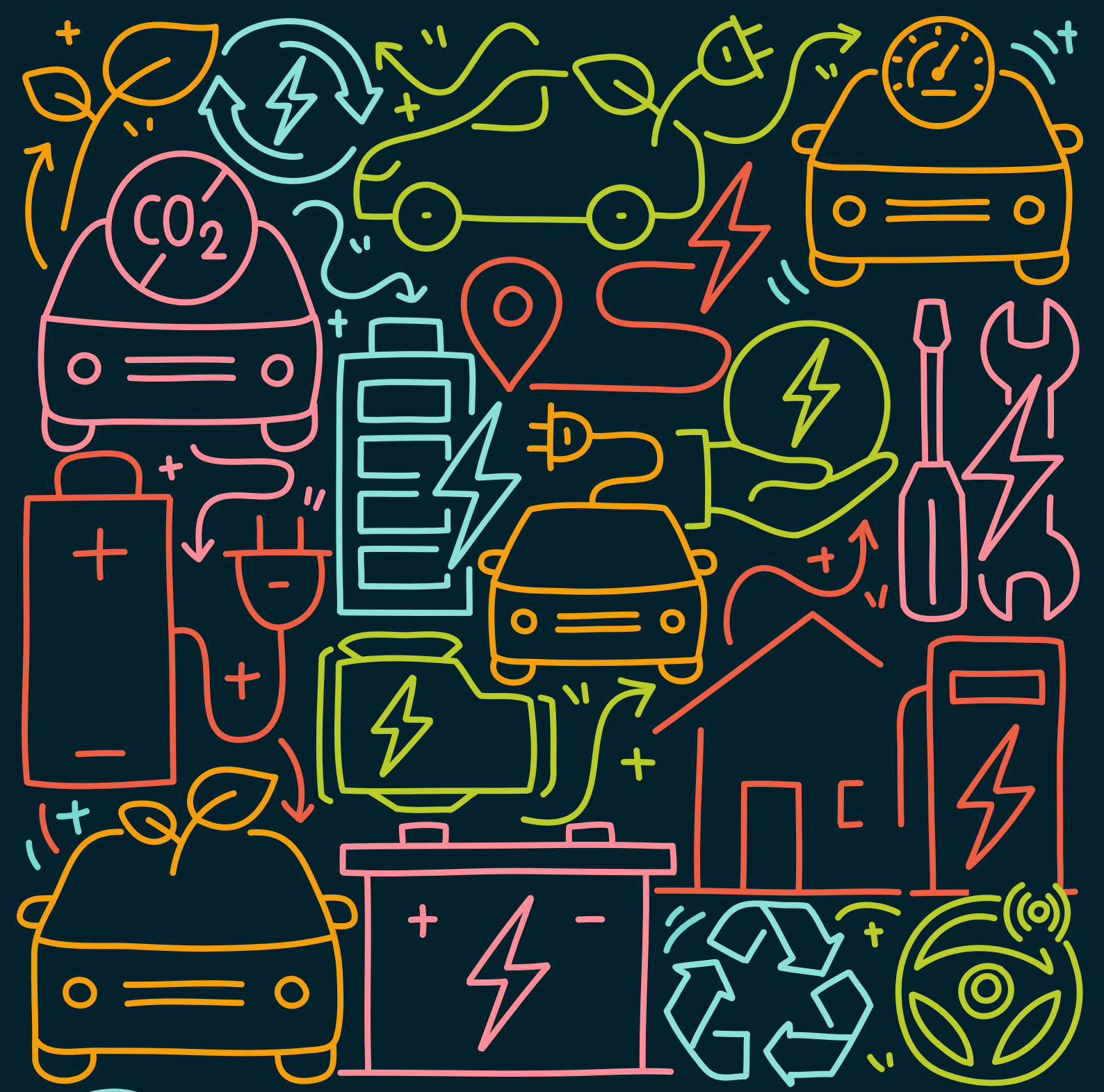


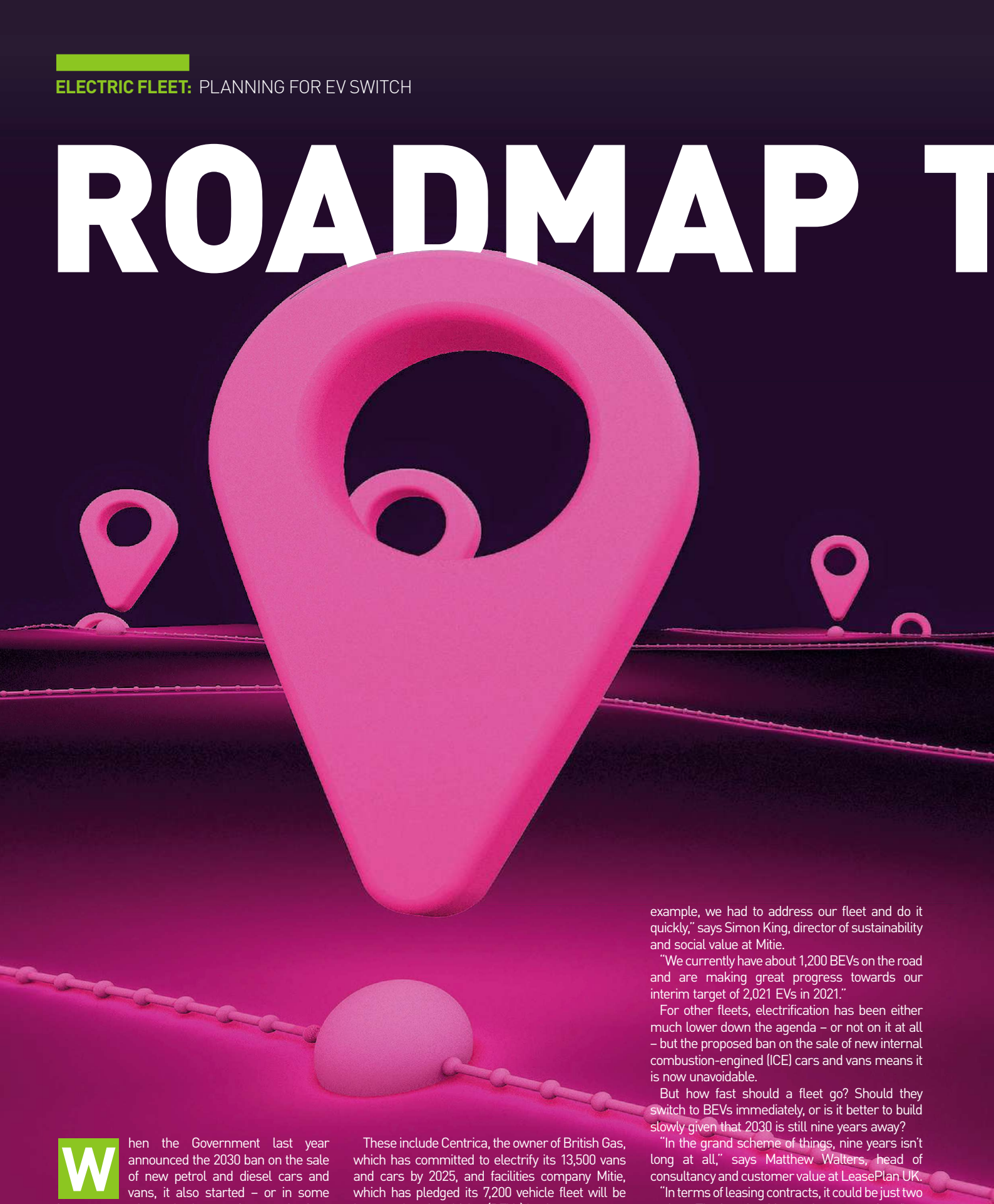
ELECTRIC FLEET

INSIDE

How fleets and manufacturers are accelerating the uptake of electric cars and vans ahead of the 2030 ICE ban

Sponsored by drax | Electric Vehicles NORTHGATE Vehicle Hire

ROADMAP T



When the Government last year announced the 2030 ban on the sale of new petrol and diesel cars and vans, it also started – or in some instances accelerated - the race for organisations to electrify their fleets.

Many were already on this journey, having made commitments either through organisations, such as EV100, to comply with corporate sustainability targets, or simply for the environmental benefits.

These include Centrica, the owner of British Gas, which has committed to electrify its 13,500 vans and cars by 2025, and facilities company Mitie, which has pledged its 7,200 vehicle fleet will be battery electric vehicles (BEVs) by the same year.

Mitie's ambition is part of a wider company commitment to become net zero carbon by 2025, with analysis showing more than 90% of its operational emissions came from its fleet.

"If we're going to decarbonise Mitie and lead by example, we had to address our fleet and do it quickly," says Simon King, director of sustainability and social value at Mitie.

"We currently have about 1,200 BEVs on the road and are making great progress towards our interim target of 2,021 EVs in 2021."

For other fleets, electrification has been either much lower down the agenda – or not on it at all – but the proposed ban on the sale of new internal combustion-engined (ICE) cars and vans means it is now unavoidable.

But how fast should a fleet go? Should they switch to BEVs immediately, or is it better to build slowly given that 2030 is still nine years away?

"In the grand scheme of things, nine years isn't long at all," says Matthew Walters, head of consultancy and customer value at LeasePlan UK.

"In terms of leasing contracts, it could be just two cycles. That's why it's so important for fleet managers to proactively look ahead rather than taking a passive approach.

"If now isn't the right time to start your journey to electrification, think about exactly when in the next nine years might be.

Sponsored by

NORTHGATE Vehicle Hire | drax Electric Vehicles

TO 2030

New petrol and diesel car and vans are to be banned from sale under Government plans. *Andrew Ryan* looks at how fleets can put together an e-mobility strategy to ensure they are ready

"Failing to prepare could leave you in the lurch later down the line."

However, Arval UK says fleets who have not started the process have no reason to panic.

"When I talk to fleet operators and we start talking about how they need to start putting together a strategic roadmap as to how they are going to convert their fleet, one of the first responses is to press the panic button," says David Watts, senior consultant at Arval UK.

"But actually, the 2030 ban is about new vehicles. If you're running four- or five-year replacement cycles, that means you've got until 2034 or 2035 when you have to be fully electric across your whole fleet.

"So, in principle, we're still looking at a 13- or 14-year transition process. There are plenty of operators who will be able to do this much quicker for a variety of reasons, and some will have fairly ambitious carbon targets so need to make that happen a bit quicker.

"But that doesn't mean all fleets have to. It doesn't have to be a sprint.

"Clearly, the sooner you can start the process, the better, but you have to be realistic about what's practical and what you are capable of achieving."

The transition to an electric fleet can be made simpler by the introduction of an e-mobility strategy.

This should provide an organisation with a detailed breakdown of its existing vehicles, how and where they are used, their operating costs, a roadmap for when they can be replaced with BEVs, and what charging infrastructure will be needed.

"To begin this process, an organisation needs to decide how ambitious they want to be with their transition," says Rob Anderson, senior fleet specialist at Cenex.

"Do they want to run a fully electric fleet, and if so, by when?

"Many companies that we're working with have set targets for a zero emission fleet by 2030, which aligns neatly with the ban on the sale of new petrol and diesel cars and vans."

Overleaf are four steps to introducing an e-mobility strategy.

SPONSOR'S COMMENT

By Adam Hall,
Head of Electric Vehicles, Drax

When it comes to debating electrification, my best advice to fleet managers is that it's not a question of 'if', but a question of 'when'.

It's not a surprising stance for someone like myself to take – it's quite literally my job to prove the benefits of electric vehicles (EVs) to businesses. And there's no denying that, despite all the odds, the EV industry is gaining momentum.

Against a backdrop of Covid-19 restrictions and Brexit uncertainty, the EV industry has seen remarkable growth over the past 12 months. This has been spurred on by a wave of positive news stories. Trade negotiations with the EU saw EVs remaining tariff-free until the end of 2023. Carbon emissions falling in lockdown reignited the call to clean up our planet through widespread social change. And, most recently, the Spring Budget in March brought news that EV charge points are now eligible for super-deduction tax relief.

These incremental changes add up to big progress. With COP26 – the much-anticipated UN Climate Change Conference of Parties – taking place in Glasgow this November, the UK's electrification targets are cementing our position as a global leader in transportation decarbonisation.

Electric vehicles might be my business, but no matter which way you look at it, when it comes to finding more sustainable and responsible ways to run our organisations, it's not a question of if. It's a question of when.

drax | Electric Vehicles

A full assessment of a fleet is necessary to gain a granular understanding of its vehicles and how they are used.

"Ask yourself how far they travel," says Adam Hall, head of electric vehicles at Drax Group. "Where to? How long are they used for? How long are they idle for? Fully understanding a fleet's patterns is key."

This information can be collected by analysing existing fleet data which has been collated manually or – more conveniently and potentially more accurately – through telematics.

It is important not to use average mileage in detailed calculations, says Joshua Gordon, EV strategy manager at Geotab. "Use the worst-case scenario so you can be confident of selecting an EV that will work for that role."

Any decisions should also be based on around 70% of a BEV's official range, as this better reflects real-world driving conditions.

Mitie has used this percentage in its calculations for "a couple of years now", says King, and new research from Arval UK supports his position.

It took three fully-electric LCVs – a small van, a medium-sized van and a large van – to Millbrook Proving Ground and carried out a number of tests in a controlled environment with different payloads, to see how range was affected (see table, left).

As the tests took place on different days, the temperatures varied and this had an impact on battery performance: the colder the weather, the more the range was reduced.

"While these figures certainly should be helpful in terms of people trying to make those first steps, we shouldn't take these as definitive numbers," says Watts.

"Fleets will get better or worse figures dependent on their own situation and circumstances," he adds.

"The impact of load was relatively minimal, and you are looking at roughly an 8%-to-10% reduction in range with a full payload, which is probably not dissimilar to what you would see in a petrol or diesel vehicle."

The fleet assessment should identify some vehicles are better suited than others to be replaced by BEVs immediately, with cars and vans much easier than heavier vehicles at present.

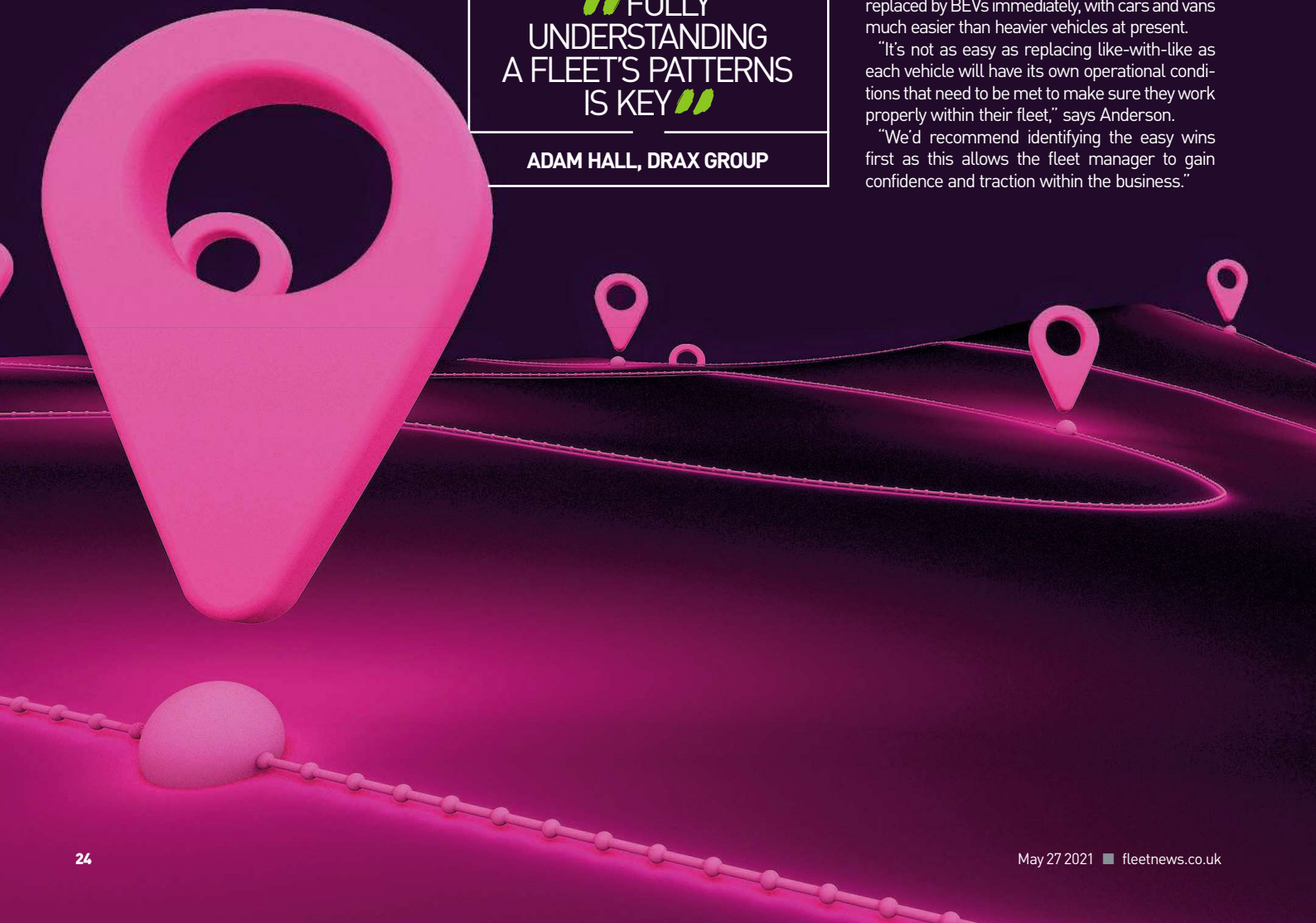
"It's not as easy as replacing like-with-like as each vehicle will have its own operational conditions that need to be met to make sure they work properly within their fleet," says Anderson.

"We'd recommend identifying the easy wins first as this allows the fleet manager to gain confidence and traction within the business."

AVERAGE RANGE VS OFFICIAL FIGURES

Cycle	Small van	Medium van	Large van	Average
Urban	65%	48%	92%	68%
Rural	74%	79%	94%	82%
Motorway	45%	74%	645%	61%
Average temp (degrees C)	3.8	8.6	12.1	8.2

> "FULLY UNDERSTANDING A FLEET'S PATTERNS IS KEY"
>
> **ADAM HALL, DRAX GROUP**



Once the fleet assessment has been completed, it is important to carry out a targeted trial to assess the potential impact of EVs on operations.

Vehicles identified as the low-hanging fruits are best placed to be those replaced by BEVs in any trial, and the use of the BEV should mirror that of the ICE vehicle as closely as possible to allow an accurate comparison.

"There's only so much you can do before you can actually start getting the vehicles on the ground," says Watts.

"Whether that's one vehicle, five or 50 it doesn't really matter as that's a question of what's right for a fleet decision-maker in terms of what they feel they can manage in that first phase.

"The ideal solution really is to find some volunteers who are willing to get involved and who are excited by the concept, who will accept the fact it won't go 100% right all of the time, but are willing to engage, to deal with any problems and feedback the pros and cons of their experiences.

"Trials can also be used to make the broader business aware of what the fleet is doing so they can pre-empt the fact things might not go to plan so they can work with the fleet on that."

While the trial is ongoing, the data collected should include battery usage and mileages travelled, using telematics if possible, says Anderson.

This should be reviewed on an ongoing basis to see if the BEVs perform better or worse than expected, and how they compare in different situations and duty cycles.

During the trial, it will also be important to provide the appropriate charging infrastructure to ensure the smooth operation of the vehicles. This may be home charging, workplace charging, or a mix of both.

Anderson adds: "At the end of the trial, maybe look at running internal workshops throughout the business to raise awareness of the results and help make the transition to BEVs easier."

Some fleets will opt to take a partnership approach with either a vehicle manufacturer or charge point supplier to reduce the cost of running a trial.

> "THE IDEAL SOLUTION REALLY IS TO FIND SOME VOLUNTEERS"
>
> **DAVID WATTS, ARVAL**

SPONSOR'S COMMENT

By Neil McCrossan, Sales & Marketing Director – Northgate Vehicle Hire

It would be fair to say that the journey towards electrification for light commercial vehicles is well underway. This raises some new challenges for the fleets of tomorrow. Electric vehicles (EVs) are changing the status quo the industry has been used to for decades and, when considering electric vans, there is a lot more to decide on than just the van.

Electric vehicles should form part of a wider mobility solution. This means considering all aspects such as initial outlay, running cost versus ICE (internal combustion engine), charging needs at home/work/on the go. In addition, there are tax considerations for your employees for the vehicles as well as how the electricity used both at the employees' home and work can be paid for within current and future tax rules.

The UK has always been a global leader in transport innovation and we see a period of transition ahead where ICE and EV vehicles will be needed with each having its part to play dependent on the solutions needed by modern fleets.

At Northgate, we are investing heavily, with fully equipped workshops and trained EV technicians in each.

We provide comprehensive e-learning training for employees as well as free driver training for customers.

At Northgate, we recognise this is a new – and possibly confusing – journey for our customers. We're here to help with this transition by explaining what is needed in areas such as charging infrastructure, energy, billing and how these elements can work with our flexible rental packages.

www.northgatevehiclehire.co.uk

NORTHGATE Vehicle Hire

FUTUREPROOF YOUR FLEET WITH NORTHGATE'S UNIQUE MIX OF DEPENDABILITY, AGILITY, AND INNOVATION.

Northgate has been supporting the commercial vehicle needs of British businesses, the public sector and charities for 40 years. And we'll be here for our customers as they adapt their fleets on the journey to electrification too. We see a period of transition ahead where ICE and EV vehicles will be needed and with each having its part to play depending on the solutions needed by modern fleets.

Electric Vehicles (EVs) are changing the industry and when considering Electric Vans there is a lot more to decide on than just the van itself.

Throughout the last year, Northgate has continued its transformation into a specialist B2B customer-centric LCV mobility provider, and as part of this we have been building the foundations for our own electrification journey, alongside those of our customers.

For the very beginning of the journey, we've worked with EV industry experts to ensure that we can support you in the right way – from assessing the suitability of introducing EVs to your fleet, right through to full deployment of vehicles, charging infrastructure, power provision and driver training. Complete turnkey solutions designed around client needs.

Adding EVs to your fleet should form part of a wider mobility solution. The evolution in technology means it is important when operating EVs that whole of life costs are considered, from initial capital outlay through to running costs versus ICE and residual values. Being able to change up to the latest models as technology improves is an important consideration.

Ownership or contract hire will commit fleets to years in vehicles that will have been superseded by newer more capable and cost-effective models. Northgate flexible hire packages provide the opportunity to change vehicles as technology evolves.

FleetNews READER RECOMMENDED RENTAL COMPANY

Working closely with OEMs, we're continually adding to our EV range to meet customer needs across all Electric LCV vans, conversions and electric cars. They're available on flexible and minimum term hires so that you can make the right choice for your fleet.

Here at Northgate, we have a solution to meet on-the-go charging needs – with a combined fuel and electric chargecard available that is accepted at over 1,000 rapid chargers and 3,000 fast chargers.

Servicing and maintenance is a key consideration for running EVs, so we're continuing to invest heavily, with fully equipped workshops and trained EV technicians in each.

We also provide comprehensive e-learning training for employees as well as free driver training packages for you, our customers.

Our proposition is designed to let customers focus on their business whilst we focus on running their fleets. Northgate customers benefit from services and agility not possible to those who buy, or contract hire their fleets.

We're here to help with the transition to EVs by explaining what is needed in areas such as charging infrastructure, energy, billing and how these elements can work with our flexible rental packages. Whatever their needs, Northgate customers know they can rely on our dependability and flexibility.

Neil McCrossan,
Sales & Marketing Director,
Northgate Vehicle Hire

NORTHGATE
for all vankind

Find out more at northgatevehiclehire.co.uk
or call Northgate on 0330 042 0903

3 FLEET REVIEW

As the trial progresses and more data becomes available, an organisation can begin to produce a roadmap of what vehicles can be replaced and when, as well as how the charging infrastructure will need to grow.

"In many cases, the first set of vehicles which can be switched to electric can be a mix of cars and small- and medium-sized vans where there's a good balance of vehicle availability, driving range and total cost of ownership (TCO) savings," says Anderson.

Other vehicle segments where BEV options are either limited or not available, such as the pick-up truck sector, should be scheduled for electrification later in the roadmap, when suitable vehicles should be available.

"There's a general tendency to get fixated on the problem areas rather than the opportunities," says Watts. "Focus on the vehicles you can change, not the ones you can't as this will be resolved in the future."

The most convenient and cost-effective method of moving to an electric fleet is to replace ICE vehicles with BEV alternatives when their lease expires, but Watts warns it is not quite as simple as that.

"A fleet manager should focus on the vehicles that can be changed for EVs now rather than concentrating on the actual replacement cycles, because if your easiest vehicles to transition are not due to be replaced for another two or three years, you are putting back the start of your transition by that time period," he adds.

To avoid this, vehicles can be swapped between employees so the ones which are due for replacement are moved into the roles of those better suited to be replaced with BEVs.

"An organisation will also need to look to the future as upcoming rules and regulations might impact their fleet policy," says Hall.

"For example, over the next few years, more towns and cities will introduce clean air zones which could come at a considerable financial cost if you have the wrong type of vehicles in your fleet."

It is important to continually review the fleet and processes even after roll-out begins, to ensure the roadmap remains up to date if changes in technology or circumstances occur.

> "THE FIRST SET OF VEHICLES WHICH CAN BE SWITCHED TO ELECTRIC CAN BE A MIX OF CARS AND SMALL- AND MEDIUM-SIZED VANS"
>
> **ROB ANDERSON, CENEX**

4 ROLL-OUT

Once an organisation has carried out an assessment and trial to determine a roadmap of BEV adoption, it can start to scale up the number of BEVs on its fleet.

This will also include rolling out expanded charging solutions and looking at how the vehicles are procured.

"It's going to need a little bit of planning to ensure both vehicles and chargers arrive in good time to make sure the roll-out can go ahead without any real delays," says Anderson.

Potential charging solutions include workplace charging, public charging and home charging, dependent on both the use of the vehicle and the driver's circumstances.

For BEVs which are based at depots overnight, workplace charging is the most common solution and allows the vehicles to be fully charged at the beginning of each working day.

BEVs which are taken home at night by their drivers are best suited to being charged at home or on the public network, but this depends on the driver's circumstances.

"If you're living in London, it is very unlikely you will have off-street parking," says Olly Craughan, head of corporate social responsibility at DPD UK, which has more than 700 electric vans which drivers take home in the evenings.

"We've sourced public charging with several

suppliers to broaden the options and make sure that people are aware that, actually, it's not too much of a challenge because if our drivers are in an urban environment the route mileage is much lower so they don't need to charge every day."

DPD provides home chargers for its drivers who do have off-road parking, and this approach has also been adopted by Mitie.

"It's our belief that if you can charge the vehicle where it sleeps, that's how it operates most effectively," says King.

Depot-based fleets will tend to charge their BEVs at their base overnight so should introduce a workplace charging solution.

"They need to understand what type and speed of charging they need, where they are going to be installed, who is going to be able to use them, and what they are prepared to spend," says Vincent de Rul, director of EV solutions at EDF Energy.

"When people think about charging, they will consider you need to have the fastest charger installed because then you can charge more vehicles. This is not necessarily the case. What is important is to have the right speed of charging based on the right time of charging and based on the length of charging.

"If you have vehicles that are staying at the workplace for a long period of time, then you don't need to have very fast chargers and probably something equivalent to a home charger would be suitable."

Some organisations could experience electricity issues on their sites if the demand caused by charging vehicles exceeds the capacity provided by the local grid.

> "IF YOU CAN CHARGE THE VEHICLE WHERE IT SLEEPS, THAT'S HOW IT OPERATES MOST EFFECTIVELY"
>
> **SIMON KING, MITIE**

In some cases, this could mean expensive upgrades to the grid, but De Rul says this can often be avoided through the introduction of a dynamic load management system.

This will automatically adapt the charging speed dependent on the grid capacity, the number of charge points and the number of BEVs that need to be charged over a set time period.

"For example, if your site has a 32kWh capacity, you may have six 22kW chargers installed," says De Rul.

"If one car is plugged in, it can be charged at the full speed of the charger. If you have six cars, then it will automatically share available capacity among the vehicles.

"This can provide the level of charging and service that is needed and as it keeps the electricity demand below capacity, it can prevent having to do expensive grid reinforcement works."

Anderson says fleets should also consider vehicle procurement methods during roll-out.

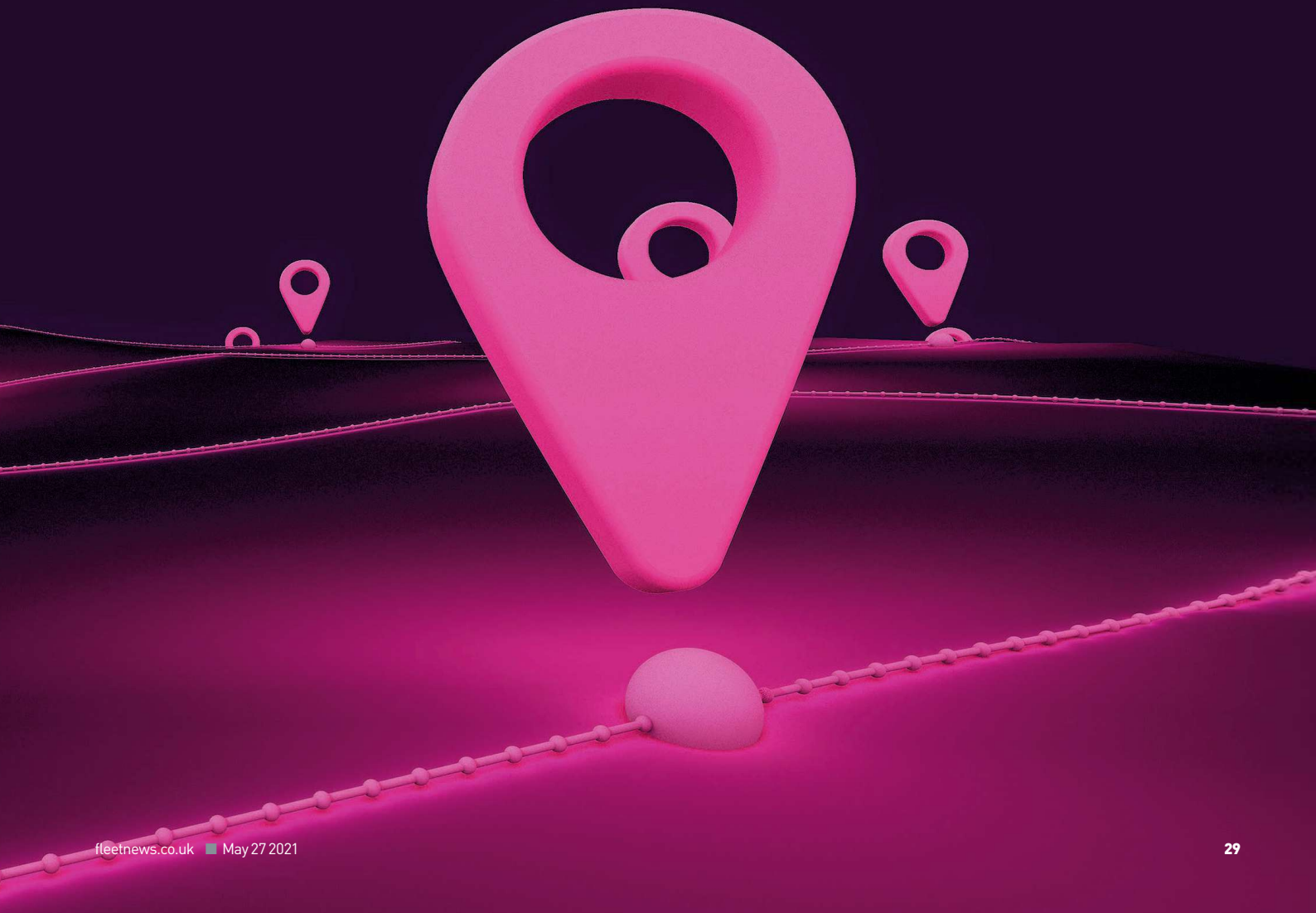
The usual procurement process is likely to be best for commercially available vehicles, he says, but they may need to take a different, innovation-led approach for segments harder to electrify.

"This is where you release a tender outlining the specification and duty cycle that the vehicle needs to achieve and let the market respond," he adds.

Anderson says some fleets have taken the approach of balancing total cost of ownership savings across the fleet when introducing BEVs.

"This way, they've been able to deploy more BEVs because they're using the savings achieved by some to balance out the losses made by others," he adds.

"It gives fleet decision-makers the chance to start to implement harder-to-electrify segments supported by the knowledge that they are making cost savings elsewhere."



Evolve your fleet.

Transport electrification is a hot topic. The 2030 ban on new fossil fuel and hybrid vehicles is just a couple of replacement cycles away, so it's no surprise that many organisations are challenging themselves to take greater steps towards positive change.

The good news is, electrification poses a real opportunity for organisations with significant transportation needs. If you're considering electric vehicles (EVs) for your business, you're moving in the right direction.

Why electrify your fleet?

Zero tailpipe emissions.
EVs produce no carbon dioxide (CO2), no nitrogen oxide (NOx) and no tailpipe particulates (atmospheric aerosol particles).

Low maintenance costs.
With no engine, no transmission and no gearbox, there's less to go wrong in an EV, meaning lower running costs.

Renewable energy advantages.
EVs form part of a business's sustainability plan. Savvy businesses with on-site renewable energy generation can charge their fleet at no additional fuel cost.

Unbeatable insight.
EV fleets can leverage state-of-the-art telematics, building an accurate and real-time overview of your fleet operation.

Future-proof business.
The government has mandated the end of new petrol and diesel car sales by 2030 – putting the UK on course to be the fastest G7 country to decarbonise cars and vans.

We're Drax.

We offer a unique end-to-end partnership approach to electrification that supports businesses every step of the way. As experts in energy and EV markets, we're perfectly positioned to help organisations build on their sustainability ambitions through fleet electrification.

8 steps to electrification

Electrification isn't something you can achieve overnight. There are many moving parts to consider before you start reaping the benefits.

But this process doesn't need to be problematic. There are eight essential steps that put fleet managers on the road to electrification. Whether you embark on the journey solo, or engage a specialist partner, planning will help you implement, manage and optimise an EV plan that has success and sustainability at its heart.

1 EV suitability assessment

Before you introduce EVs into your fleet, you'll want to understand and prove the benefits.

Start with a full review of your current fleet usage to understand your operational requirements. Consider factors like mileage (per trip and per day), load requirements, areas of operation and resting locations as a starter for 10.

Follow with a total cost of ownership (TCO) calculation. Influential factors include cost of 'refuelling' with electricity versus diesel or petrol, ongoing maintenance requirements, and any tax benefits and toll, levy or congestion-charge exemptions.

The insight from your fleet review and TCO come together to create your business case.

2 Vehicle recommendation

Next up, choosing the right electric vehicles for your business.

Much like traditional vehicles, you'll look at drivability and function versus form. But for EVs, you'll also look at specifications like engine range (miles per charge, measured in units of energy, kWh) and charging capability (do you want standard charging speed, or rapid charging capability?)

Some partners arrange EV demonstration days. These letdrivers and decision makers try recommended vehicles before committing to purchase.

3 Charging infrastructure assessment

At this stage, you'll decide two things: what kind of charge points you want and where they'll go.

You might think you need charge points at every site you own. But unless your vehicles regularly travel over 100 miles per day, you may be surprised at how few charge points you actually need.

As for type of charge point, this is all down to speed. Slow charge points are cheaper and ideal for overnight charging. Ultra-rapid charge points cost more, but allow for charging at rest stops.

4 Electrical site survey

Once you've chosen your charging locations, the site survey makes sure your installation is practical and efficient.

Groundworks can be inconvenient, so managing them effectively – such as taking advantage of existing electricity infrastructure – can help minimise disruption and expense. This is the last stage before committing to location.

5 Hardware implementation

Time to get plugged in! At this stage, you'll be ordering and installing your charge point hardware.

Getting your charge points in the ground might require specialist contractors, such as charge point programming experts or a site manager to take responsibility of site works and project management.

Consider using installation day to raise awareness in your business and communicate why you've spearheaded the change.

6 Charge point management

Charge points are user-friendly but sophisticated pieces of tech. Their initial set up will let you enable clever functionality, like programming different tariffs for different types of users.

Some EV partners will provide software that gives real time visibility of your charging network usage. Certain products even let you remotely lock and reset your equipment, to even better self-manage your fleet.

7 Maintenance and servicing

What happens if your charge points need updates or develop faults? Even the best products in the world aren't immune to faults.

Potential charging infrastructure issues to be aware of include outages and failures. But charging technology is smart; manufacturers or specialists can often detect (and correct) faults before the end-user is even aware that anything's wrong.

8 Enabling the power of telematics

Once your electric fleet is up and running, you can use data to optimise the value of your investment.

EV-specific telematics data can provide valuable information, like how efficient your drivers are. Even minor tweaks to driving styles can make journeys more power efficient, which adds up to operational savings.

The more you use your EVs, the more data you gather and the more you can maximise your operation.

For more information on fleet electrification, download the 8 steps to electrifying your business guide: energy.drax.com/8-steps-guide

Considering
electric vehicles?

Don't be in the dark

If you're considering switching your fleet to EV, you can't make decisions in the dark. You need real intelligence.

We can help you build an accurate overview of your operation, using state-of-the-art telematics.

As your energy partner, we'll work with you to plan, implement and manage an electric vehicle infrastructure with renewable power at its heart.

EVolve with us
energy.drax.com/intelligence

drax | Electric Vehicles

ISTOCK.COM/TANYA ST

HIGHLIGHT SIGNIFICANT SAVINGS WITH TCO

Taking all vehicle cost factors into account is key to pricing up EVs for the journey to 2030, says *Simon Down*, automotive associate director, Deloitte

The UK's proposed 2030 ban on sales of new internal combustion engine (ICE) vehicles means the time is now for a wholesale switch to electric vehicles (EVs).

Businesses have an unprecedented opportunity to enable and accelerate the switch to EVs for their employees while also helping to achieve their own net zero goals.

With estimated savings of between 10% and 15% from switching to electric, it's the right time to take a total cost of ownership (TCO) approach towards business car schemes.

By looking beyond the more visible costs of vehicle ownership, employers can make robust and informed decisions that will support a switch to EVs.

Fleets make up around 55% of all new car registrations in the UK and, with relatively short corporate lifetimes, these vehicles quickly find their way into the used car market.

This means businesses can play a big role in accelerating the move to EVs across the whole UK motor parc, not just their own arrangements.

Currently, one of the main challenges to EV uptake is the perceived price premium EVs carry when compared with ICE alternatives.

The perception that EVs are more expensive is likely to have been exacerbated by the recent changes to the plug-in car grant (PiCG) that reduced the maximum value of the grant by £500 down to £2,500 and dropped the eligible threshold to £35,000 from £50,000.

If an employer takes a traditional list price or lease rental approach to measuring vehicle costs, then EVs can appear more expensive.

In the examples shown overleaf, the list price for EVs is around 18% higher than the ICE vehicles, with lease rentals showing a 16%-20% cost premium for the EVs.

With these figures, it's easy to see why it can be discouraging for employers wanting to go electric.

However, taking a TCO approach can highlight significant savings and is key to vehicle funding decisions, to ensure they are based on informed and robust numbers.

WHAT IS TCO?

A TCO approach captures all direct and indirect costs associated with funding and using a car over its expected lifetime and goes much further than more traditional approaches.

Costs typically considered under TCO include:

More visible/obvious costs:

- Vehicle funding costs (including lease rentals, finance payments, depreciation etc.).

➲

- Maintenance costs (including tyres, servicing, MOTs etc.).
- Motor insurance.

Less visible/obvious costs

- Cost of fuel/electricity or mileage reimbursement provided.
- Direct and indirect taxes (including VAT, corporation tax, national insurance contributions – NICs).
- Other ad-hoc costs (including other financial insurance products etc.).
- The impact of known future changes in tax rules and rates.
- Other financial considerations (e.g. the cost of funds used).

Integrating these elements enables employers to make better judgements on the financial implications associated with switching to EVs.

WHY IS TCO PARTICULARLY IMPORTANT FOR EVs?

Taking a traditional approach to measuring vehicle costs does not take account of key differences between electric and ICE vehicles.

A large part of the financial support introduced to incentivise a switch to EVs is delivered through the tax system.

The low rates of company car tax for EVs provide a very significant financial incentive for employers and their employees to switch.

Also, when a vehicle's servicing and fuel or electricity costs are taken into consideration, EVs can offer significant savings.

The following examples demonstrate the fundamental shift that can occur when switching from a traditional to a TCO approach.

The two examples opposite show a side-by-side cost comparison for an ICE vehicle and a comparable EV alternative.

CALCULATION ASSUMPTIONS

The examples are based on company cars acquired in April 2021 and leased on a 36-month contract term with a contract mileage of 60,000 miles. It is assumed the employer pays corporation tax at the main rate and can recover VAT. The employee undertakes 10,000 business miles per annum reimbursed at HMRC advisory rates.

Both examples show that the EVs are between 12%-19% more expensive if you only consider the list price, or the sub-total of the more obvious and visible costs.

However, the ICE vehicles are much more expensive when it comes to the less visible costs, with the greatest differences emerging in the cost of business mileage allowances and employer NICs.

> "BY GAINING GREATER INSIGHT AND UNDERSTANDING, BUSINESSES CAN REALISE THE TRUE COST OF PROVIDING EVs"

Example 1: Hatchback	ICE	EV	Diff (£s)	Diff (%)
List price	£27,815	£32,935	£5,120	18%
More visible/obvious costs				
Lease rentals	£14,256	£16,487	£2,231	16%
Maintenance	£2,334	£1,952	-£382	-16%
Motor insurance	£1,950	£2,400	£450	23%
Sub-total	£18,540	£20,839	£2,299	12%
Less visible/obvious costs				
Business mileage allowances	£4,200	£1,200	-£3,000	-71%
Employer Class 1A NICs	£3,416	£227	-£3,189	-93%
VAT recovery	-£2,277	-£1,699	£578	-25%
Corporation tax relief	-£4,602	-£4,328	£274	-6%
Sub-total	£737	-£4,600	-£5,337	-724%
Total cost of ownership (TCO)	£19,277	£16,239	-£3,038	-16%

Example 2: Saloon	ICE	EV	Diff (£s)	Diff (%)
List price	£41,940	£49,935	£7,995	19%
More visible/obvious costs				
Lease rentals	£23,275	£27,922	£4,647	20%
Maintenance	£2,919	£2,358	-£561	-19%
Motor insurance	£1,950	£2,400	£450	23%
Sub-total	£28,144	£32,680	£4,536	16%
Less visible/obvious costs				
Business mileage allowances	£3,300	£1,200	-£2,100	-64%
Employer Class 1A NICs	£5,672	£345	-£5,327	-94%
VAT recovery	-£2,975	-£2,720	£255	-9%
Corporation tax relief	-£6,617	-£6,628	-£11	0%
Sub-total	-£620	-£7,803	-£7,183	1,159%
Total cost of ownership (TCO)	£27,524	£24,877	-£2,647	-10%

This perspective completely changes the picture, removing the perceived EV price premium and, instead, demonstrating a large cost saving.

WHAT ABOUT SALARY SACRIFICE?

Introducing a salary sacrifice arrangement can enable greater access to EVs across a much wider population of employees. In turn, this can help to deliver meaningful and sustained reductions in roadside pollution and carbon emissions.

Salary sacrifice for EVs takes advantage of incentives available to company car drivers, making them more affordable for employees than if purchased as a private consumer.

It can present an opportunity for employers to offer a new and engaging benefit that can be made available across an entire workforce.

As a result, it is becoming a very popular arrangement with employers and employees alike, and it will be a useful tool for increasing the uptake of EVs.

Salary sacrifice sees a contractual reduction in an employee's gross pay, in return for a fully insured and maintained electric company car.

The employer saves on both the salary no longer paid, and the associated employer NICs on the salary that is sacrificed.

These savings offset the costs associated with providing the car, so the arrangement can be designed to deliver savings or run on a cost-neutral basis for the business.

With vehicle costs offset by savings through payroll, it is necessary for an employer to take into account TCO to effectively manage these.

Miscalculations could otherwise leave employers with unexpected costs that are not offset by the salary sacrifice savings.

THE ROAD AHEAD

On first glance, the perceived price premium of EVs is likely to put off some employers considering the switch.

This is often down to the more obvious and visible costs of vehicle provision which tend to make EVs more expensive than their ICE alternatives.

However, adopting a TCO approach can dramatically change the result.

By gaining greater insight and understanding, businesses can realise the true cost of providing EVs and make significant savings in the long term.

NORTHGATE CAN DELIVER THE FLEET SOLUTION YOU NEED.

With a full range of vehicle hire options and mobility solutions available.

FLEET MANAGEMENT

Reduce costs and increase efficiency with our range of mobility solutions for your whole fleet.

Fleet Management

With our flexible account managed solution, we look after vehicles for whole of life, taking away the burden of administration, minimising vehicle downtime, reducing fleet costs and saving you time

Accident Management

Deal with incidents across your fleet, from notification through to insurance and repair using a single phone number

Telematics

Know where your vans are at all times, improve driver behaviour and effective route planning to reduce fuel costs

Risk Management

Fleet risk audits, driver risk assessments and tailored driving courses available

Fuel Management

Drive down fleet fuel spend with a fuel card solution that gives you money off the pump price

Vehicle Inspection App

Reduce paperwork and easily monitor your fleet's overall condition, ensuring you have fully compliant vehicles

HIRE OPTIONS

12months+

A great alternative to the commitment of contract hire or ownership, ideal for uncertain economic times. The longer the term, the better the rate we can offer.

Flexible Hire

Available for three months or more and ideal for when you have a ballpark idea of what you need, but want some flexibility in exact end dates.

Short Term Hire

Rent vans when you need them, for as long as you want them.

We Buy You Rent

A hassle free way to sell your vehicle and rent new. With We Buy, You Rent, you get a fair market price for your existing vehicle and all the benefits of renting new. You choose a hire option - 12months+, Flexible Hire, or VanHire+.

Electric Vehicles

Providing expert consultative advice across all aspects of operating EVs and solutions including everything from helping you to choose the right E-LCV through infrastructure to driver training and advice – we're ready to help you make the switch.

What's included as standard:

- Full service and maintenance
- 24/7 breakdown and recovery
- Over 50,000 vehicles
- 67 branches nationwide
- Courtesy and replacement vehicles
- Road Fund Licence included

FleetNews READER RECOMMENDED RENTAL COMPANY

Find out more at northgatevehiclehire.co.uk or call Northgate on 0330 042 0903

NORTHGATE for all vankind

Ensuring fleets can switch to plug-ins without hassle

Athlon UK are the leading multi-marque leasing company to help support fleets to make a hassle-free switch to plug-in vehicles.

Over the past six months the company have built a specialist team to provide a consultative approach, using total cost of ownership (TCO) modelling and expertise on fleet operations to offer the best ultra-low emission vehicle (ULEV) and electric vehicle (EV) solutions.

Daimler Fleet Management rebranded to become Athlon UK in October 2020 and have now fully completed that transition, including the bedding in of system migrations and new processes.

Lesley Slater, Athlon UK chief commercial officer, says the combination of history in the UK with Daimler Fleet Management and the international expertise from Athlon's management of more than 400,000 vehicles across Europe is creating a unique global and local package for fleets.

She says: "We wanted to make sure we integrated the new brand in the right way last year.

"We have been collaborating with our international colleagues to combine our expertise."

Athlon operate across European and North American markets, so fleets already working with the company can establish that continuity and familiarity in the UK.

Slater says: "It's still early days, but our collaboration with international colleagues has already started opening doors for fleets that prefer to have that consistent level of service from their leasing provider across different territories."

Athlon have three core fleet sectors that are the biggest opportunities for growth over the next 12 months, with strong ties already with mid-to-large-sized public sector, UK corporate and specialist fleet clients.

The company offer a wide range of funding options, ranging from short-term rental through to full contract hire with repair and maintenance packages to suit all needs.

Part of what drew Slater to joining the company last summer was the fact there was an opportunity to build a team that has a real opportunity to grow the Athlon name in the UK.

Athlon have made some key hires this year to expand their public sector and specialist commercial vehicle (CV) teams to ensure that not only the brand knowledge is there, but there is also a deep understanding of what fleets need operationally with specialist vehicles.

Dedicated account managers and the personal touch

Slater explains that it was important not to have a "call centre mentality" when developing Athlon's approach to customer service. There has to be a personal touch.

Each fleet customer has a named account manager, with a direct contact details. It means every fleet customer knows exactly who they need to get in touch with at Athlon to help them with any queries.

It's these account managers that work consultativley with fleet customers to review vehicle choice lists and to understand each business' individual needs.

Slater says: "We work with a lot of middle-to-large-sized fleets and we know they want that personal touch, but we also combine that with having a wider customer service team available to support with any additional help that might be needed."

Public sector and plug-in vehicle growth

Slater says: "Public sector fleets have really been at the forefront of moving to ULEV and EV.

"We're already on all the major public sector supply frameworks, so we're well positioned to help those fleets transition to electric."

Athlon have a dedicated public sector team for both cars and CVs.

This includes geographic representation across the UK. So, for example, public sector fleets in Scotland will be dealing with someone in Scotland from Athlon that knows the intricacies and needs of that local market.

Other specialist fleets like those drivers working with ride-sharing companies or specialist chauffeur fleets are also making the switch to plug-in vehicles in increasing numbers.

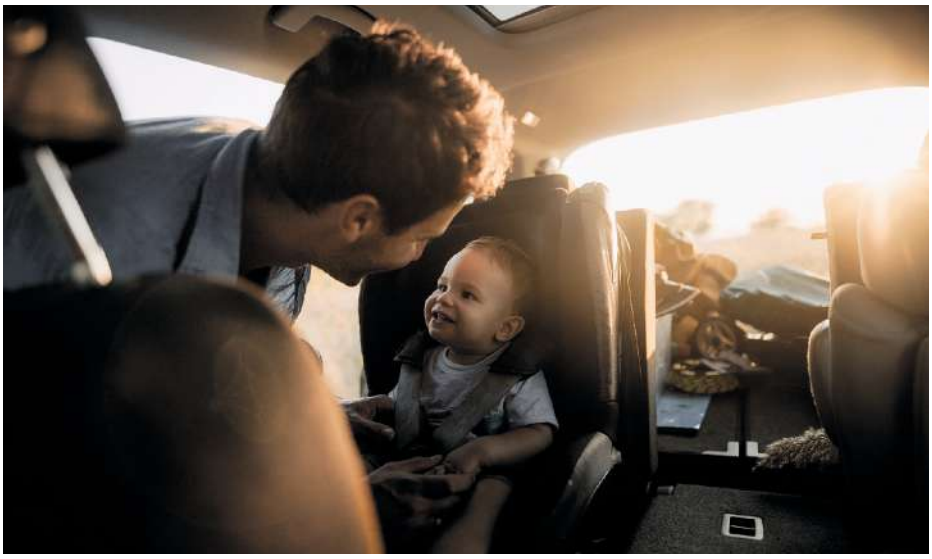
Slater says: "What's really interesting for that market is that moving to EV isn't just about the benefits for wholelife cost (WLC), it's also driven by customer demand.

"We're hearing from taxi clients that there is a desire from customers to ride in EVs specifically."

Offering services for small-to-medium enterprise (SME) fleets is a future target, with Athlon developing more tailored digital solutions to help smaller fleets also make the switch to plug-in vehicles.

Using Athlon's WLC tools, the sales teams collaborate with fleet clients to understand their business objectives and tailor solutions for them.

WLC takes into account all related factors over a vehicle lease period, including the acquisition price, level of depreciation, servicing and maintenance costs and company car tax, plus running costs –



Athlon UK will offer fleets guidance about charge point installation

including fuel or charging expenditure.

It's the only accurate way of calculating the true cost of running a vehicle and, despite some plug-in vehicles having a higher entry price compared with some internal combustion engines, they can stack up more positively when looking at the whole picture.

Understanding those intricacies around running costs can be a big benefit to those that are electrifying their fleets.

This is despite the Government's decision this year to roll back the plug-in vehicle grant from £3,000 to £2,500, excluding models that cost more than £35,000.

While Slater says any roll-back in additional support is unwelcome, she's confident it won't knock EV investment from fleet customers.

She says: "It's not just the grant funding alone that is driving EV investment from the fleet market.

"When you look at WLC for plug-in vehicles, there are a host of benefits from benefit-in-kind (BIK) taxation, to savings on service, maintenance and repair (SMR) that still stack the figures in fleets' favour and there are still many positive reasons to make the switch."

As Slater explains, demand for plug-in vehicle product in the UK is such that when fleets talk about introducing EVs, these are conversations that are much more developed than 12 months ago.

> "MOVING TO EV ISN'T JUST ABOUT THE BENEFITS FOR WLC, IT'S ALSO DRIVEN BY CUSTOMER DEMAND
>
> **LESLEY SLATER, ATHLON UK**

Approximately 50% of all Athlon's leasing quotes are now for EV.

She says: "We're seeing that rather than a year ago when fleets might be having those initial conversations about moving to EV or hybrid, they're very much now ready to order.

"So, securing that supply of vehicles is a challenge the entire industry has to manage."

Athlon have been working flexibly with clients to talk about contract extensions on existing vehicles while waiting for more EV product to reach the UK.

Slater says: "There have been so many new EV product launches and we're at a really exciting time in terms of the diversity of vehicles that are becoming available.

"The majority of customers are happy to wait for EV supply and we can work with all customers to flex contracts and extensions to help line things up for them to move into the latest technology."

In addition to helping fleets identify the best plug-in vehicles to meet their needs, Athlon are working on a new suite of services that can help customers with charging infrastructure, whether that's at the depot, at home or workplace chargers.

This includes taking advantage of any Government funding, as well as lining up charge point solutions, suppliers and EV tariffs.

Slater says: "There is a lot more to consider around how you're going to approach charging costs for drivers and we're able to model that using our WLC tools."

V2G: 5 BIG QUESTIONS

Vehicle-to-grid electric vehicle charging is expected to make a significant contribution to the Government's aim of zero carbon by 2050. *Andrew Ryan* looks at what the technology is and how it may affect fleets

1

What is V2G and how does it differ from smart charging?

Vehicle-to-grid is a technology which enables electricity to flow from a charge point to an electric vehicle (EV) and vice versa.

This means that as well as the EV being charged from the charge point, electricity can be fed the other way from the vehicle's battery to power a home, an office building, a street or the grid.

This allows a vehicle to act as a mini-power station and, for example, help support the grid when demand for electricity exceeds supply.

This could become a bigger issue in the future when the UK becomes more dependent on renewable sources of energy such as solar and wind.

Currently any shortfall tends to be filled from sources such as gas-powered power stations which emit greenhouse gases. But, in the future, this could be supplied by clean energy from EVs, which have been charged using renewable energy when electricity supply was higher.

The potential importance of V2G is highlighted in the National Grid's future Energy Scenarios report, which identifies the technology as being key in helping to manage the electricity demand in Great Britain.

V2G is distinct from basic one-way charging or smart charging, which is where the rate and/or time at which a vehicle is charged can be controlled while the vehicle is plugged in and involves the one-way flow of energy from the charger to the car.

V2G is a more powerful tool than smart charging, but also more complicated, as well as more expensive to install.

2

How could fleets benefit from V2G?

Fleets could earn revenue through selling the electricity stored in their EVs to the grid when it is needed, before recharging when supply exceeds demand and the cost of the energy is lower.

The E-Flex Demonstrator Project in London saw the Royal Borough of Greenwich operate five electric Nissan eNV200s.

These were charged when more electricity was generated through renewable resources and the energy was cheaper, with their energy discharged to offset periods with greater carbon emissions when electricity also costs more.

As they were fully charged ahead of the next day's schedule, they could be used with no disruption to the drivers' working days.

Because of how the electricity markets are set up at the moment, the fleet was unable to sell electricity to the grid as it has too few vehicles, but Imperial College quantitively modelled the potential revenues that would have been possible.

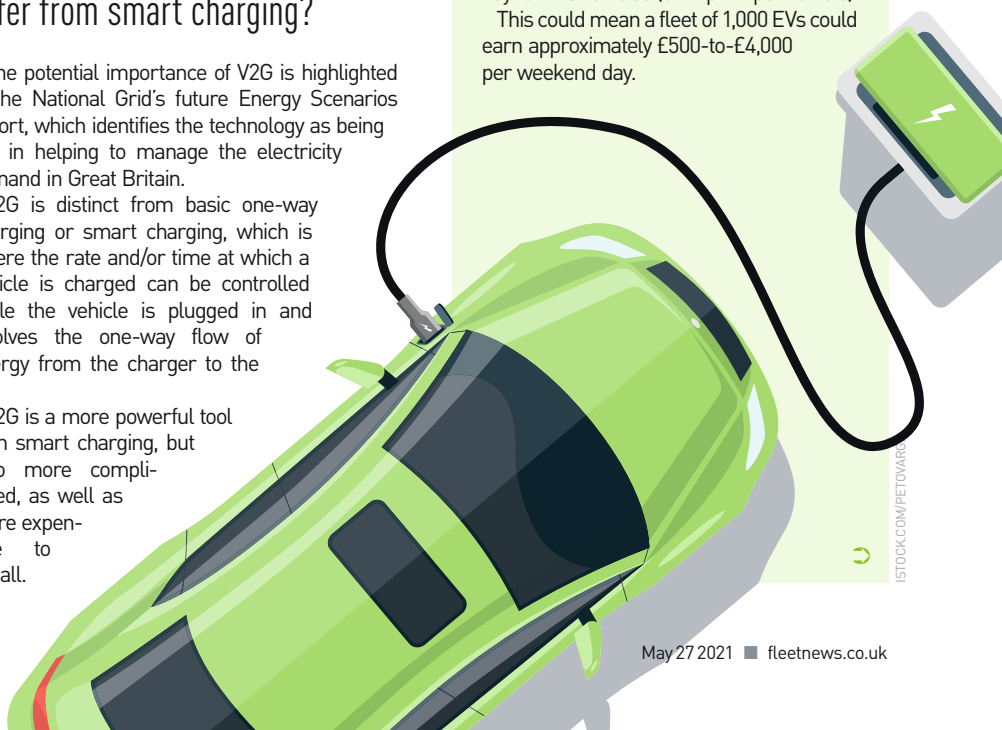
It found the fleet could save between £5.48 and £7.35 in charging costs each day, and earn up to 66p a day for the five vehicles (or 13p per vehicle).

Based on these figures, Imperial College calculated a fleet of 1,000 EVs could earn around £130 each weekday.

If the EVs were left plugged in over the weekend, they would be able to access the dynamic containment frequency market which requires its providers to be plugged in for 24-hour periods.

This increases the potential revenues a fleet could earn, and these could be between £2.47 and £20.38 for a weekend day for five vehicles (or 49p-£4 per vehicle).

This could mean a fleet of 1,000 EVs could earn approximately £500-to-£4,000 per weekend day.



ISTOCK.COM/PETOVARGA

Any colour you want.

As long as it's green.

If you're considering switching to electric vehicles, we understand it can seem like a big leap.

You need an experienced partner that knows how to plan, implement and manage a cost-effective electric vehicle infrastructure, with renewable power at its heart.

By migrating your fleet and premises at a pace that makes financial sense for your business, we make it easy for you to choose greater sustainability and reduced emissions.

EVolve with us
energy.drax.com/sustainability

drax | Electric Vehicles

MOBILITY IS ESSENTIAL FOR YOUR BUSINESS

FREE2MOVE

Free2Move offers each client its own mobility solution

Free2Move offers its clients complete support by...

ASSURING MOBILITY

LEASE

Choose **Free2Move Lease** and benefit with leasing solutions, together with a full suite of packages & services to suit your requirements and help drive your company's mobility.

2020 BUSINESS MOTORING Awards
WINNER BEST BUSINESS LEASE AWARD

OPTIMISING COSTS

CONNECT FLEET

The online platform **Free2Move Connect Fleet** analyses data of your vehicles in real-time, optimises their maintenance and improves your drivers' safety.

RENT

Need a short or medium term rental vehicle? **Free2Move Rent** offers help you to cover peaks of activity and adapt to unexpected circumstances.

AT FREE2MOVE, OUR SOLUTIONS ARE:

Multi-brand & flexible
with personalised support

Reliable & secure
with protection

Electric & Hybrid ready

Allow your company's mobility to be fully managed by **Free2Move**.

0345 319 1017
info@free2moveleasing.co.uk
www.free2move-lease.co.uk
Connect with us

3

How does V2G impact on the health on an EV's battery?

Any EV involved in V2G will have its battery charged and discharged more often than an EV which is charged in the traditional way.

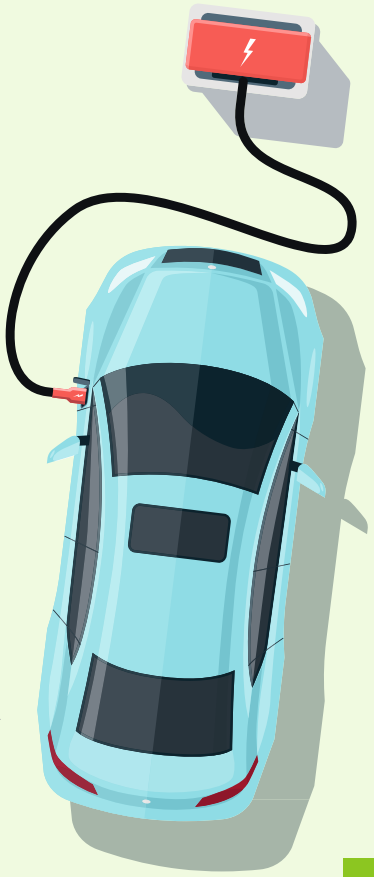
This could accelerate how quickly the battery could degrade if not managed correctly, says Martin Rothbart, senior product manager energy and sustainability at powertrain systems testing company AVL.

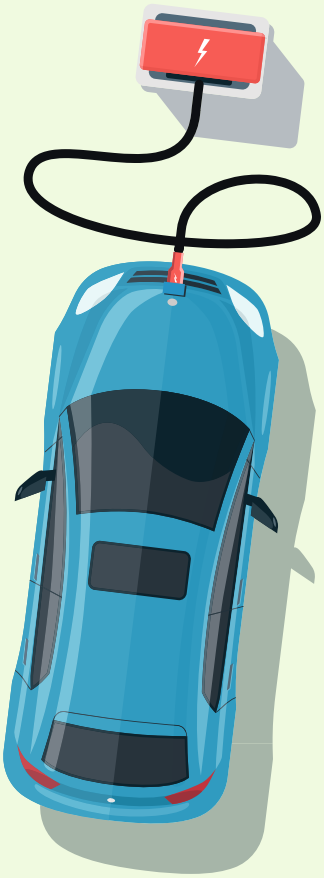
"The battery accounts for around 30% of the cost of the vehicle, so it is key you take care of the ageing process," he adds.

Batteries will degrade over time, but a study by the University of Warwick found that intelligently managing the use of V2G could improve battery life by around 10% a year.

"These findings reinforce the attractiveness of V2G technologies to OEMs," says Kotub Uddin, of the energy and electrical systems group at the University of Warwick.

"Not only is V2G an effective solution for grid support, but we have shown there is a real possibility of extending the lifetime of batteries."





ISTOCK.COM/PETOVARGA

4

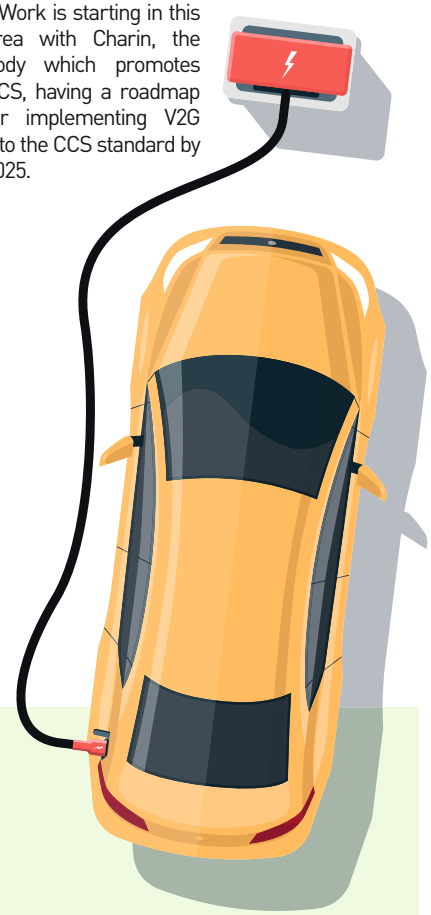
What is needed for V2G?

A V2G system requires four components: a V2G-enabled vehicle, a bi-directional charger which allows energy to flow both ways between the EV and grid, a communication system which allows the charger to 'talk' to the car and vice versa, and a control system.

Currently, the only BEVs on sale in the UK that are capable of V2G are Nissan's Leaf and e-NV200 models, as they support the Chademo charging protocol. All other BEVs use CCS, which does not currently support V2G.

"Across the large vehicle manufacturers we are not aware of any other models planned to include Chademo in Europe, so it is imperative to progress CCS to being fully V2G capable," says Cenex.

Work is starting in this area with Charin, the body which promotes CCS, having a roadmap for implementing V2G into the CCS standard by 2025.



5

How close is V2G to becoming widespread?

The V2G market still has numerous challenges to overcome before it becomes widespread, but BP Pulse CEO Matteo De Renzi has estimated this may begin to happen by 2023.

Currently there is a lack of vehicles capable of V2G (see Question 4 above), while the cost of a V2G charger is still high, although it is falling.

In 2018, V2G chargers cost around £15,000, but are now around £5,000. Cenex estimates these figures will fall to £1,000 by 2030.

If revenue streams for V2G remain constant, then the prospects for the technology will improve over the next few years.

"V2G may promise cost or carbon reductions and be oven-ready for larger-scale roll-outs, but the question is whether the energy system and the market will be ready to accept it," says Chris Rimmer, infrastructure strategy lead at Cenex.

"The process for gaining network connection permission remains painfully slow. Only Nissan vehicles are currently compatible with the technology, which is still too expensive.

"Fleet managers are busy grappling with the ban on the sale of new petrol and diesel cars and vans in 2030, leaving little time to think through how to best use their newly-electrified vehicles.

"And market entry barriers remain significant for companies looking to bet big on the readiness of V2G."

Rimmer adds: "Yet, despite the Covid-19 pandemic, E-Flex and other projects are continuing to develop apace, while sales of EVs are at record levels.

"Expect this year to be filled with results, reports and announcements from V2G projects.

"These will show just how oven-ready V2G is and, perhaps most tellingly, also reveal how V2G-ready the market is."

ENGIE

'We really need to walk the walk (on zero carbon)'

Engie has set itself ambitious targets for its transition to a full BEV car and van fleet. *Andrew Ryan* finds out how it is progressing

Reward director Fiona McIver 'bangs the drum' to increase EV uptake

ORGANISATION: Engie
REWARD DIRECTOR: Fiona McIver
HEAD OF FLEET: Jonathan Lamport
FLEET SIZE: 4,000 (2,300 vans, 1,000 cars, 700 others)
FUNDING METHOD: Contract hire
REPLACEMENT CYCLE: Four years

When your corporate company purpose is to "make zero carbon happen for businesses and communities" it places a certain pressure onto that organisation to lead by example.

That is the case at energy and services company Engie, which has committed to electrifying its fleet of around 4,000 vehicles, as well as pledging that none of its vehicles would be diesel by 2025.

"Our purpose is to make zero carbon happen, so we really need to walk the walk and push that as far as we can," says Fiona McIver, reward director for the UK and Ireland at Engie.

The company, which is focused on the production and supply of low carbon energy, services and regeneration as well as EV charging infrastructure, began its fleet electrification programme in 2017 and a year later it was a key partner alongside Global Action Plan in creating the Clean Van Commitment.

This resulted in a pledge from many of the UK's largest fleet operators, including organisations such as Tesco, Anglian Water and Network Rail, to strive to increase the number of battery electric vehicle (BEV) fleets by 2028.

Engie also committed to an interim target of electrifying 20% of its fleet by 2020.

"Hands up, we didn't quite manage our 20% target due to an enormous number of factors, not least the pandemic which led to the shutdown of all kind of manufacturers," says McIver.

"Our fleet size also increased through growth and acquisitions, and in the in the end, we achieved 14% overall.

"We did convert 23% of our small vans to electric, and 34% of our benefit cars, but we struggled with the medium/large vans because they weren't available at that time."

The company has used data from telematics to identify which vans were suitable to be replaced immediately with BEVs.

CHARGE POINT INVESTMENT

As part of its electrification plan Engie is also investing £600,000 into building an infrastructure to support its EVs, including charging points at its key UK offices, customer sites and at the homes of its employees for free.

"What we're trying to do is remove as many barriers as possible," says McIver, who is responsible for the strategy of the fleet, with head of fleet Jonathan Lamport and his team of four employees looking after its day-to-day running.

"The main resistance to BEVs was about range anxiety in the beginning, but the newer EVs have much longer ranges, so that anxiety has quietened down.

"I think the charging infrastructure still alarms people, and that's even if you tell them there are more charge points than petrol stations, or that they could even have a charger at their homes.

"Obviously there are some instances where that doesn't really work, particularly in major hubs like London where a lot of people don't own their home, or if they live in a flat and don't have a driveway. So, there are still quite a few obstacles when it comes to charging, but we're getting there. It will need a change in approach that people have to stop for 20 minutes to use the public charging network."

If BEV drivers have a long journey to make or have range anxiety, they are able to access rental vehicles at Engie's preferential company rates.

The company also tries to allay any fears or misconceptions through regular communications though channels such as email and webinars, while it also uses quotes and videos from its BEV drivers to raise awareness.

It has also introduced other incentives to encourage BEV uptake. The company's choice list is split into four bands for perk drivers, with eligible employees able to trade up one level for petrol and hybrid cars, but any number of levels for BEVs.

"They can do that as long as it's affordable – it's not for us to say they can't," says McIver. "It is an inducement for them to move to the green side.

"The instant the Tesla 3 was available it became a real game-changer because at one point it was priced really rather attractively. That has varied since it came out and that's why it's important we have a responsive car choice list which we update to reflect those changes."

WHOLELIFE COST MODEL

Vehicles in each band are currently determined by lease rates and McIver says the company is looking to change this to a wholelife cost model as it believes that would increase the number of BEVs in each band.

"We're also discussing with our executive team whether we can have 'trademark' cars per level," she adds.

"Instead of them being based on cost, we can say, for example, 'ok, we want the majority of our employees to be able to have access to the Kia e-Niro, so, regardless of whether or not the cost of the lease goes up or down, we will have it in this band'."

The company has also pledged to ensure that none of its UK fleet is diesel by 2025, and all these models have already been removed from its company car choice list.

Petrol and hybrid models will follow when practical as manufacturers extend their model ranges.

Engie also offers all staff access to ultra-low emission cars through a salary sacrifice scheme, operated by Tusker, which it introduced in 2018.

"We have quite different employee types in the company and were conscious that a lot of the benefits always seem to just cater for our more senior staff," says McIver.

"Whereas here is the opportunity to say to an employee 'look, you don't need a cash deposit, you don't need to pay for insurance, you don't need to pay for maintenance. It's all included in the monthly payment'."

So far, 127 cars have been ordered to date, an order penetration of around 1%. Almost all (91%) have been BEVs, with the average CO_2 emissions of the salary sacrifice cars being 12g/km.

The most popular models have been Tesla Model 3, Audi e-tron, Toyota C-HR, Kia e-Niro and Peugeot e-2008.

Employees are allowed to procure two cars through the salary sacrifice scheme, "so if they wanted to get one for themselves and one for their parents, or wife, or child, that's entirely feasible.

"That is obviously really for the more senior employees, but it's a great advantage for them to be able to do that. Any drum we can bang to increase EV uptake, we will."

BUILDINGS-AS-A-GRID: IS THIS THE SOLUTION FOR WORKPLACE CHARGING?

Turning a building into an energy hub with solar panels and energy storage could transform workplace charging, says Eaton. *Andrew Ryan* reports

One of the challenges facing organisations looking to electrify their depot-based fleets is ensuring their sites can deliver enough electricity to charge numerous vehicles at the same time.

In some instances, this could leave a company with a large bill if it needs to upgrade its connection to the electricity grid to cope with the increased demand for energy.

For example, as part of the ongoing Optimise Prime electric vehicle (EV) trial, UK Power Networks has looked at the cost and practicality of converting 21 Royal Mail depots to be able to cope with an all-electric fleet.

Taking into account a number of factors such as the existing agreed supply capacity and the number of vehicles which would need to be charged, the network operator found that if these EVs were plugged in as soon as they returned to the network, it would cost around £1.8 million to upgrade the depots' connections to the capacity required.

Smart charging technologies, which manage the charge dispersed by numerous charge points, ensuring demand does not exceed the site's capacity at any time, would mean just three of the 21 Royal Mail sites assessed would need network upgrades, saving a significant amount of money.

Another possibility, says power management technology company Eaton, is to adopt a 'buildings-as-a-grid' approach which would transform buildings into energy hubs.

These would combine three technologies – solar panels to produce electricity, an on-site battery to store the energy produced, and charge points to fuel EVs – managed by a load balancing and energy management system.

"This can lead to a better user experience at times of peak demand, as well as provide the potential for grid support," says Myriam Vansteenkiste, sales director, energy transition and renewables at Eaton.

When used separately, the components all have a cost and environmental benefit, but, when brought together, they can have a transformational effect.

Eaton's X storage could be part of the solution to charging multiple vehicles simultaneously

Introducing a buildings-as-a-grid system such as Eaton's can increase the number of chargers which can be installed on a site, as well as the available power per charger, says Vansteenkiste (see graph).

She says if a site has eight 22kW charge points and has an electricity supply of 50kW, then just two vehicles could be charged at the same time if no additional technology was used – it would not be possible to charge a third EV as the grid would be at maximum capacity.

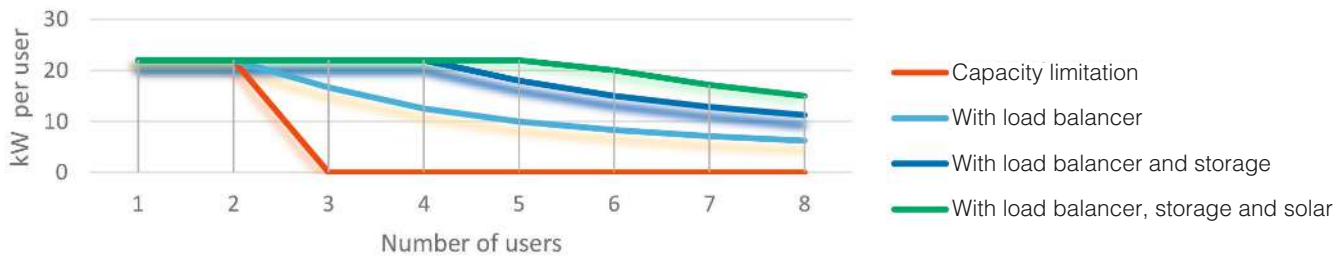
If a load balancing system was installed then multiple vehicles could be charged at the same time, but at a slower rate as the electricity supply would be split between them. For example, three or four EVs would still be charged at more than 10kW per user, says Vansteenkiste.

"Energy storage improves this further, but, with solar panels generating electricity as well, it will help more users have access to higher charging speeds," she adds.

"Even when you go to seven or eight users, they will all still be able to charge their cars in a reasonable amount of time."

If an energy storage system is used, this can store the excess electricity to be used later in the day when electricity is more expensive, or when the grid requires support at peak times, which can create a revenue stream for the owner of the building.

THE SITE LEVEL BENEFITS OF BUILDINGS-AS-A-GRID



DELIVERING BESPOKE REMARKETING STRATEGIES FOR FLEET VENDORS

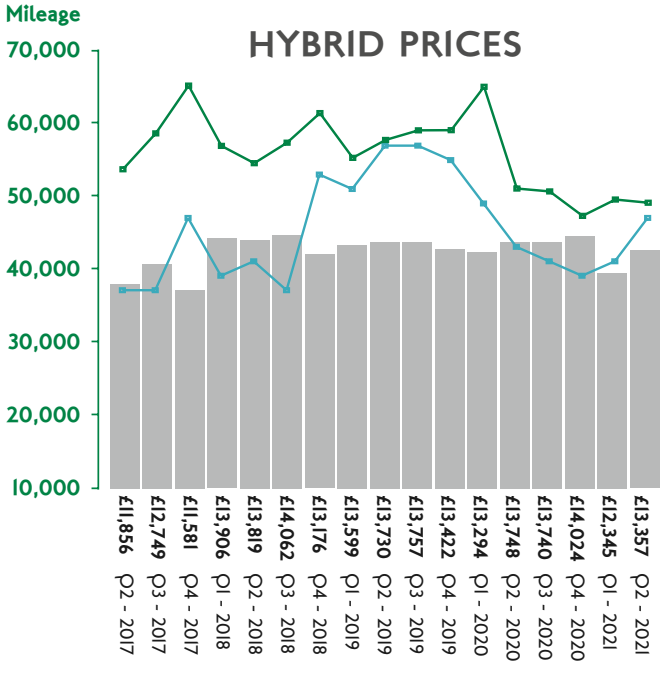
ASTON BARCLAY

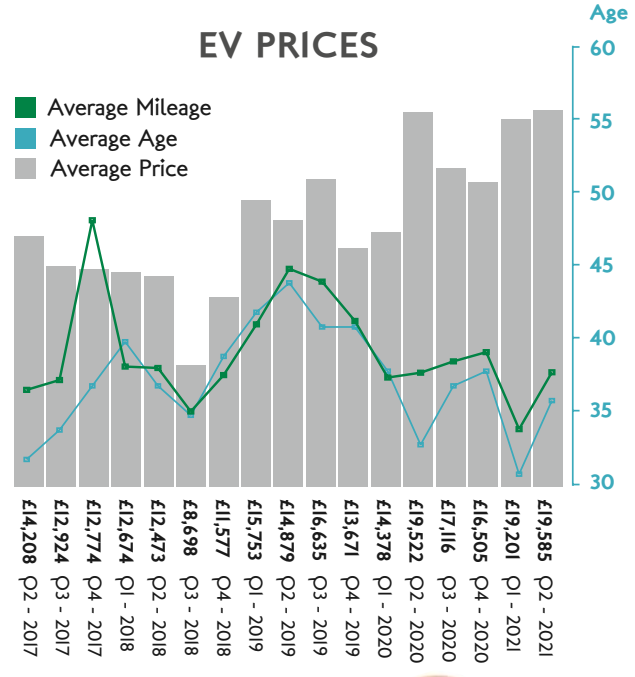
Aston Barclay has been using its decades of experience to help contract hire and leasing companies, finance companies and OEMs navigate through the used vehicle minefield for the past 18 months.

One vendor was keen to understand more about used hybrid and EV price trends and how that was impacting their current sales performance and prices.

We used pricing insights and feedback from our auctioneer team and buyer base to understand how guide prices were out of kilter with equivalent petrol and diesel cars and had impacted conversion rates.

By helping to set accurate reserves on every car, the vendor has already increased conversion rates.





Let us become an extension of your remarketing team and deliver industry-leading conversions. Get in touch with our MD - Customer, Martin Potter at salesteam@astonbarclay.net

FLEET & MOBILITY LIVE

5th -6th October 2021 at the NEC

The UK's leading event for the fleet and mobility community

REGISTER YOUR INTEREST NOW

fleetandmobilitylive.com

For exhibitor and sponsor enquires please contact events@fleetandmobilitylive.com

COVID-19 Notice: Bauer Consumer Media/Fleet & Mobility Live are continuing to monitor the COVID-19 situation closely and will follow government advice. At this moment in time, we feel that the timing of Fleet & Mobility Live will offer the perfect opportunity to bring the industry back together after such exceptional times. We will ensure additional safety measures are in place to ensure strict hygiene standards are maintained throughout the event. Should you have any concerns about attending or exhibiting, please contact the events team - events@fleetandmobilitylive.com

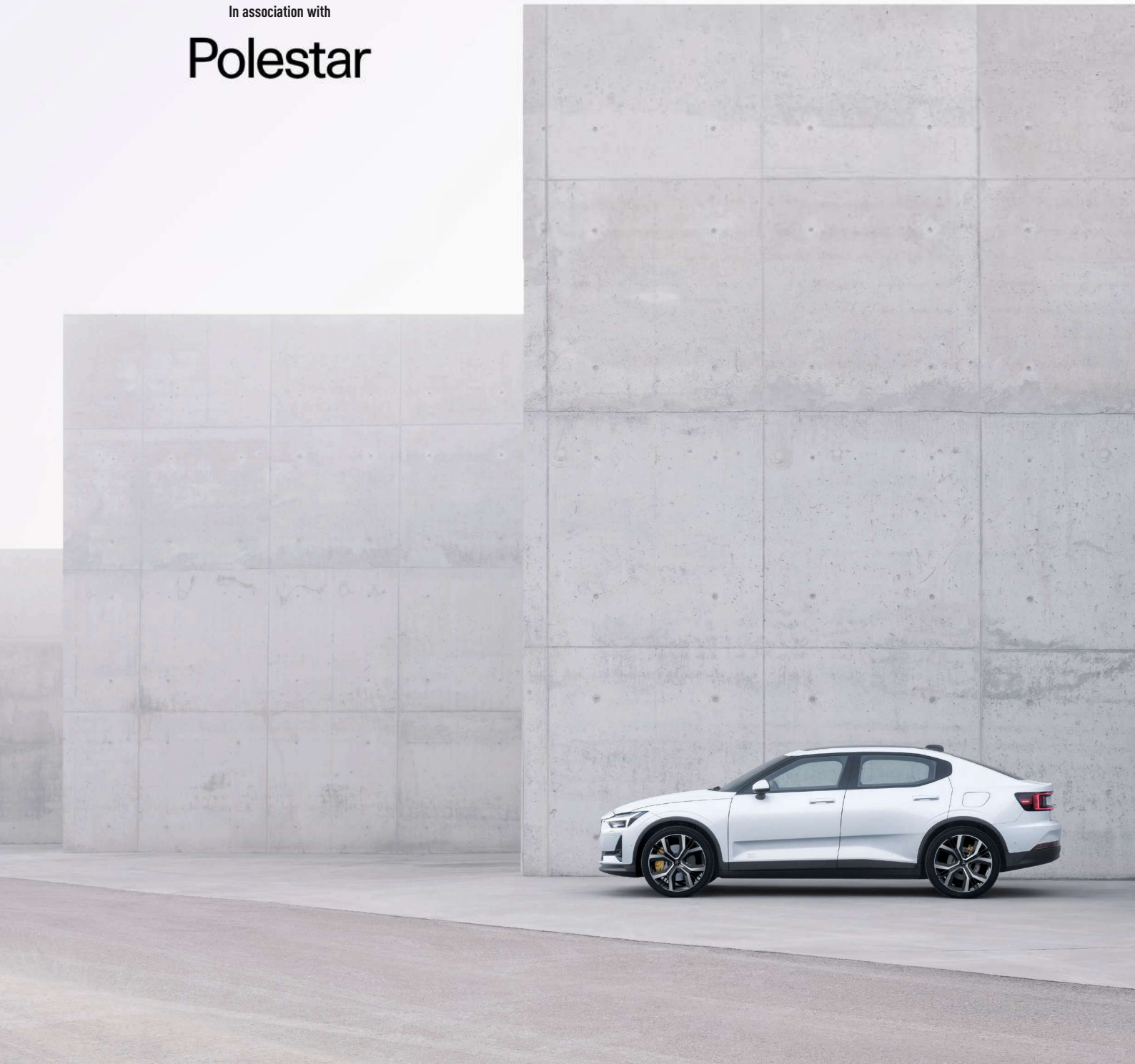
A SPECIAL REPORT BROUGHT TO YOU BY FleetNews

THE POLESTAR 'MOONSHOT'

New brand aims to have the first well-to-wheel, fully emissions-free vehicle that does not require additional carbon offsetting to back its claims

In association with

Polestar



Goal is a fully emissions-free vehicle without any carbon offset 'cop outs'

Fleets across the UK are making the switch to electric vehicles (EVs) to help cut carbon emissions. But, simply transitioning to EVs and away from internal combustion engines (ICEs) doesn't mean fleets have "gone green".

There's no getting away from the fact that manufacturing a car is damaging to the environment, whether it's an EV, hybrid, diesel or petrol vehicle.

It's why Polestar, the performance electric vehicle brand, has laid down the gauntlet to the industry to say it will build a well-to-wheel emissions-free vehicle by 2030.

The Sino-Swedish brand is also going to do it without using carbon offsetting (such as planting trees to absorb more CO_2), a practice which Thomas Ingenlath, Polestar's global boss describes as a "cop out".

It's a bold statement that immediately throws up questions about all elements of the manufacturing process. How can you manufacture an electric battery at no cost to the environment?

There are many challenges and difficult questions to be answered over the next nine years, but as Jonathan Goodman, Polestar UK's chief executive officer and head of global communications explains, this kind of "moonshot" project is what sets the brand apart.

Goodman says: "The world does not need another automotive sub-brand. We have to offer something truly unique for the industry to justify our existence and setting a target like manufacturing a truly carbon neutral car sends out a signal of intent.

"It's going to mean we question everything and rewrite all the fundamentals of the car manufacturing process."

This is Polestar's aspiration across the business: it wants to completely rip up the rulebook on how cars are made, sold and serviced.

Goodman's team in the UK has been given the remit to pick and choose what it wants from the legacy of the old automotive world and discard the rest.

It means that unlike other new automotive start-ups, Polestar can take the platforms, safety heritage and technology expertise Volvo has built up over the years, as well as the funding and supply chain experience from Geely, and forge a new path.

Any fleet manager or customer can go onto the polestar.com website and look at what kind of environmental impact producing a Polestar 2 has.

It's there for all to see that producing an EV's materials and its battery pack actually results in higher CO_2 emissions than producing an ICE engine for a conventional car.

Polestar is laying it all out on the table and communicating openly about the true environmental impact of the entire life cycle of electric cars, from production to end-of-life.

Goodman adds: "Project 0 will actually mean we'll be making a positive contribution towards climate change. That's something the automotive industry has never done.

"It's brave and you're there to be shot at, but we're not afraid to make the difficult calls to change how things are done.

> THE WORLD DOES NOT NEED ANOTHER AUTOMOTIVE SUB-BRAND. WE HAVE TO OFFER SOMETHING TRULY UNIQUE FOR THE INDUSTRY TO JUSTIFY OUR EXISTENCE AND SETTING A TARGET LIKE MANUFACTURING A TRULY CARBON-NEUTRAL CAR SENDS OUT A SIGNAL OF INTENT
>
> **JONATHAN GOODMAN, POLESTAR UK'S CHIEF EXECUTIVE OFFICER AND HEAD OF GLOBAL COMMUNICATIONS**

Fleet customers have been treated like second class citizens for too long

Fleets choosing Polestar shouldn't expect the standard experience they're used to when picking their next company car.

The new performance electric brand is a newcomer to the UK fleet market and is looking to right some wrongs by having closer direct relationships with drivers, without cutting out fleet managers and leasing companies from the picture.

Having the right approach to the fleet market will be essential, as 70% of the company's all-electric Polestar 2 sales are expected to go to company car drivers (see page 4 for an in-depth report on the Polestar 2).

The brand is not playing a numbers game in the UK, so is not chasing retail or fleet volumes or worrying about upsetting a car dealer sales network. Polestar doesn't have one.

Goodman says: "The fleet customer has been treated like a second class citizen by other manufacturers for too long.

"Company car drivers are often treated with disdain when they go to the dealership and the sales executive realises they're not going to get a sale.

"Polestar's fleet customers can get the same experience as a retail customer and they will be treated like they're the most important person in the world."

The brand has two physical retail experience centres called Spaces, with one at the London shopping centre Westfield or at The Trafford Centre in Manchester, and more than 100 service points across the UK bringing peace of mind to fleet decision makers and drivers when it comes to the barriers for switching to EVs.

The teams at the Spaces are not paid a commission on sales, so it's a no pressure, no hassle environment.

Test drives can be arranged online at regional hubs or at Polestar's current road test roadshow across the UK. But that's only if fleets want to engage with the brand in person. It's totally up to them.

The entire buying, or leasing experience can be cunducted directly online at polestar.com.

Small business owners, SMEs and personal leasing customers can complete their orders for a new Polestar end-to-end online.

Meanwhile, larger corporate customers will have Polestar introduced by their existing leasing companies.

Orders can be placed through the leasing company and then when Polestar has permission, it will contact drivers directly and update them on the status of the vehicle order and when it's time for their handover.

COLLABORATING WITH THE UK LEASING INDUSTRY

Matt Hawkins, Polestar UK head of sales, says: "We don't want to cut the leasing company out by going directly to the customer.

"If the fleet is already comfortable working with their leasing company and happy with them, we would rather go through them to make that introduction."

Hawkins says it's much better to forge relationships with leasing companies and to get buy-in with the brand, rather than trying to go direct to fleets, particularly as the brand is "the new kid on the block".

All the team at Polestar ask for in return is that it deals directly with drivers at the point of vehicle handover.

A lot of fleets Polestar is already talking to have made the decision to switch to EVs or they're actively assessing their options to electrify their fleets.

But Hawkins acknowledges that Polestar is still largely an unknown quantity.

Some company car drivers have been tracking the launch of Polestar since October 2017 and even approaching the brand without the knowledge of their fleet manager.

Hawkins says: "As long as the driver understands the decision on offering Polestar is a decision the fleet manager will ultimately make, we are happy to look after drivers and give them a retail brand experience."

Polestar UK's fleet and sales team has already been working with leasing

companies in the UK to provide product information.

It means account managers at leasing companies that already have relationships with fleets can have the initial conversations introducing Polestar as an alternative EV option.

Hawkins says: "Rather than us be a bolt out of the blue for fleets that have never dealt with Polestar as a brand before, they can have the comfort in knowing we've presented to their leasing company.

"Fundamentally, the leasing companies will already understand the differences in our sales process so they can align that to the customer."

Debbie Hunt leads Polestar's UK fleet sales and both she and Hawkins have many years of experience in the industry, working across leasing companies, dealer groups and car manufacturers.

Crucially, Hawkins says the team has experience working in the field spending many hours behind the wheel each day.

He says: "We know where drivers are coming from when they talk about choosing the right vehicle for them."

GETTING BEHIND THE WHEEL OF A POLESTAR

There are several ways Polestar is offering test drives for fleets. If a fleet manager is happy for a driver to arrange a test drive like any other retail customer, that's an option open to them.

Drivers can choose a time online that suits them, fill in their driving licence details and turn up.

There will be a short presentation of the brand, a short walk around of the car and then drivers get access to the Polestar 2 to take it out on the road.

Fleet specialists will be on hand at all test drive locations, so when a company car driver turns up, they will get access to more specialist knowledge.

It's here where Polestar will do some more due diligence to make sure an EV is right for each driver, crucially before any orders go through.

Hawkins says: "By making EVs so attractive to fleet drivers due to the 1% benefit-in-kind (BIK) company car taxation, it means some drivers might not have done all their research before making the switch.

"What kind of journeys are you doing? What's your daily mileage? Do you have access to a home charging point and is driving an EV going to fit into your daily schedule?"

Polestar also has a corporate demonstrator fleet of vehicles that are available on request to leasing company influencers and fleet decision makers for longer term test drives.

This can be to assess the performance of the car over a longer period of time and if a fleet or leasing company might be setting their own residual values (RVs).

Polestar is also looking at holding some takeover events for test drives that are held in collaboration with leasing companies.

Hawkins says: "We recognise there will be a grey area where there is a fleet operator that has demand from drivers to experience Polestar.

"They want to get something more tailored to their business but don't necessarily need a longer test drive."

Polestar is currently working on creating one day events at its own test drive locations where leasing companies can invite their own customers along for a ring-fenced period of time.

Hawkins adds: "This is just the start of Polestar's fleet journey.

"Our team is in the early stages of gathering information about what customers want and we're tailoring our processes around what drivers, fleet managers and leasing companies need.

"We're working hard to make sure the processes underpinning our fleet sales are as seamless as possible."

Polestar 2 in focus

The Polestar 2 is the first mainstream production car with an all-electric powertrain to arrive in the UK from the brand and it offers a true rival to the Tesla Model 3.

The range has recently expanded to three different variants - two long range 78kWh versions (408hp/231PS) with a WLTP range of up to 335 miles, as well as a standard 64 kWh (224PS) model that still offers over 260 miles. Prices range between £39,900 and £45,900.

As would be expected from an electric vehicle (EV), acceleration is instant and relentless, with the 50-70 mid-range especially punchy.

A 0-80% rapid charge can be achieved in 40 minutes.

What's most impressive about the Polestar 2 is how it drives. The Polestar 2 lives up to the brand's performance promise.

The battery weight helps keep the car planted, while its specially-tuned suspension takes corners with ease.

Driving the car on normal roads, the capabilities are well hidden. On a motorway jaunt, Polestar 2 exhibits the same levels of comfort and refinement as a luxury saloon.

There are no sport or eco modes, just a nicely tuned accelerator pedal that allows for effortless (and efficient) cruising or breakneck acceleration.

For an extra £3,000, an optional Pilot Pack includes enhanced safety and driver assistance features, such as the Pixel LED headlights with LED front fog lights, Driver Assistance with Adaptive Cruise Control and Pilot Assist, a 360-degree surround view camera, all-round parking sensors, and Driver Awareness including Blind Spot Information System (BLIS) with steering support, Cross Traffic Alert with brake support, and Rear Collision Warning.

Polestar 2's infotainment system also deserves praise.

The car was awarded a five-star Euro NCAP safety rating in March 2021, thanks to structural safety developments, eight airbags, and safety assistance features which include vehicle, pedestrian, cyclist and road edge detection support.

POLESTAR 2 KEY STATS

Variant	Battery capacity	Output	Preliminary consumption (WLTP)	Preliminary range (WLTP)
Long range dual motor	78 kWh	300 kW (408PS) 660 Nm	31.4-32.6 kWh/100 miles	279-298 miles
Long range single motor	78 kWh	170 kW (231PS) 330 Nm	27.5-29.4 kWh/100 miles	320-335 miles
Standard range single motor	64 kWh	165 kW (224PS) 330 Nm	27.5-28.9 kWh/100 miles	260-273 miles

Google has designed the car's operating system and infotainment system, so apps like Google Maps and Spotify are smartly integrated into the 11-inch-central touchscreen and 12.3-inch driver display, enabling a smartphone experience.

Operation is simplistic, as are all the car's features. You don't even need to switch it on or off, just jump in and select 'drive'. Provided you have your smartphone nearby, you also don't need a key, with locking, unlocking and operation all digitally secure through the Polestar app.

The *avant-garde* and minimalist design of the exterior and bespoke interior is beautifully finished with a variety of materials, including real wood and WeaveTech vegan fabrics. There's plenty of space for passengers too, with similar cabin space to a large saloon.

The boot is bigger than you would get in a VW Golf at 405 litres, plus there's an extra storage space under the bonnet, ideal to store the charging cables.

A COMFORTABLE TRANSITION TO EV

Polestar, fundamentally, is a build-to-order brand and is currently working to a three-month lead time for deliveries.

However, there are some limited pre-configured stock customers can get hold of more quickly.

Matt Hawkins, Polestar UK head of sales, says the Polestar 2 has already been described by customers as a car that makes it easier to transition to EV. The fact the new model also qualifies for 1% benefit-in-kind tax makes the new model even more attractive for company car drivers.

He says: "The Polestar 2 doesn't feel like you're getting into a piece of tech. You get into the car and it feels like a premium saloon. It has a gear lever in the middle to select forward and reverse, it has an instrument binnacle behind the steering wheel with a familiar set-up. That helps drivers that might be used to a petrol or diesel car."

Hawkins thinks the Google-powered operating system will be a particular highlight for fleets.

He says: "It's a pretty big step for a manufacturer to say we know we're good at hardware, but the software companies such as Google are better at that."

It means the Polestar 2 can seamlessly link Google Map information between smartphone and the vehicle and it can also point out charging points and EV range for each journey to help make planning work trips easier.

The voice recognition system can control temperature, audio and the navigation system so drivers can keep their hands on the wheel and eyes on the road.

ALTERNATIVE FUELS

ALTERNATIVE THINKING

OUR EV EXPERTS ALWAYS DO WHAT'S RIGHT FOR YOUR BUSINESS

Your business, like our approach to decarbonisation, is unique. Our consultancy experts put the needs of your fleet first. We provide recommendations on a vehicle-by-vehicle basis and work in partnership with you to develop a bespoke transition strategy for a greener, brighter future.

Connect with our experts

zenith.co.uk
oneteam@zenith.co.uk
0344 848 9311

Zenith
Intelligent Vehicle Solutions

IT'S ELECTRIFYING!

WHAT WILL HAPPEN – AND WHEN

Matt de Prez looks at how manufacturers are adapting to suit the demand for electrification

VOLKSWAGEN GROUP

AUDI

Along with the culling of combustion engine product variants, Audi's goal is to offer more than 30 electrified cars by 2025, with 20 being full EVs. The brand expects that 40% of all Audis sold by 2025 will be electrified.

Currently, it offers the e-tron in numerous fully electric guises and the e-tron GT. These will shortly be joined by the Q4 e-tron, which is based on the same platform as VW's ID.4.

With regard to plug-in hybrids, these come in the shape of the A6, A7 and A8 saloons, Q3, Q5 and Q7 SUVs and the A3 hatchback.

The 'e-tron' tag of old was replaced by 'TFSIe' for these variants.

SEAT

Seat will develop and produce small electric cars for the Volkswagen Group based on its new MEB-Lite platform.

The new compact models are expected to have a footprint similar to that of the current Seat Arona and VW T-Cross.

The first vehicle is expected to launch in 2025, with a starting price of around £17,000. It will be offered in configurations for Audi, Cupra, Škoda and VW, as well as Seat.

VW

Volkswagen has upgraded its electric vehicle sales ambition with a new pledge that 70% of the cars it sells in Europe will be fully electric by 2030.

It has a strategy to launch one new EV each year, including three this year.

The all-wheel drive ID.4 GTX was announced last month and will be followed by the ID.5 in the second half of the year. A seven-seater electric SUV for the Chinese market, called ID.6 X, will be launched in autumn.

An electric car to sit beneath the ID.3, developed by Seat, will arrive in 2025.

The combustion engine fleet will also be developed further in parallel to the acceleration of the e-campaign. All core models, including the Golf, Tiguan, Passat and T-Roc, will get another successor.

BENTLEY

Bentley will become a fully-electrified luxury car brand within 10 years.

It will only sell plug-in hybrid or electric vehicles (EVs) by 2026 and will switch to EV-only by 2030.

The strategy will see Bentley transform from being the world's largest producer of 12-cylinder engines to a leader in suitable luxury mobility within a decade.

Every model line will be offered with the option of a hybrid variant by 2023 and Bentley will launch two new plug-in hybrids this year, joining the existing Bentayga Hybrid.

ŠKODA

By 2025, Škoda's portfolio will include 10 electrified models in various segments, six of which will be all-electric, the others will be plug-in hybrids and hybrids.

Switching to EV? Can your telematics partner answer ‘yes’ to these 5 questions?

Geotab can.

Ensure your telematics partner can answer these questions as you adopt electric vehicles in your fleet:

- Can you give me recommendations for fleet electrification, from my existing fleet data?
- What is the basic EV driving and charging data I need?
- Can you expand my charging infrastructure and make it smarter?
- Can my telematics system be customised for my fleet’s specific EV needs?
- Will my telematics system support all the electric vehicles I’m interested in today? And tomorrow?

Want to transition your fleet to EVs? Think Geotab.

Already operate a partial or full electric fleet? Benefit from Geotab’s extensive model support and data insights including: real-time battery state of charge while driving, energy consumption and charging metrics all in one platform.

www.geotab.com/uk

GEOTAB®

Geotab @GEOTAB MyGeotab Geotab

BMW GROUP

BMW will launch its new i4 electric car this autumn and plans to have at least one fully electric model on the road in around 90% of its current market segments by 2023.

The i4 will join the brand's existing i3, iX3 and upcoming iX SUV in 2021, alongside the Mini Electric, while electric versions of the 5 Series and X1 are billed to follow, giving the Group 12 electric models by 2023.

By the end of 2025, the BMW Group aims to have delivered around two million fully electric vehicles to customers worldwide.

Mini will introduce its last new combustion engine model as early as 2025 and launch only fully-electric models from then. By 2027, fully electric vehicles will account for at least 50% of all Mini deliveries. The entire Mini range will be fully electric in the early 2030s.

FORD

Ford has committed to sell only electric cars in Europe by 2030, with all Ford cars sold in the continent by 2026 expected to be zero-emissions capable.

The brand's entire commercial vehicle range will also include a zero-emissions-capable option, electric or plug-in hybrid, by 2024, with two-thirds of Ford's commercial vehicle sales expected to be all-electric or plug-in hybrid by 2030.

Currently, the manufacturer offers two electric models: the Mustang Mach-E and the electric Transit. These are available alongside the plug-in hybrid Kuga SUV.

Under a new agreement with the VW Group, Ford will launch at least one volume electric car based on VW's MEB platform. This is expected to be a small SUV.

HONDA

Honda will move all of its European mainstream models to feature electrified powertrains by next year and plans to only sell electric- or hydrogen-powered cars globally by 2040.

It is developing a new platform to underpin a whole range of new models and expects that 40% of its global sales will consist of fully electric or hydrogen-fuelled vehicles by 2030.

Joining the new Jazz and Honda e in the UK will be four new electrified models in the next three years. The first to arrive will be the H-RV hybrid, followed by two other hybrid models and another fully electric car.

SPONSOR'S COMMENT

By Joshua Gordon, EV Strategy Manager, Geotab

Geotab supports the largest number of electric vehicle (EV) makes and models in the market today – 150 and counting. This cements the company's position as the strongest telematics provider in the EV space.

While many competitors provide light or only partial support for EVs, Geotab believes in working with you from the EV procurement stage to providing the support required for effective fleet management.

With driving data, fleets have visibility of real-time state-of-charge, kWh energy consumption and electric economy.

And this is as well as charging assurance tools to ensure vehicles are prioritised and charged when they need to be, and much more.

This provides fleets with reliable data to make informed decisions on how to operate your EVs more efficiently.

We work directly with vehicle manufacturers to develop unique capabilities to access critical EV data. You can operate your EVs with confidence knowing that your vehicle is fully supported and there are no data gaps in reporting. Any EV performance questions you have, we can answer.

Trust Geotab to help develop your EV adoption strategy with data-driven recommendations for which vehicles in your fleet to swap with electric. Learn more about Geotab's Electric Vehicle Suitability Assessment and how it can be tailored to your specific business goals.

Visit us at: www.geotab.com/uk/ or email: infouki@geotab.com

GEOTAB management by measurement

HYUNDAI

Hyundai plans to offer 44 alternative fuel vehicles by 2025 – including 13 hybrids, six plug-in hybrids, 23 battery electric vehicles (BEVs) and two fuel cell electric vehicles.

The Korean carmaker harbours ambitions to claim a 8%-to-10% share of the global EV market by 2025 and says it will accelerate the development of hydrogen fuel cell vehicles.

Hyundai will use the Ioniq name for a new dedicated electric vehicle sub-brand, with three new EVs set to be launched in the next four years.

The first model under the Ioniq brand will be the Ioniq 5, which will launch soon. It is based on the concept EV '45' that debuted at the International Motor Show (IAA) 2019 in Frankfurt.

In 2022, Hyundai will introduce the Ioniq 6 saloon, which is based on the company's latest concept EV 'Prophecy', unveiled in March; followed by Ioniq 7, a large SUV in early 2024.

JAGUAR LAND ROVER

Jaguar will offer an entirely electric model line-up by 2025 and Land Rover will phase out the combustion engine by 2036.

Currently, the only fully-electric model offered by JLR is the Jaguar I-Pace, although the brand has recently launched a wide range of plug-in hybrid variants across some of its most popular models, including the Evoque and Discovery Sport.

There will be six all-electric Land Rovers within the existing Range Rover, Discovery and Defender families by 2030, with the first arriving in 2024.

Jaguar's all-electric line up will not include the replacement XJ that was due to launch this year.

The brand expects 60% of Land Rovers will be sold with zero-emission powertrains by 2030 and will begin to phase out diesel engines from its model range from 2026.

KIA

Kia plans to launch 11 new EVs by 2026 and is aiming for EVs, plug-in hybrids and hydrogen fuel-cell cars to account for 40% of its global sales by 2030.

Seven of the new models will be built on the Hyundai Group's new dedicated E-GMP architecture. The other four vehicles will be based on existing combustion-powered cars.

The first to launch will be the EV6, a new flagship that will arrive before the end of the year.

MERCEDES-BENZ

Mercedes-Benz is expanding its range of EQ electric vehicles with six new model additions to its range, the first of which are expected to arrive next year.

The EQS, a fully electric version of the new S Class will be the first to arrive. It will be followed by the EQE executive saloon plus a pair of related SUV models. An EQA compact SUV and larger EQB will also begin production next year.

The new vehicles will join the existing EQC and recently launched EQV.

Mercedes-Benz wants electrically-powered cars including all-electric and plug-in hybrid vehicles to account for more than half of its sales by 2030.

MAZDA

Mazda expects that internal combustion engines (ICEs) combined with some form of electrification will account for 95% of the vehicles it produces in 2030 (with battery electric vehicles accounting for the remaining 5%), therefore it plans to continue to focus on maximising the efficiency of ICE.

Having launched its first electric model in 2020, the MX-30, the manufacturer now plans to introduce a version fitted with a petrol range extender this year.

VOLVO

Electrifying business

Introducing the Volvo XC40 Recharge Plug-in Hybrid T4 R-Design

From £39,390	**13%**	**Up to 28 miles**
P11D	Benefit-in-Kind	Pure electric range

Our Volvo XC40 Recharge Plug-in Hybrid T4 R-Design delivers figures that speak for themselves. But that's not all. There's the head-turning design, technology to keep your drivers connected and world-leading safety innovations to protect them. Plus, if you act now your business can enjoy a range of government incentives and tax benefits currently available for plug-in hybrid vehicles.

Volvo plug-in hybrids.
A fleet for here and now.

Visit volvocars.co.uk/hybridfleet
or call the Volvo Car Business Centre on 0345 600 4027

Fuel consumption and CO_2 figures for the Volvo XC40 Recharge Plug-in Hybrid T4 R-Design, in MPG (l/100km): WLTP Combined 117.7 – 134.5 (2.4 – 2.1). WLTP CO_2 emissions 55 – 47g/km. WLTP electric energy consumption 3.5 – 4.1 miles/kWh. Equivalent all electric range 26.1 – 27.3 miles. Figures shown are for comparability purposes; only compare fuel consumption, CO_2 and equivalent electric range figures with other cars tested to the same technical procedures. These figures were obtained using a combination of battery power and fuel. The Volvo plug-in hybrid vehicles require mains electricity for charging. These figures may not reflect real life driving results, which will depend upon a number of factors including the accessories fitted (post-registration), variations in weather, driving styles and vehicle load.

Glow on charging cable for illustrative purposes only.

Company Car IN ACTION

REGISTRATION NOW OPEN

Fleet operators and leasing personnel can register for free at **www.companycarinaction.co.uk**

JUNE 23-24 2021

MILLBROOK PROVING GROUND

CCIA 2021 will coincide with the year of the electric vehicle, with more models launching and supplies no longer restricted. We expect these cars and vans to dominate the show. It will be your best opportunity to make key decisions about which electric brands and models are right for your fleet and we will support you in making those decisions by offering best practice advice from industry experts. Put the date in your diary now.

The UK's premier drive and decide event exclusively for fleet decision-makers and influencers

companycarinaction.co.uk

Brought to you by **FleetNews**

NISSAN

Nissan plans to launch eight new electric cars by 2023, but has not confirmed how many will be offered in Europe. Currently, only the Ariya crossover is confirmed to join the brand's UK line-up next year.

By 2030, the car maker says all its models will be electrified, with a number expected to feature a new e-Power hybrid powertrain.

RENAULT

Renault is seeking to position itself as a technology, service and clean energy brand, with a plan to launch 14 new models with electrified powertrains by 2025.

Spearheading the French car maker's new direction is a retro-styled electric city car based on Renault's popular 5 model.

There will be seven new pure electric models from the brand between now and 2025 – with a further seven offering hybrid engines.

TOYOTA & LEXUS

Toyota's strategy has largely centred around hybrid models and, by 2025, the brand expects the technology will still account for around 70% of its sales. In the second half of the decade the manufacturer will begin to ramp up sales of electric models.

There are no fully electric Toyotas currently on sale, but the company plans to introduce 15 by 2025, including seven as part of a new bZ series.

The "bZ" stands for "beyond zero" and will be built on new dedicated EV platforms developed in partnership with Daihatsu, Subaru and Suzuki.

Only one model has been unveiled so far, the bZ4X. Sales are expected to start in 2022.

Lexus will also continue to offer predominantly hybrids, but also has the UX 300e fully electric SUV that launched last year. It's likely future electric Lexus models will have a sportier focus, as shown by its LF-Z Electrified concept.

STELLANTIS

Stellantis will produce vehicles on four new electrified platforms – two of which are fully electric.

The new strategy seeks to rationalise the group's electric car platforms, which currently comprises a mix of FCA-developed architectures and PSA ones. In future, all vehicles from all brands will use a new platform system called STLA.

According to Stellantis, this vehicle architecture will underpin A, B and C-segment vehicles, as well as compact and mid-size SUVs. STLA Medium will arrive in late 2023 and will cater for C and D segment. There will be some crossover with the brand's STLA Large platform which caters for large vehicles and people carriers.

Citroën and DS plan to offer electrified engines on all models by 2025, while Peugeot promises the same by 2023.

Fiat has committed to electrifying 60% of its range by the end of this year, while Jeep and Alfa Romeo are kickstarting their transitions with new plug-in hybrid models.

VOLVO

Volvo says it will become a fully electric car company by 2030 and will launch a completely new family of electric cars in the coming years.

It intends to sell only fully-electric cars and phase out any car in its global portfolio with an internal combustion engine, including hybrids, within nine years.

Already by 2025, Volvo aims for 50% of its global sales to consist of fully-electric cars, with the rest hybrids.

Part 1

ELECTRIC CARS

In a survey, more than a third of respondents cite CSR as the main reason for introducing EVs. But, close to a fifth plan to leave it until they have to comply. *Stephen Briers* reports

Electric cars' day has come. With more than 30 pure battery electric vehicles (BEVs) and 60 plug-in hybrid electric (PHEV) models now on the market and with almost every manufacturer offering an ultra-low emission option in their range, UK businesses and their company car drivers are providing the catalyst for a surge in EV registrations.

Production levels are rising rapidly as several manufacturers start to dedicate car lines to EV at factories worldwide, although delays are still commonplace, partly due to the ongoing Covid-19 pandemic which saw many plants temporarily close during lockdown.

Nevertheless, all manufacturers have revealed their EV roadmaps which, for the likes of Ford and Jaguar, include switching their entire model lines to BEV and PHEV ahead of the UK's 2030 deadline for the ban on sales of new petrol- and diesel-powered cars and vans.

New car registrations hit record levels in volume and market share last year, albeit from a low base, with BEV accounting for 6.6% of the new car market (volumes up 186%, of which 68% were company cars) and PHEV 4.1%. Growth has continued into 2021, with BEV up 108% in the first four months of the year (7.2% of the market), and PHEV up 162% (6.4% market share).

In comparison, diesel now accounts for just 11% of new car registrations.

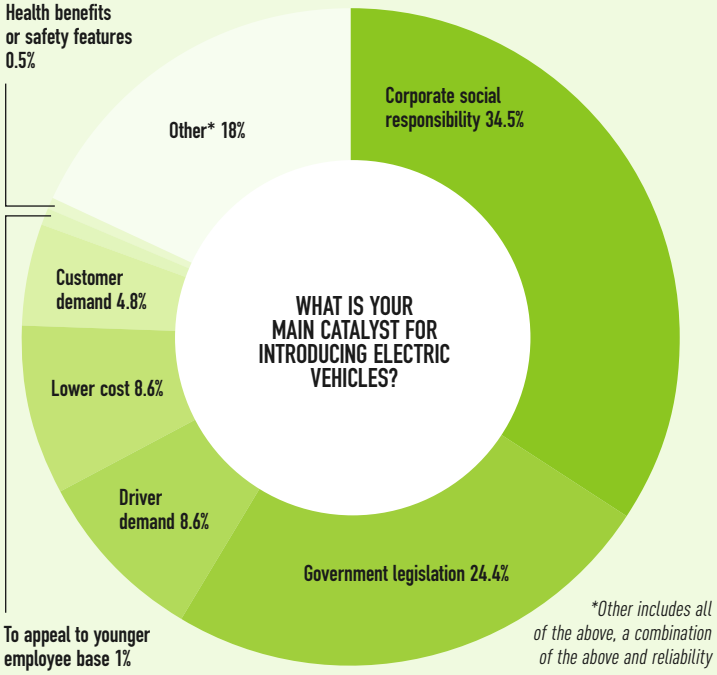
Yet, despite the eye-catching percentage rises, there is still a long way to go, according to the findings of a *Fleet News* survey sponsored by BP. Just 10% of the cars operated by the 200-plus respondents are PHEVs and 6% are BEVs, while the powertrains each account for only 10% of the cars that fleets have on order – 80%, therefore, are still conventional fuels.

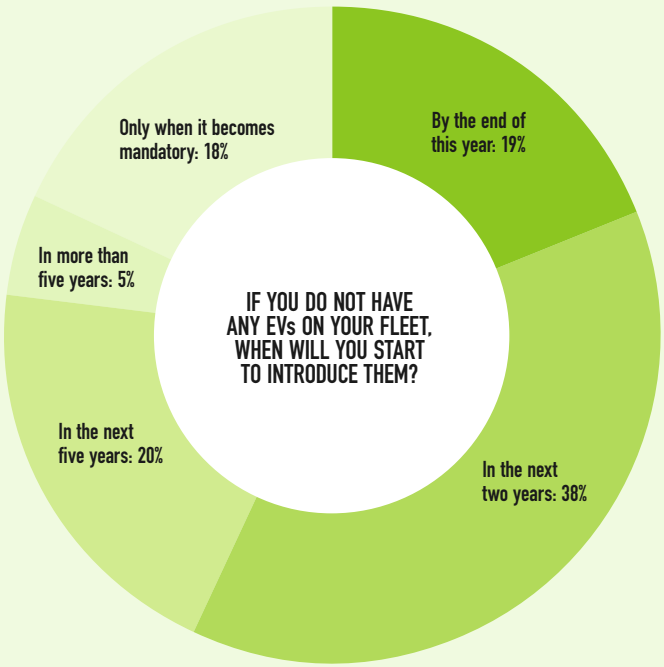
More than a quarter (26%) of companies currently have no PHEVs on their fleet, while 44% have no BEVs. Of these, 19% expect to have started introducing ultra-low emission cars by the end of this year and a further 38% within the next two years.

But almost one-in-five (18%) steadfastly refuse to introduce EVs until it becomes mandatory.

Size matters when it comes to early EV adoption. Almost 80% of companies without any PHEVs operate fewer than 100 cars, albeit around 20% do have full electric cars. Similarly, three-quarters of companies with no full electric cars are in the small fleet category, although 25% have some PHEVs.

Commonly, it is the larger companies who are making the bold statements about converting their fleets to electric and signing up to environmental





pledges. They have the resources to trial vehicles, build confidence within the business and among employees, and then implement the robust communications plans required to secure mass buy-in.

Siemens introduced PHEV in 2015, with full electric arriving two years later. It now has more than 1,000 PHEVs and 80 BEVs, with a car order book of 80% PHEV and 6% BEV.

The environmental drive comes from the top, sparked by a company mission of putting sustainability at the heart of its business.

It's a similar story at Mitie, whose own sustainability pledge will see it move almost 40% of its fleet to electric by the end of the year, with the rest following by 2025 under its Plan Zero commitment.

Corporate social responsibility (CRS) is the biggest driver in the move to adopt EVs, stated by 34.5% of respondents. Meanwhile, 24.4% felt they were being hustled into making the move by Government legislation.

Almost 9% are feeling the pressure from drivers, while the same percentage are attracted by the lower whole life costs. Fewer than 5% say they are introducing electric vehicles primarily due to customer demand, as part of business tenders.

Wayne Warburton, Siemens UK head of mobility services, has found many electric vehicles to be cheaper than comparable diesel on wholelife costs.

"What's making the difference is the maintenance and fuel. And, as leasing companies get a better understanding of how much cheaper they are to maintain, they are no longer loading the service, maintenance and repair (SMR) from a risk point of view," he says.

"There are savings for Siemens as well as the driver and the planet."

The wholelife cost message is still not widely recognised by many fleets. Cost was highlighted by survey respondents as one of their biggest challenges, with one-in-five saying it was preventing them from making the switch to electric.

However, their biggest issue was insufficient range for job requirements. This was mirrored by their own employees, whose overriding objection (stated by 33%) was lack of range.

The 2021 class of EVs should help to alleviate these concerns, with many models now comfortably exceeding 200 miles' range in real-world conditions.

Range anxiety is often a perception that can easily be overcome when drivers see the impact on their wallet. That's certainly the experience of Steve Openshaw, group fleet and transport manager at Eric Wright Group.

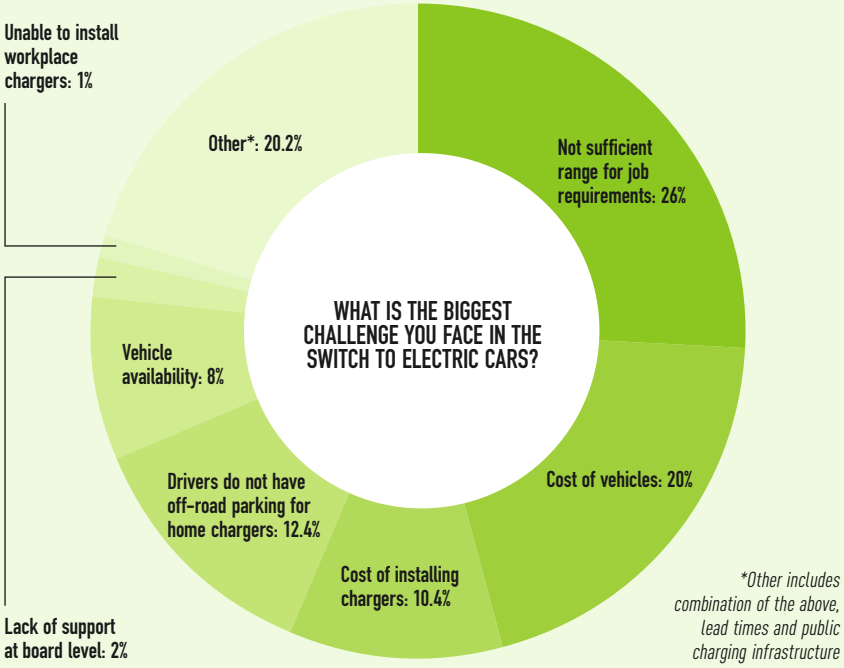
Commenting on the low benefit-in-kind (BIK) tax rate introduced in 2020 for electric cars, he says: "As soon as the BIK rate dropped, range anxiety disappeared. The newer EVs have ranges of 200 miles and upwards, and you don't want to be driving 200 miles in one go, anyway.

"If you are doing so, it's against (our) policy. In four hours of driving, you need to take a break of half-an-hour to an hour, so, in that time, you can charge the vehicle up."

Charging infrastructure is harder to resolve. For the business, the main concern is the cost of installing a workplace network (10.4%), but the bigger hurdle is drivers who do not have off-road parking for home charging (12.4%).

It's also the second biggest objection ➲

SURVEY FACTS:
Sample size
214
fleet operators



*Other includes combination of the above, lead times and public charging infrastructure

SPONSOR'S COMMENT

By Adrian Brabazon, UK fleet sales manager, BP Fleet Solutions

Post-pandemic, we've seen just how quickly human behaviour can change; how we have all become more flexible and are willing to adapt faster than ever before.

A recent survey carried out by *Fleet News* and bp has revealed that only 7% of fleets have moved their entire fleet to electric and only 11% of fleets are using plug-in hybrid vehicles. This proves that there is still much work to be done in changing industry perception and instilling more confidence in fleet decision-makers to make the switch.

We want to help bring fleets into the future with our end-to-end fleet solutions, helping businesses with EV charging solutions at work and at home while providing them with access to bp pulse, the largest public network of rapid chargers in the UK.

Our Fuel and Charge card and app also makes the switch to EV more convenient and much simpler for fleet decision-makers to commit. With ongoing support across finance, charging infrastructure, invoicing and maintenance, we know that every fleet is different.

As one of the largest electric vehicle charging companies in the UK with more than 8,000 public charging points, our customers can also spend less time worrying about charging and more time thinking about the job in hand.

We know how challenging the shift can be, and bp is here to help your business in meeting those challenges and embrace the change as we head towards a net zero future.

The transition to EV

bp pulse can help remove the anxieties of electrifying your fleet

The industry is in a moment of significant change and as the sale of new petrol and diesel cars is set to be banned by 2030, the transition to electric vehicles (EVs) is higher on the agenda for many decision-makers.

A survey, carried out in association with bp, has revealed some of the challenges fleet decision-makers across the UK still face and how they're under constant pressure to keep evolving, ensuring they are meeting the greenest and most sustainable options for their company vehicles.

The research revealed that only 7% of respondents to the survey have moved their entire fleet to EV, showing that limited driving ranges and a lack of confidence in the ability and reliability of EVs continue to be big obstacles for both drivers and decision-makers.

As one of the largest and most experienced charging companies in the UK, bp offers end-to-end solutions to help businesses develop EV charging technologies. Fleet drivers can be reassured that they are never far from their next charge with bp pulse, the largest public network of rapid chargers in the UK. Not only do drivers have access to thousands of charging points, but fleets have access to an expert account manager to guide them through the process of electrifying depots, offices or homes so that they can feel confident making the changes to a fully electric fleet.

"bp offers end-to-end solutions to help businesses develop EV charging technologies"

bp's Fleet Solutions also includes the Fuel and Charge card and app to support fleet vehicles of all engine types in their transition to EV. With a focus on end-to-end integration, mixed fleets have a one card solution for all charging and fuelling needs.

The upfront cost of transitioning to EV can feel overwhelming at first, but bp supports fleets in weighing up initial costs of EVs, against long-term gains including savings on tax, fuel and maintenance of your fleet.

The survey has also revealed that 11% of car fleets are plug-in hybrid, proving that fleets are transitioning and the industry is adapting, but change is happening slowly. Historically, EV models have been somewhat limited, however, research published in bp's *Future of Fleet* report revealed that fleet managers now have an impressive range of models available in the market.

There's never been a better time for fleet decision-makers to lead the way to an electric future and Fuel and Charge can help fleets embrace the change as we head towards a net zero future.

To find out more please visit: bp.com

bp

raised by employees, further exacerbated by their concerns about public charge points and the time it takes to charge the car.

A sizeable proportion also object to paying for their own home charger.

Combined, charging worries account for 40% of employee's objections.

While many companies insist that staff taking an EV must have a home charger, some have other measures in place.

Willmott Dixon (see also page 64) installs chargers at all its places of work which has opened the EV door to those who are unable to install a charge point at their home.

Nevertheless, while a home charger is not mandated, there is an approval process to ensure the car is an appropriate choice for the employee; if they don't have a home charger, they must have a viable plan to charge the vehicle.

Workplace charging can be the viable solution for staff without the ability to install their own units, although some local councils are also now considering neighbourhood schemes offering shared chargers.

The workplace charging infrastructure is a central part of any EV strategy, though. Most fleets have opted for 7kW chargers or 22kW with a smaller proportion investing in 50kW units.

Siemens has installed more than 100 charge points across its 12 main sites, with 26 alone at its Manchester head office.

All are 7.4kW chargers, as they meet the needs of its PHEVs, although the next round of investment will prioritise 22kW/50kW to match the uptake of pure EVs, with a future roadmap already earmarking 150kW for high demand sites.

Siemens is in the minority by creating a rota of four-hour charging slots, morning and afternoon, via an online booking system to ensure the maximum number of employees are able to charge their cars (just 14% of survey respondents have a booking system). Around a quarter of staff with PHEVs have also fitted a home charger at their own expense, although it is not mandatory.

Employees self-fund home chargers at 41% of businesses, according to the *Fleet News* and BP survey, with 26% of companies bearing the entire cost. In a third of cases, the expenditure is shared by company and employee.

Corporate fleet operations manager Fraser Crichton has installed a variety of charging solutions at Dundee City Council. Basic 7kW chargers are ideal for fleets with a few EVs travelling low mileages. But, as the numbers build, so does the need for investment in more powerful units.

"As a rule of thumb, when you have more than eight EVs at a site I would normally look to have a rapid 50kW charger," Crichton says.

"The number of times people say they have put a vehicle on charge and return to find it wasn't and the battery is flat is an issue, particularly if you have car pools with different people driving the same car. The rapid charger is your back-up to boost the batteries to 50% charge in 15 minutes."

He adds: "If you have 16 electric vehicles, you need eight charge points. A Leaf will do around 150 miles so that's two days' worth – it's roughly a 50% calculation. But that ratio will reduce as the battery range increases."

A surprisingly high proportion of survey respondents (68%) say they do not offer any driver training to those new to EVs to help them adjust and maximise their efficiency.

According to Energy Saving Trust (EST), there is a triple benefit to eco driving: extended range, cost savings (electricity and maintenance) and fewer collisions as drivers tend to be more aware when driving efficiently.

Tim Anderson, EST group head of transport, says: "It is important to maximise the benefits from regenerative braking, which charges the battery. It is key to efficient urban driving."

EST data also shows the impact of speed on range: driving at 70mph compared with 50mph reduces EV range by 36% while 70mph versus 60mph results in a 22% reduction.

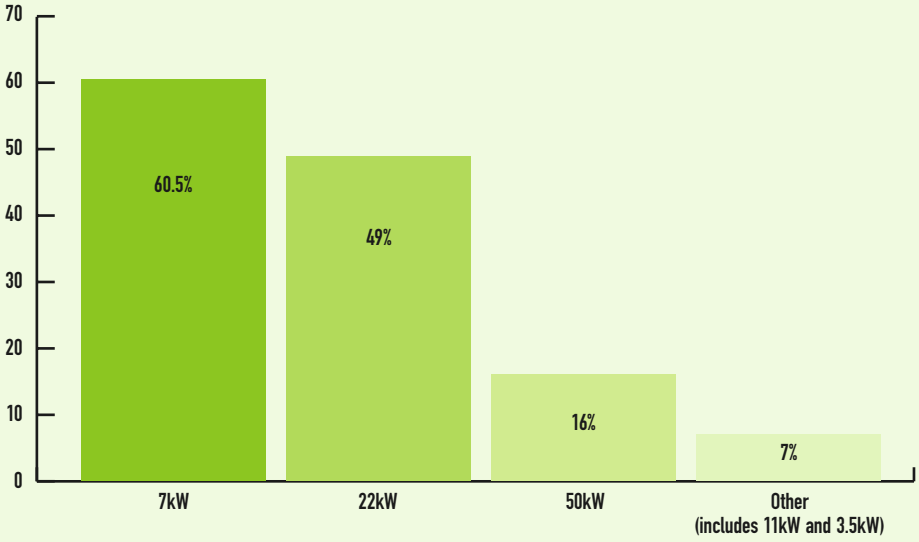
Heating also has a measurable effect, with summer driving typically returning 4.5 miles per kWh, falling to three miles in winter. EST advises drivers to use heated seats and steering wheels rather than air-con and to pre-heat their EV while it is being charged.

By 2025, with just five years remaining to the Government's ban on the sale of new petrol and diesel cars and vans, 15.5% of survey respondents predict their entire car fleet will be pure electric.

A further 24% expect more than half of their cars to be BEVs, but 42% anticipate fewer than a quarter of their car fleet to have switched to being full electric.

Given that 18% intend to introduce EVs only when mandated, while 5% have no plans to begin the move for more than five years, there remains a large number of companies that will be cutting it fine to implement robust electric policies, including workplace charging infrastructure, ahead of the 2030 ban.

IF YOU HAVE INSTALLED WORKPLACE CHARGERS, WHAT POWER OPTIONS?



SURVEY FACTS: Fleet size profile:

59% fewer than 100 cars

24% 100–500 cars

SURVEY FACTS: Fleet size profile:

6% 501–1,000 cars

11% more than 1,000 cars

BY 2025, WHAT PROPORTION OF YOUR CAR FLEET WILL BE FULL ELECTRIC (BEV)?