

Can't charge an electric car at home? Then petrol may be cheaper

The high cost of plugging into a public charger means that for drivers without off-street parking a gas guzzler may be cheaper to run

by George Nixon, Senior Money Reporter
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No driveway? Then there may be no point in getting an electric car.

A journey could end up ten times more expensive for drivers with no charger at home. According to the energy consultant BFY Group, the 110-mile round trip from London to Brighton would cost you £2.64 if you could charge at home, but £26.40 if you used one of the rapid chargers found at motorway services or in hotel car parks. It would be £17.33 if you charged on a residential street.

The typical cost of the journey for a petrol car would be £17.45 – similar to the charge from a standard public point for an electric vehicle. But it is generally cheaper to buy a petrol car than an electric vehicle.

There are about 1.5 million electric cars in the UK, which is 4.4% of the total. The government has banned the sale of new petrol and diesel cars from 2030.

In a survey of 5,000 drivers by the energy supplier Eon Next, 59% said the cost of going electric was the biggest barrier to making the switch. Manufacturers have been discounting electric cars in an effort to shift them off their forecourts and hit the zero-emission sales targets, but they are still more expensive than petrol equivalents.

The car sales website AutoTrader said a new electric Vauxhall Corsa cost £29,485, compared with £23,795 for a petrol version. An electric Renault Zoe was £30,440, while a comparable petrol Renault Clio was £19,220.

Second-hand electric cars, especially those about three years old, are often cheaper than petrol equivalents because there is a less established second-hand market.

Manufacturers, energy suppliers and the motoring industry often argue that the initial cost of going electric is offset by much lower running costs, but that applies only to those who can charge at home. Drivers with their own charging point can get cheap electric car tariffs that cost between 6p and 10p per kilowatt hour (kWh) for overnight charging.

This would amount to about £180 a year if you always charged overnight, according to BFY's calculations, based on a price of 8p per kWh, a car that does 3.3 miles per kWh and 7,500 miles a year.

BFY said slow public roadside chargers on lampposts or bollards cost about 52.5p per kWh while fast chargers at motorway services or retail parks 80p per kWh.

According to the Public Accounts Committee in March, the Department for Transport admitted that the cost disparity between at-home and public charging was "probably the single biggest challenge to the electric vehicle transition in the UK".

Between July 2022 and March the price of petrol fell from 192p to 140p a litre, reducing the annual cost of running a petrol car from £1,627 to £1,190. BFY assumed fuel consumption of 40 miles per gallon and 7,500 miles a year.

Since March, oil prices have fallen further in response to Donald Trump's trade tariffs, and the price of unleaded petrol has dropped to 132p a litre.

The annual cost of exclusively using a slow public charger to run an EV rose from £810 to £1,181 between July 2022 and March this year, and from £1,178 to £1,800 for a fast charger. Drivers who use public chargers are likely to need some combination of the two.

The calculations were based on government petrol prices and data from charging operators and ZapMap, a company that compiles information about public charging spots.

'We can charge overnight for £3.57': if Lydia Berman couldn't charge her electric Jaguar I-Pace at home most of the time, making the switch from petrol would not have made financial sense. Berman and her husband, Russell, from Hertfordshire, swapped their old Alfa Romeo Stelvio for the Jaguar at the start of last year after working out it would save them money. A tank of petrol for the Stelvio, which Berman said was a "real gas guzzler", cost almost £80 and the car normally needed refuelling twice a week.

The Jaguar, which cost them £35,000 for a two-year-old model, will travel about 280 miles on a full charge. Their typical overnight charge costs £3.57 when they can do it at home – so they spent only £28 for the whole of last month. But Berman, 46, who owns the Creative Stripes marketing agency, said it "costs a small fortune" when she has to use public charging.

One of her clients is based in Dorset, while she sometimes has to stay overnight in hotels for events and conferences. Using public chargers on the return journey to Dorset can cost her £80 or £90 a time, she said.

Fast chargers can cost about 80p per kWh, more than ten times as much as the 6.5p per kWh she pays at home. "There's the charging cost and then also whatever you have to pay on top when you're sitting in a café for half an hour or so while it's charging," she said. "If you're driving there and back to Dorset it adds a chunk. "If we couldn't charge it at home and rely on cheap electricity, we probably wouldn't have gone electric."

Plugging a car straight into the mains of a home is slow and potentially dangerous, so many owners install a home charger at a cost of £800 to £1,200, according to the motoring organisation, the RAC. Some people can get a £350 grant from the government towards the cost of installing a charger, for example if they rent and have access to off-street parking. However, many who live in flats will not be able to install a charger without permission from the freeholder, or the landlord if they are a tenant.

'Logistically, going electric doesn't make sense': Jess and Sam Beaumont are in their early thirties and keen to go electric. The couple, who live in Blackheath in southeast London, mainly use their 2014 Nissan Note for short journeys, such as supermarket trips, visits to friends or taking their one-year-old to visit grandparents on the other side of London.

But their plans to go green have been hindered by the type of property they live in and a lack of chargers. The couple live in a maisonette with no driveway and have a permit to park on the surrounding streets, but to install a home charger outside would need the permission of the land's freeholder (the local council). The alternative would be to use a charger in a nearby public car park, or in a retail park, both of which would cost far more than charging at home.

Jess, who works in communications, said: "Relying on public chargers just is not convenient when you've got to think about parking with a baby in tow. From a logistics perspective it doesn't make sense."

About 9.6 million households in the UK, equal to 35%, do not have off-street parking, according to the RAC Foundation, a pro-motoring think tank. In London this rises to 56%.

Ian Barker from BFY said: “With almost 40% of households lacking off-street parking, and public charging often ten times more expensive, more needs to be done before electric vehicles are a realistic option for all. That means smarter policy, fairer pricing, and an inclusive charging network.”

What can be done? The higher cost of public charging has been attributed to operators needing to recoup the cost of installing chargers, with a profit on top, and a higher rate of VAT applied to public charging (20%) compared with domestic electricity (5%). There have been calls for VAT on public charging to match rates on domestic electricity to cut costs and encourage more drivers to go electric.

In Eon Next’s poll, 28% said the lack of public charging infrastructure was a barrier to going electric, and the same percentage cited range anxiety – the worry of running out of battery on long journeys. It is likely that the availability of public charging would improve and prices would drop if more people had electric cars, because operators would have more guaranteed customers.

While the numbers are steadily improving – there were 76,507 public chargers in April, up 28% on the year before and on track to meet the Department for Transport’s target of 300,000 by 2030 – there are big disparities between UK regions.

The nationwide average is 113 public chargers per 100,000 people. There are 66 per 100,000 in Yorkshire and the Humber, and 35 per 100,000 in Northern Ireland.