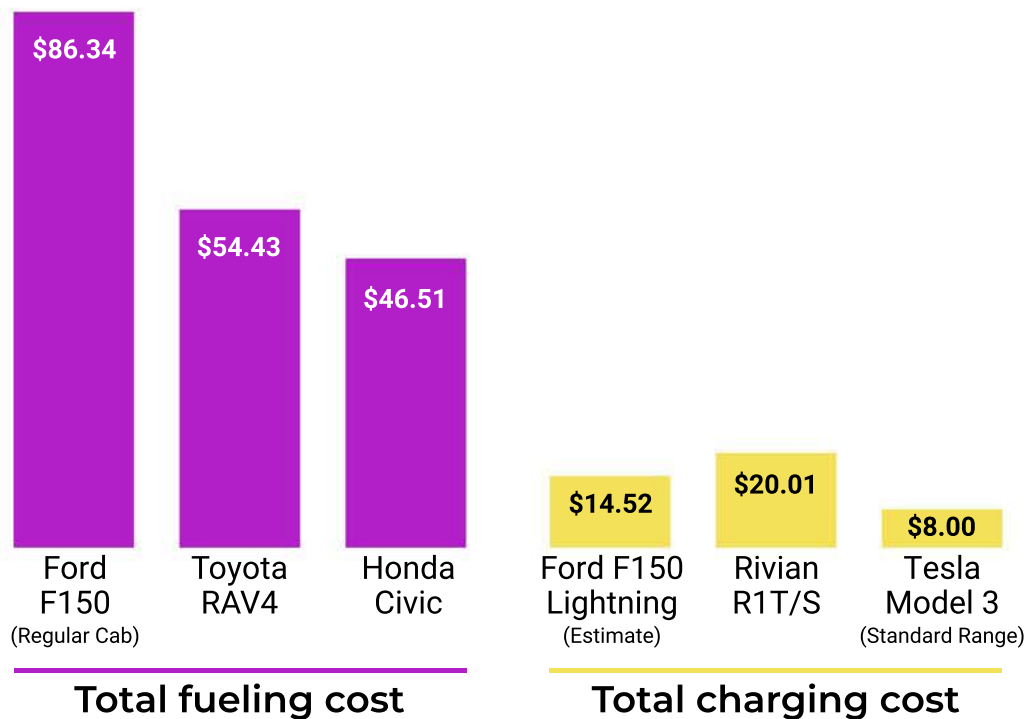
Wisconsin

Average Energy price
for Gallon of Gasoline

\$3.75

Average Energy price
for kWh in Electricity

\$0.15



Sources

*Gasoline prices are based on April 2022 data, and residential end-use sector electricity prices are based on January 2022 data. In both cases, these are the most recent available data. Electricity prices have been relatively static; in many states, the price of residential end-use sector electricity has decreased from previous iterations of this report, which is updated monthly.

Gas Prices as of April 12, 2022: <https://gasprices.aaa.com/>

Electricity Prices in Residential End-Use Sector in Jan 2022

(most recent data available):

https://www.eia.gov/electricity/monthly/epm_table_grapher.php?t=epmt_5_6_a

Ford F150: <https://www.ford.com/trucks/f150/models/f150-xl/>

Toyota RAV4: <https://www.toyota.com/rav4/features/mpg/4430>

Honda Civic:

<https://hondanews.com/en-US/honda-automobiles/releases/release-abdd33728c044217ba85db3c233b2483-2020-civic-hatchback-specifications-features>

Ford F150 Lightning:

https://www.greencarreports.com/news/1134532_ford-confirms-f-150-lightning-ev-battery-pack-details-range-estimates

Rivian R1T + R1S:

<https://www.caranddriver.com/news/a37500438/rivian-r1t-r1s-epa-range/>

Tesla Model 3: <https://www.evspecifications.com/en/model-driving-range/cc48e0>

Additional Resources

Gas Gallons vs. Electricity E-Gallons: <https://www.energy.gov/maps/egallon>

Vehicle Fueling Cost Calculator: <https://afdc.energy.gov/calculator/>

About Z E T A

The **Zero Emission Transportation Association** (ZETA) is a federal coalition focused on advocating for 100% EV sales by 2030. ZETA is committed to enacting policies that drive EV adoption, create hundreds of thousands of jobs, secure American global EV manufacturing leadership, drastically improve public health, and significantly reduce carbon pollution.