ZETA

ELECTRIC VEHICLES

ARE FAR CHEAPER TO DRIVE THAN GAS-POWERED CARS.

AUGUST 2022

Passage of the Inflation Reduction Act officially set the U.S. on track to transition to clean transportation, saving Americans money and creating millions of jobs.

Contents

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. The passage of the Inflation Reduction Act will further these cost savings with historic clean energy investments and tax credits, lowering the sticker prices of EVs and expanding manufacturing.

Key Takeaways on The 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, operate independently of global oil and gas markets, so their operating costs are not subject to fossil fuel price shocks, disruptions, and supply shortages. Instead, EVs run on electricity, which is cheaper than gasoline, is price-stable, and is domestically produced from increasingly renewable and local resources.

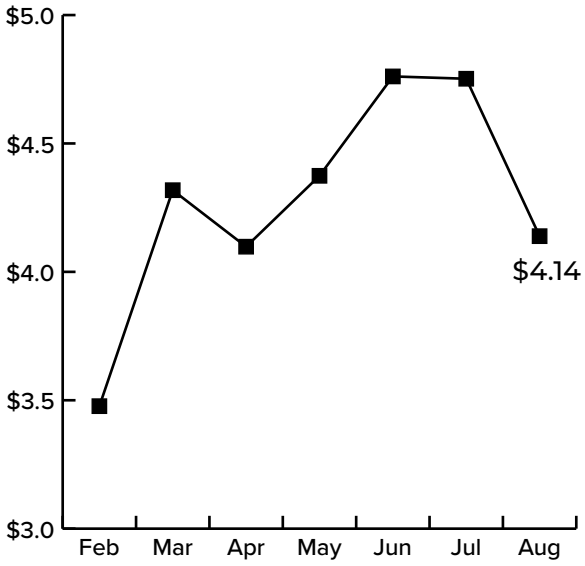
EVs are far cheaper to drive than gas-powered vehicles. Nationally, gas-powered vehicles are 3-5 times more expensive to drive per mile than EVs. In nearly half of the states examined in this report (including Arizona, Colorado, Nevada, North Carolina, Ohio, Tennessee, Virginia, and West Virginia), EVs can be driven at just 15-20% of the cost of gas-powered cars per mile. In addition to examining this month's data, this ZETA report also looks back at previous months, and the data confirms that over time, EVs are markedly cheaper to drive per mile—and experience far greater price stability—than gas-powered vehicles.

The total cost of EVs is lower than that of gas-powered vehicles. In many cases, EVs are already comparable in price to similar new gas-powered models. And in addition to their fuel cost savings, EVs require less maintenance than gas-powered vehicles, too. EVs can save drivers between $1,800 and $2,600 on operating and maintenance costs per year, according to Consumer Reports.

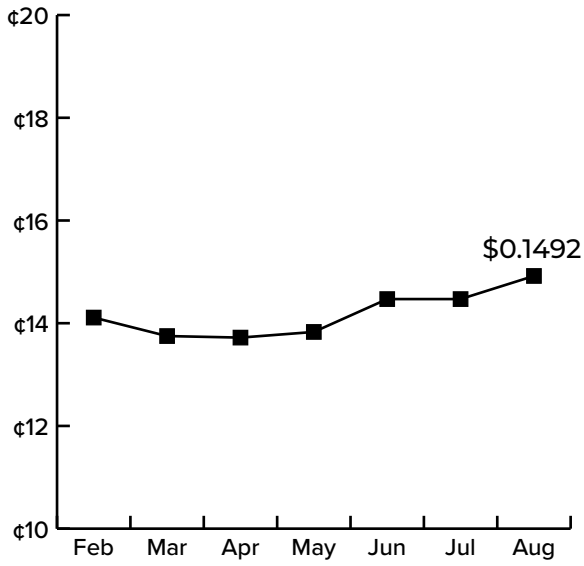
EVs will cost even less to buy thanks to consumer and manufacturing tax credits. The EV tax credit expansions and advanced manufacturing production tax credits in the Inflation Reduction Act will further reduce EV sticker prices, making it cost less to both buy and drive an EV. This will help American EV manufacturers compete against foreign entrants into the market by aggresively incentivising supply chain onshoring. Furthermore, EV tax credits will help signal durable market certainty, which will help American EV manufacturers scale up to meet demand. This will create millions of good-paying American jobs and help the United States win the global clean transportation race. When the IRA reached the presidents desk, the US made a historic investment in climate, the consumer, and this transportation race with unallied foreign competitors.

Comparing The Operating Costs of Electric and Gas-Powered Vehicles Over The Past Six Months

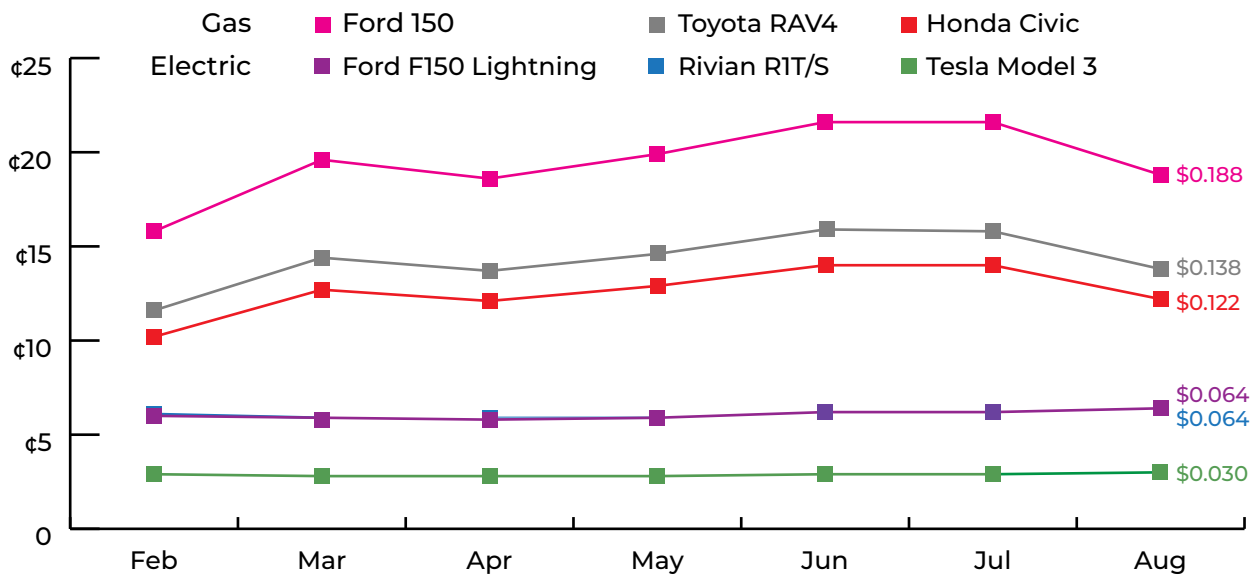
National Avg. Cost Per Gallon of Gasoline



National Avg. Cost Per Kilowatt-hour of Electricity



Cost Per Mile* To Drive electric and gas vehicles



*Gasoline prices are based on that month's data, and residential end-use sector electricity prices are backdated by three months. In both cases, these are the most recent available data. Even with inflationary pressures, the effect of electricity price changes on the operating costs of EVs has been minimal, as demonstrated in the data.

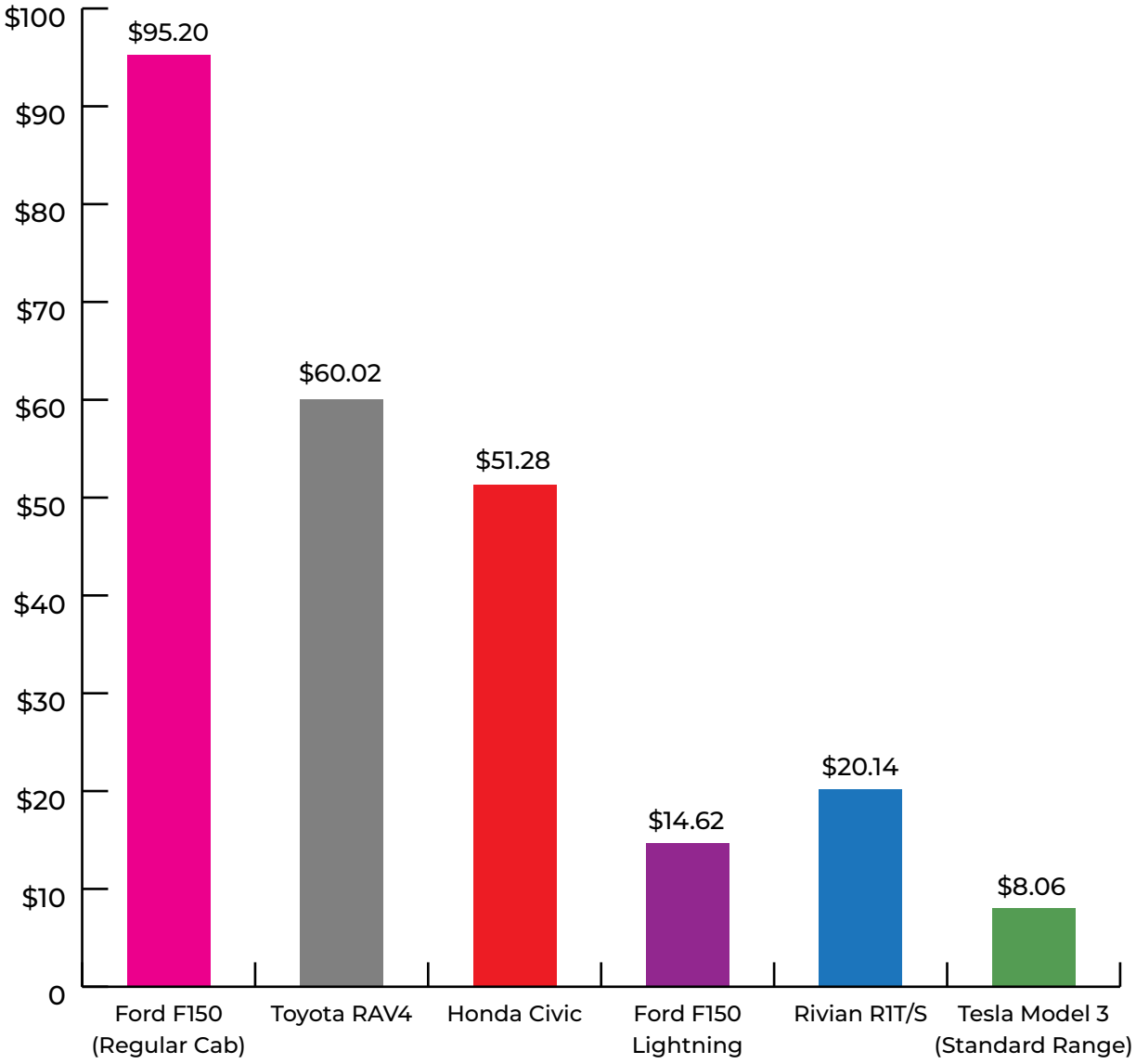
Comparing The Fueling/Charging Costs of Gas-Powered And Electric Vehicles

Avg. Energy Price per Gallon of Gasoline
(As of July 7, 2022)

$4.139

Avg. Energy Price per Kilowatt-hour of Electricity
(As of April 2022)

$0.1492

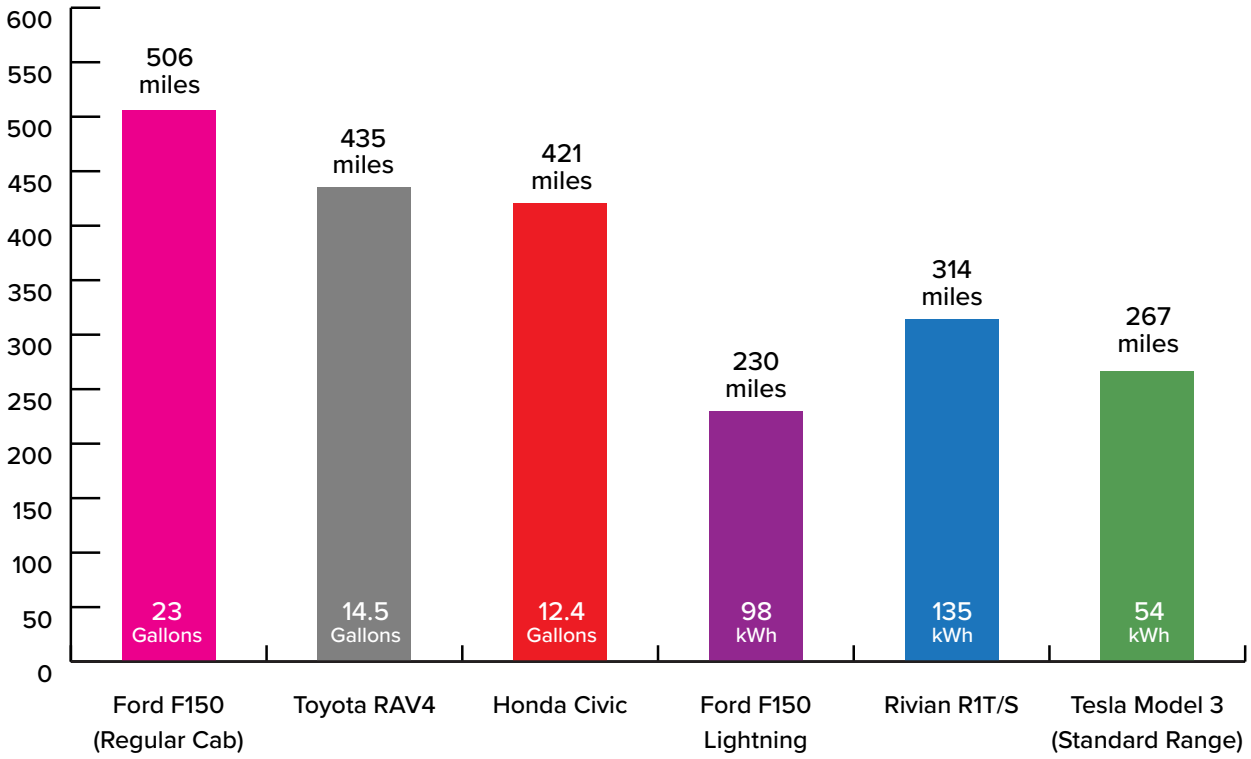


Total Fueling Cost
(Internal Combustion Engine Vehicles)

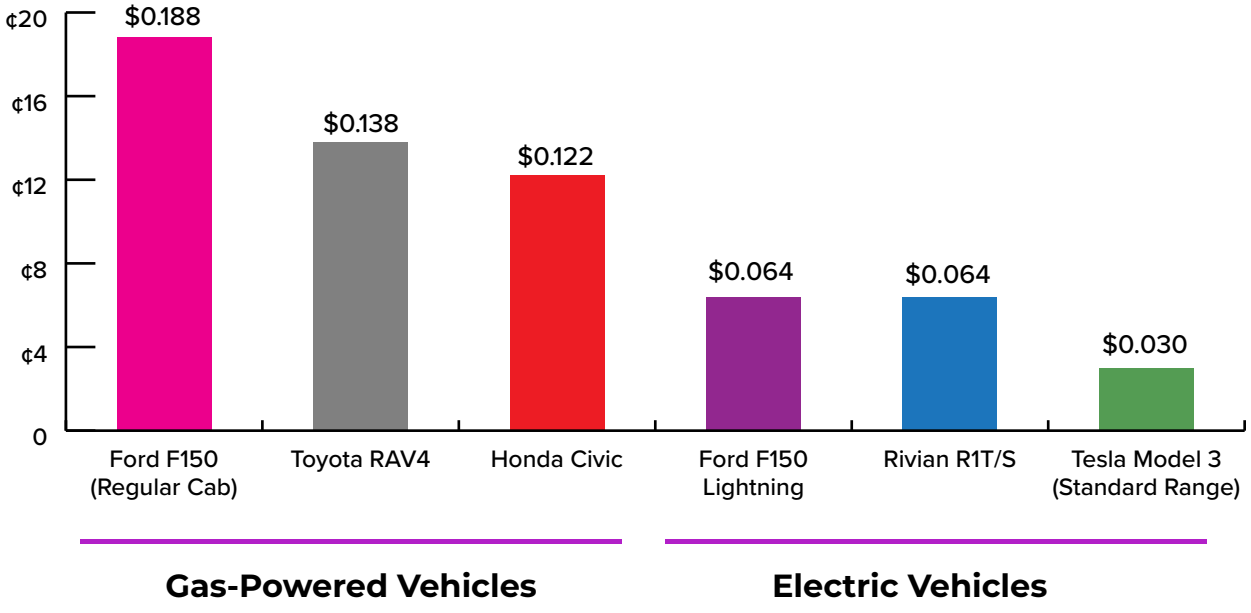
Total Charging Cost
(Electric Vehicles)

Comparing The Operating Costs of Gas-Powered And Electric Vehicles

Estimated Mileage



Total Cost Per Mile



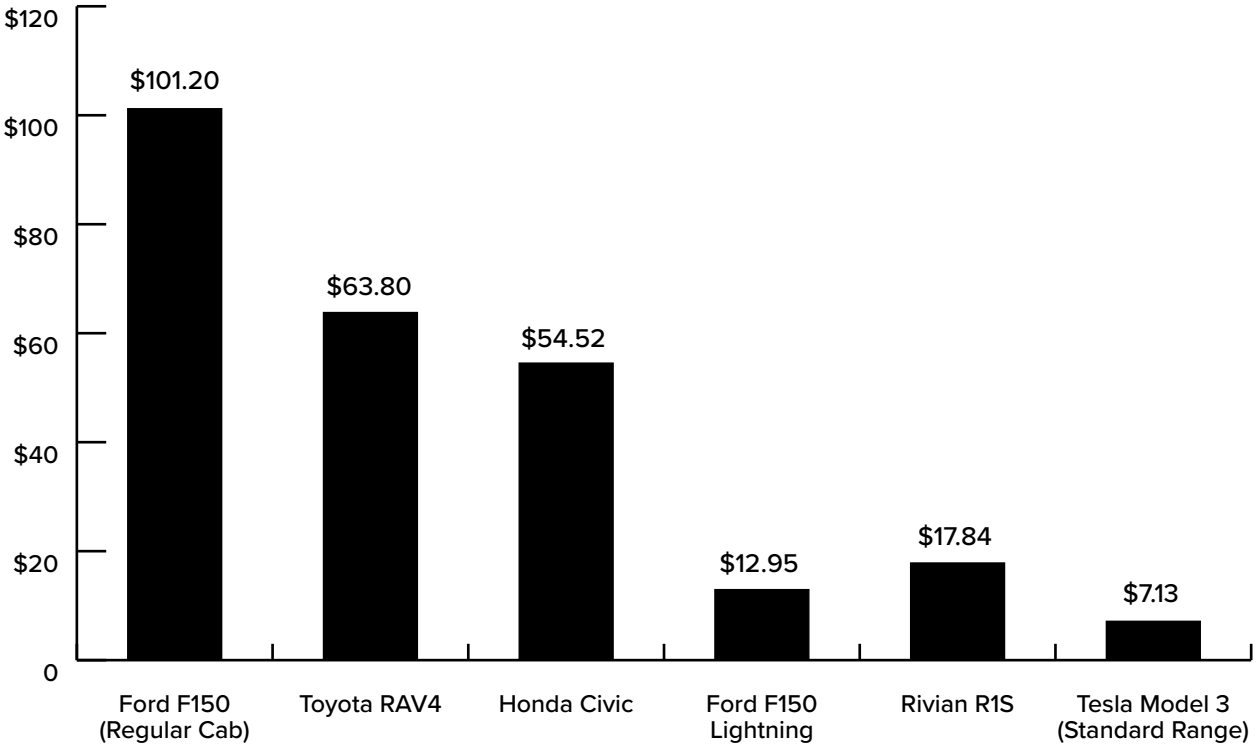
Arizona

Avg. Energy Price per Gallon of Gasoline
(As of August 4, 2022)

$4.400

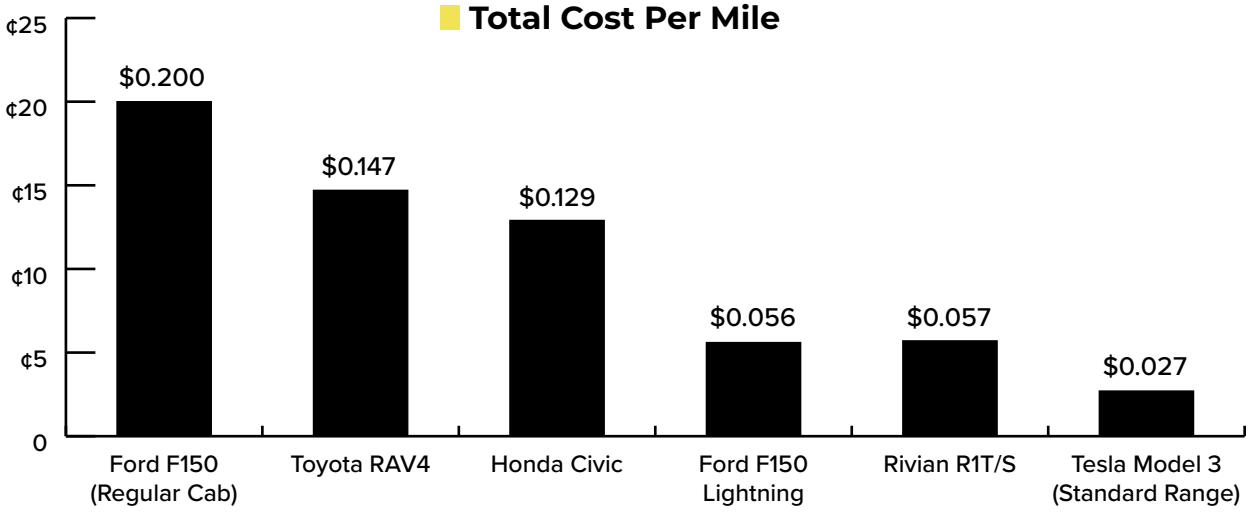
Avg. Energy Price per Kilowatt-hour of Electricity
(As of May 2022)

$0.1321



Total Fueling Cost | **Total Charging Cost**

Total Cost Per Mile



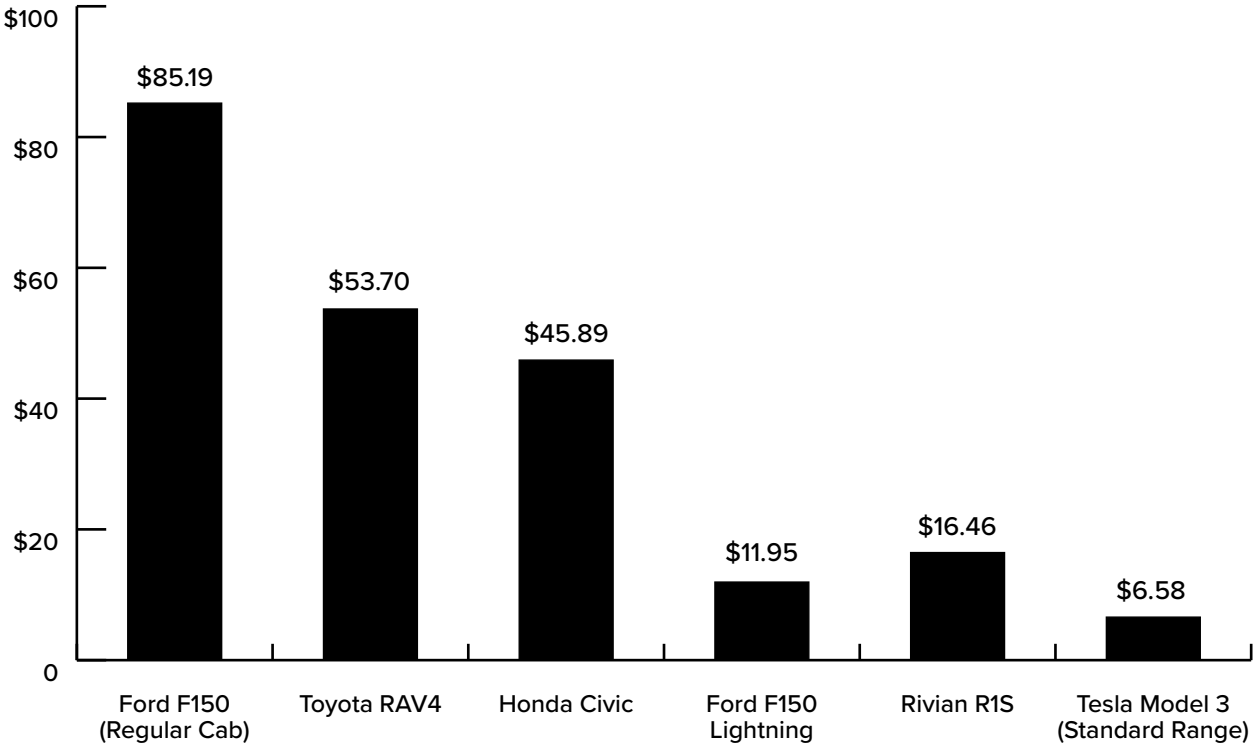
Arkansas

Avg. Energy Price per Gallon of Gasoline
(As of August 4, 2022)

$3.704

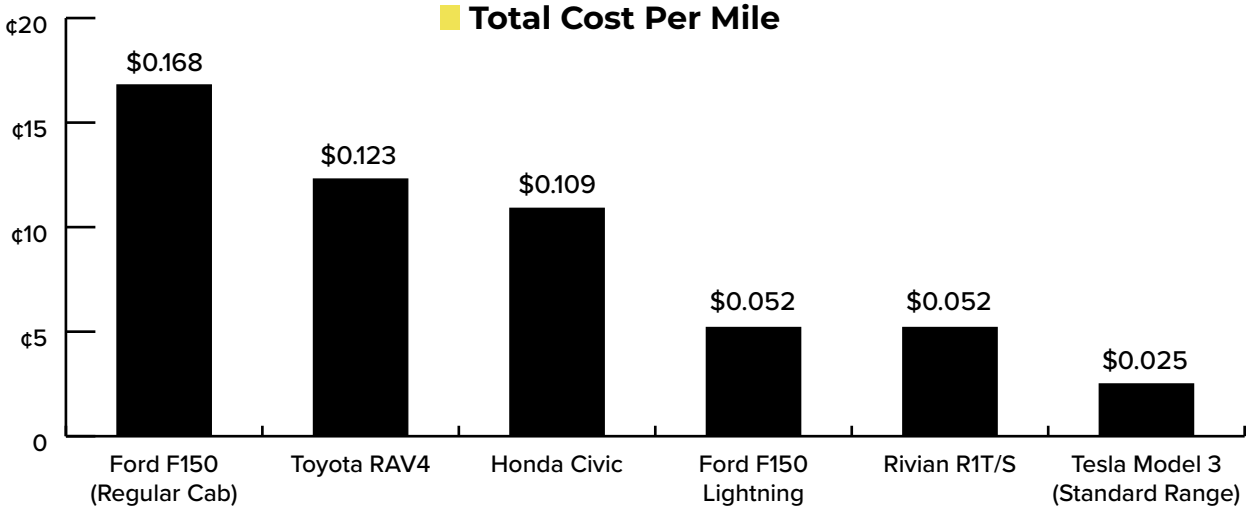
Avg. Energy Price per Kilowatt-hour of Electricity
(As of May 2022)

$0.1219



Total Fueling Cost | **Total Charging Cost**

Total Cost Per Mile



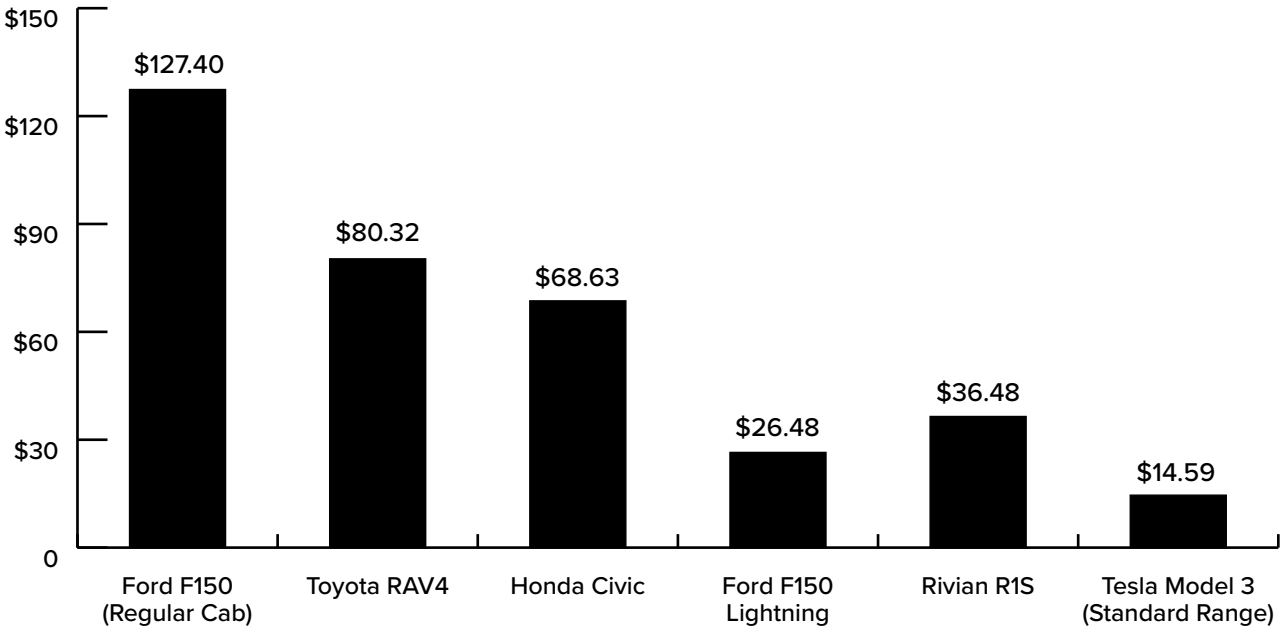
California

Avg. Energy Price per Gallon of Gasoline
(As of August 4, 2022)

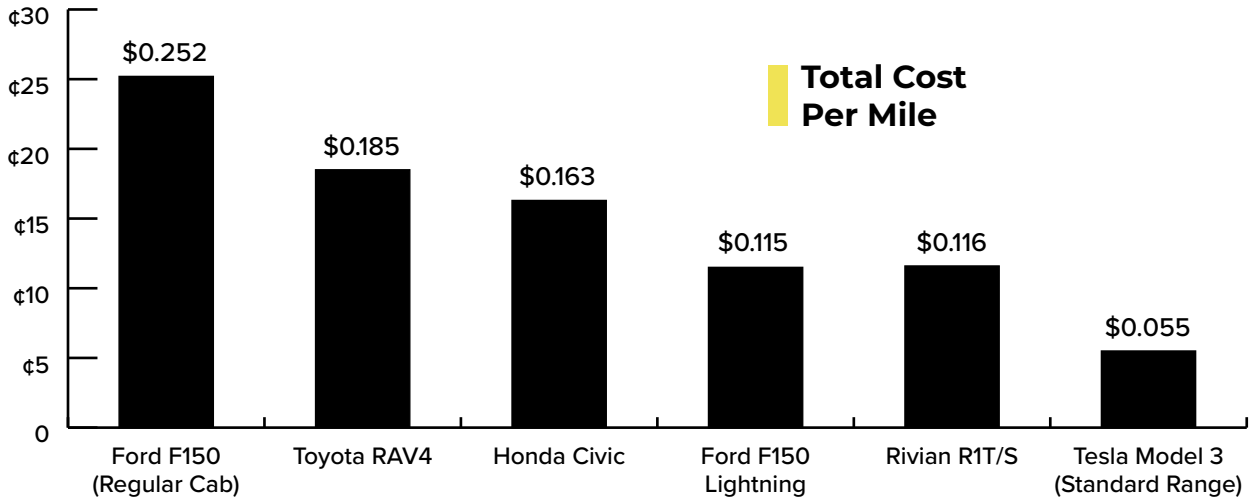
$5.539

Avg. Energy Price per Kilowatt-hour of Electricity
(As of May 2022)

$0.2702



Total Fueling Cost | **Total Charging Cost**



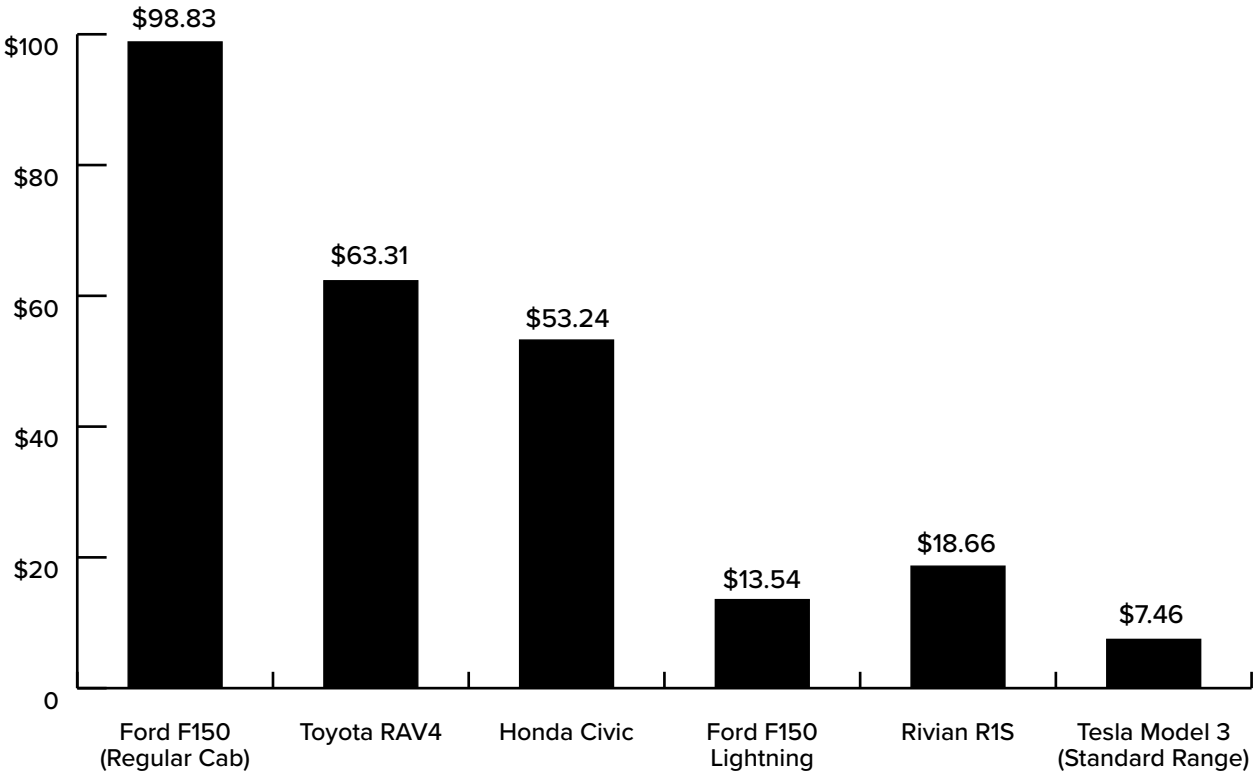
Colorado

Avg. Energy Price per Gallon of Gasoline
(As of August 4, 2022)

$4.297

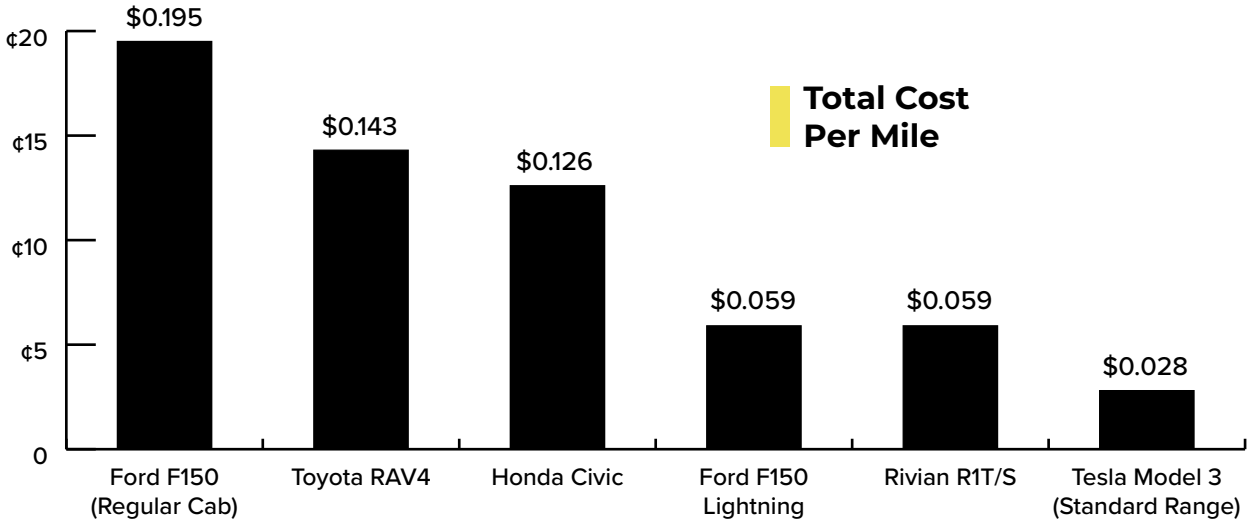
Avg. Energy Price per Kilowatt-hour of Electricity
(As of May 2022)

$0.1382



Total Fueling Cost

Total Charging Cost



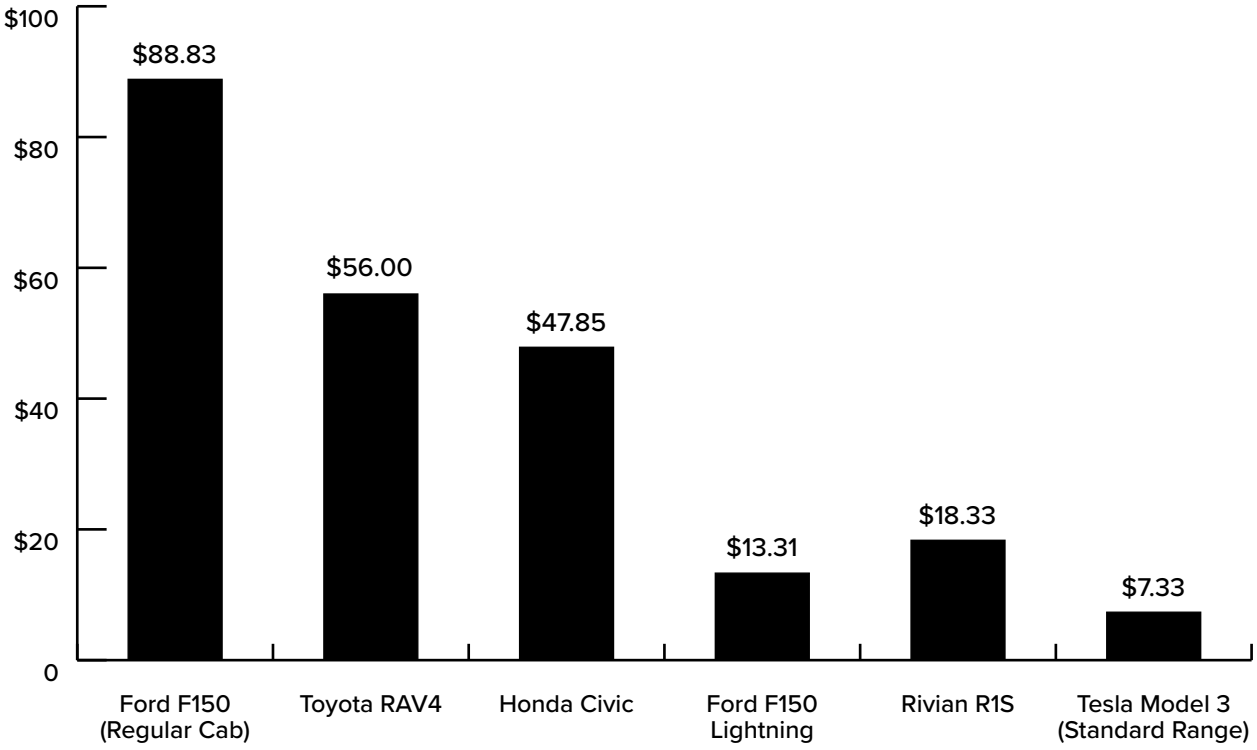
Florida

Avg. Energy Price per Gallon of Gasoline
(As of August 4, 2022)

$3.862

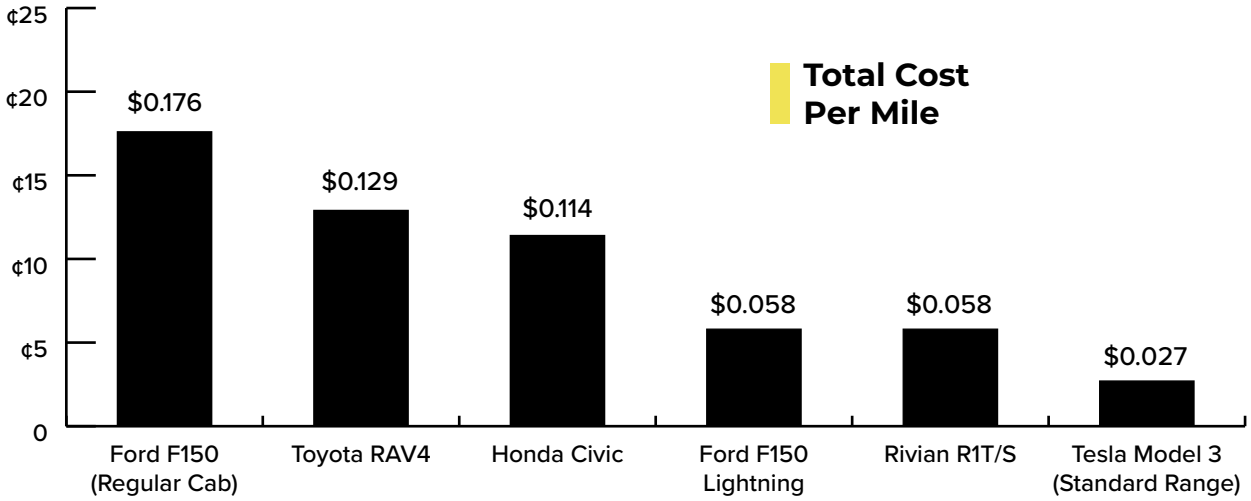
Avg. Energy Price per Kilowatt-hour of Electricity
(As of May 2022)

$0.1358



Total Fueling Cost

Total Charging Cost



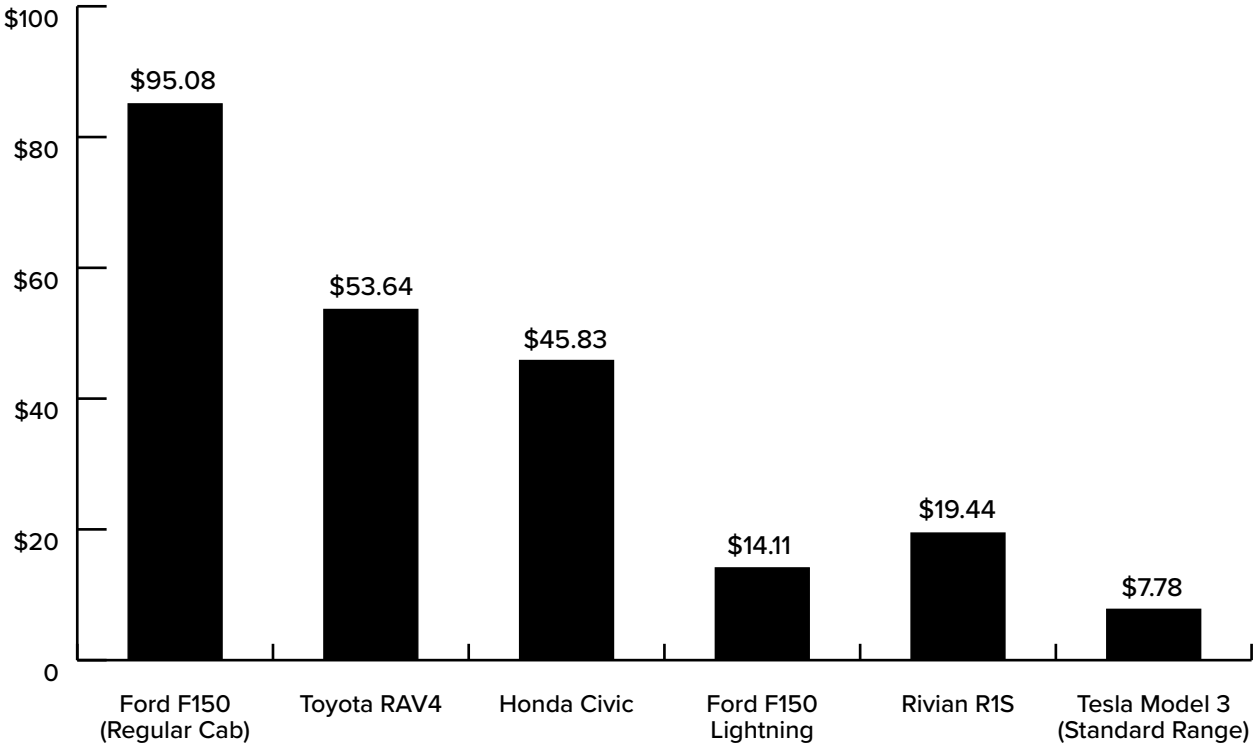
Georgia

Avg. Energy Price per Gallon of Gasoline
(As of August 4, 2022)

$3.699

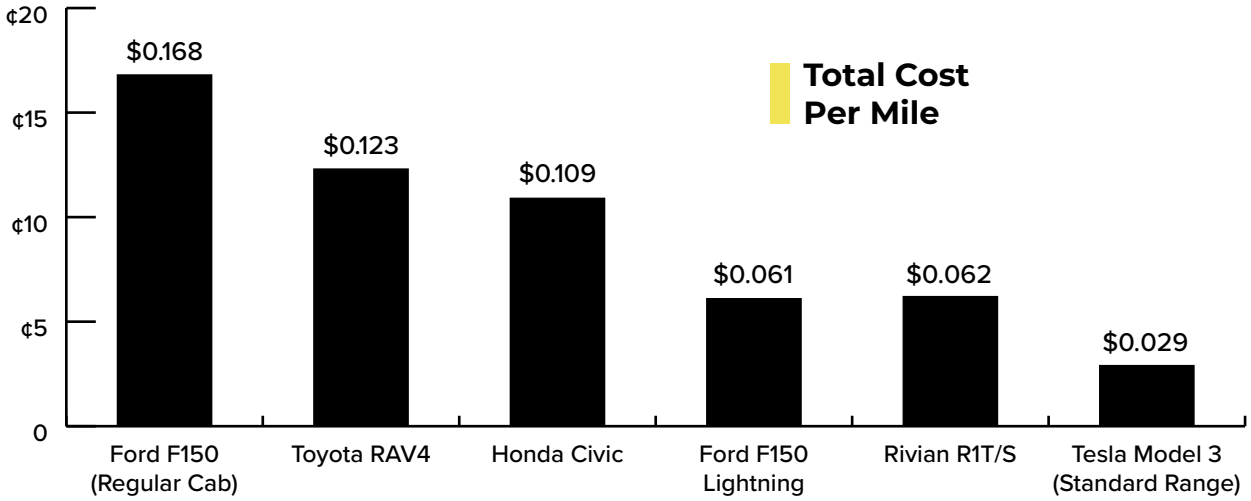
Avg. Energy Price per Kilowatt-hour of Electricity
(As of May 2022)

$0.1440



Total Fueling Cost

Total Charging Cost



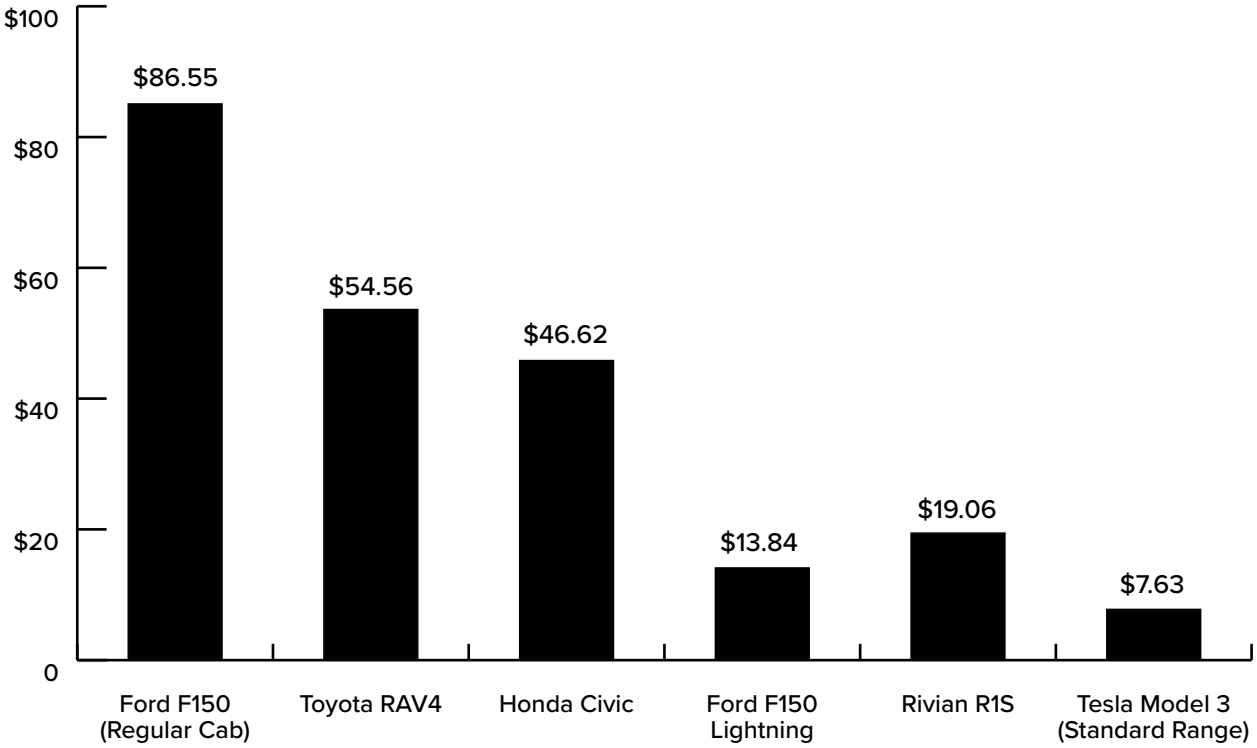
Kansas

Avg. Energy Price per Gallon of Gasoline
(As of August 4, 2022)

$3.763

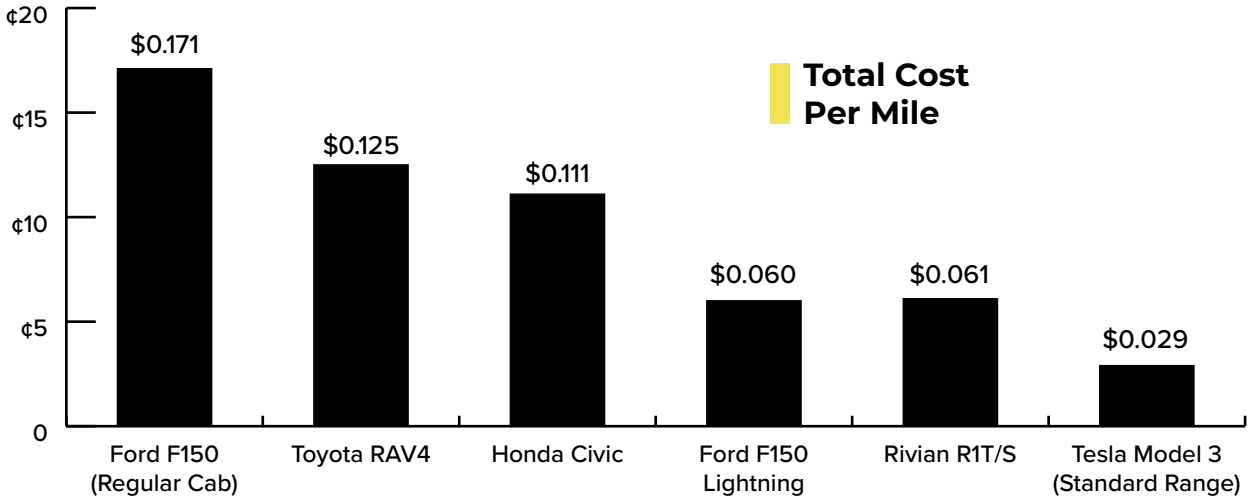
Avg. Energy Price per Kilowatt-hour of Electricity
(As of May 2022)

$0.1412



Total Fueling Cost

Total Charging Cost



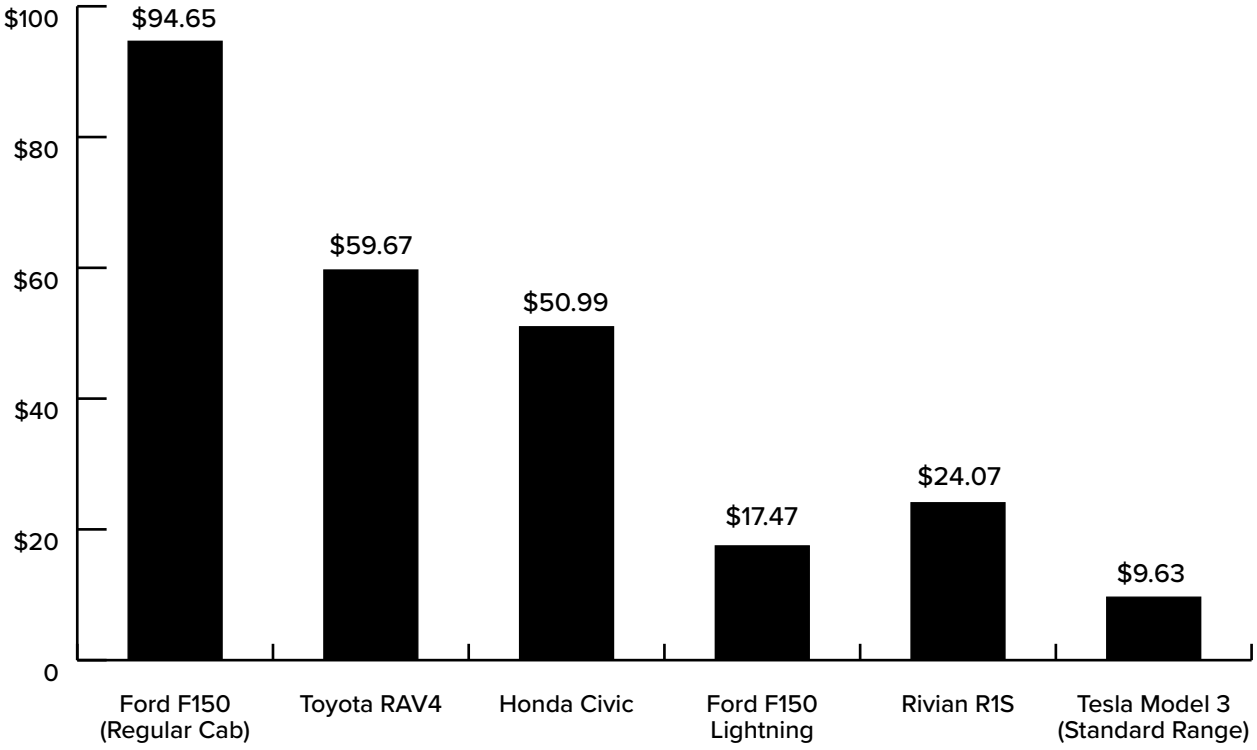
Michigan

Avg. Energy Price per Gallon of Gasoline
(As of August 4, 2022)

$4.115

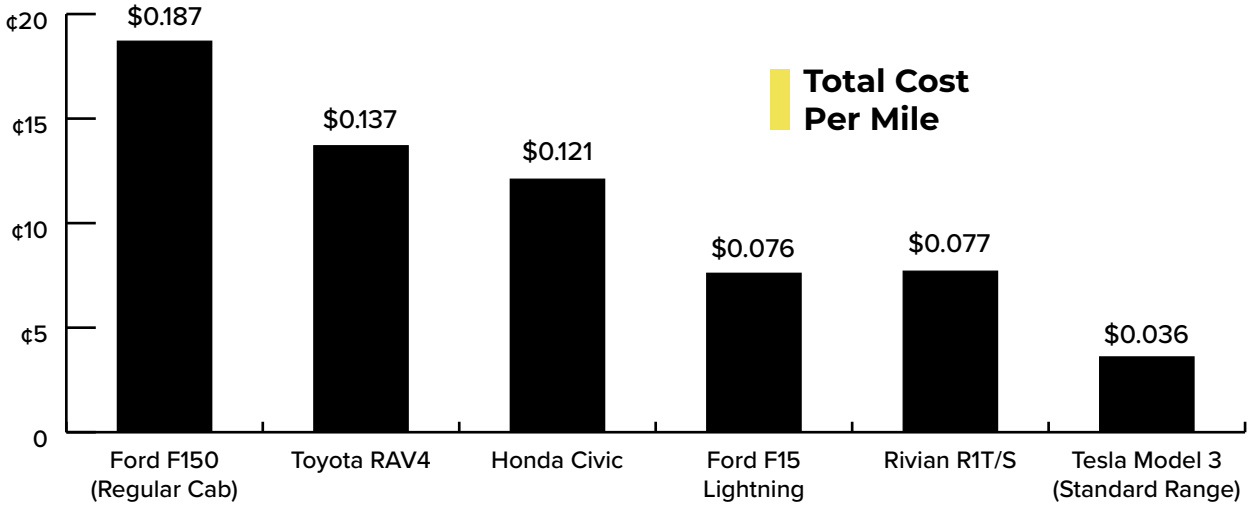
Avg. Energy Price per Kilowatt-hour of Electricity
(As of May 2022)

$0.1783



Total Fueling Cost

Total Charging Cost



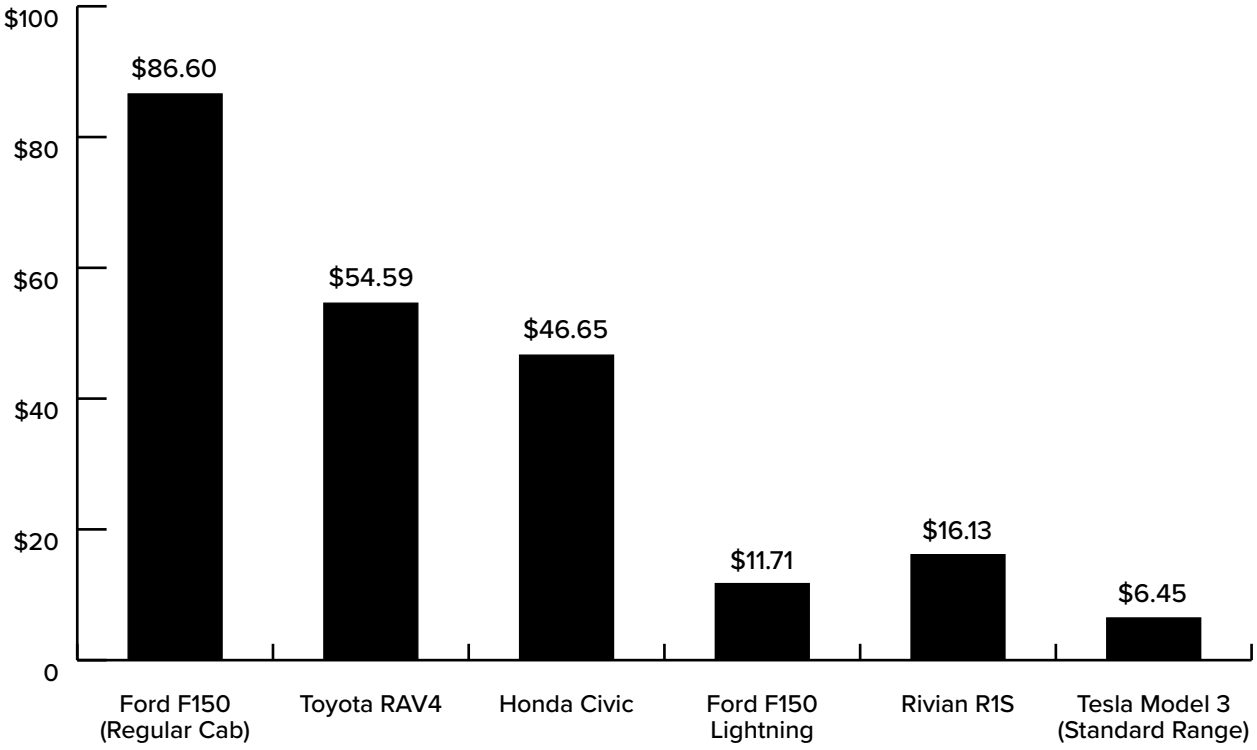
Missouri

Avg. Energy Price per Gallon of Gasoline
(As of August 4, 2022)

$3.765

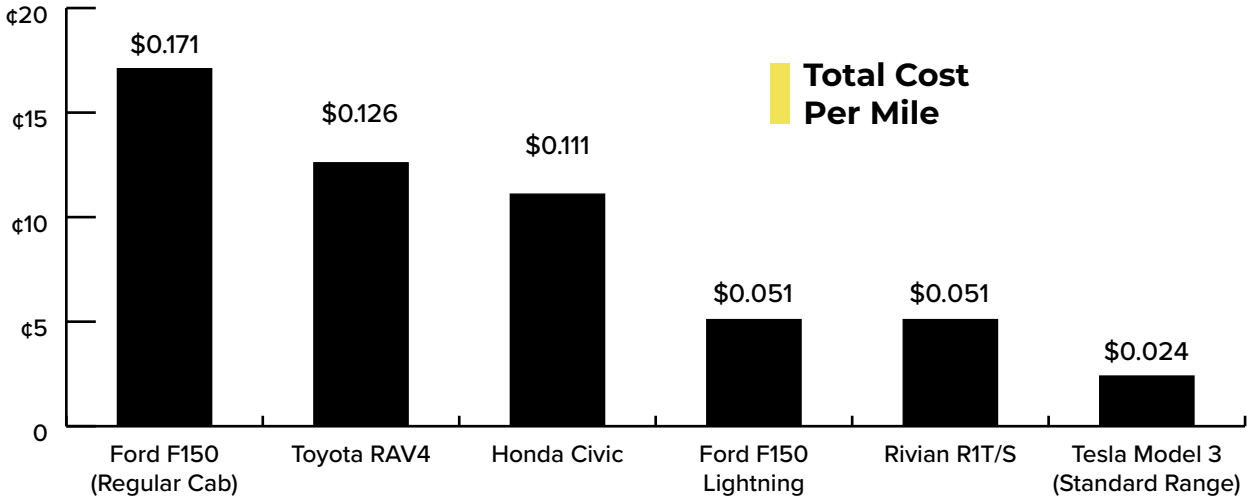
Avg. Energy Price per Kilowatt-hour of Electricity
(As of May 2022)

$0.1195



Total Fueling Cost

Total Charging Cost



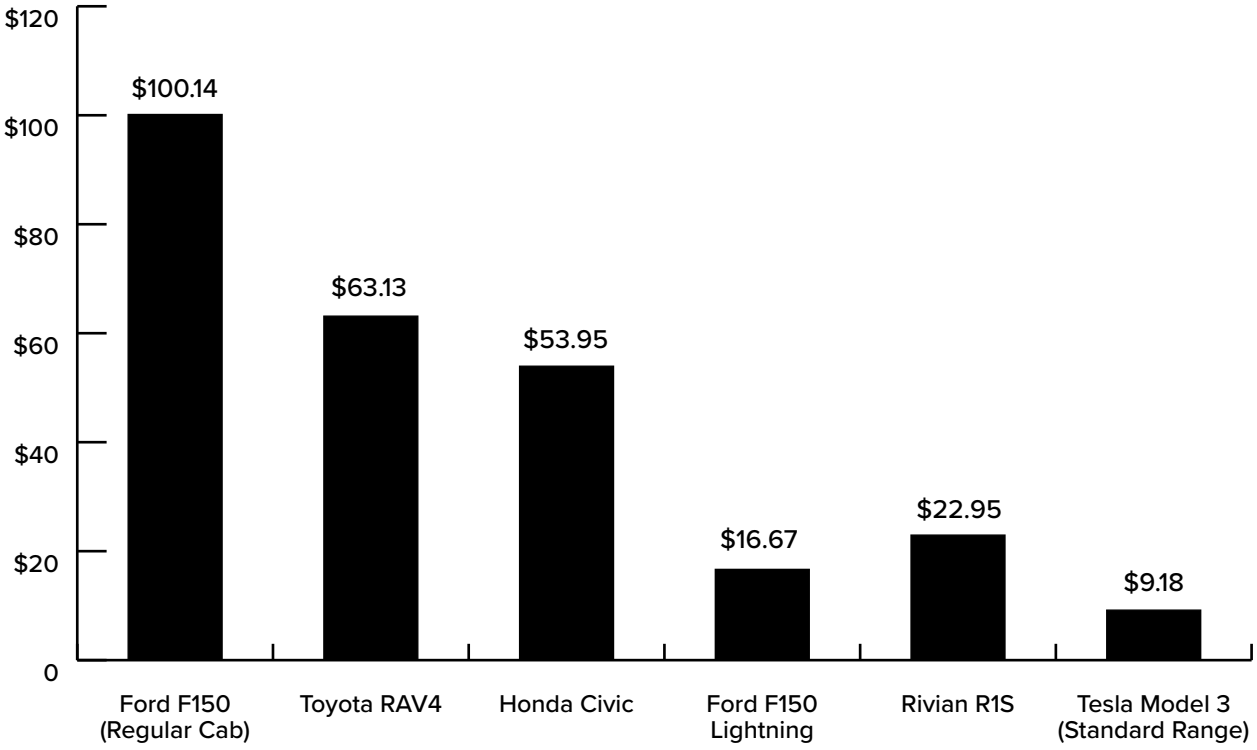
New Jersey

Avg. Energy Price per Gallon of Gasoline
(As of August 4, 2022)

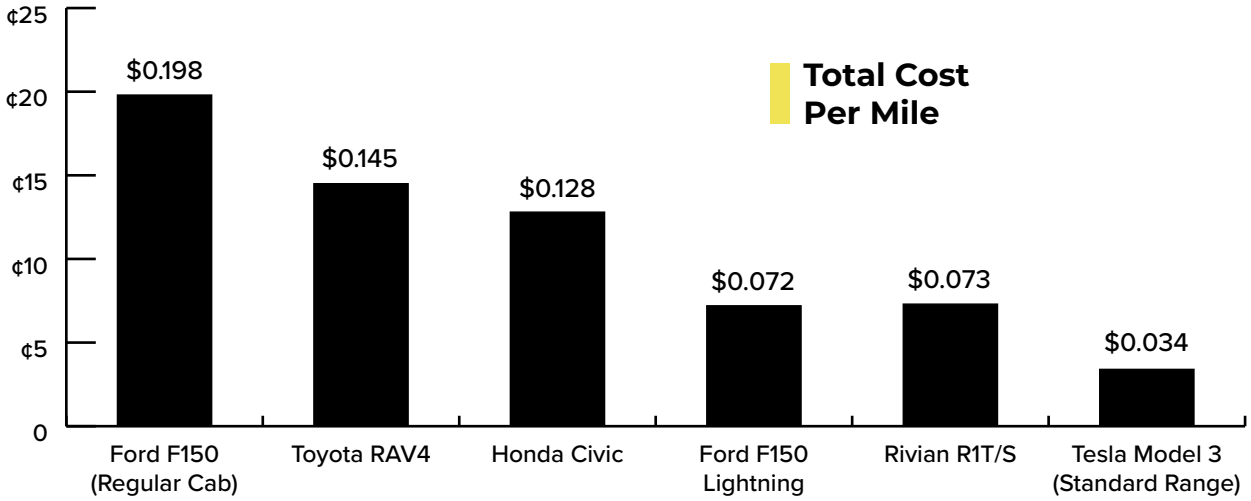
$4.354

Avg. Energy Price per Kilowatt-hour of Electricity
(As of May 2022)

$0.1700



Total Fueling Cost | **Total Charging Cost**



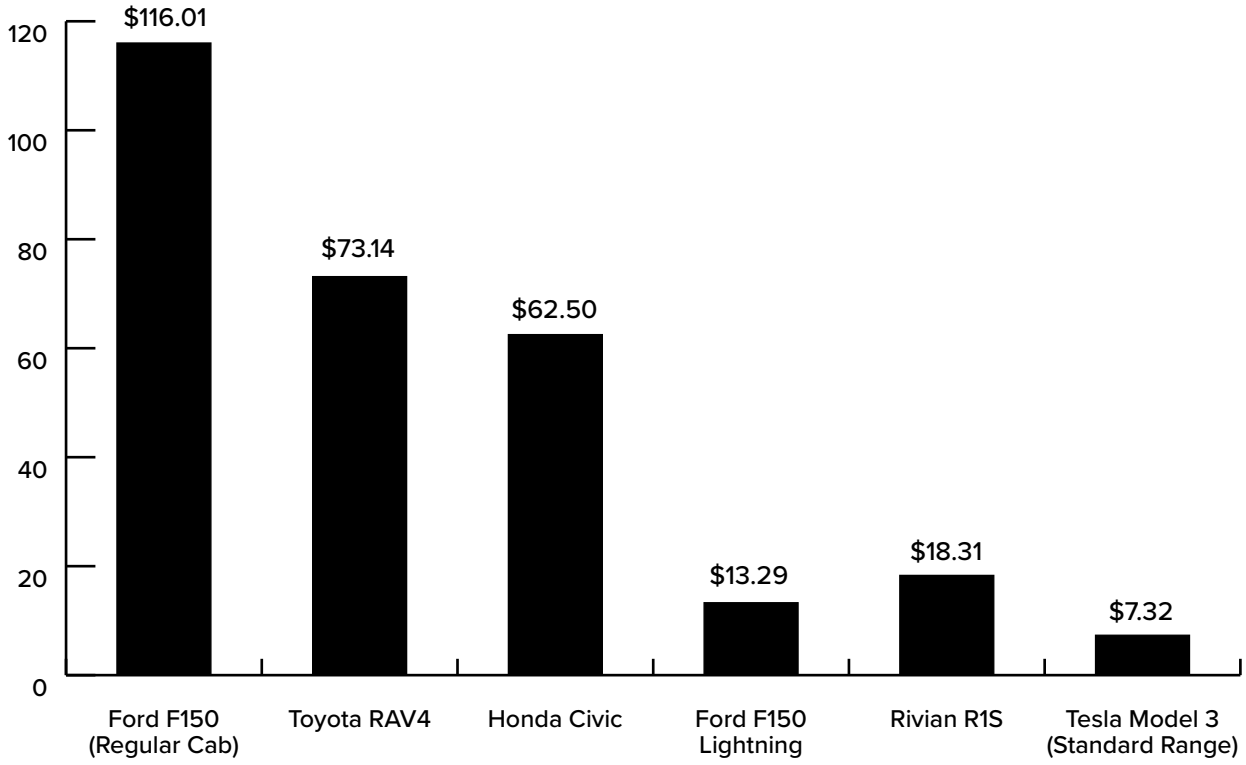
Nevada

Avg. Energy Price per Gallon of Gasoline
(As of August 4, 2022)

$5.044

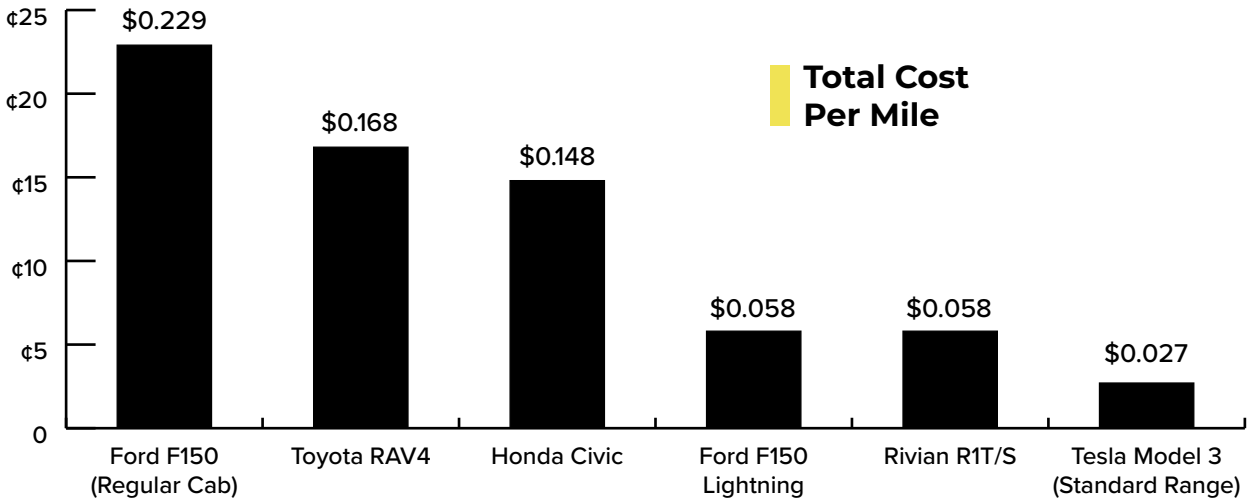
Avg. Energy Price per Kilowatt-hour of Electricity
(As of May 2022)

$0.1356



Total Fueling Cost

Total Charging Cost



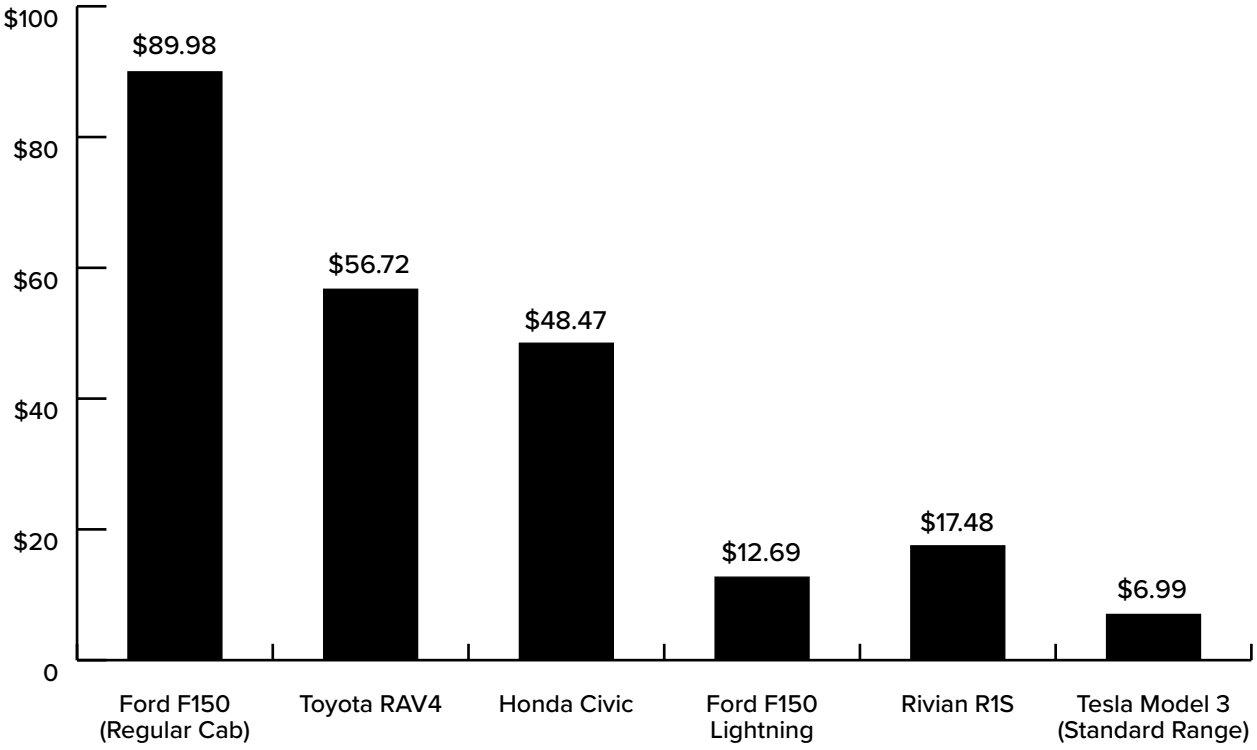
New Mexico

Avg. Energy Price per Gallon of Gasoline
(As of August 4, 2022)

$3.912

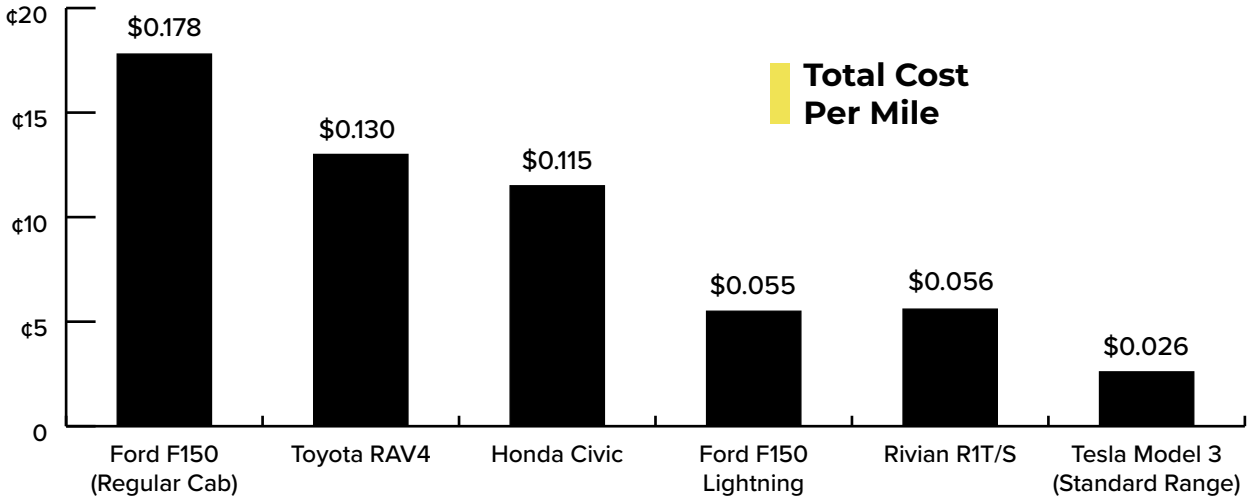
Avg. Energy Price per Kilowatt-hour of Electricity
(As of May 2022)

$0.1295



Total Fueling Cost

Total Charging Cost



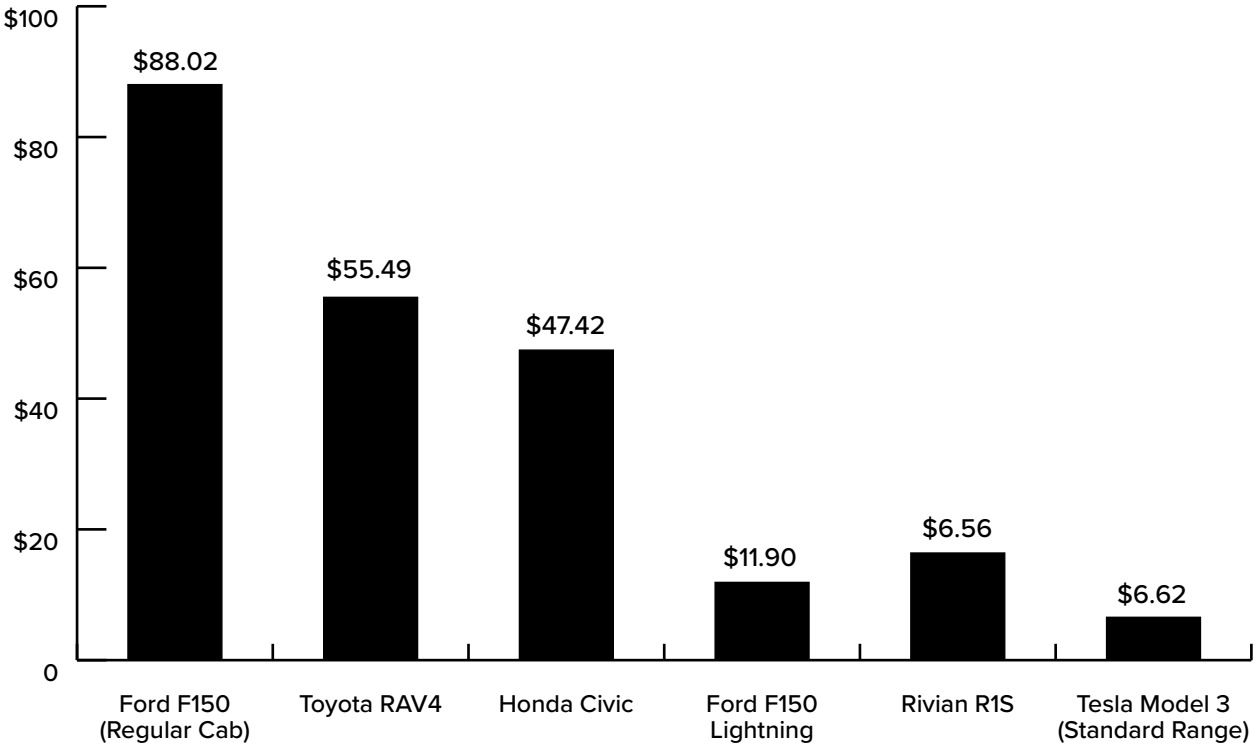
North Carolina

Avg. Energy Price per Gallon of Gasoline
(As of August 4, 2022)

$3.827

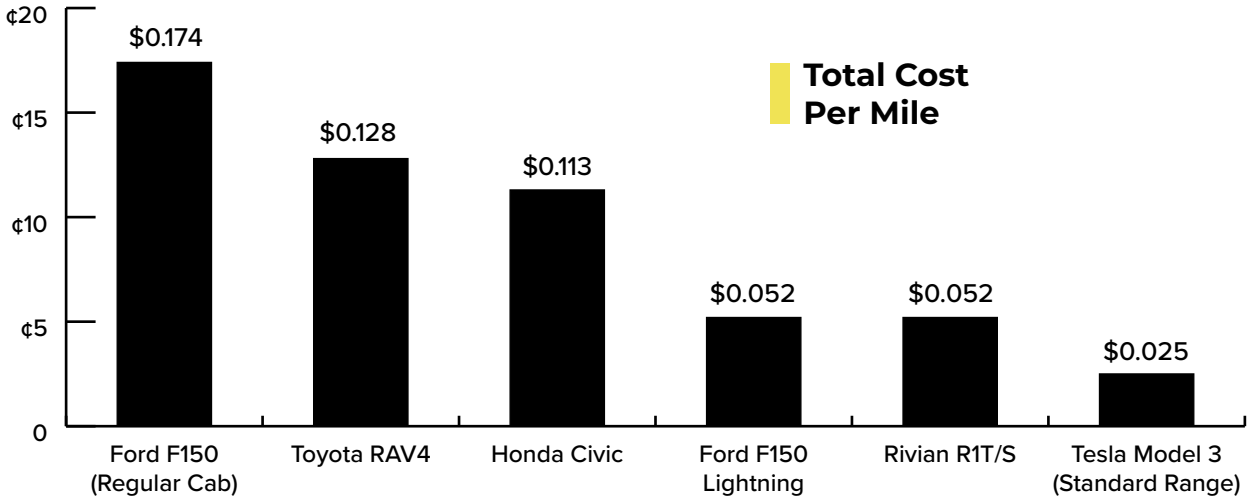
Avg. Energy Price per Kilowatt-hour of Electricity
(As of May 2022)

$0.1214



Total Fueling Cost

Total Charging Cost



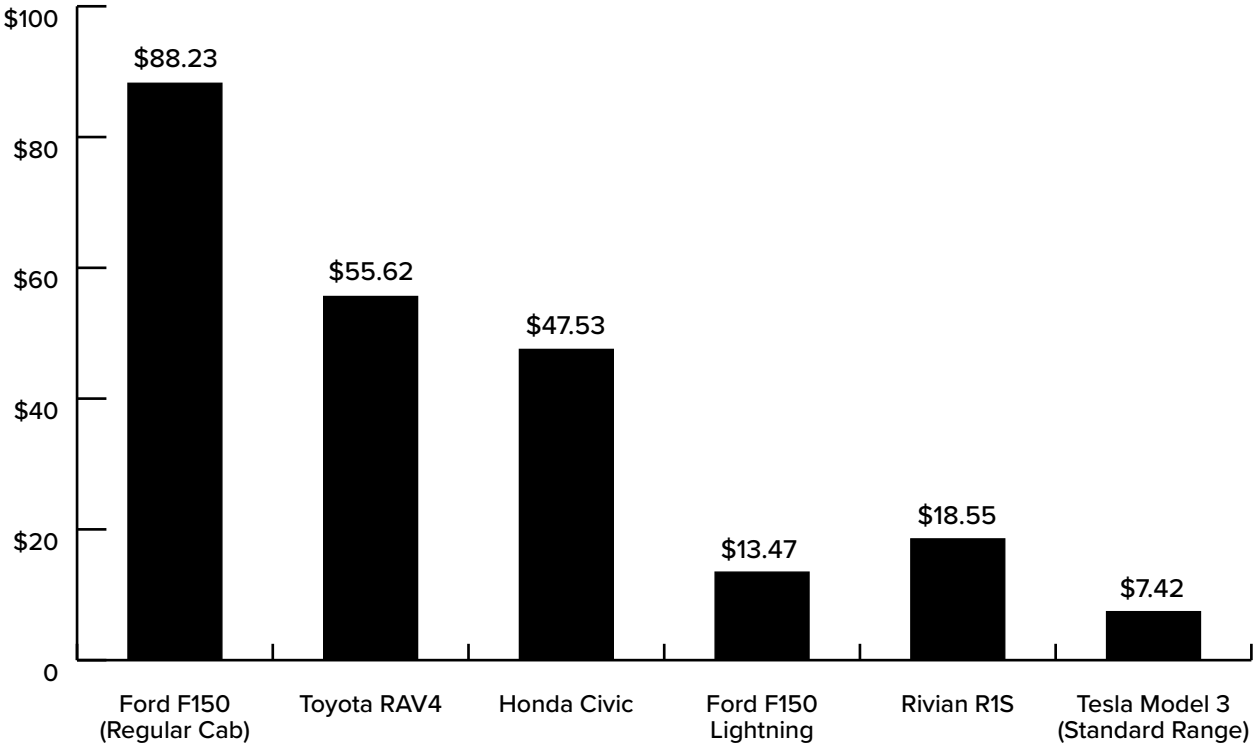
Ohio

Avg. Energy Price per Gallon of Gasoline
(As of August 4, 2022)

$3.836

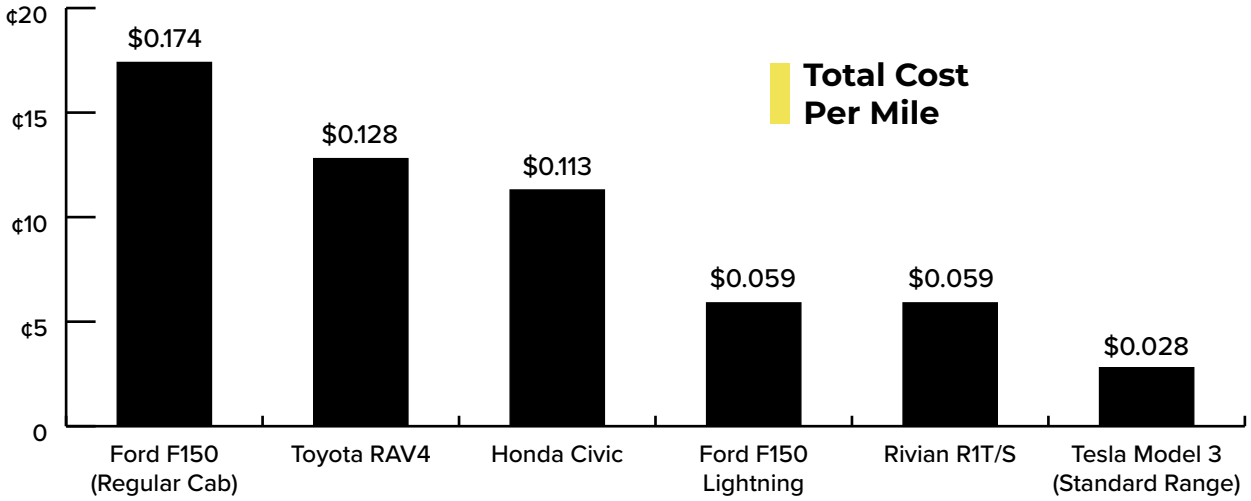
Avg. Energy Price per Kilowatt-hour of Electricity
(As of May 2022)

$0.1374



Total Fueling Cost

Total Charging Cost



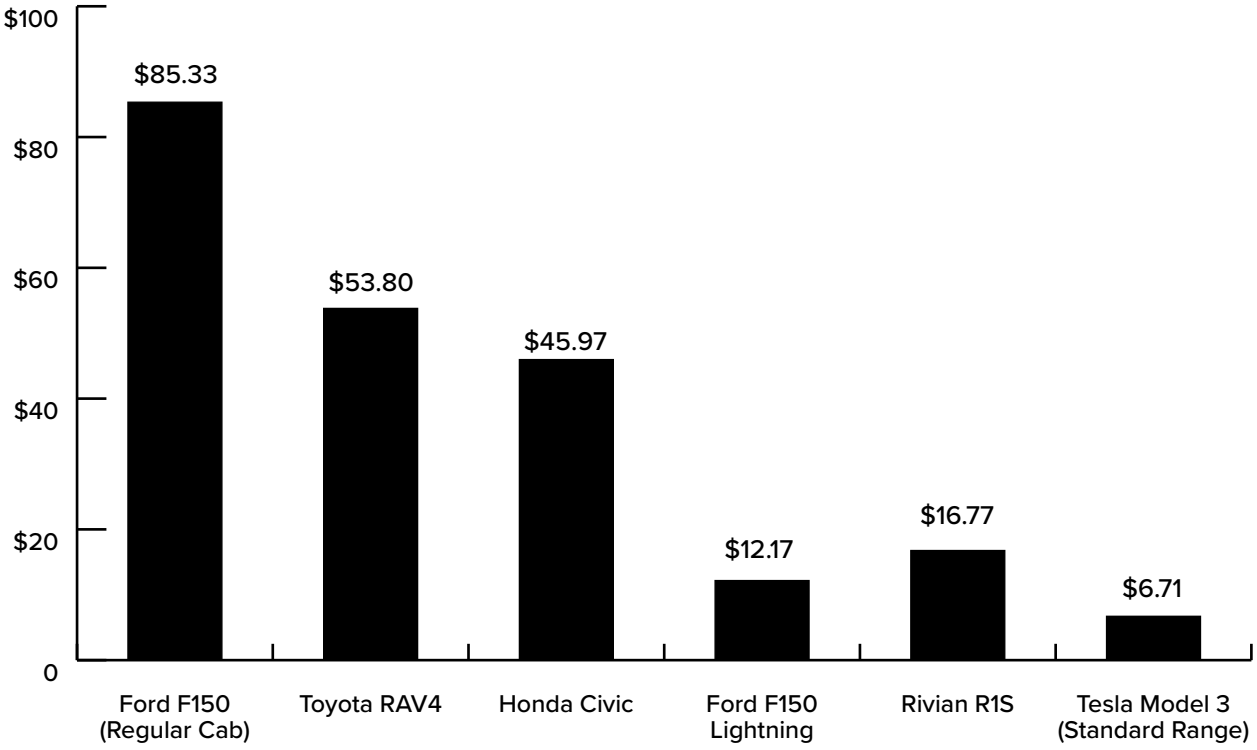
Oklahoma

Avg. Energy Price per Gallon of Gasoline
(As of August 4, 2022)

$3.710

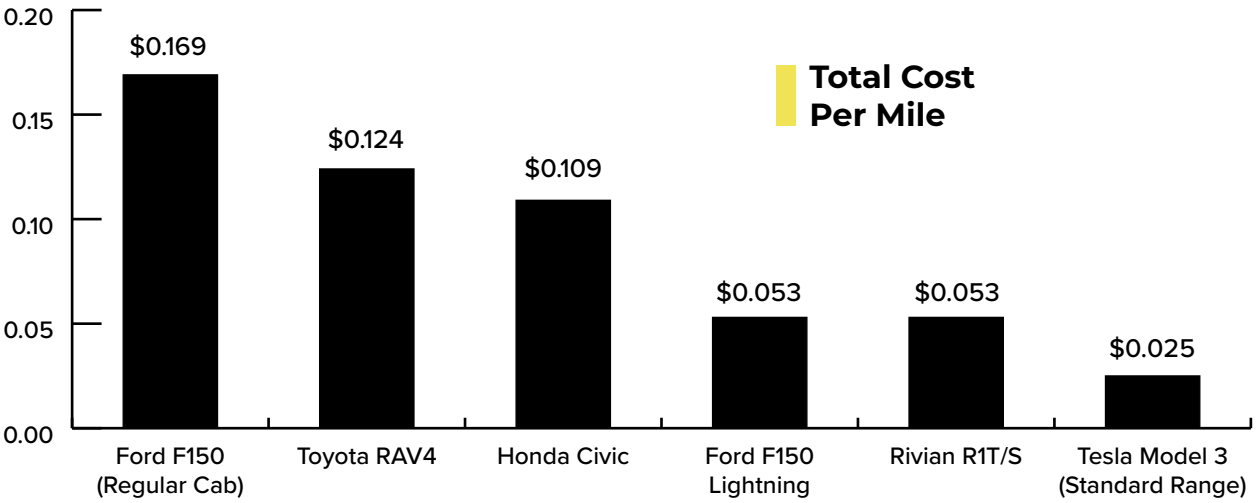
Avg. Energy Price per Kilowatt-hour of Electricity
(As of May 2022)

$0.1242



Total Fueling Cost

Total Charging Cost



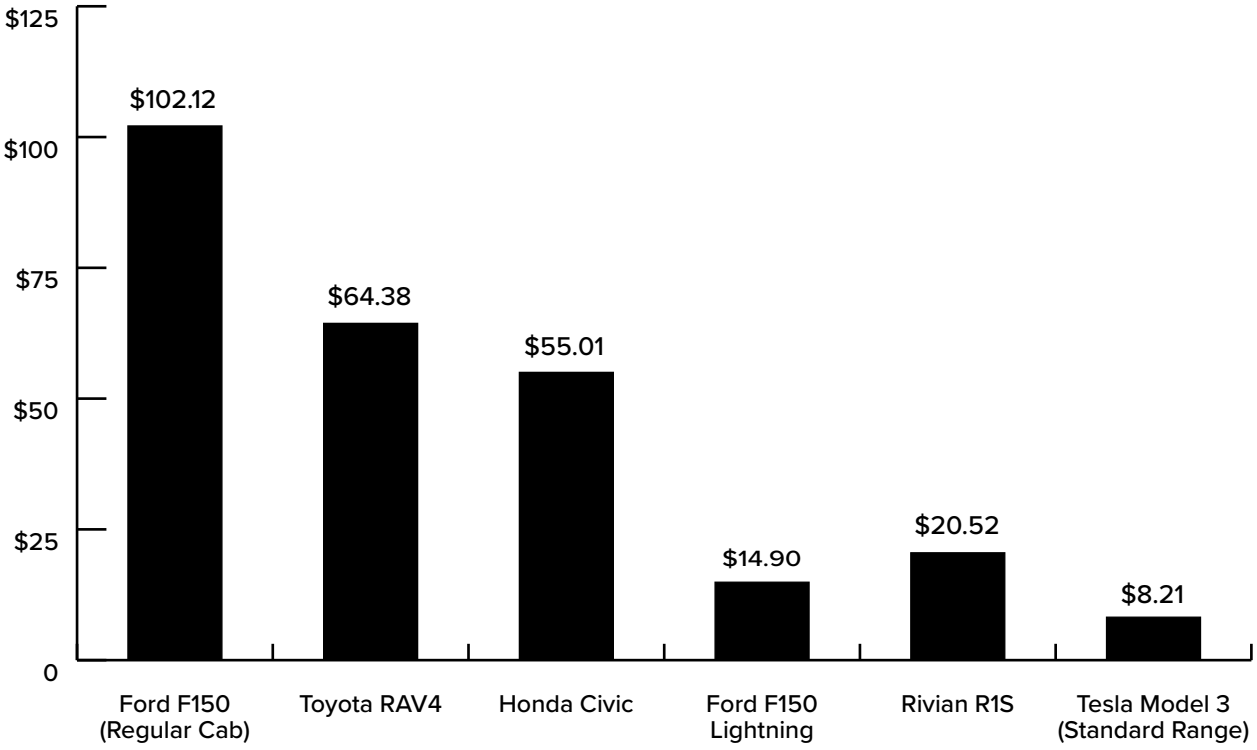
Pennsylvania

Avg. Energy Price per Gallon of Gasoline
(As of August 4, 2022)

$4.440

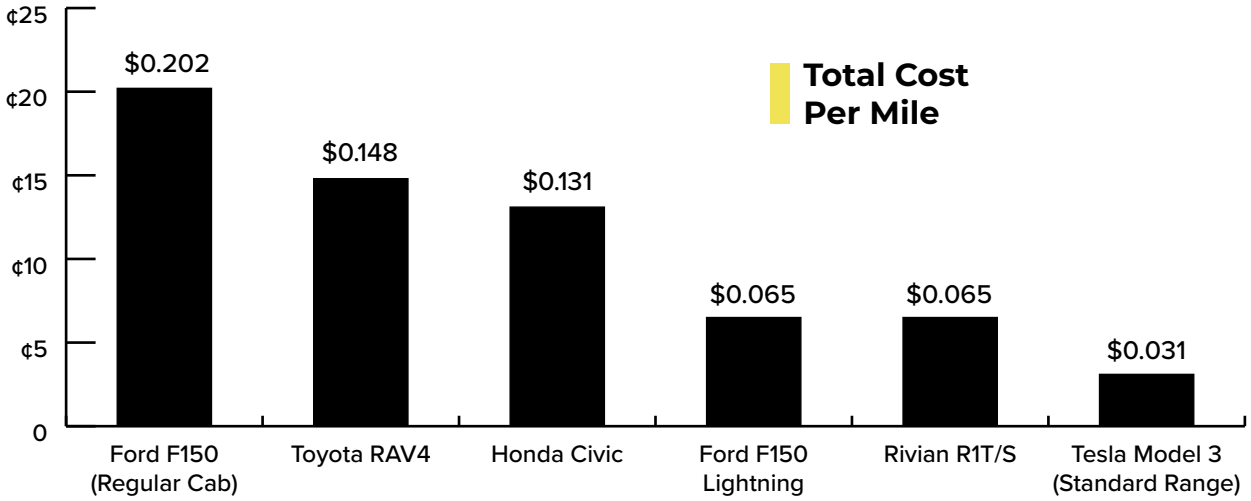
Avg. Energy Price per Kilowatt-hour of Electricity
(As of May 2022)

$0.1520



Total Fueling Cost

Total Charging Cost



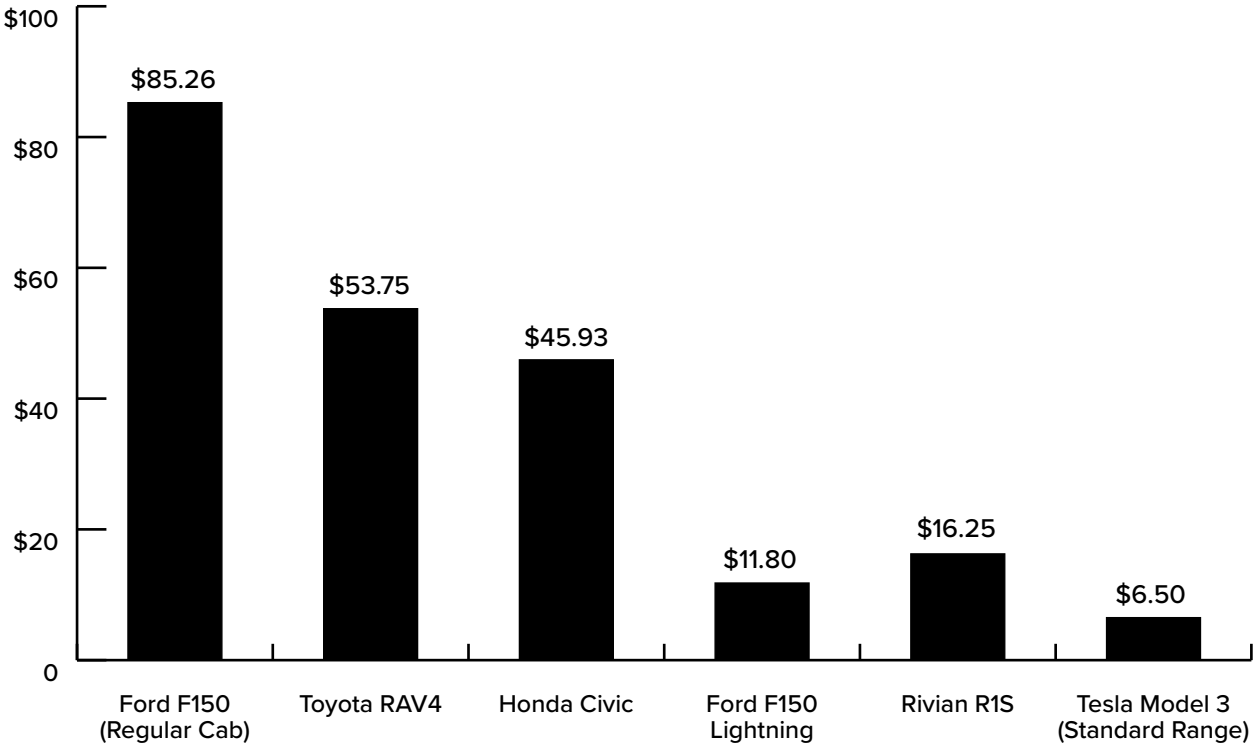
Tennessee

Avg. Energy Price per Gallon of Gasoline
(As of August 4, 2022)

$3.707

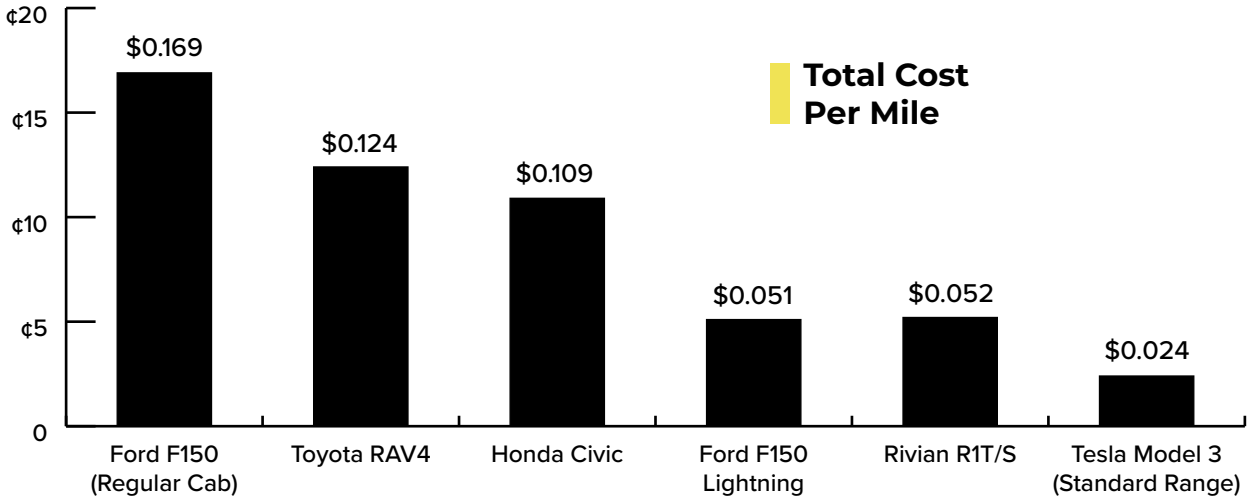
Avg. Energy Price per Kilowatt-hour of Electricity
(As of May 2022)

$0.1204



Total Fueling Cost

Total Charging Cost



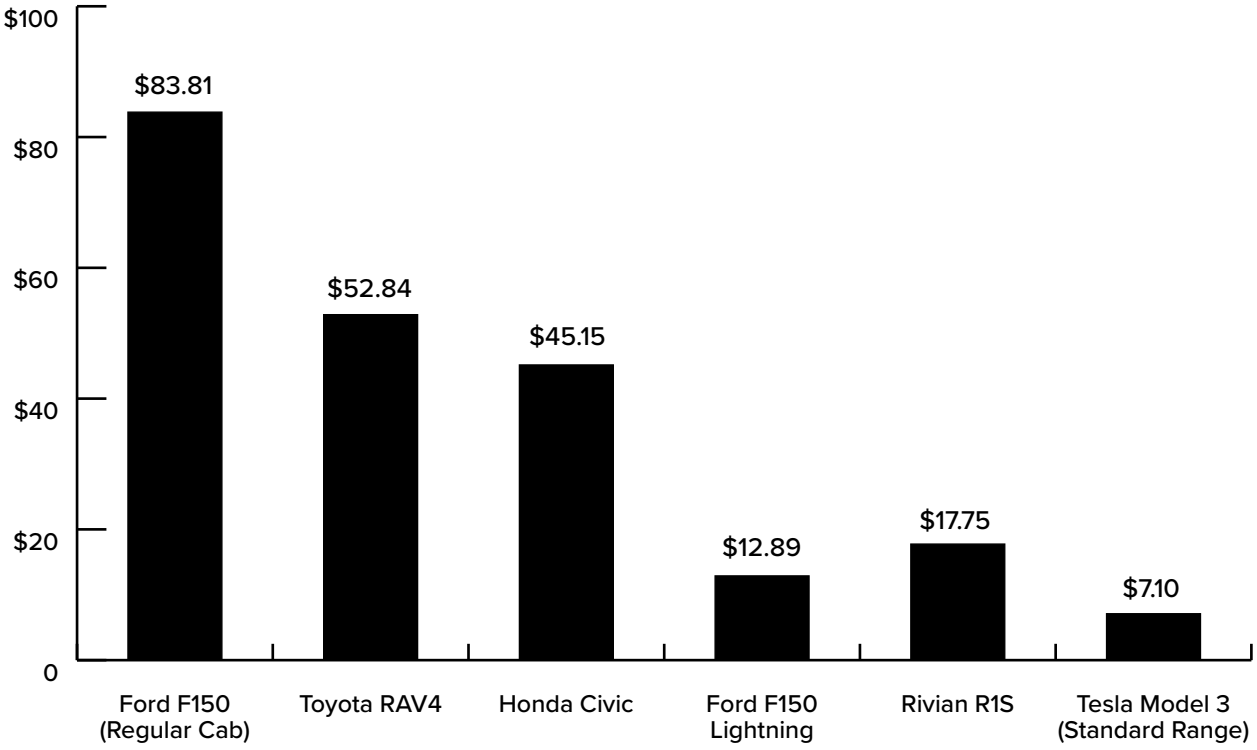
Texas

Avg. Energy Price per Gallon of Gasoline
(As of August 4, 2022)

$3.644

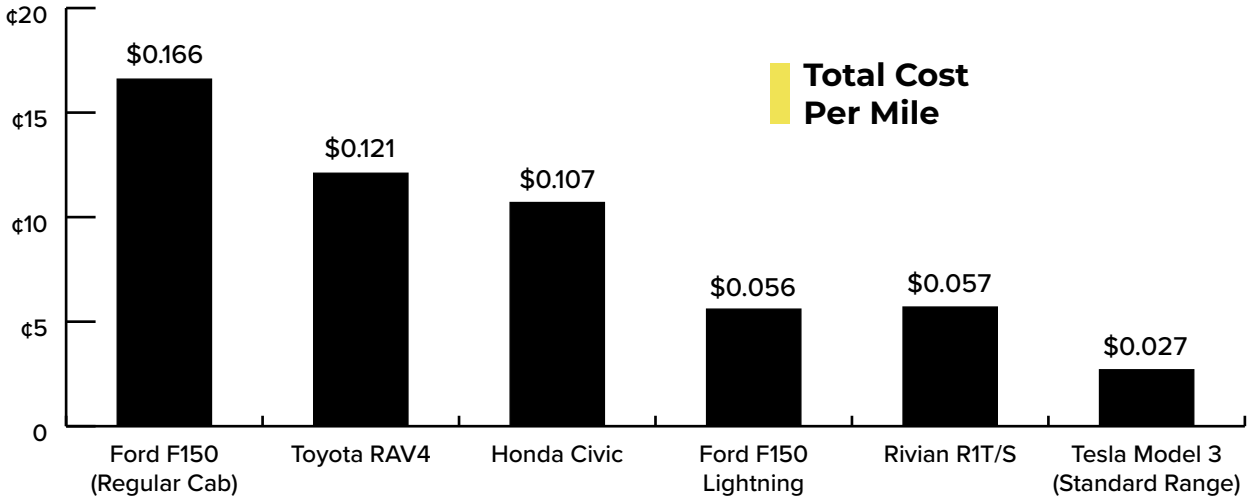
Avg. Energy Price per Kilowatt-hour of Electricity
(As of May 2022)

$0.1315



Total Fueling Cost

Total Charging Cost



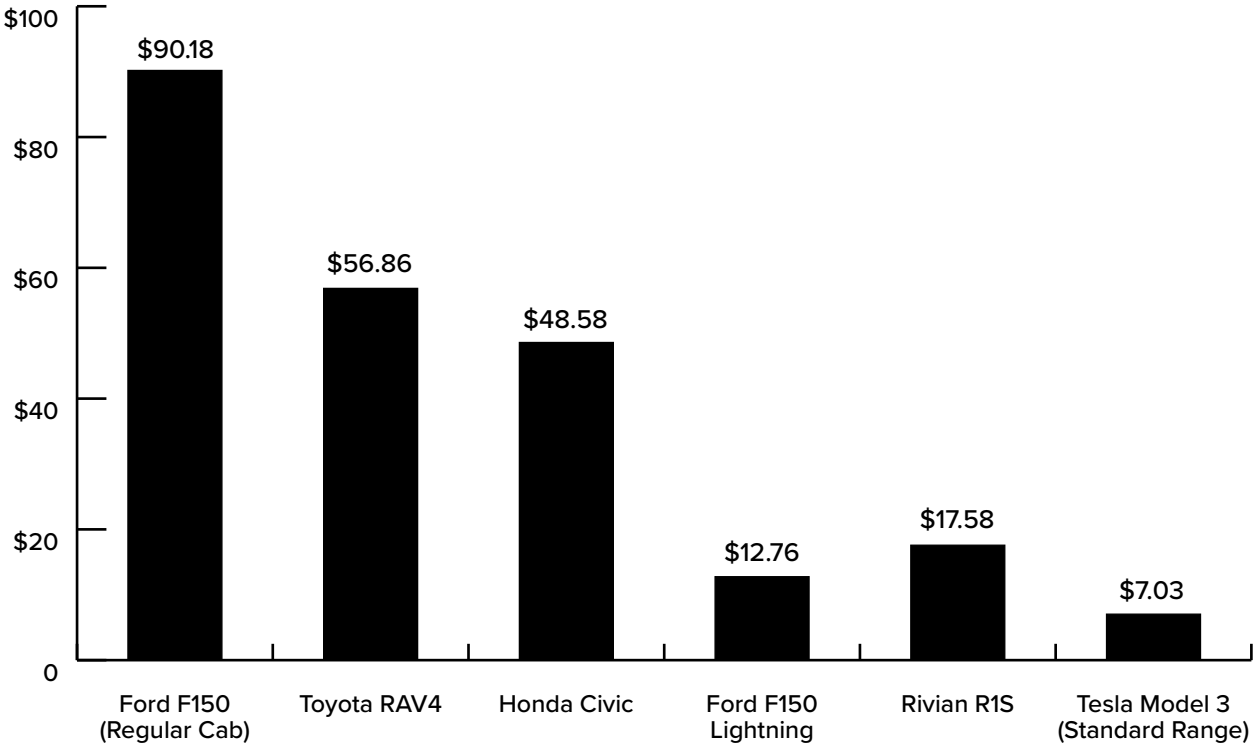
Virginia

Avg. Energy Price per Gallon of Gasoline
(As of August 4, 2022)

$3.921

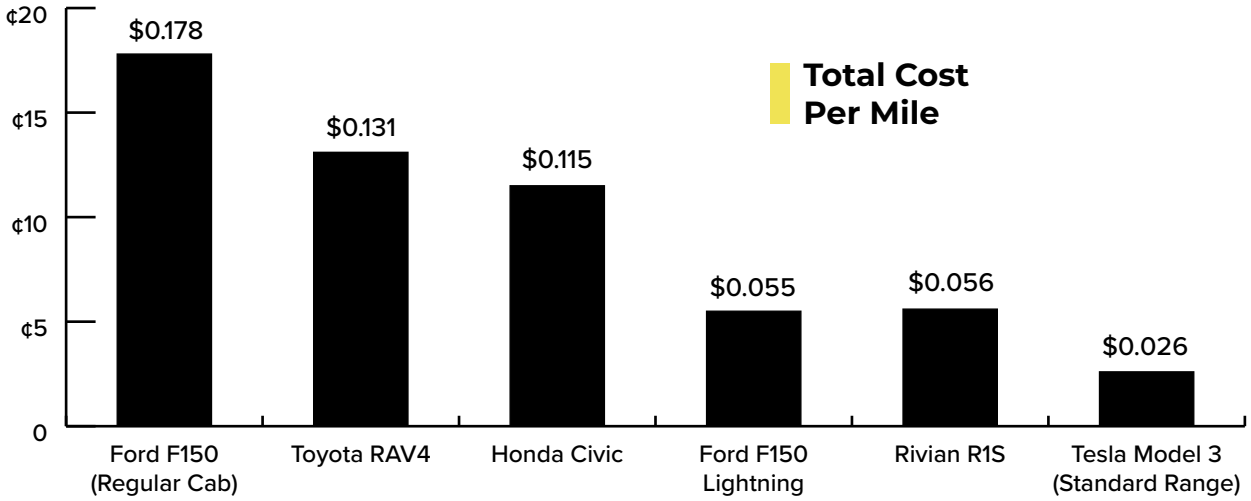
Avg. Energy Price per Kilowatt-hour of Electricity
(As of May 2022)

$0.1302



Total Fueling Cost

Total Charging Cost



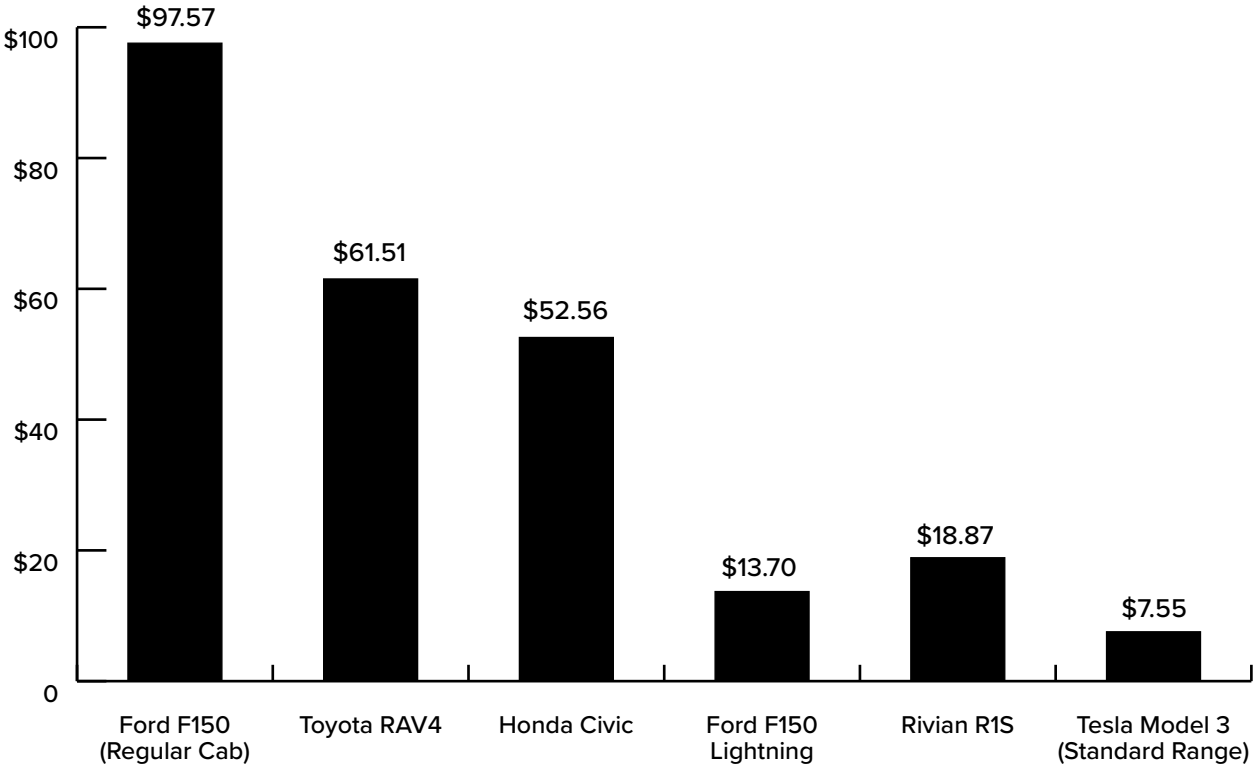
West Virginia

Avg. Energy Price per Gallon of Gasoline
(As of August 4, 2022)

$4.746

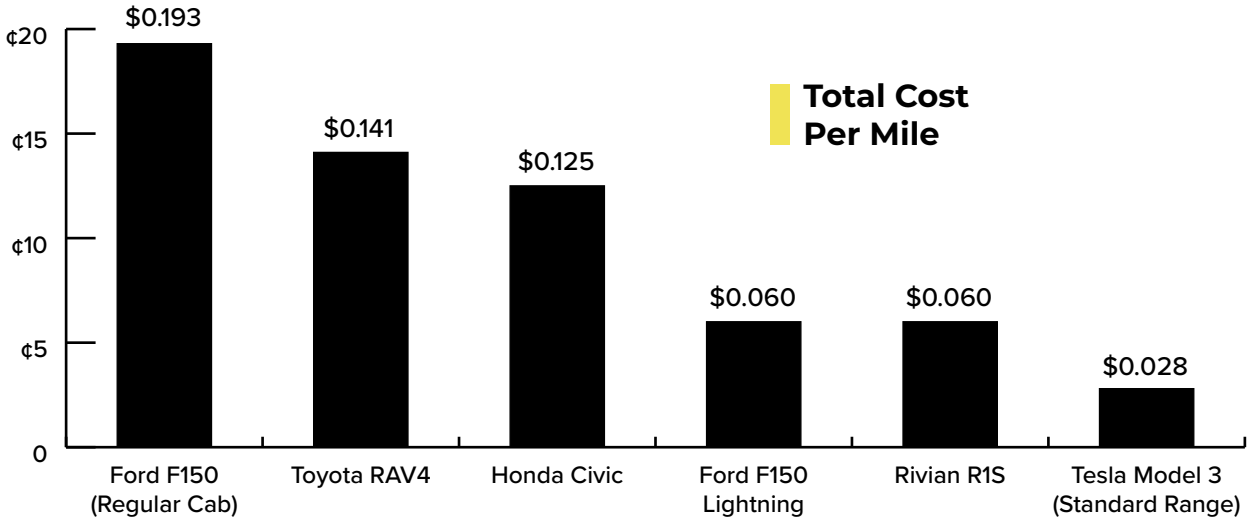
Avg. Energy Price per Kilowatt-hour of Electricity
(As of May 2022)

$0.1324



Total Fueling Cost

Total Charging Cost



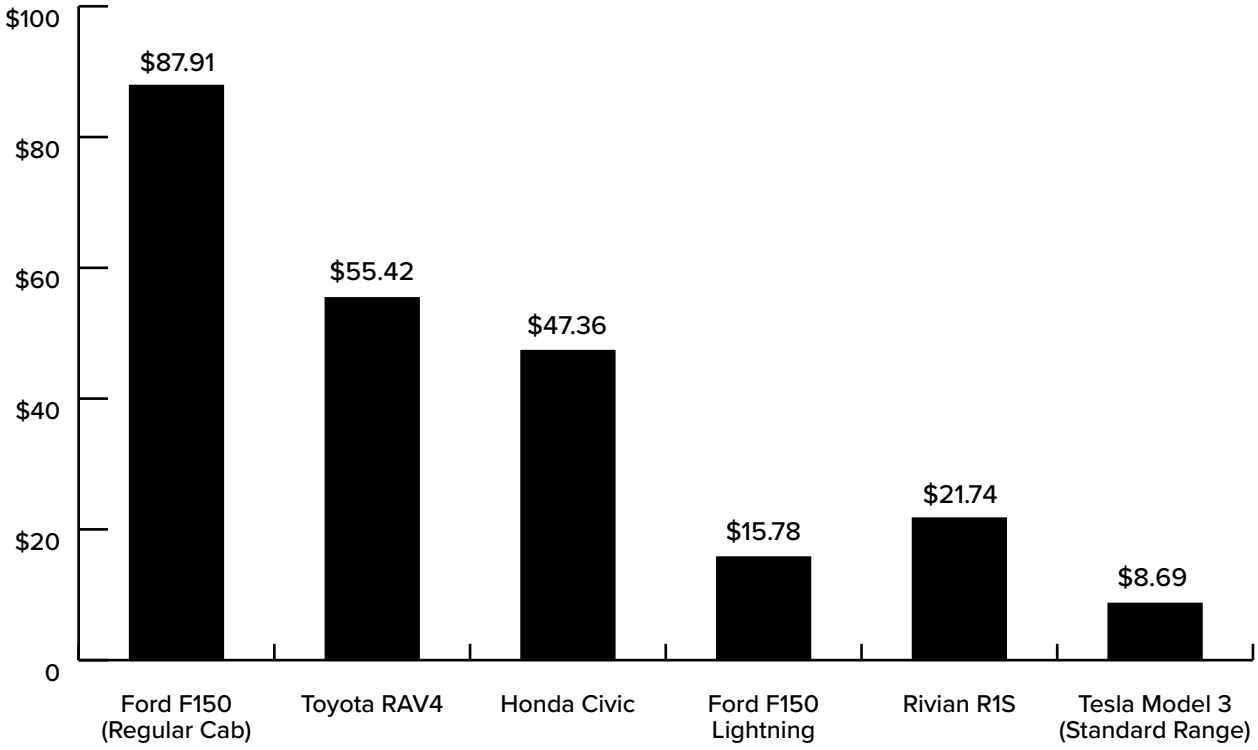
Wisconsin

Avg. Energy Price per Gallon of Gasoline
(As of August 4, 2022)

$3.822

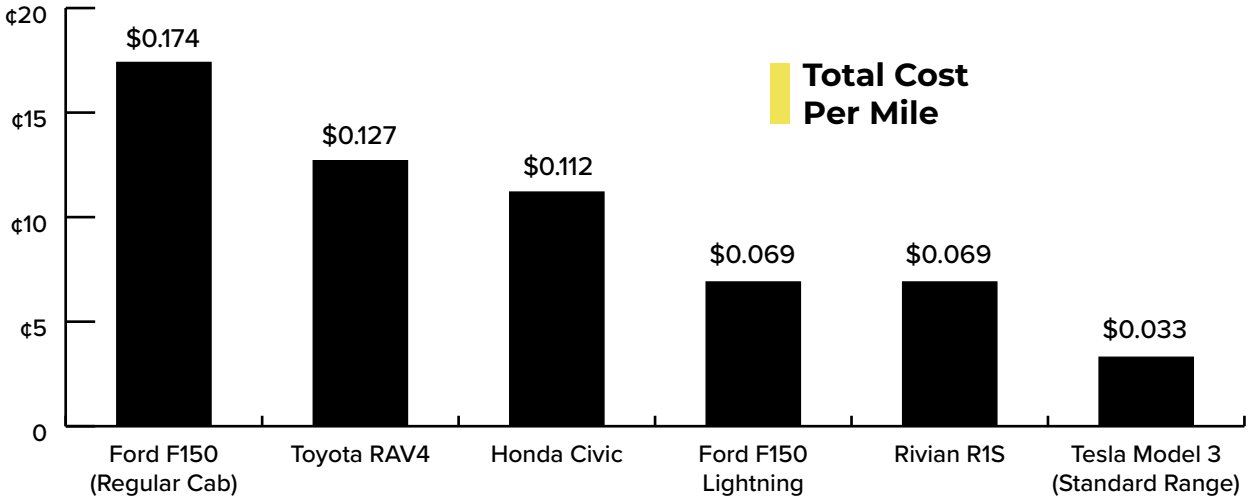
Avg. Energy Price per Kilowatt-hour of Electricity
(As of May 2022)

$0.1610



Total Fueling Cost

Total Charging Cost



Sources and Info

*Gasoline prices are based on August 2022 data, and residential end-use sector electricity prices are based on May 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 August 4, 2022: https://gasprices.aaa.com/
Electricity Prices in Residential End-Use Sector in May 2022 (most recent data available): https://www.eia.gov/electricity/monthly/
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/calc/

About ZETA

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.