

The Electric Vehicle
Ecosystem Report

September 2022

Foreword



The UK's great decarbonisation transition is well underway. Over the past half decade, the market for battery electric vehicles (BEVs) has thrived, thanks to generous government schemes, investment

in infrastructure, and a greater awareness of the environmental and long-term financial benefits on offer.

BEVs now make up 14% of all new car registrations each month, rising to one in three¹ when including hybrids. But BEVs or hybrids still only represent around 3%² of all vehicles on UK roads, and there is a long way to go until we reach anything resembling a critical mass.

At Novuna Vehicle Solutions we operate a fleet of over 98,000 vehicles. As a leading advocate for zero emission vehicles, we've already electrified 35% of our total car fleet and we have a clear commitment to electrify 100% of our car and small van fleet (3.5 tonnes and under) and 50% of our funded van fleet (vehicles over 3.5 tonnes) by 2030.

Our partnership with sustainable energy business GRIDSERVE, a company we have invested in, is also helping us fulfil these decarbonisation objectives. Responsible for the UK's first Electric Forecourt®, GRIDSERVE's pioneering 'sun to wheel' model is already successfully charging over 100,000 electric vehicles every month and GRIDSERVE is at the forefront of tackling the infrastructure challenges we cover in this report.

Today, we are seeing the pace of EV adoption accelerate at breathless speed, but if we hope to see this happen at the pace required for new petrol and diesel vehicle sales to be phased out by 2030, we must carefully consider the needs of the everyday motorist, and take proactive steps to ensure they are met by supporting the wider ecosystem for electric mobility adoption.

These needs are complex, and often nuanced, which is why we have launched this new piece of research, the Novuna Electric Vehicle Ecosystem (EVE) Report, to help understand how the transition, and the infrastructure that will support it, is likely to unfold in the immediate future.

The EVE report focuses on three core dimensions of the EV landscape: the current state of the nation's EV infrastructure, and how well it is serving UK drivers; the experience of EV early adopters, when driving, charging, and owning their cars; and the future intentions of petrol and diesel drivers, when they are likely to switch, and what is currently stopping them doing so.

The insights in these pages are derived from public data, proprietary data, and from interviews with 2,000 drivers across the UK, including 574 BEV drivers, 344 drivers of plug-in hybrids (PHEVs), (referenced together as EV drivers within this report) and over 1,000 drivers of vehicles with internal combustion engines (ICE drivers), including mild hybrids.

For industry insiders it is no secret that a lack of charging points, especially the 'rapid and ultra-rapid' variety, coupled with the lack of interoperability and reliability from the larger chargepoint operators is shackling the energy transition, and this is a view wholeheartedly shared by motorists. Over three quarters (76%) of EV drivers believe the UK's charging infrastructure is not fit for purpose with an average of 15 electric vehicles vying for every public chargepoint.

The Government's plan to install 300,000 chargepoints by 2030 is an ambitious, yet necessary goal, but with just 32,000 chargers in the ground today, this target is some way off. It has taken ten years to install the first 32,000 public charging devices – we must now build the same number in a single year – and then repeat that feat every year until the end of the decade. Whilst the private sector can make up some of the shortfall, the Government, including local and combined authorities, should be tackling this issue head on.

When we look at the lived experience of the half million EV drivers on UK roads today, their reports are overwhelmingly positive. This is cause for celebration, and I hope will encourage millions more to make the transition, but we must also listen closely to their stories so we can make improvements for the next generation.

I hope you enjoy reading the report, and I am confident you will take something away from it.

Jonny Berry
Head of Decarbonisation,
Novuna Vehicle Solutions

¹ <https://www.smm.co.uk/vehicle-data/car-registrations/>

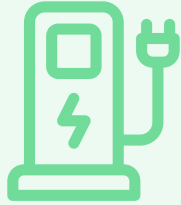
² <https://heycar.co.uk/blog/electric-cars-statistics-and-projections>

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Key findings

1



To meet the Government's milestone target of 300,000 chargepoints by 2030 will require installing **30,000** devices every single year for the next seven years, a tenfold growth in the total number put in the ground in the past decade.

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Five in six (85%) drivers of EVs say they would make their home charger available to the public if they could charge fellow motorists to use it.



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Off-street parking is such an important factor for EV and PHEV drivers, that **two thirds (68%)** say they would never buy or live in a house without these facilities ever again.

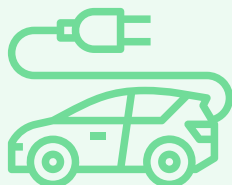
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London is the best place to charge in the UK with just 5 EVs chasing each available public chargepoint in the Capital (**5:1**) compared to the South West at the other end of the scale (**32:1**).



4

5



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Younger generations are most compelled by the credentials of EVs. **Four in five (79%)** 18-34 year olds expect that their next car will be an EV, while **two thirds (64%)** of 35-54 year olds agree. The over 55s are most resistant to change, with only **a third (34%)** committing to the prospect of an EV being their next vehicle.

State of the nation

32,011

Chargepoints in the UK, of which 5,974 are rapid chargers.

441,167

Electric cars driving on UK roads today. 36 times more than the 12,364 in 2015, and rising fast.

15:1

The ratio of electric cars to charging points in the UK.

In London this is 5:1

In the South West 32:1

80:1

The ratio of electric cars to rapid chargepoints in the UK.

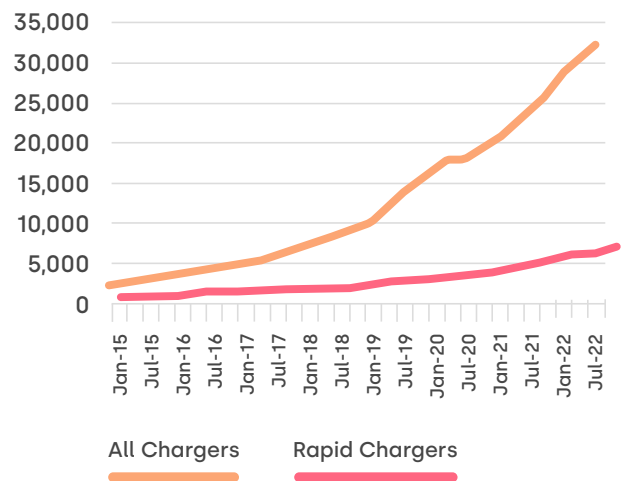
That's 1.25 rapid chargers for every 100 drivers.

EV drivers in the UK today rely on a network of over 32,011 public chargepoints. This is 14 times the number (2,283) that were available back in 2015, when EV ownership began to take off.

Barring a brief hiatus in 2020, the pace of chargepoint installation has increased year on year, and continues to do so. Indeed, more than a third of all the chargers in the UK were installed since 2021, with 7,637 going live in the past year alone.

The number of rapid chargers, 25kW or above and capable of fully charging a car in around an hour, has increased even more swiftly. There are now 5,974 available to EV drivers in a hurry, which is more than 30 times the number available in 2015.

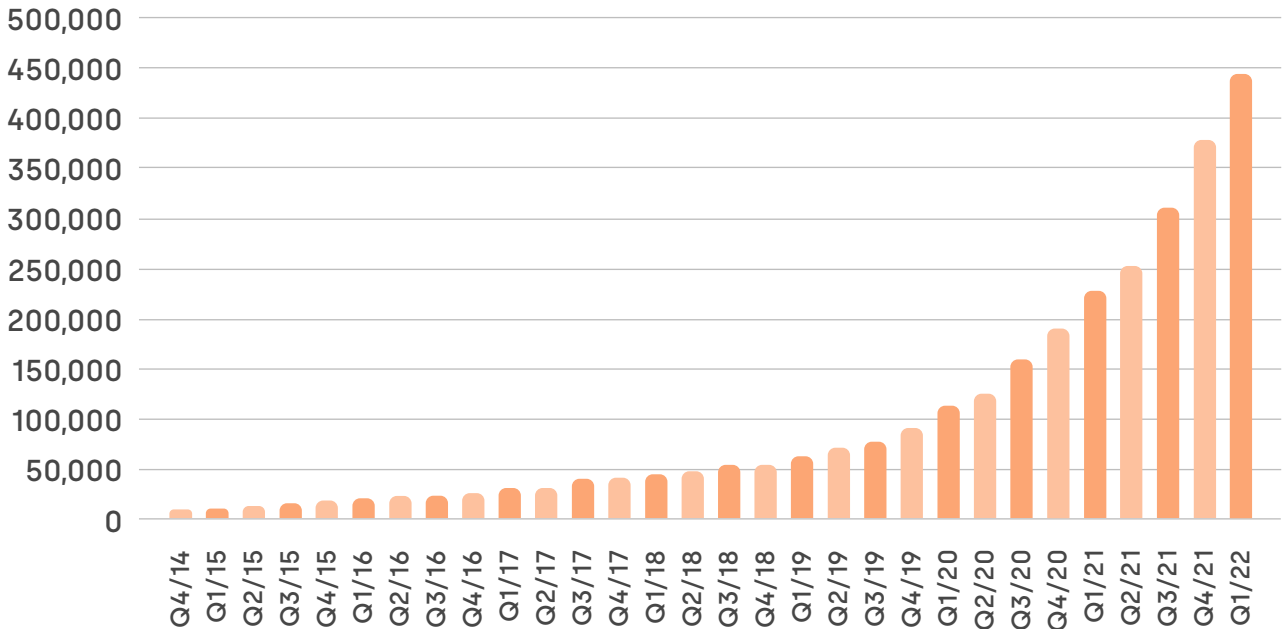
Total EV chargepoints 2015 - 2022



Source: ZapMap



Electric Cars in the UK



Source: Department for Transport

The total number of electric cars in the UK has also risen dramatically over the past seven years. At the start of 2022, there were 441,167 fully electric cars on UK roads, as well as a further 45,354 buses, coaches, light & heavy goods vehicles, and electric motorcycles. Altogether, there are now four times more EVs in the UK than there were just two years ago in 2020. While this growth has been fast, it still represents just 3% of all vehicles currently licenced in the UK.

While the number of EVs, and the number of EV chargepoints, have both increased dramatically in recent years, demand for chargers is rising far faster than supply.

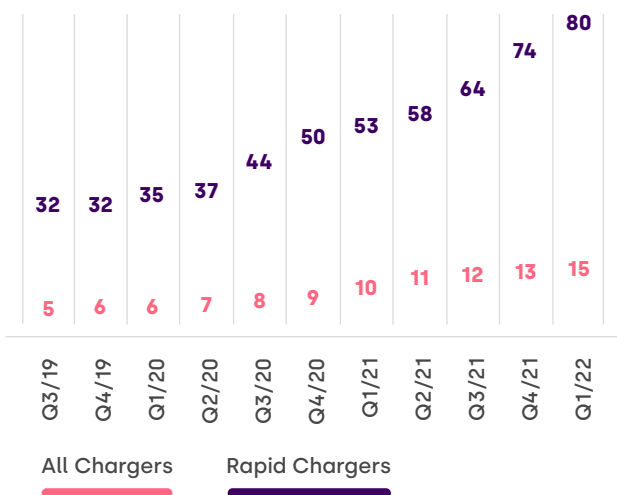
For every public charging point in the UK, there are 15 electric cars vying for its use. This 15:1 ratio may not seem like a lot, but it has tripled from 5:1 since 2019, and EV drivers are reporting an increase in queueing.

The government hopes to have 300,000 public chargepoints in the ground by 2030. But even if we manage to hit this goal, this ratio would grow to 54:1 if just half of the population are driving a BEV by that time.

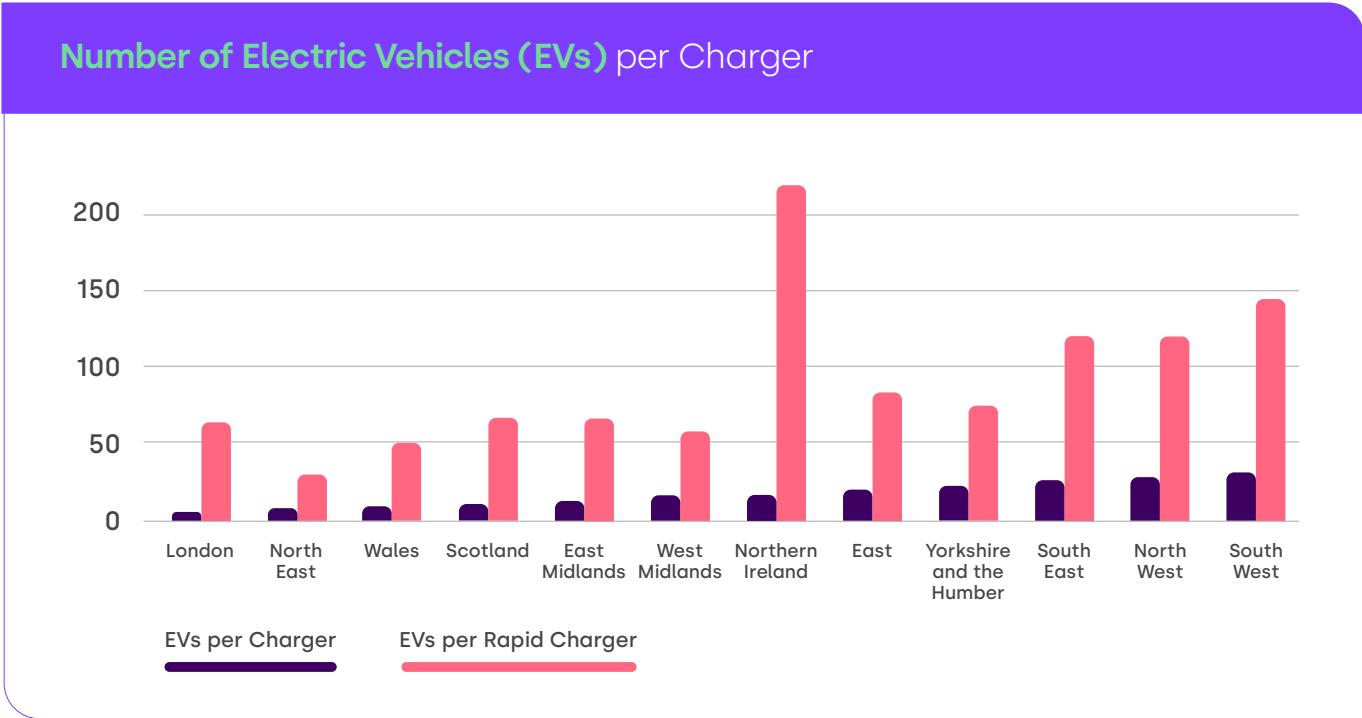
Demand is also outstripping supply for the highly sought after rapid devices, which can fully charge a car in about an hour. There are 80 cars now chasing every speedy device, a marked increase on the 32:1 ratio seen in 2019.

In other words, there are seven chargers, or 1.25 rapid chargers, for every 100 electric cars in the UK, and as we will cover in the pages to come, this is already causing concerns.

Number of electric cars per public charger



Source: Department for Transport



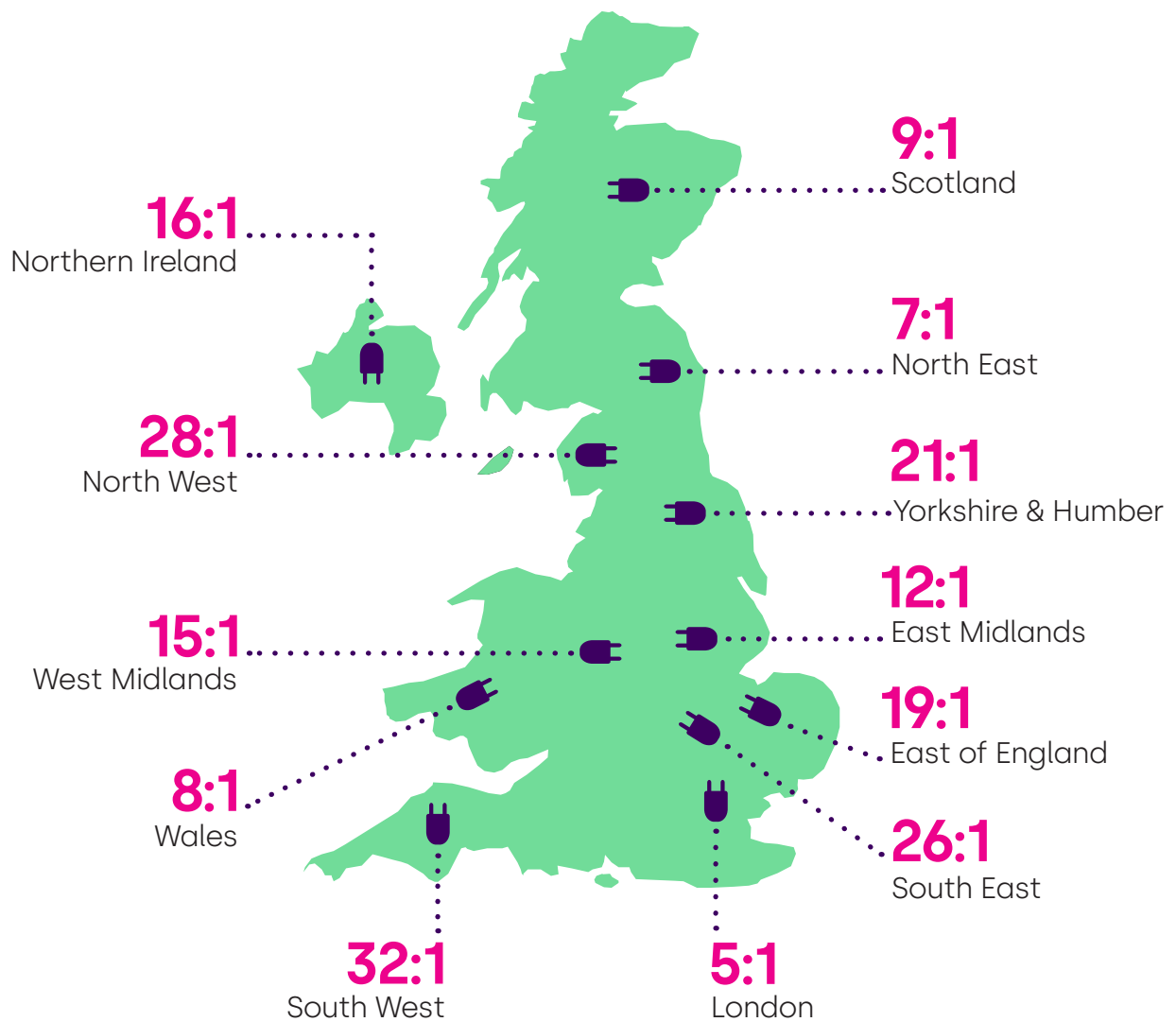
Source: Department for Transport

The region with the greatest EV to charger ratio is the South West, with 68,000 electric cars relying on just 2,091 public chargepoints (32:1). It also has the second worst availability of rapid chargers, with just 469 devices available to the public at a ratio of 145:1, with only drivers in Northern Ireland fairing worse (220:1).

London takes the prize for the best place to charge your vehicle using public infrastructure, with just five electric cars chasing each device, or 21 charging spots for every 100 EVs. You'll have to be patient though. London might be the best place to stumble upon a charger, but it is far from the best if you're in a hurry. With just 736 rapid chargers currently active in the capital, and just four in the congested City of London, there are on average 64 EVs chasing every rapid device.



Number of Electric Vehicles (EVs) per Charger (cont)



Source: Department for Transport

Local Authorities with the **best ratio of EVs to chargers**

2:1

Waltham Forest, Wandsworth, Southwark, Hackney,
Na h-Eileanan Siar, Coventry

3:1

Kensington and Chelsea, Brighton and Hove, Lambeth, Hounslow, Islington,
Newham, Gwynedd, Greenwich, Argyll and Bute, Westminster, Isle of
Anglesey, Inner London, Boston, Brent

4:1

Richmond upon Thames, Highland, Lincoln, Dumfries and Galloway,
Eden, Blaenau Gwent, Nottingham, Pembrokeshire, East Lothian, Merton,
Sunderland, Fermanagh and Omagh, Carlisle, Hammersmith and Fulham

Rapid charger '**deserts**' (July 2022)

All but three of the UK's Local Authorities now contain at least one rapid charger, powerful enough to charge an electric car in around an hour. The three that have yet to install one are:

- Ards and North Down, population 162,100, in Northern Ireland;
- Harlow, population 93,300, in the west of Essex, and;
- The Isles of Scilly, population 2,100, an archipelago off the Cornish coast.

Source: Department for Transport



Lessons from EV's early adopters

Around half a million people in the UK regularly drive an electric vehicle, and almost half of these early adopters of the technology rely on public charging infrastructure to power their vehicles several times a month. In our mission to find out just how fit for purpose this public infrastructure is, we asked more than 900 of them, and their plug-in-hybrid (PHEV) cousins, for their views on what's working, what's not, and what they'd like to see happen next.

In this chapter we'll explore whether EV drivers can find a charger when they need one; what determines where, when and how often they charge; and what really grinds their gears when they pull into a charging station. We also explore how EV ownership makes them feel, how it affects their lives, and whether they would ever go back to a gas guzzler.

Home chargepoints are more than just a nice-to-have

Buying an EV is one thing, charging it is quite another, especially if you're among the third of owners without the means to charge at home due to laws prohibiting obstructions to public footpaths. Two thirds (68%) of EV drivers have access to a private driveway or garage, while a further 14% use communal off-street parking, leaving one in six (17%) with little choice but to park on the street, where they must rely on public access plugs for most, if not all, of their charging.

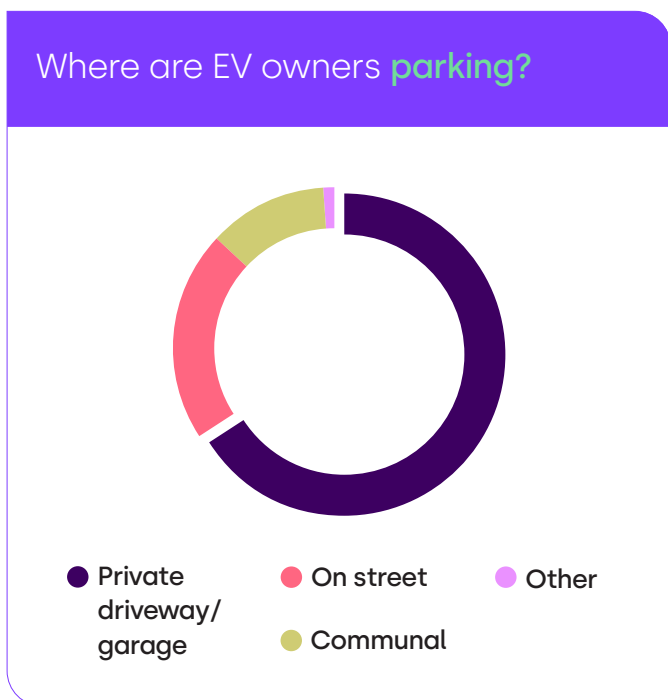


For those lucky enough to have a driveway, the advantages of home charging are clear. It's more convenient for one, and usually cheaper too, which is why the seven in ten (70%) drivers that do have a private charger installed in their home will do around three quarters (78%) of their charging with it.

This privileged cohort have limited need of public infrastructure, and will only tend to use it when travelling far from home, or taking advantage of a free boost in supermarkets, hotels, or for a third (32%) of EV drivers, at work. Of the EV drivers we spoke to, more than two thirds (69%) said they will only use a public charger if they find themselves a long way from home.

In fact, off-street parking is such an important factor for BEV and PHEV drivers, that two thirds (68%) say they would never buy or live in a house without these facilities ever again. It's not hard to see a potential link emerging between the adequacy of public charging infrastructure and the value of properties without off road parking.

Altogether, around half (47%) of EV drivers will regularly make use of public infrastructure to charge their car's battery. This is much higher in some parts of the UK, such as Northern Ireland (62%), the North West (56%), and North East (54%). Incidentally, Northern Ireland is the region with the lowest provision of rapid chargers per 100 EVs, and the North West is the region with the second lowest provision of standard chargers per 100 EVs, suggesting that some of the communities with the greatest need for public charging, are those facing the greatest competition to access it.



The 'range anxiety' myth

A lot of noise is made about 'range anxiety', the fear that electric vehicles are incapable of travelling great distances without stopping for charge, but this obsession with range is outdated. Most BEVs rolling off production lines today can travel more than 250 miles on a single charge, with many now exceeding 300, meaning running out of charge is a relatively rare occurrence.

That's not to say it never happens. A third (38%) of BEV drivers admit that their battery has run flat at least once while on the road, and a further third (32%) say they have come nail-bitingly close. However, this appears to be an issue of poor planning, and inadequate infrastructure, rather than vehicle limitation, as suggested by the vastly different experiences of people in different generations and geographies.

Older generations for example seem to be channelling their life experience into planning their journeys better, with just one in ten (10%) people aged over 55 saying they've been caught out, compared to a third (32%) of those aged between 35 and 54 and half (50%) of those aged 18 to 34.

Londoners also seem to be far more likely to end up stranded than people in the rest of the country. Half (53%) of the capital's BEV drivers say they have run out of power at some point in time, despite there being more than 10,000 public access chargers dotted around the city.

The problem, therefore, is not so much one of 'range anxiety', but of 'charger anxiety', the fear of seeing the low-battery low warning light when miles from a suitable, speedy, and readily available, charging device. To mitigate this risk, around two thirds (65%) of BEV drivers will always leave their house with a full charge if they can, although this is of course not a luxury available to the 30% of drivers without a home charger. Perhaps unsurprisingly, close to half (45%) of BEV drivers admit that not charging their car is the source of an occasional family dispute.

In many respects this fear is also misplaced. There are 32,000 public chargepoints in the UK, including 6,000 rapid devices, and there are no true 'charger deserts' left in the country. But coverage and quality are two different things, and with ballooning EV sales increasing competition for existing infrastructure, most early adopters of the technology do wish things were better.



The number one wish: Upgrade public charging infrastructure

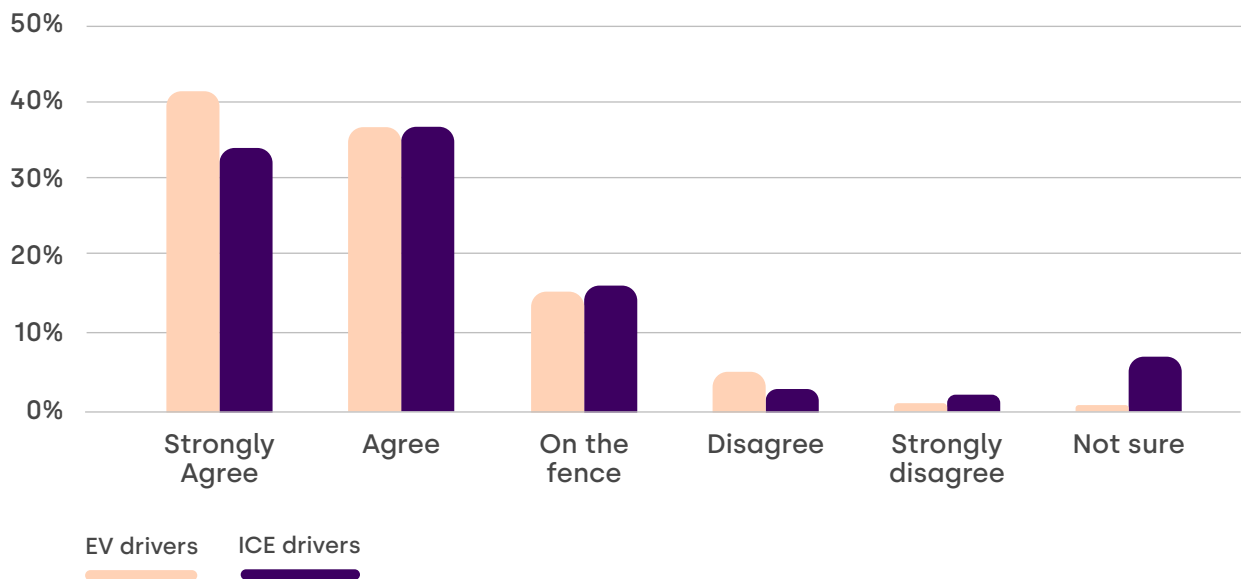
Over three quarters (76%) of EV drivers believe the UK's charging infrastructure is not fit for purpose, and if that wasn't enough of a wakeup call, three quarters (75%) of these early adopters believe there simply aren't enough public chargepoints out there. It's not just EV drivers calling for more chargers, most (71%) ICE drivers are also calling for installations to ramp up across the UK, as they come to terms with the prospect of making the switch themselves.

In March this year, the government released its Electric Vehicle Infrastructure Strategy, outlining plans to install 300,000 chargepoints by 2030 supported by funding worth £1.6 billion. This tenfold growth in the country's public charging provision will require installing 30,000 chargepoints every year for the next seven years, the same number that have been put in the ground in the past decade.

When asked whose job it is to dramatically ramp up the installation of public chargers, the overwhelming majority point their finger at the public sector to provide the level of transformation required. Four in five (81%) EV drivers think the government should be doing more to support the rollout of rapid chargers in the UK, while a similar number (79%) believe that their local authority should be rolling up its sleeves. Once again, ICE drivers agree (71% and 68% respectively).

So far, this is not happening. In April this year, Novuna submitted a freedom of information request to the UK's nine Metro Mayors asking how they were spending the £250m annual budget for infrastructure development granted to them by central government. The investigation revealed that just four of the nine combined authorities installed new chargepoints in 2021, and only two installed any for public use. Altogether, a total of 98 were installed across the nine jurisdictions, of which only 42 were explicitly made available for public use. That's a drop in the ocean compared to the 7,600 delivered by the private sector over the same period.

The Government should do more to support the rollout of rapid chargers



EV chargepoints installed in each Metro Mayor City Region in 2021

City Region	Metro Mayor	Chargepoints installed			Capital Investment Fund available (annual)
		Total	Public	Private	
West of England	Dan Norris	43	29	14	£30,000,000
West Yorkshire (Leeds)	Tracy Brabin	29	0	29	£38,000,000
Greater Manchester	Andy Burnham	13	13	0	£30,000,000
Liverpool City Region	Steve Rotheram	13	0	13	£30,000,000
Tees Valley	Ben Houchen	0	0	0	£15,000,000
West Midlands	Andy Street	0	0	0	£36,666,667
Cambridgeshire and Peterborough	Nik Johnson	0	0	0	£20,000,000
North of Tyne	Jamie Driscoll	undisclosed			£20,000,000
Sheffield/South Yorkshire	Dan Jarvis	undisclosed			£30,000,000
Total		98	42	56	£249,666,667

Source: Responses received following freedom of information requests submitted by Novuna to the offices of the UK's nine Metro Mayors in April 2022

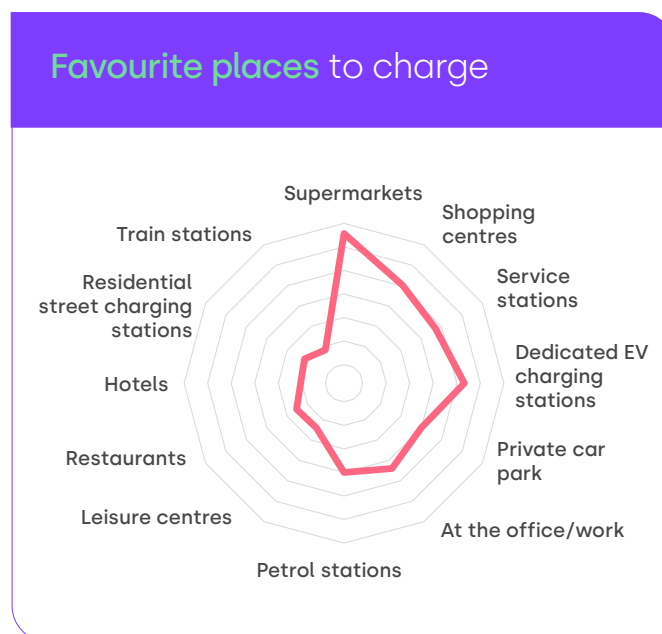
What EV drivers really want from public chargepoints

For those that do rely on public infrastructure, proximity is key, and in this respect most EV drivers' needs are met reasonably well. On average, EV owners will travel around 8 minutes to reach the nearest chargepoint, and almost half (45%) can get to one in under 5 minutes. Unfortunately, a minority do struggle, with one in ten (11%) having a journey of over 20 minutes to reach their closest charger.

Beyond distance to the nearest charger; speed, reliability and familiarity are top of the list of priorities when it comes to finding and using a public chargepoint. The number one consideration is whether the chargepoint offers a reasonable price per kWh, which is a top concern for a third of EV drivers (36%). This is followed by the ability to access a rapid charger (33%), which ranks just above both instant access and reliability, which are cited as a top concern by a quarter (28%) of drivers. These criteria are seemingly most fulfilled at supermarkets, shopping centres and at service stations, with drivers listing these as their top places to go.

Plenty of drivers take further steps to avoid disappointment. Three in five (60%) say they are willing to drive a few miles further for a faster charger, whilst a similar proportion (61%) would do the extra miles to use

a chargepoint operator they are familiar with, so as not to mess around with new apps, sign-ups and payment terms. With so many public charger providers out there, ease of using charging points, and upfront costs of signing up to new suppliers, was a frustration aired by many of the EV drivers we spoke to.





What's really grinding drivers' gears

EV drivers can encounter all sorts of bugbears when charging their vehicle in public, and while these frustrations aren't enough to drive them back to their gas guzzler (just 9% said they might return to petrol or diesel for their next car) it does highlight some issues that the government and the public charging sector needs to address urgently. Just 1 in 20 (5%) BEV drivers say using public chargers is invariably stress free.

The top three frustrations cited by BEV drivers today are: turning up to find chargers are out of order (28%), having to queue for a charger (25%), and plug-in hybrid (PHEV) drivers hogging the limited chargers (23%) available.

When it comes to queuing, one in five (20%) are fortunate enough to live in such a well-served area that they rarely (16%) or never (4%) have to queue. Nevertheless, almost a third (31%) of all BEV and PHEV drivers say they frequently have to queue for a charger, while a further third (34%) say they occasionally have to. A small but significant minority (16%) say they seem to find all available chargers already in use, every single time they try to charge.

It's no surprise therefore to hear that a quarter of BEV drivers see red when a hybrid, which can use petrol or diesel as well as electricity, is parked in the EV charging bay. The vast majority (71%) of BEV drivers think fully electric cars should have priority over plug in hybrid vehicles, and would presumably love to see this enforced. It's not as radical suggestion as it might seem, given even most (59%) PHEV drivers agree.

Fast is not fast enough

Half (50%) of all public charging, and a similar amount (52%) of all home charging, is done by fast chargers (typically 7kW via domestic wallboxes or 22kW via public charging points). Consequently, the average BEV battery can fully recharge in under eight hours at home³. Compare that to rapid and ultra-rapid chargers (over 50kW), which can do the same often in less than an hour, and it's clear to see which is going to be more useful for someone charging up at the supermarket, or at a service station on the long drive to the in-laws.

Indeed finding a rapid charger is such a priority, that three in five (61%) EV drivers say they will drive a few miles further to use a rapid charger if an app such as ZapMap shows one as available and within range, however, that can be easier said than done.

There are just 6,000 rapid chargers dotted around the UK that the public are able to use, meaning there are currently 80 EVs competing for every rapid charger. Of course, this is a national average, and EV drivers in some regions will face much stiffer competition than this. But wherever in the country you are, the unavoidable truth is that there simply aren't enough rapid chargers to go around. This is where the industry needs to focus, and it's vital that most of the 270,000 new devices being installed by 2030 are fast enough to be futureproof. It bears repeating that four in five (81%) EV drivers believe the government should be doing more to support the rollout of rapid chargers, a view shared by ICE drivers, indicating just how united the country is on this matter.

³ <https://www.britishtgas.co.uk/smart-home/hive-ev-charging.html>

What to do while waiting for a charge

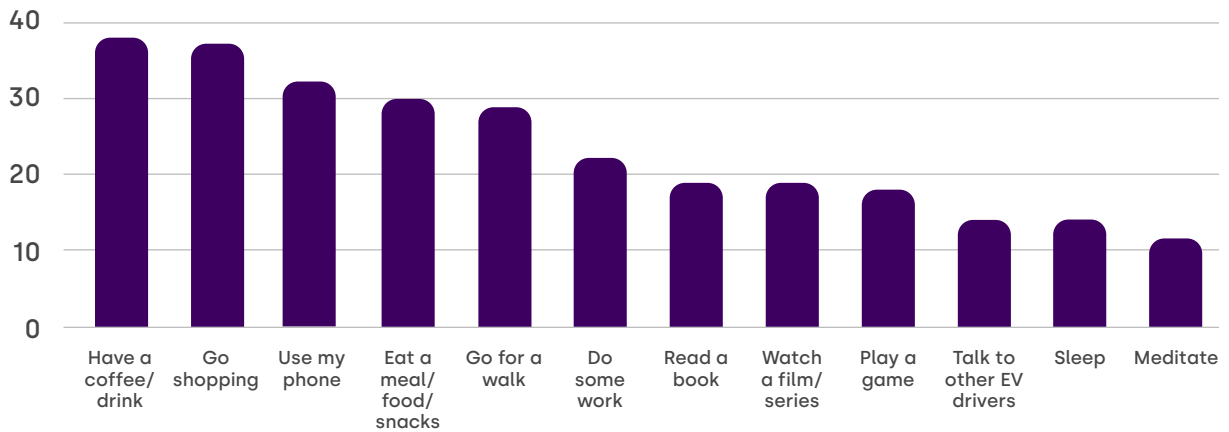
Charging up on the move is a reality that almost every driver in the UK is going to have to get used to at some point or another. So what exactly are people that already have an EV doing while giving their battery a boost via a public chargepoint?

The majority see this time as an opportunity. Seven in 10 (71%) BEV and PHEV owners will try to use the time productively, and just 1% say they never do anything useful. Top of the list of activities is going for a coffee or drink (38%), closely followed by going shopping (37%), or using their phone (32%). Other popular activities include chatting to other EV drivers (14%) or engaging in meditation or mindfulness exercises (11%).

Habits differ among age groups, however, and drivers over 55 are much more likely to go for a walk than their younger counterparts (47% vs. 28%) who are more commonly found either on their phone (35%), watching a film or TV series (19%), or getting some work done (22%).



What to do while waiting for a charge



Transition journey from ICE to EVs

The decision to purchase a new vehicle is rarely taken lightly and the indecision is only heightened when purchasing an EV, as for most it still feels like a leap into the unknown. But something has happened in the past few years. Whether it's the Tesla effect, or the Greta effect, or the simple appeal of a full charge costing less than a tenner, demand for EVs is here, and here to stay.

The next five years are going to be nothing short of revolutionary for the motor industry, with three in five (59%) ICE drivers saying their next car is likely to be an EV, and 25% being all but certain, there is ample room for optimism. Charger anxiety aside, there is much to look forward to, but where will the next wave of EV drivers come from, and what will they do to the dynamic of this rapidly growing community?

In this chapter, we examine the main factors influencing motorists' decisions to adopt an EV, what drove current EV drivers to make the switch, what's motivating ICE drivers to consider it, and what are the biggest hurdles standing in their way.

The motivations of an early adopter

First, let's look at those who have already purchased an EV and have been able to take advantage of generous incentives to make the switch, with over half of plug-in cars registered to businesses rather than people⁴. On a long list of reasons why EV drivers were so keen to make the transition, there were two standouts held in equal measure. Almost half (48%) of EV drivers say they were attracted to the long-term fuel savings, while exactly the same proportion said the environmental case was what swayed them.



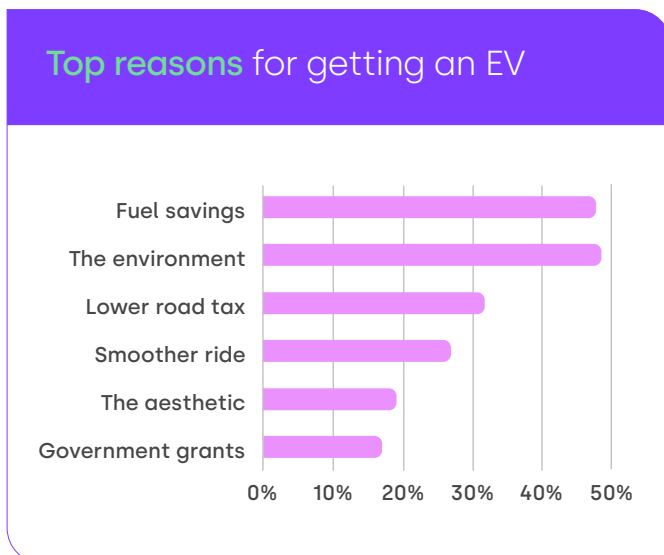
The ability to take advantage of lower road tax (32%), the smooth driving experience (27%) and a desire to make the most of government grants (17%) were all also frequently cited additional motivations for people making the switch.

It would be remiss however not to mention the concerns that EV drivers had before they took the plunge, particularly as many of these are shared by ICE drivers. The top worries, in order of commonality, were the expected battery range of their vehicle (36%), the availability of chargepoints (30%), and the upfront cost (28%) of acquiring the car in the first place. There were also some more intangible concerns. Roughly one in 10 (13%) say they were sad to be losing the sound and feel of an internal combustion engine, another one in 10 (11%) say they were concerned they would struggle to sell it, and a similar number (11%) admit they were worried what their family and friends would think about their new purchase.

No room for U-turns

Encouragingly, it seems that most of these concerns have not been realised. The vast majority of EV owners report that they are enjoying using their vehicle and could not imagine going back to one with an internal combustion engine. Four in five (78%) current BEV and PHEV drivers say their next car will definitely be a pure EV, with one in 10 (9%) saying they would probably step back to a parallel hybrid, and just 9% saying they would return to petrol or diesel.

In fact, owning an EV is bringing some additional, perhaps unforeseen benefits. Whether it be for environmental considerations or skyrocketing fuel prices, a huge 91% of BEV drivers say they feel "smug" about not needing to use petrol or diesel when they use a public charging station. This is a permanent feeling for some, with a quarter (26%) of drivers saying they feel it every time they charge. The positives even go beyond the day-to-day driving and charging of their vehicle; two in three (64%) say their new EV is a conversation starter with friends, family and neighbours.



⁴ <https://www.smmmt.co.uk/2022/05/three-quarters-of-a-million-evs-now-on-uk-roads-but-car-ownership-falls-for-second-year/>

Who is most likely to switch to EV?

With six in 10 (59%) ICE drivers saying their next car is likely to be a BEV, and a further one in 10 (8%) currently on the fence, it appears likely that the next five years will see a continuation of the rocketing adoption seen over the past few months.

Encouragingly, it is the younger generations, the road users of the future, who seem most compelled by the credentials of BEVs. Four in five (79%) 18-34 year olds expect that their next car will be a BEV, while two thirds (64%) of 35-54 year olds agree. The over 55s are currently the most resistant to change, with only a third (34%) committing to the prospect of a BEV being their next vehicle. And it is women who are seemingly more receptive to the idea than men, with 63% saying they are likely to buy a BEV, compared to 54% of men.

There is also some regional discrepancy. Almost three quarters (72%) of Londoners say they will likely opt for a BEV, followed by drivers in the North East (66%), the South West (61%) and Yorkshire and the Humber (60%). This eagerness is not shared in the South East and Northern Ireland, where under half, 44% and 45%, of drivers are on board with making the switch.

The rising cost of living is pushing ICE drivers away from fossil fuels

The rising cost of living is weighing heavily on everyone's minds. Half (50%) of all ICE drivers say the rising price of

fuel has made them more likely to get a BEV, while a third (33%) say that rising costs are prompting them to consider selling their car sooner rather than later. In the meantime, two thirds (63%) of ICE drivers are doing what they can to drive more efficiently to cut fuel costs.

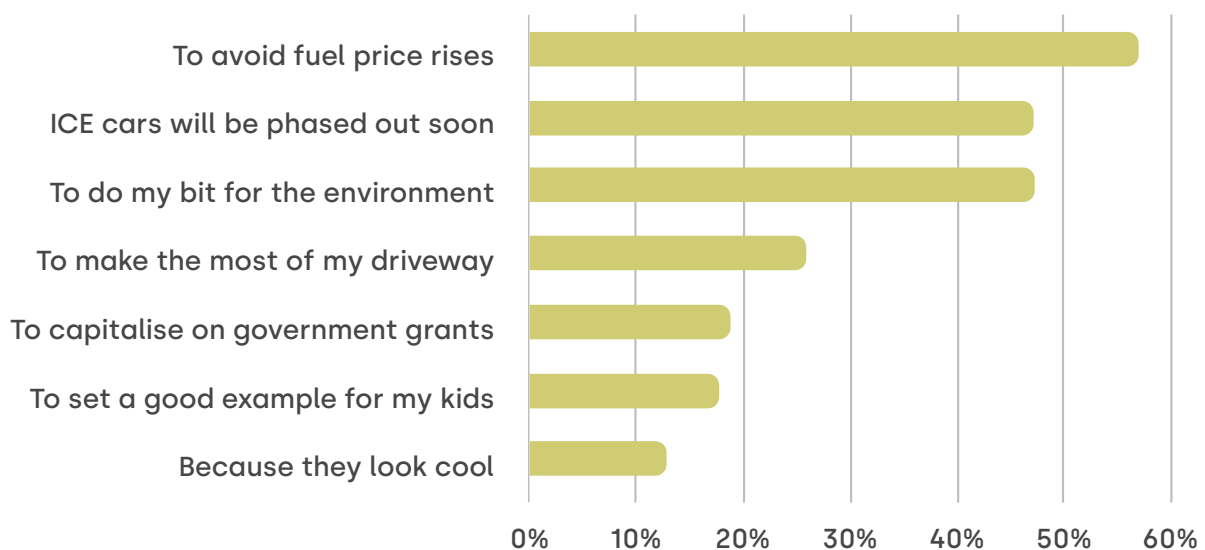
In fact, rising fuel costs are the single biggest motivating factor for the 59% of ICE drivers who have said they will purchase a BEV next, with over half (57%) of this group saying it is a key determinant.

Others are keen to get ahead of the curve and purchase an EV before the sale of new petrol and diesel fuelled cars are phased out in 2030. Half (47%) of drivers seemingly believe that this deadline will lead to excess demand, and with prices already rising, and supply chain challenges showing no sign of easing, it's clear to see why waiting lists are getting longer.

Many are also seemingly more receptive to the idea of a BEV than they were previously. A fifth (20%) say they no longer have range anxiety, while one in six (16%) say they feel compelled to buy an EV based on peer pressure from friends, family or their neighbours.

Others (26%) are mindful that their off-street parking gives them an edge, and are keen to take advantage, whilst 19% want to make the most of government grants before they dry up. Setting a good example for their children is also a factor, with 18% saying this would be a motivating factor for a purchase.

Why will an EV likely be your next car?



Overcoming the speed bumps

Glowing reviews from BEV drivers are all well and good, but convincing the EV sceptics is the industry's more pressing challenge if it is to effectively contribute to the UK's net zero goals.

The perceived range of a BEV, charging availability, and the upfront costs remain very real concerns for ICE owners.

Nine in 10 (89%) say they are put off by the upfront cost, with half (51%) classing it as a major barrier. This sentiment is being exacerbated by the cost-of-living crisis, with 85% saying rising inflation is making them question whether they can justify investing in a new car. As for range, nine in 10 (88%) ICE drivers say they are still concerned about how far a BEV can travel between charges, despite the average range on new BEVs being in excess of 250 miles. Only a third (36%) cite this as a major concern, but it is still a hurdle that the industry needs to address, and one it can do through awareness campaigns.

Arguably, the most complicated barrier to bring down, and the one we have put front and centre of this report, is the perceived difficulty in finding somewhere to publicly charge an EV. The same proportion (88%) of ICE drivers that claim range anxiety is a big barrier, now say charger anxiety is equally so. Five in six (85%) are similarly concerned about competition from other drivers, and say they are worried about having to queue to charge their vehicle.

As we touched on at the start of Chapter 2, having a home charger is a major factor determining whether people make the switch and go fully electric. Three quarters (75%) of ICE drivers report that not being able to install a charger at home is a reason they have yet to do so, and although half (52%) are hoping to change that, it's not easily remedied, especially in urban areas. Innovation is on the way, with five in six (85%) drivers of EVs say they would make their home charger available to others, so long as they could charge fellow motorists to use it.

A small minority are against switching to a BEV for more philosophical reasons, such as being unconvinced by the reduced carbon footprint claims of BEVs, with a quarter (23%) saying they are not persuaded by the environmental benefits, and a fifth (20%) are worried about battery recycling. Interestingly, one in five ICE drivers say they are "extremely concerned" about climate change, despite driving a petrol or diesel fuelled vehicle.

How are motorists financing the cost of battery electric vehicles?

With the upfront cost of a BEV being the most common reason why ICE drivers are hesitant to switch, let's take a look at the options for financing a BEV purchase.

Almost every ICE driver in the UK has at least given some thought to getting a BEV, with nine in 10 (93%) having conducted some research into the prospect of getting one for their next vehicle. Of the ICE drivers who said they were likely to purchase a BEV next, two in five (39%) said they would buy the vehicle with cash or by using a loan. One in five (18%) said they would use Personal Contract Purchase, followed by Hire Purchase and leasing (both 15%). Just one in 12 (8%), said they would use their employer's salary sacrifice scheme, despite the cost-effective packages on offer which are helping drivers make the switch to electric by putting a pre-tax portion of their salary towards paying the monthly cost. Salary sacrifice take-up is increasing with employers bundling servicing and maintenance, insurance, and home charging installation fees, all within a tax efficient wrapper.

