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How Much Does It Cost To Charge an Electric Car?

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- The cost to charge an electric car is supposed to be cheaper than fueling up a car, so we've broken down those average costs.
- Overall, charging an electric vehicle at home may cost less than $50 per month, compared to $130 or more per month to fuel up a gas-powered car.
- Charging at home, at night, is most likely your cheapest charging option if you want to save even more money.

We hear all the time that it's cheaper to recharge the battery on an EV than it is to fill up a gas tank. That lower charging cost is supposed to help offset the upfront costs of buying an EV, which tends to have a more expensive price tag than your typical ICE car. But is that true? How much does it truly cost to charge an electric car? Let's break it down.

How Much Does It Cost To Charge an Electric Car: Monthly Costs

There are multiple ways to look at topping up an EV battery versus fueling up a gas-powered car. First, let's see what we could expect for monthly costs, on average.

Home EV Charging: Cost Per Month

To figure out how much you'll spend with a home charging station with a basic Level 1 or a faster Level 2 charger, you'll need to calculate the amount you pay for electricity every month. As of January 2024, the average U.S. household pays 15.45 cents per kWh, according to the U.S. Energy Information Administration.

Then, you have to look at how far an EV can go for every kilowatt hour. A conservative average is 3 to 4 miles per kWh.

Divide the total miles you drive every month by 3 or 4 to get your monthly kWh use. (Americans tend to drive 12,700 miles every year, so that would mean 1,058 miles per month. Whew.) Then multiply that number by your cost per kWh.

So let's use those average numbers for everything, and we can get an average American cost to use a home charging station:

(miles driven per month / miles per kWh) x cost per kWh = monthly charging cost

(1,058 miles per month / 3.5 miles per kWh) x 16 cents per kWh = **$46.70** per month for home EV charging.

Filling a Gas Tank: Cost Per Month

Filling up a 12-gallon gas tank currently costs nearly $44, assuming an average gas price of $3.66 per gallon. If you're driving a car that gets a combined average of 30 miles per gallon, you'll get 360 miles of driving range before you hit empty.

To hit that average 1,058 miles per month, you'll need to refuel three times each month (1,058 miles divided by a 360-mile range) and spend roughly **$131.76** per month.

How Much Does It Cost To Charge an Electric Car: Cost Per Fuel-Up

Maybe you'd rather know how much you can expect to pay for just one complete recharge versus one full tank of gas.

Home EV Charging: Cost to Charge

To look at how much it might cost to recharge an EV battery from 0% to 100%, we use a slightly different formula. For this, you divide the car's range by the range per kWh. Then you multiply that by the cost per kWh.

(car's range /miles per kWh) x cost per kWh = cost to charge

So let's say your EV gets 360 miles of range, and your kWh per mile is somewhere between 3 and 4 miles, with your cost per kWh still being 16 cents:

(360 miles of range / 3.5 miles per kWh) / 16 cents per kWh = **$15.89** per full charge

Gas Stations: Cost to Fill Up

We'd use the same formula as above, but instead of kilowatt hours we're using miles per gallon and the cost of a gallon of gas.

(car's range / miles per gallon) x cost per gallon = cost to fuel up

Let's say your car gets the same 360 miles per tank of gas, with a 12-gallon tank, so you get 30 miles per gallon combined. And for the sake of simplicity, let's use that same cost of $3.66 per gallon. So to fuel up an empty tank, it would cost:

(360 miles of range / 30 miles per gallon) / $3.66 per gallon = **$43.92** to fuel up

An easier way to think of this is to just take the size of your gas tank and multiply that by the cost of gas per gallon. So to fuel up from totally empty, you'd spend:

12 gallons in a tank x $3.66 per gallon = $43.92 to fuel up

Commercial EV Charging: Cost to Charge

But hey, not everyone is going to be charging up their EVs at home – that's why more and more companies are trying to build out EV charging infrastructure. It'll probably be more expensive to use a commercial charger than to charge at home, but is it still cheaper than filling up a gas tank?

It’s tricky to know exactly how much a public EV charging network will charge per kilowatt hour. You can estimate that a public Level 2 charger will cost 20 to 25 cents per kWh, while the increasingly common Level 3 public chargers will cost 40 to 60 cents per kWh. Basically, a commercial EV charger will cost you maybe two to three times as much as using a home charging station.

We’d still use that EV formula from before, but let’s do a few pricing options for your easy reference. Let’s tackle if it costs you 20 cents, 40 cents, or 60 cents per kWh to charge at a commercial EV charger.

(car’s range / miles per kWh) x cost per kWh = cost to charge

So if we’re using the same car that gets a 360-mile range and gets 3.5 miles on a kWh:

20 cents per kWh: (360 miles of range / 3.5 miles per kWh) / 20 cents per kWh = **$20.57 per full charge**

40 cents per kWh: (360 miles of range / 3.5 miles per kWh) / 40 cents per kWh = **$41.14 per full charge**

60 cents per kWh: (360 miles of range / 3.5 miles per kWh) / 60 cents per kWh = **$61.71 per full charge**

So yeah, charging an EV from 0% to 100% on a commercial EV charger would still be cheaper than filling up a gas car ($43.92) from totally empty to full if you were paying from 20 to 40 cents at a public EV charger ($20.57 to $41.14). It definitely gets more expensive above the 40-cent threshold, but something to remember is that you most likely won’t be using only public charging stations to

charge up your EV — you'll probably be doing a mix of charging at home and charging at public stations.

You don't have that option with an ICE car — you always have to use a gas station to fill up.

Something to Consider: Fluctuating Electricity Rates

It's important to note that electricity rates vary based on factors such as location and time of day, so where you live can have a significant impact on your electric bill.

Or maybe you've bought an EV that offers free charging at DC fast chargers through a partner network — that would help out a ton when it comes to cost-savings on charging up, too.

Electric car owners also do have the option of installing a Level 2 home charger, which can cut their charging time by half but costs around $2,000 for parts and installation.

So sure, some drivers may be hesitant to consider an electric car due to concerns about access to public charging stations, or about the time it could take to charge up. But it turns out that as much as 90% of car charging is done overnight, at home — when electricity usage and costs are usually at their lowest.

Ready to Make the Switch?

If you're on the fence about the cost to charge an electric car, maybe this guide will help you out. You can also get some help from the Department of Energy's

Vehicle Cost Calculator to see your average costs of ownership. It's another handy tool to have in your pocket if you're looking to make the switch to electric.

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