

Whitepaper:

Embracing an electric future: the right support for fleets



drivetech.co.uk



Foreword

There's no doubt we are at a landmark point in automotive history as we move to a future of alternatively fuelled vehicles (AFVs). With the government's recent announcement that the sale of new petrol and diesel vehicles will be banned by 2030 – 10 years earlier than planned – that future isn't far away. Today, the adoption of AFVs is increasing at pace as we are on our journey to 2030 and it's vital businesses have the right support they need to embrace an electric future.

There's a huge amount of noise in the media, from government and by drivers themselves on the topic of electric vehicles (EVs). For some this is exciting, others daunting and for many, understandably, an area of confusion. From charging through to cost and maintenance, there's a myriad of considerations and a wealth of information out there which will inevitably evolve as the technology does. One area which shouldn't be overlooked within this is driver training.

It's vital that businesses and drivers adapt to ensure they remain safe on the road in EVs, are legally compliant and can achieve cost efficiencies where possible. There isn't necessarily going to be a one-size-fits-all answer to this, as businesses of different shapes and sizes will have varying requirements for EVs and their drivers. Businesses will therefore move at different speeds towards full EV adoption. What is certain is that safety needs to remain a number

one priority for all businesses, and it will remain ours at DriveTech, whatever the power source of the vehicle.

We have just celebrated DriveTech's 30th anniversary and we are witnessing the single biggest change in automotive history with the adoption of EVs and the move to 2030. It's an exciting time to be working in the automotive industry and I'm proud to be on this journey with our corporate customers. This white paper gives an overview of the current EV landscape, some key considerations for fleets and the role of driver training. I hope you find it a useful tool to support your business plans on the road to 2030.



Charlie Norman
Managing Director



The Future is Now

The 2030 date for the government's ban on the sale of new petrol and diesel vehicles might seem like a consideration for the future but we can't overlook the change that is happening now. There are already in excess of 770,000 alternatively fuelled cars on the UK's roads and almost 59,000 AFV commercial vehicles. Almost 100,000 are electric vehicles and this figure continues to grow*. The September 2020 plate change saw a surge in EV registrations (21,903), up 184.3% year-on-year (SMMT, October 2020).

A recent poll of 17,628 motorists by the AA and ITV's Tonight programme said nearly half (47%) would switch to electric vehicles. Fleets are embracing this change as well. According to the findings of the AA's 2019 – 2020 Operational Fleet Insight Report, in partnership with Rivus, over half of respondents expected to convert their fleets to EV in the next five years, which was up 22% year-on-year.

As the government's £1.3bn commitment to roll-out more charging points pays off, coupled with improvements in EV technology and a wider choice of vehicles on the market, the EV revolution is set to pick up pace.

The EV Opportunity Today

Aside from the obvious environmental benefits, there are cost and well-being gains to be achieved from adopting EVs today.

A key factor for the increasing take-up of EVs with fleet drivers is financial. Pure EVs are not subject to any Benefit-in-Kind (BiK) tax for 2020/21, irrespective of the date the car was registered. In 2021/22 the BiK rate is set at 1% and just 2% for 2022/23. Furthermore, the government's Plug-In Car Grant gives buyers of all-electric cars costing up to £50,000 a 35% grant to pay for the purchase up to £3,000.

Financial support is also available for drivers wanting to install a home charging point for an EV. If they have an eligible electric vehicle, they could get up to £350 off the cost of buying and installing the charger.

* www.gov.uk/government/organisations/office-for-low-emission-vehicles

One of the lesser known benefits of EVs is increased driver well-being. A 2018 study by the London Electric Vehicle Company showed that the quieter driving environment of an EV has significant mental health benefits. Drivers are able to concentrate better behind the wheel and find the experience more relaxing.

Did You Know?

- It was around 1832 that Scotsman Robert Anderson designed the first crude EV
- In 1865 Frenchman Gaston Plante invented the rechargeable battery
- English inventor Thomas Parker built an electric car in 1884
- In 1971 EVs were thrust into the moonlight when NASA's electric Lunar rover made a journey on the moon



Supporting the Nation's Drivers

As fleets begin or progress their EV journeys it's vital that safety remains a top priority, as it has done up to this point. This means making sure drivers are well equipped to understand the unique way an EV operates, the car's capabilities and limitations, how to maintain one and the optimum driving strategies to maximise safety and efficiency.

The technology of EVs means they have clear driving differences compared to 'traditionally' fuelled vehicles. For example, EVs instantly accelerate as they don't have manual gears and this instant power can cause safety risks for untrained drivers. Regenerative braking is another clear development that faces EV drivers. This has an impact when pressure is taken off the accelerator and the car slows down instead of coasting which can add risk in terms of stopping distances.

Providing driver training for your fleet is one of the most effective ways of reducing such risks for your drivers and, ultimately, saving lives. Beyond this, driver training can also help improve a driver's mindset and save money by conserving power used.

It is only with the right driver education that an EV transition project that an organisation undertakes will be smooth and successful. The importance of awareness and engagement among staff cannot be underestimated.

Key Steps to Preparing Your Fleet for EV Driving

Education – make sure your drivers receive targeted education to ensure your electrification strategy is a success. On a basic level they will need to know how to practically use the car and how to charge it.

Training – this can come in the form of online and classroom-based workshops to suit the business needs, as well as on-road sessions, all with an experienced trainer. Ideally drivers should receive EV training before they get the keys, so they are prepared as best as possible to drive safely and efficiently.

Mindset – understandably there will be some uncertainty among drivers around moving to EVs and in many cases driver mindset is considered the biggest barrier to adoption. Through the right driver training and support you can ensure preconceptions or uncertainty is a thing of the past. We can work with your business and individual drivers to make sure there is a positive mindset towards EV and any concerns are addressed.

Top Three Tips for Efficient EV Driving

- Avoid unnecessary acceleration and braking by reading the road ahead
- Keep a check on your speed – the higher the speed the more energy consumed
- Switch to eco mode – many vehicles will have a range of eco features to ensure smarter and more efficient driving so make the most of them

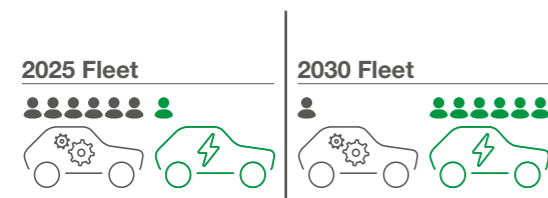
Industry Insight: The Four Steps to Going Electric

Industry expert and fleet consultant Jon Burdekin shares his four steps to transitioning a fleet to electric vehicles.

With the government ban on the sale of new petrol and diesel vehicles from 2030 (and plug-in hybrids from 2035), the next 3 – 5 years will see an influx of company car drivers moving into electric vehicles for the first time.

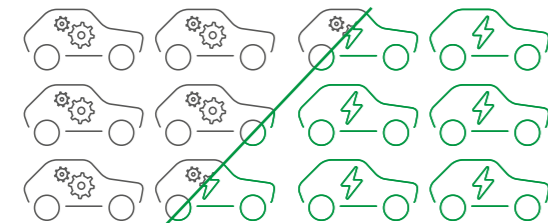
Companies will need a plan to transition all of their fleet over to EVs by this deadline. This can broadly follow four phases:

Evaluation



Scoping out the current landscape and developing a phased plan to establish when each driver could make the switch.

Transition

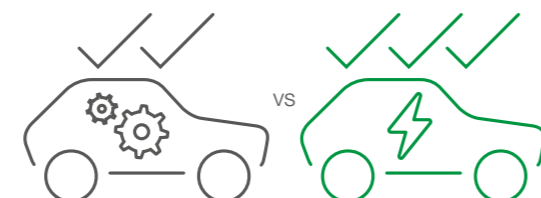


Putting the plan in place and implementing the support infrastructure required for adopting EVs into the fleet.

Along this journey, a constant thread is the requirement for extensive driver education. Employers have a duty of care to ensure their drivers are well educated in all aspects of EV driving, and fully understand the new technology, including:

- ✓ **How to drive safely**
- ✓ **How to charge vehicles**
- ✓ **How to maximise the range of their vehicle**
- ✓ **Understanding all of the new technological features exclusive to EVs**
- ✓ **Tips and techniques to become a confident and knowledgeable EV user**

Analysis



Doing the maths and using Whole Life Costs to work out what savings (financial & carbon) will be made by moving to electric.

Operation



Turning an EV fleet into 'business as usual' – with amended fleet policies, reporting measures and operational aspects such as EV hire cars and insurance.

Clearly EV familiarisation for drivers will play a crucial part in fleets adopting these vehicles, helping to reduce accidents, reduce charging spend and improve driver experience of the new technology.

Jon Burdekin is Owner and Managing Director of Jon Burdekin Fleet Consulting Ltd and has over 27 years' experience in the UK leasing and fleet finance industry. Jon works with a range of businesses to support them with the adoption of new vehicles, most notably with the conversion to EVs fleets.



Jon Burdekin MD of JBFC



EV Myths: True or False?

As we absorb the ever-evolving information on EVs whilst technology and regulation advances at pace, opinions are being formed and it can be difficult to separate fact from fiction. To save you time, we've dispelled some of the common EV misconceptions so you can focus on the truth and make the right judgements for your fleet.

EVs are more dangerous than petrol or diesel: FALSE

There is no evidence that EVs are any more prone to being involved in a road accident than petrol or diesel vehicles. Safety may be a concern because EVs are silent, so with no engine noise could be harder for pedestrians to be aware of as a car approaches. All four-wheel EVs have to be fitted with an acoustic vehicle alert system which must sound when reversing or travelling below 12mph.

EVs are slower than petrol or diesel cars: FALSE

You can comfortably travel at legal road speed limits in an electric vehicle. In fact, they accelerate more quickly, so might feel faster to drive. Also never fear if you have professional racing in mind! Formula E is an example of the speed capabilities of EVs. The Gen2 car can accelerate from 0-100km/h in 2.8 seconds, with a top speed of 280km/h.

You can't do long journeys in an EV: FALSE

Battery technology is advancing all the time. There are a range of models on the market that can do in excess of 250 miles on one charge. Bear in mind you would be unlikely to travel this far without a break anyway and these breaks provide charging opportunities. As 68% of journeys we make each year are under five miles (Energy Saving Trust), this isn't an issue very often. Conserving battery power is also possible with efficient driving and driver training can support with this.

The UK energy grid won't cope with mass charging of EVs: FALSE

There is enough energy capacity to cope if everyone was charging an EV overnight. National Grid estimates that demand would only increase by 10% in this scenario, which is within the range of manageable load function.

You can find out more at www.nationalgrid.com

EVs are more expensive than petrol and diesel equivalents: FALSE

Upfront costs may be more expensive while the technology develops over time (remember there is government support available) but the whole life costs are lower as they are cheaper to run.

Find out more here www.gov.uk/plug-in-car-grants

Not enough EV charging points: FALSE

Ok, so the UK's not where it needs to be for 2030 yet but we have a decade to get there. New charge points are being added daily and there are now over 35,000 connections in the UK (Zap-Map, November 2020). The UK's first electric forecourt from GRIDSERVE is now open and the government has committed £1.3bn to accelerate the roll-out of charging points.

You can use this charge point map to plan a route www.zap-map.com/live

Spotlight on E-scooters

Cars and vans aren't the only form of electric transport that is growing in popularity. E-scooters are becoming a more common sight as rental trials were approved to take place across the UK in summer 2020. London has recently confirmed it will allow e-scooter rental trials to go ahead in the city from spring 2021, so we expect to see further growth.

The trials have been approved in a bid to boost more environmentally friendly modes of transport. In cities the idea is they are a micromobility solution, an alternative to public transport. The trials got approved in the middle of the pandemic, when it was key to reduce overcrowding on public transport more than ever.

However, the widespread availability of e-scooters on the roads of British towns and cities is causing increasing controversy and issues for policing. Here, Charlie Norman, Managing Director at DriveTech, discusses the emergence of public e-scooter trials in the UK and the challenge for the police.



With grateful thanks to TIER for permission to use this photograph.

"The Government has been wrestling with the question of 'micromobility' – which includes e-scooters – for some time. Britain has lagged behind other countries such as Germany, France, Austria and Switzerland where use is currently permitted, although laws and regulations differ by country.

"The challenge to the police, however, is potentially substantial. Some types of scooter can be programmed to exceed 70 km/h, although scooters in the rental trials are limited to 25 km/h. The

current highway infrastructure in most towns and cities does not have the widespread provision of cycle lanes which are probably the environment to which they are best suited, leaving the rider to choose between breaking the law and using the footpath (where they represent a danger to others) or taking to the road (where they represent a danger to themselves).

"The law in relation to e-scooters is complex and will need to evolve quickly. They are currently classified as Personal Lightweight Electric Vehicles (PLEVs), and in the eyes of the law they are subject to a similar rigorous regulation to that which covers larger vehicles: MOT, tax, licensing etc. The pilot rental schemes dictate that riders must be over 16 and possess at least a provisional driving licence to hire a PLEV – but private use of your own scooter on the road remains an offence in all circumstances, with the potential to lead to a fine of £300 and six penalty points.

Hazards and Criminal Uses

"There are plenty of potential hazards. First, there is the safety of the vehicle itself. They have small wheels, limited suspension, a very low centre of gravity and a riding position that is unfamiliar to many. The requirement to operate them with both hands seriously diminishes the rider's ability to give hand signals; they are generally faced with a choice of indicating or braking – not both.

"There are also important questions surrounding the lack of preparedness of many riders to use the equipment. Many if not most riders will receive no instruction whatsoever before moving onto busy streets full of vehicles of all sizes, and with no requirement for any safety equipment such as a helmet, lights or high-visibility clothing.

Looking Ahead

"The government's desire to catch up with other countries is understandable and the potential for e-scooters to help move populations around in a socially distanced way is undeniable. But, care will be required to manage the risk that the growth of micromobility isn't accompanied by a hike in casualties or a source of fresh tension between the police and (predominantly younger) road users.

"If we are to see a continued growth in micromobility, then it should be accompanied by provisions to ensure that riders are better prepared and protected and that the role of the police is clear. Short cuts taken at this time could have deadly consequences further down the line.

"We urge any businesses that are in locations undertaking trials, now or planned for the future, to make sure staff are properly equipped with the right knowledge and training to use e-scooters in the safest way possible. We have been developing packages to support our customers, so talk to us about your business needs now and keep safety top of the agenda."



Thinking Bigger...

When thinking about electric vehicles, attention often goes straight to cars, but buses, trucks, vans and HGVs can't be overlooked. All fleets with larger vehicles will be playing their part in the journey to 2030 and the transition to electric. Driver training will be more important than ever to maintain safety, well-being and to embrace alternative power sources.

Buses

With over 4 billion passenger journeys on local bus services each year, plus widespread private use, the possibilities for going electric are vast. (Department for Transport, October 2020). Transport Secretary Grant Shapps, said: "Buses carry more people than any other form of public transport in the UK, and with 200 electric buses able to offset 3,700 diesel cars, it is clear they have a crucial role to play in bringing down emissions."

Bus drivers must be highly skilled to deal with some of the pressures they can face and the responsibility they hold. Ongoing training is vital to adapt to new power sources safely and help drivers maintain the right mindset to remain calm throughout the variables in their work.

Light Commercial Vehicles

Around 3.4 million people use vans for work, with light commercial vehicles (LCVs) supporting around 10% of the UK's workforce. There are over 4.5 million vans on the roads and there's been 59% growth in the LCV sector since 2000 (SMMT). One of the biggest

challenges with LCVs is that inexperienced drivers can overlook the fact that vans are not designed to be driven the same as a passenger car and this is when accidents can happen. This same challenge is faced with the move to EVs and it is through driver training that employees will understand how to optimise safety and adapt to new power sources.

However, the journey for LCVs has already begun. Indeed, SMMT data released in October reported that 10,300 electric vans alone have been registered in the UK so far in 2020.

Heavy Goods Vehicles

There are over 501,000 heavy goods vehicles registered in the UK and their number is increasing. At the end of 2019 new HGV registrations were up a significant 11% year on year (Department for Transport, April 2020). The drivers of these vehicles are the lifeblood of getting our goods safely from A to B yet driving a heavy goods vehicle (HGV) can be one of the most dangerous occupations. Training is vital in optimising safety and, importantly, the well-being of drivers. As well as the technology of the vehicle and changing power sources, training needs to be tailored to the unique challenges these drivers face on a daily basis. There are some HGV operators exploring the use of hydrogen fuel but this currently involves a bespoke on-site facility. The infrastructure for this option is not yet under consideration but it could be another option for the future.

Conclusions

What unites all fleets, is prioritising the safety of their drivers and other road users and this is regardless of the power source of the vehicles. The journey to 2030 – and the government's ban on the sale of new petrol and diesel cars – will take different roads for all businesses. While some have started the transition to EVs, others have yet to explore alternatively fuelled vehicles but businesses can be reassured that the end goal is the same for all and the right support is available.

Driver training plays a key role in keeping safety top of the agenda over the next decade and beyond. The spotlight is often shone on vehicle technology, charging infrastructure and cost but we must not overlook the safety of drivers and other road users and the importance of driver mindset. Equipping drivers with the knowledge and skills to drive EVs – which are a completely new technology for many – safely and efficiently and to make the right decisions on the road at all times is vital.

The rapid automotive change we are all experiencing presents opportunities for fleets and will set apart those businesses who are able to adapt and innovate. Looking ahead, the future is an exciting one and now is the time to take stock, analyse fleet operations and surround your business with the right partners who can make your EV plans a reality while keeping everyone safe.

Sources of further information:

-  www.goultralow.com
-  www.gov.uk/government/organisations/office-for-low-emission-vehicles
-  www.smmmt.co.uk

About DriveTech

DriveTech is the world leader in fleet risk and safety management, and driver training. It is also the UK's largest provider of driver offender retraining courses.

With a track record built over the last 30 years, DriveTech now delivers fleet consultancy, driver assessment and training services in over 95 countries, in 35 languages through over 40 partners. Our fleet solutions improve driver safety, reduce fleet running costs and ensure compliance with legal and duty of care responsibilities. Our customers range from companies with small fleets through to large corporate customers where driver training is a core activity, an understanding of their sector required and a clear return on investment is demanded.

DriveTech is part of the Automobile Association.

With thanks to:

Jon Burdekin, Owner and Managing Director of Jon Burdekin Fleet Consulting Ltd. www.jbfleetconsulting.co.uk

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Contact Us

DriveTech UK & DriveTech International

Fanum House, Basing View, Basingstoke
Hampshire, RG21 4EA, UK

T +44 (0) 1256 610907

E tellmemore@drivetech.co.uk

drivetech.co.uk