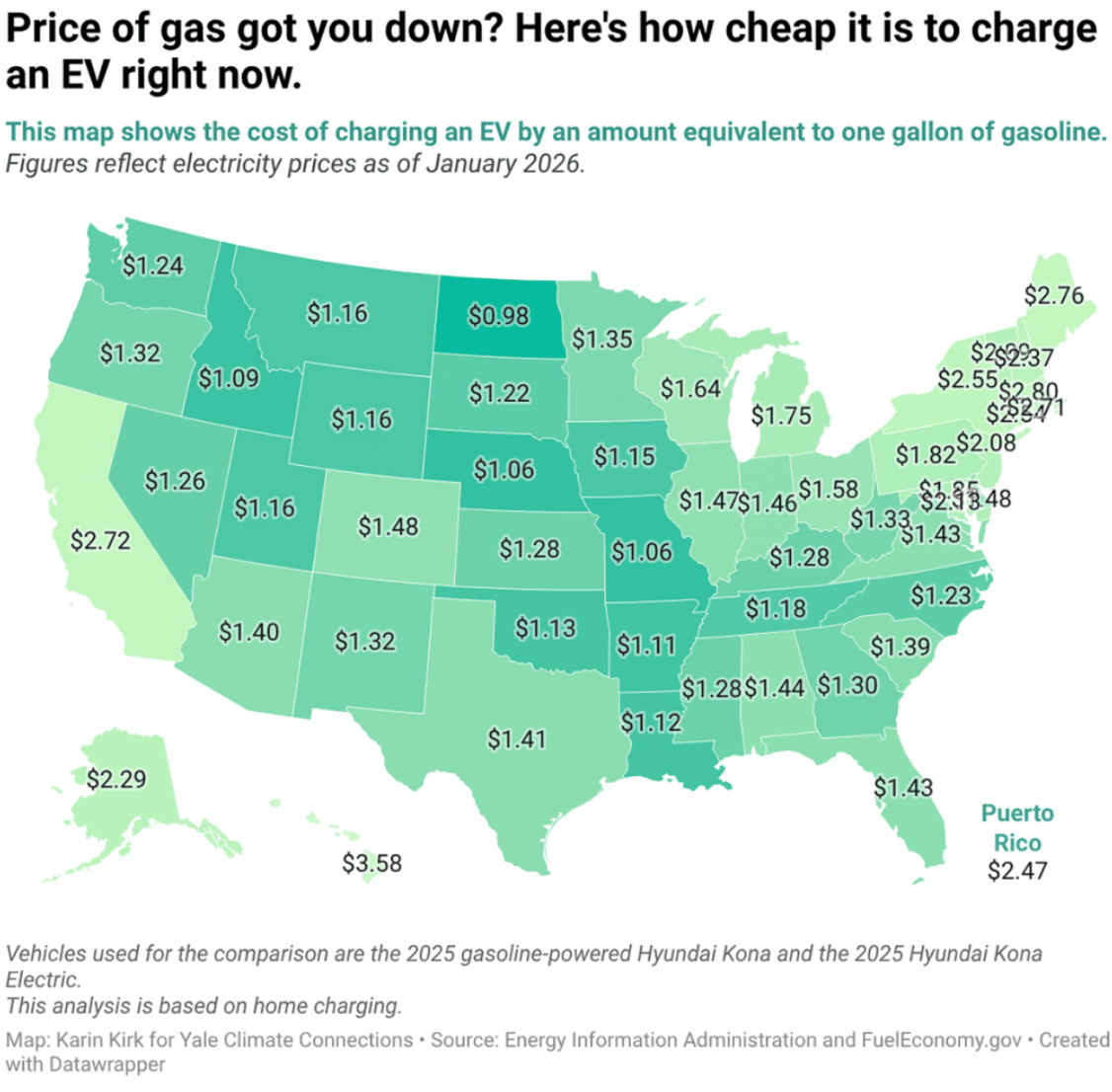
What's cheaper: Fueling your car with gas or electricity?

Karin Kirk reports:

As gas prices climb higher, the simple efficiency of an EV could become all the more appealing. In all 50 states, the cost of home-charging an EV is considerably cheaper than fueling a car with gasoline.



The map above shows the cost of charging an EV at home. The price is expressed in "eGallons," which is the cost of charging an EV by an amount equivalent to one gallon of gasoline.

EVs are super efficient

One reason EVs are a bargain to fuel is that electric drivetrains are vastly more efficient than internal combustion engines. Consider a gasoline price of $4 per gallon. In an internal combustion vehicle, around three dollars' worth of that gasoline is lost as waste heat and friction, and only one dollar's worth of the fuel actually moves the car down the road. The rest of the energy is lost in the process.

EVs are much simpler machines: A battery produces an electrical current that spins a rotor, which, in turn, spins the drive axle. EVs also recapture the energy that would otherwise be lost during braking, feeding electricity back into the battery as the vehicle slows down. All told, around 90% of the original energy used to charge a car goes toward propelling the vehicle.

Even in the worst-case scenario where an EV is charged on a coal-heavy grid, an EV is still more efficient than a gasoline-burning car. For a full explanation and illustrations, see "Electric vehicles use half the energy of gas-powered vehicles," which is likely the most cited and reused work I've ever written.

Electricity prices don't spike like oil prices

The price of charging an EV at home is based on the residential price of electricity. Electricity rates don't spike up and down like oil prices because electricity is regulated, and utilities must seek government approval to raise prices. Utilities are allowed to adjust their rates temporarily to account for variation in fuel prices, but even so, the effect is muted, resulting in a fairly stable price over time.

People can't make their own gasoline, but they can generate their own electricity

Drivers of gasoline or diesel-powered vehicles are dependent on a single energy type, which makes them vulnerable to supply disruptions. The situation can be even more painful because a commodity like oil commands a global price regardless of where it's produced.

But electricity can come from multiple sources, and utilities can shift the proportions of different energy sources in their portfolio in order to keep the price down. Electricity is cheaper when demand is low, so some utilities offer discounted rates for off-peak EV charging. Some people charge their EVs with rooftop solar panels, which offers even more protection from rising prices. **No matter how many wars are fought over fossil fuels, sunshine remains free and inexhaustible.**

New EVs cost more to purchase, but used EVs are a value

The price difference between EVs and gasoline-powered cars has been narrowing, but new EVs are still more expensive than their gasoline counterparts. The two types of vehicles are closer in price in the used car market. As of early 2026, buyers paid around $1,400 more for a used EV than for a similar gasoline vehicle. According to analysts at Recurrent, which tracks the EV market, used EVs are selling more quickly than used gasoline cars, and around 40% of used EVs are selling for less than $25,000. On average, used EVs have fewer miles and are newer than gasoline cars of the same price.

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This article was a subset of a larger Yale Climate Communications piece.