

# Electric Vehicle Report 2023



# LOGISTICS UK

## **We support, shape and stand-up for safe and efficient logistics**

Logistics UK is one of the biggest business groups in the UK, supporting, shaping and standing up for efficient logistics. We are the only organisation in the UK that represents all of logistics, with members from the road, rail, sea and air industries, as well as the buyers of freight services such as retailers and manufacturers whose businesses depend on the efficient movement of goods.

An effective supply chain is vital to Keep Britain Trading, directly impacting over seven million people employed in making, selling and moving the goods that affect everyone everywhere.

With Brexit, technology and other disruptive forces driving changes in the way goods move across borders and through the supply chain, logistics has never been more important to UK plc.

As champions and challengers, Logistics UK speaks to government with one voice on behalf of the whole sector, increasing the impact of our messages and achieving impactful results for members.

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# Foreword



Welcome to Logistics UK's report on how vehicle operators are responding to the challenge of decarbonising their fleets by 2050. With support from members, we have explored the realities of introducing and operating commercial electric vehicles in the current landscape of rapidly changing technology, supply side constraints and economic challenges.

Interviews were conducted between late 2022 and early 2023. These were with fleet operators who are utilising electric vehicles at scale at the moment, those who have begun to, or are planning to, introduce electric vehicles into their fleets, as well as those who have trialled electric vehicles and moved away and those who have concluded investment in electric vehicles is not yet right for them.

The electric commercial vehicle sector is still a small part of the total commercial vehicle parc, but uptake is increasing rapidly. Electrification may not be the answer for all commercial vehicle usages, but it is clear that for most vans and lighter HGVs it is a technology that will enable operators to meet the decarbonisation challenge in the short to medium term. With phase-out dates for new diesel and petrol cars and vans starting in 2030 in the UK, growing concerns about health issues connected to poor air quality and international, national and local regulation aimed at reaching net zero by 2050, our research clearly shows the logistics sector is fully aware of its responsibilities in meeting the challenges.

UK logistics businesses are keen to invest in sustainable technology to help them meet national and international obligations and are working hard to understand the next steps for their journey to net zero. This is why we are calling for a fair transition to a green economy across the UK, and within urban areas, that enables businesses to develop and move to greener energy and fuels in a cost-efficient way, with partnerships on innovation, and charges that reflect the value that logistics delivers within communities.

Together, we can deliver a more innovative, productive and green economy for communities throughout the country.

Logistics UK is leading for logistics in the UK and welcomes its members joining the debate on this important issue.

A handwritten signature in black ink, appearing to read 'D Wells', with a horizontal line underneath.

**David Wells OBE**  
*Chief Executive*  
Logistics UK

# Executive summary

Since Logistics UK's 2019 electric vehicle (EV) research, decarbonisation has risen much higher on the political and corporate agenda. This report shows that there is widespread awareness of phase-out dates for non-zero emission tailpipe vehicles. For light commercial vehicle operators, the route to decarbonisation is clearer, with many already opting to electrify their van fleets. However, some large van operators, in hard to electrify sectors, and those with heavy vehicle operations, face significant uncertainty as zero emission tailpipe vehicle technologies are still emerging.

In the last report, EV availability and limited vehicle types on the market were a major concern and remain so for many today. In 2019, 0.3% of the van parc were EVs; by Q3 2022, 0.9% of the fleet were EVs. As more operators electrify their fleets at scale and more start to transition, demand is likely to build significantly as the phase-out deadlines approach for non-zero emission tailpipe vehicles. However, in recent months some respondents reported increased acquisition costs, following a period of decreasing prices. Although this is not yet delaying decarbonisation plans, it is a development that is being watched carefully by operators.

There is now much greater recognition of the importance of adequate power supply and charging infrastructure than seen in the previous report. Because of this, some respondents are considering relocation of logistics sites to ensure better energy supply and greater space for overnight vehicle charging.

Attitudes to vehicle capabilities are diverging; respondents who are just starting to consider electrification are frustrated that available electric vehicles do not match their diesel fleets in terms of mileage range, load carrying and power take off, and may delay decarbonisation plans to avoid changing their operating models. Those who have operated EVs for some time, take a more pragmatic approach and have changed their operations to work within the capability of the EVs available, recognising that like-for-like replacement of existing diesels is not always possible.

Operators report that the current volatility of energy prices and increasing vehicle acquisition and servicing costs, coupled with sudden changes to grant funding in recent years, have made budget management more challenging and been problematic for business case development.

To address the concerns, Logistics UK is calling for a range of measures to support industry to move more rapidly to decarbonise fleet operations.



## Our asks are:

### Power supply

**A fair and equitable approach for funding electricity connections with an electricity generation roadmap to enable the expansion of depot charging for EVs, transparency on available grid capacity, sufficient supply margin and common service agreements amongst Distribution Network Operators (DNOs), plus regularly reviewed energy support to manage shocks and industry engagement to unlock energy generation investment.**

- A fair and equitable approach for funding electricity connections to enable the expansion of depot charging for EVs including through the tax system and the plug-in grant being available to fund connections and charging infrastructure.
- Transparency on available grid capacity and a common service agreement amongst DNOs for connections.
- Development of an electricity generation roadmap with expected milestones showing the incremental percentages of registered vehicles that need to move to electric to ensure sufficient supply margin as more vehicles rely on the National Grid.
- Energy support to manage shocks, keeping that support under review, and coordination with the logistics sector to enable long-term planning and unlock investment.
- Government to work with industry to unlock investment in energy generation, by linking feed-in tariff rates to wholesale electricity prices, enabling greater levels of commercial energy generation and energy security.

## EV public chargepoint network

**An EV public chargepoint network that is fully accessible to large electric vans now and electric trucks in the future, supported by an EV charging infrastructure roadmap with clear milestones to drive an accelerated uplift in suitable public charging infrastructure with high reliability standards.**

- EV charging and refuelling infrastructure roadmap designed in collaboration with business to work for logistics vehicles, backed with clear guidance and incentives for local authorities.
- An immediate uplift in the number of public chargepoints that can be used by battery electric vans, and recognition of the future needs of battery electric trucks is vital to give the logistics sector the confidence to invest in zero emission at the tailpipe vehicles.
- Significantly accelerated roll out of public charging infrastructure that is fully accessible to commercial vehicles, with clear milestones for minimum levels of suitable chargepoint provision across the country.
- A centralised and standardised public chargepoint system operating to high reliability standards providing live availability updates and information about chargepoint space size and suitability for use by large electric vans now and for electric trucks in the future.

## Fiscal support

**Embed certainty for fiscal support aimed at encouraging logistics operators to decarbonise their operations, including for grants, and amend the qualifying criteria for the 100% annual investment allowance for vehicles acquired via leasing or hiring and clarify the usage of the allowance to include investments in increasing electricity supply to commercial vehicle premises.**

- Amendment of the qualifying criteria for the 100% tax deductible annual investment allowance for capital spending in the year of expenditure that was announced in the Spring Budget 2023 to include vehicles acquired via leasing or hiring, and clarification of the usage of the allowance for investments in both buildings and equipment, including costs associated with increasing electricity supply at commercial vehicle premises to support the transition to net zero logistics and increased productivity.
- Sudden changes to plug-in vehicle and chargepoint grant schemes to be avoided where possible to support better business planning and provide certainty for operators.

## Regulations

**Fundamental reform of regulatory vehicle weight thresholds, driver training and vehicle inspection regimes to avoid regulatory conflict to include redefining the current derogation for category B drivers to tow a trailer on an alternatively fuelled vehicle, aligning it with the 2030/2035 phase-out dates whilst maintaining the existing definition of eligible low carbon fuels (LCFs).**

- Fundamental reform of regulatory weight thresholds, not just with alternatively fuelled vans, but across all vehicle classes to avoid regulatory conflict and ensure driver and operator compliance, as well as reforms to training and vehicle inspection regimes for large electric vans up to 4.25 tonnes to take into account that those vans are currently being unfairly caught in costly rules designed for HGVs, as they are heavier than diesel vans.
- The current derogation for category B drivers to be redefined to allow a trailer to be towed with an alternatively fuelled vehicle (between 3.5 tonnes and 4.25 tonnes) up to 7 tonnes maximum authorised mass.
- The current derogation to be brought into line with the 2030/2035 phase-out dates for non-zero emission vehicles to send a strong signal to the market, whilst recognising that exemptions will be required for specialist and niche operations that remain hard to electrify beyond the phase-out dates.
- The existing definition of eligible LCFs allowed under the derogation to be maintained to support van usages that need to rely on fuel technologies other than battery electric and should continue to include LCFs that can offer significant greenhouse gas (GHG) emission savings.

## LCFs

**LCFs incentivised in the tax system to be cost competitive with diesel and a clear, long-term plan for utilising LCFs across transport modes, based on industry evidence, backed by investment in infrastructure and R&D, and supported by a clear regulatory framework.**

- LCFs must be incentivised in the tax system to be cost competitive with diesel, to include a continuation of the gas duty differential to 2030, development of a Hydrotreated Vegetable Oil (HVO) differential, and support from the government for the production of Liquefied Natural Gas (LNG) and Compressed Natural Gas (CNG).
- Develop a long-term plan for utilising low carbon fuels across transport modes, including HVO, LNG and CNG. This should be based on evidence from industry and backed by investment in infrastructure and R&D and supported by a clear regulatory framework.



# Introduction



## Net zero in context

The Climate Change Act (CCA) came into force in 2008 and is the legal basis for the UK's approach to tackling and responding to climate change, it aligns with commitments that many other developed countries have in place. The Act requires that emissions of carbon dioxide and other greenhouse gases are reduced and adaptations are made to mitigate climate change risks.

The CCA commits the UK government to reducing GHG emissions by at least 100% of 1990 levels by 2050, otherwise known as net zero, covering the whole of the UK including Scotland, Wales and Northern Ireland (NI). The UK government has since published several plans and strategies that cover all transport modes and has indicated more will follow. These include its transport decarbonisation plan, *Decarbonising Transport: A Better, Greener Britain*<sup>1</sup> (July 2021), the *Net Zero Strategy: Build Back Greener*<sup>2</sup> (October 2021) and the *UK Hydrogen Strategy*<sup>3</sup> (August 2021). A low carbon fuels strategy is expected by summer 2023.

According to government statistics published in October 2022<sup>4</sup>, the transport sector was the largest emitter of GHG emissions in 2020, producing 24% of the UK's total GHG emissions, with 19% of these emitted by HGVs and 16% by vans.

As the logistics sector transitions away from fossil fuels, the legally binding targets of the CCA will drive unprecedented change in the way our supply chains operate. To help to meet the targets, government policy sets the following phase-out deadlines:

- **2025** – Public sector car and van procurement restricted to EVs in Scotland and Wales.
- **2027** – Public sector car and van procurement restricted to EVs across UK.
- **2030** – Sales of new petrol and diesel vans end.
- **2030** – No new public sector diesel HGV procurement in Wales.
- **2030 - 2035** – Sales of new non-zero emission L-category vehicles (eg, two and three wheeled vehicles) end – proposed.
- **2035** – Sales of hybrid vans and non-zero emission tailpipe trucks ≤ 26 tonnes end.
- **2040** – Sales of all non-zero emission tailpipe HGVs end.
- **2045** – Scotland aims to be 100% net zero GHG emission.
- **2050** – Net zero.

As well as the phase-out dates for non-zero emission tailpipe vehicles, reporting rules around supply chain carbon emissions are becoming more stringent. Known as 'scopes', these rules are the most widely used GHG accounting standard covering:

- **Scope 1** – Direct emissions from operators.
- **Scope 2** – Indirect emissions from purchased energy.
- **Scope 3** – All other emissions from the supply chain.

1 [Decarbonising Transport: A Better, Greener Britain, DfT, 2021](#)

2 [Net Zero Strategy: Build Back Greener, BEIS, 2021](#)

3 [UK hydrogen strategy, BEIS, 2021](#)

4 <https://www.gov.uk/government/statistics/transport-and-environment-statistics-2022/transport-and-environment-statistics-2022#greenhouse-gas-emissions-from-transport>

*“While electric vans are fine, the capability of heavy EVs is still progressing in terms of range. For one service carrying nutritional medical feed, we maxed out on weight, but then needed to shorten the route to make the EV solution work.”*

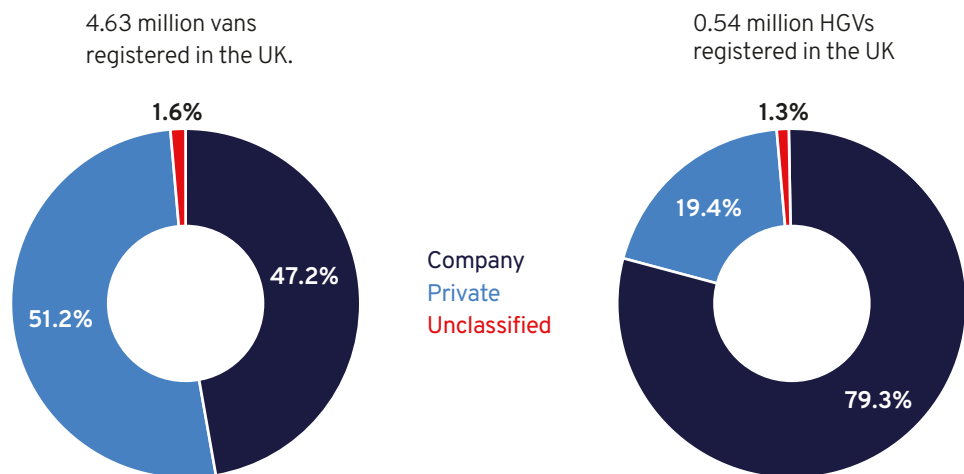
**Catherine Hughes,  
CEVA Logistics**

Scopes 1 and 2 are mandatory for large firms, with new rules introduced this year (2023) for some large companies under Scope 3. This means that even the smallest businesses may also be asked for information about their emissions in order to continue doing business with firms that fall under Scope 3 requirements.

In line with international targets and phase-out dates, some vehicle manufacturers have publicly committed to cease production of fossil fuel engines. The UK government is also introducing a zero emission vehicle (ZEV) mandate starting on 1 January 2024. The mandate aims to ensure supplies of zero emission vehicles are increasingly brought to market in time to meet demand, and that manufacturers are prepared for the UK’s 2030 phase-out dates for the sales of new petrol and diesel cars and vans.

As of 13 December 2022, 4.63 million vans and around 0.54 million HGVs registered for use on UK roads (**fig 1**), but only around 1% of vans and 0.2% of HGVs are plug-in electric (**fig 2**). While the phase-out dates are only for new vehicles, to transition the majority of the commercial vehicle parc to zero tailpipe emission alternatives to achieve net zero is a significant challenge. (see **fig 5.1**, p 39)

**1 Proportion of company and privately registered vans and HGVs in the UK Q3 2022**



Source: Vehicle Licensing Statistics, Q3 2022, DfT, 13 December 2022

**2 Number and proportion of licensed plug-in vehicles (PiV) in the UK, Q3 2022**

Body Type	Battery Electric	Plug-in hybrid electric		Range extended electric	Total PiV	Proportion of total licensed vehicles per category	
		Petrol)	Diesel)			Q3 2022	2019
Buses and coaches	1,841	0	0	0	1,841	1.3%	0.3%
Cars	547,505	369,730	11,125	9,822	938,182	2.8%	0.8%
HGVs	1,019	0	0	0	1,019	0.2%	0.1%
Vans	39,477	1,026	0	1,656	42,159	0.9%	0.3%
Motorcycles	12,865	1	0	0	12,866	0.9%	0.2%
Other vehicles	393	5	0	6,607	7,005	8.9%	4.1%
<b>Total</b>	<b>603,100</b>	<b>370,762</b>	<b>11,125</b>	<b>18,085</b>	<b>1,003,072</b>	<b>2.5%</b>	<b>0.7%</b>

Source: Vehicle Licensing Statistics, Q3 2022, DfT, 13 December 2022

Many large fleet operators already have plans to transition their light goods vehicle fleets to zero tailpipe emission vehicles and for this sector the majority will opt for EVs as they are a known technology. The technology may be understood but many challenges remain that will need to be addressed if the transition to electric fleets is to happen at scale and in line with net zero ambitions. At the same time, the pace of the roll out of public EV chargepoints that can accommodate commercial vehicles will need to increase, to match the uptake of commercial EVs ahead of and beyond the phase-out dates.

While the majority of vans will move to electric in the short to medium term, there are some vans that will need to rely on alternative fuels and LCFs beyond the phase-out dates, especially those operations where electrification will be very difficult, such as vehicles working in remote locations where grid supply is constrained, where the vehicle provides power to auxiliary equipment or where vehicles are used 24/7.

A report by Zemo Partnership entitled *Market opportunities to decarbonise heavy duty vehicles using high blend renewable fuels*<sup>5</sup> concluded renewable fuels such as biodiesel, hydrotreated vegetable oil (HVO) and biomethane can achieve more than 80% GHG emissions savings. Logistics UK supports the use of LCFs to support those operators who wish to reduce their GHG emissions, but for whom EVs are not a viable solution, until a greater range of suitable electric van and trucks are available in the mass market.

These findings highlight the GHG emissions savings that would be lost if LCFs are not more widely adopted for use by HGVs and larger vans that are unable to electrify.

Logistics UK welcomed the government's announcement on 30 March 2023 setting out progress to date on green energy and energy security but expressed disappointment at the continued lack of a delivery roadmap for commercial EV infrastructure, LCFs and rail electrification.

While this report is focused on EVs, the purpose of vehicle electrification is to help the industry take the necessary steps to meet net zero deadlines. The role of LCFs in helping to manage an orderly transition to decarbonised operations will be vital. Operators need to know they can power their vehicles to ensure service to their customers, and companies have routinely expressed worries about whether there will be adequate power supply to meet the needs of increasing numbers of EVs. They see LCFs as a route to reducing their GHG emissions, until the vehicles and infrastructure are available and suitable for their operations.

However, operators need to know that LCFs, such as HVO, LNG, CNG, hydrogen and synthetic fuels, will be properly incentivised through the tax system, such as continuing the gas duty differential until 2030, introducing an HVO differential and support from the government for the production of LNG and CNG so these fuels are cost competitive with diesel.

Previously, logistics companies who invested in LNG reported inconsistent government policy regarding natural gas fuels for transport had affected vehicle supply, as manufacturers were reluctant to market gas vehicles and operators' appetite for investing in gas vehicles diminished.

A clear, long-term low-carbon fuel strategy that can demonstrate cost effectiveness for industry and government is vital to provide a signal for

*“It is a challenge to decarbonise heavy duty trucks and develop an alternative refuelling or charging infrastructure. Battery electric vehicles are going to be part of the solution but we also see a role for hydrogen fuel cell electric vehicles as they offer benefits in terms of range and refuelling times.”*

**Geraint Bruton,**  
**BOC UK & Ireland Ltd**

<sup>5</sup> <https://www.zemo.org.uk/work-with-us/fuels/projects/2020-high-blend-biofuels.htm>

manufacturers, operators and fuel suppliers to encourage investment in LCF vehicle and infrastructure technology.

#### Logistics UK is calling for:

- LCFs to be incentivised in the tax system to be cost competitive with diesel, to include a continuation of the gas duty differential to 2030, development of a HVO differential, and support from the government for the production of LNG and CNG.
- Develop a long-term plan for utilising LCFs across transport modes, including HVO, LNG and CNG. This should be based on evidence from industry and backed by investment in infrastructure and R&D and supported by a clear regulatory framework.

## Changes since our last report

*“Fair to say the purchase of the vehicle is the easy part. The infrastructure is the hard part.”*

**Cliff Smith,**  
Tesco Distribution Ltd

### EV market

Since our last EV report in 2019, the market has grown significantly. **Fig 2** (page 10) shows the growth in electric van and truck registrations as a proportion of total van and HGV registrations. However, with less than seven years until the first new vehicle phase-out dates, the next vehicle acquired by most operators may not be powered by diesel or petrol.

### Respondents’ decarbonisation targets

In 2019, firm decarbonisation targets did not feature in participants’ responses. However, of those interviewed for the 2023 report, 62% of respondents stated they plan to have decarbonised their van fleets by 2030 although most have yet to set firm dates for when all their transport operations will be net zero, especially those with HGVs where zero-emission at the tailpipe technologies are less certain. All respondents were fully aware of their obligations to decarbonise their operations by 2050.

### Respondents’ priority focus

In the last report, of those respondents who had started their decarbonisation journey, there was a focus on the lack of suitable vehicles on the market. At that time, most respondents were still trialling electric vehicle technology and only just beginning to consider how to decarbonise their whole fleet.

While appropriate vehicle acquisition is still a significant concern for respondents, especially given the current vehicle supply chain constraints, there is now more widespread recognition that the key challenge for successfully electrifying fleets is ensuring adequate power supplies are available first. All respondents cited energy supply as their top priority.

### Public chargepoint network

In the 2019 report, 90% of respondents were charging their vehicles at their depots. The main reason given was that public chargepoint spaces were simply not big enough to accommodate vans. Operators continue to report issues



with finding spaces large enough for longer, wider and taller vehicles, although previous frustrations about payment systems seem to be receding as fuel card operators are now incorporating public chargepoints into their systems.

Additionally, concerns have been growing about whether the public chargepoint network is fit for use by commercial vehicles. Respondents to the 2023 research confirmed more needs to be done to ensure public charging is accessible to their vehicles; even if depots are used as the primary charging location, operators want reassurance that vehicles can use public chargepoints to top up vehicles during their routes and in emergencies. Some operators' drivers, and many employed by SMEs, take their vans home at night and are more reliant on public charging because many drivers do not have access to off-street parking.

Logistics UK responded to a consultation about the consumer experience at public chargepoints in spring 2021<sup>6</sup>. Whilst the government has responded that payments at public chargepoints should be simple and standardised, chargepoint data should be readily available for users and a minimum of 99% reliability of chargepoints maintained, parliamentary time has not yet been made available to bring these proposals into law.

### SMMT HGV charging and refuelling position paper

SMMT's position paper, published in April 2023, highlights the scale of the challenge to ensure there is sufficient charging and refuelling infrastructure for HGVs ahead of the 2035 and 2040 end of sale dates. SMMT concludes that the current network of depots, Motorway Service Areas and truck rest stops provide for an adequate spread of charging and refuelling opportunities but further data is required to determine how much capacity is needed at each location.

According to Department for Transport (DfT) figures, total public chargepoint installation has increased significantly since January 2020, with 37,055 public EV chargepoints across the UK, of which 6,887 were rapid and ultra rapid chargers or above (see **fig 3** and **fig 4**) according to government figures as of 1 January 2023. While this represents an increase of 30.6% since January 2022, **fig 5** shows the geographical distribution of chargepoints across the UK, with the highest number in London (131.0 per 100,000 population), compared with the lowest in Northern Ireland (19.2 per 100,000 population).

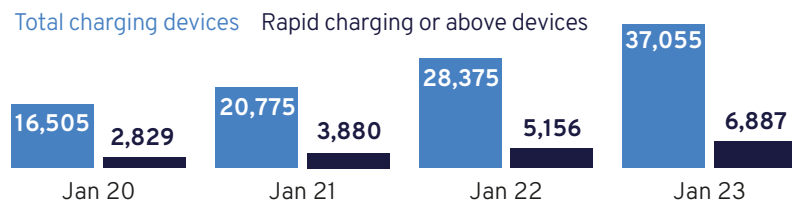
### 3 Number of public charging devices available by speed

Year	Slow charging devices	Fast charging devices	Rapid charging devices	Ultra rapid charging devices	Total charging devices
Jan-23	8,913	21,255	4,592	2,295	37,055

Source: Electric Vehicle Charging Device Statistics, DfT, January 2023

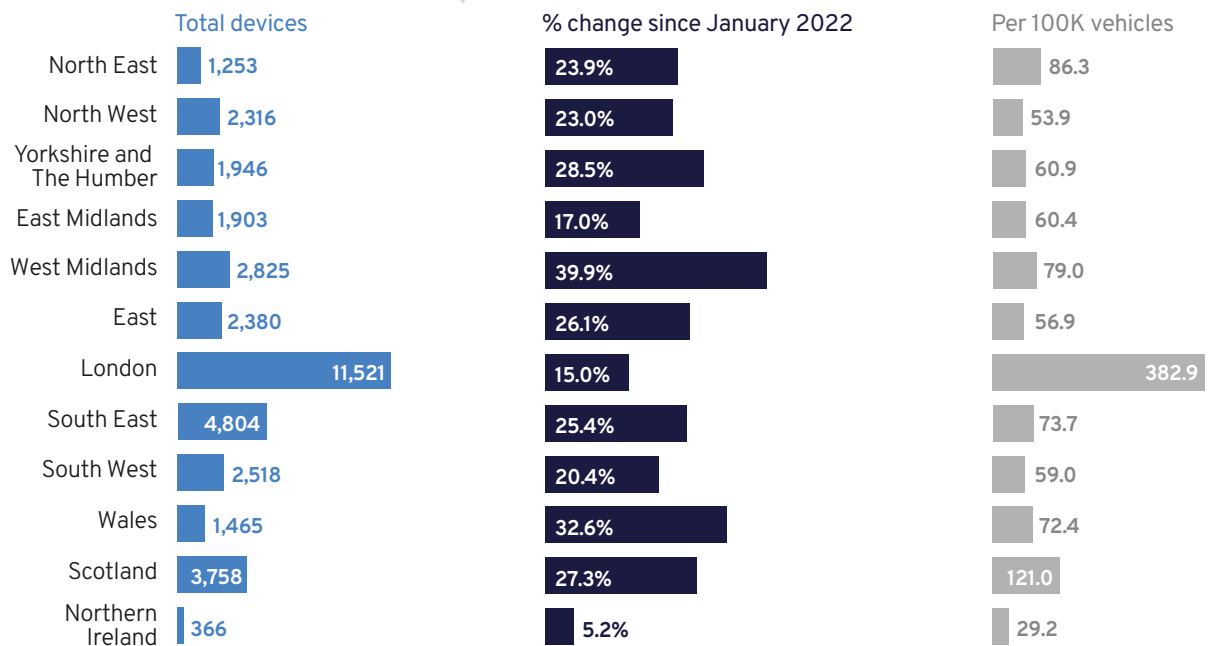
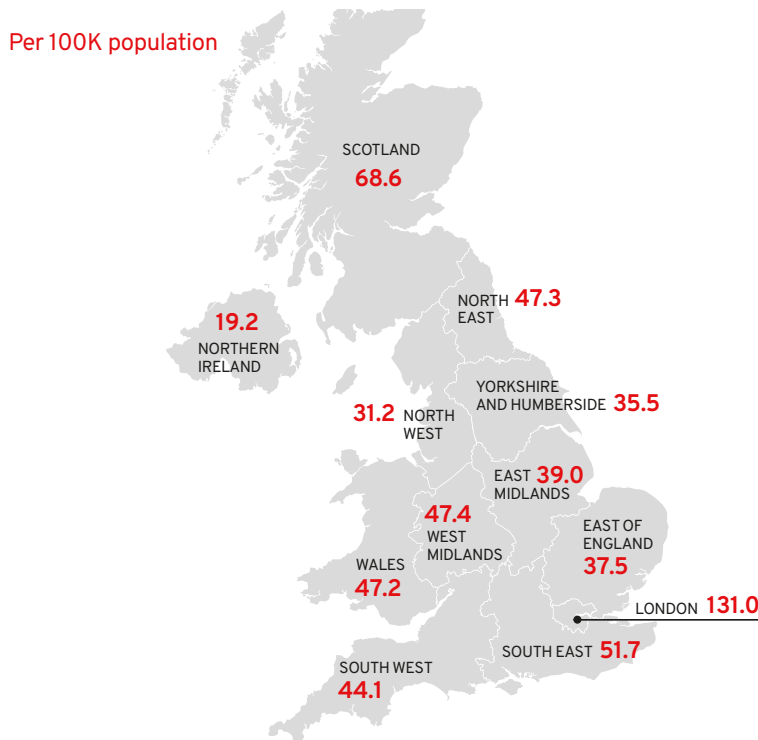
<sup>6</sup> <https://www.gov.uk/government/consultations/the-consumer-experience-at-public-electric-vehicle-chargepoints/the-consumer-experience-at-public-chargepoints>

#### 4 Number of public charging devices available since January 2020



Source: Electric Vehicle Charging Device Statistics, DfT, January 2023

#### 5 Publicly available electric vehicle charging devices by region and country - 1 January 2023



Source: Electric Vehicle Charging Device Statistics, DfT, January 2023

## Logistics UK is calling for:

- An immediate uplift in the number of public chargepoints that can be used by battery electric vans, and recognition of the future needs of battery electric trucks. This is vital to give the logistics sector the confidence to invest in zero emission at the tailpipe vehicles.

## Fiscal support

All respondents to the 2019 and 2023 research reported strong ambitions around decarbonising their fleets for environmental and social reasons, tempered with concern about the costs associated with the transition, something that featured highly then and now.

In the previous report, Logistics UK called for a fairer way of funding energy supply upgrades, straightforward and consistent rules for grants, taxation and regulations and more support for the secondhand EV market, especially for the installation of chargepoints by SMEs. Respondents also expected costs of vehicle acquisition to fall as the commercial electric market grew.

Respondents to the 2023 research reported volatile energy prices and vehicle acquisition costs, and called for more support through tax allowances for capital expenditure on green infrastructure, including increasing power supply capacity at their premises. Many cited business planning challenges connected to uncertainty around costs and financial support, including sudden changes or withdrawals of grant funding for both vehicle acquisition and chargepoint installation.

Government grants for electric cars and home chargepoints for privately owned houses were withdrawn on 14 June 2022; at the same time, the eligibility criteria for plug-in vans changed to include electric vans up to 4.25 tonnes gross vehicle weight (GVW). Previously, the grants had only been available for electric vans up to 3.5 tonnes GVW. Operators of vehicles over this threshold could only apply for the plug-in truck grant and there were only 16 grants available in total from this fund. Including electric vans up to 4.25 tonnes GVW meant operators could apply for up to 1,000 grants per year. However, the amount of grant payable to eligible small vans up to 2.5 tonnes GVW was reduced to £2,500 from £3,500 (in March 2021) and £8,000 (in 2020). The grants for eligible large vans up to 4.25 tonnes GVW is £5,000. Under the previous criteria, large electric vans up to 3.5 tonnes GVW could claim £6,000 (in March 2021) and £8,000 (in 2020).

The new higher weight threshold is designed to encourage uptake of alternatively fuelled vehicles (AFVs) to make use of the category B licence derogation for AFVs that was originally introduced in 2018 to counter the reduced payload compared to a petrol or diesel vehicle. The Office of Zero Emissions (OZEV) has confirmed that this derogation will be made permanent.

*“Changing pattern of government grants, cuts in discounts – it feels like building a business case on shifting sands, especially when they have to be put together 18 months before.”*

**Mark Karkeek,  
South West Water Ltd**

*“Towing is a massive issue – a lot of our contracts need to tow up to 3.5 tonnes. We are starting to see electric vans that can tow being released, but it halves mileage range and has limited towing capabilities.”*

**David Cahill,  
Amey Fleet Services**

*“If a large electric van needs a weight increase to 4.25t to maintain payload, for trucks – the equivalent uplift will be 9 tonnes. Unless government review all thresholds to avoid payload loss, we will have to put on more vehicles and increase our prices.”*

**Mike Sutton,  
Lime Logistics Ltd**

### **Alternatively fuelled vehicles – licence derogation**

Companies who operate the heaviest vans have long called for clarity regarding the category B derogation allowing holders of a standard driving licence to operate an AFV up to 4.25 tonnes. The additional weight allowance ensures there is no loss of payload capacity from using an AFV, and ensures operations remain as efficient as possible. The news in June 2022 that the derogation would be made permanent and the government consultation to review the licence flexibility was warmly welcomed by the logistics sector. However, the government response has been delayed, which is unhelpful for business planning by fleet operators and manufacturers, and risks a loss of momentum for operators seeking to utilise this welcome additional weight allowance.

### **Zero Emission Road Freight Trials (ZERFT)**

In May 2022, the UK government announced funding for an “extensive zero emission road freight demonstrator programme” focussed on the heaviest HGVs (40 – 44 tonnes), with £140 million due to be allocated to successful bidders through Innovate UK and the DfT. The programme is aimed at supporting the government’s commitment to end sales of all new, non-zero tailpipe emission HGVs by 2040 and enable continued cross border freight. The programme is focussed on battery electric and hydrogen fuel cell technology and will be used to gather evidence on future refuelling and recharging infrastructure. Originally the government said the demonstrations would commence later in 2022 but this has been delayed, with the successful projects yet to be announced at the time of this report.

Currently electric vans, cars and motorcycles do not pay vehicle excise duty (VED) and this was reported as a benefit for electric van operators in our last report. However, from 1 April 2025, EVs registered after 1 April 2017, will be charged road tax.<sup>7</sup>

For vans, this means they will pay the standard rate for petrol and diesel vans, which currently stands at £320 per year. With electric vans in relatively short supply and a higher capital cost than diesel this new tax seems premature and risks undermining the business case for investment.

### **Approaches to deployment of EVs within business**

In 2019, our research showed most businesses considering electrifying their fleets were at the start of their journey. The majority were at the trial stage, operating less than 10 EVs within their operations. The reason most frequently cited for not investing in EVs was the lack of suitable vehicles on the market that could do the same job as current fossil fuel vehicles.

In 2023, those operators at the early stages of decarbonising their fleets held similar views and were actively seeking EVs that would slot easily into their fleets without any changes to their operations. However, there was a notable difference with operators who had introduced EVs several years ago and who had electrified significant parts of their fleets. Experienced EV operators recognised that to achieve a successful integration of EVs into fleets, it was important to work to the

<sup>7</sup> <https://www.gov.uk/government/publications/introduction-of-vehicle-excise-duty-for-zero-emission-cars-vans-and-motorcycles-from-2025/introduction-of-vehicle-excise-duty-for-zero-emission-cars-vans-and-motorcycles-from-2025>



vehicle's capabilities and adjust operating practices accordingly, resulting in some operators having to deploy more vehicles.

### Linkages between emissions and air quality

Discussions with respondents in 2023 showed significant recognition of how lowering carbon emissions can also assist with air quality improvements. London's Ultra Low Emission Zone (ULEZ) was first introduced in 2018, expanding for the first time in 2021. Since March 2021, seven Clean Air Zones (CAZ) have been introduced across England, starting with Bath, with more in the pipeline. In Scotland, four Low Emission Zones (LEZ) have also been set up which will come into full force this year. These schemes, together with recent learnings around the health impacts of some atmospheric pollutants has helped to raise awareness of the impacts of transport emissions in all forms on our lives and communities.

Since our 2019 EV research, there has been a growing understanding that the move to decarbonise fleets can bring additional benefits in improving air quality, particularly with nitrogen dioxide and particulate emissions. Reports of reduced tyre and brake wear with EVs have been noted as an additional benefit by many operators.

### Logistics UK is calling for:

- The current derogation for category B drivers to be redefined to allow a trailer to be towed with an alternatively fuelled vehicle (between 3.5 tonnes and 4.25 tonnes) up to 7 tonnes maximum authorised mass.
- The current derogation to be brought into line with the 2030/2035 phase-out dates for non-zero emission vehicles to send a strong signal to the market, whilst recognising that exemptions will be required for specialist and niche operations that remain hard to electrify beyond the phase-out dates.
- The existing definition of eligible LCFs allowed under the derogation to be maintained to support van usages that need to rely on fuel technologies other than battery electric and should continue to include LCFs that can offer significant GHG savings.

*“Lots of others are trying to replicate what diesel vehicles will do – we stood back, worked out what the vehicle could do and tailored operations accordingly.”*

**John Boyle,**  
**WGM Engineering Ltd**



# Electricity supply



A third of respondents cited power supply infrastructure as one of their biggest challenges for fleet electrification.

Those interviewed demonstrated a growing recognition of the importance of adequate power supplies to deliver fleet electrification, with respondents referencing the need for undertaking due diligence and detailed planning of electrification projects to ensure successful outcomes.

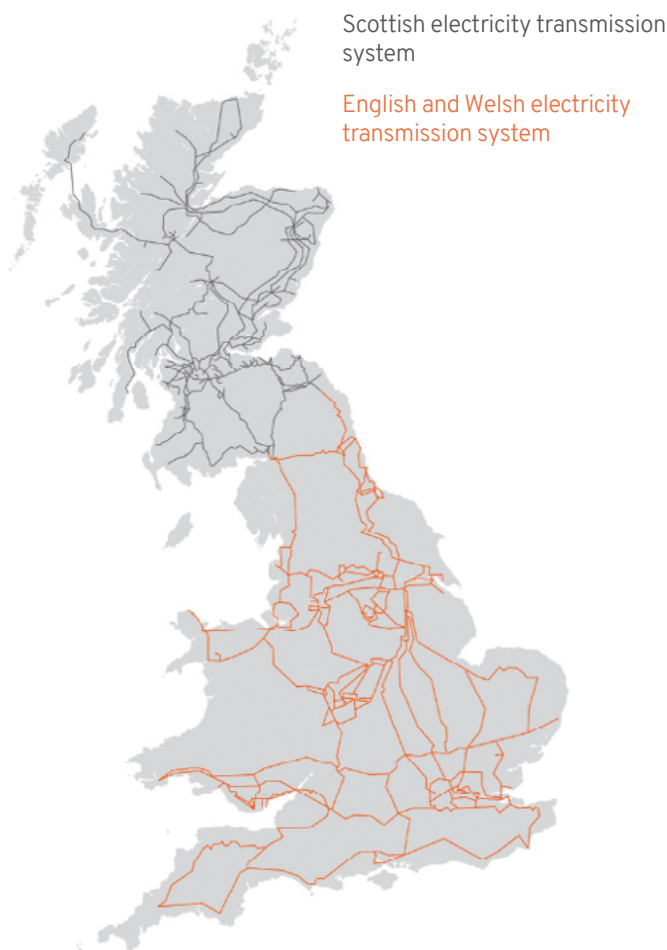
There is also concern about National Grid's ability to grow its resources and to make strategic decisions about national priorities for power upgrades to support strategic industries and the strategic power network required for logistics services. The logistics industry is aware that for rural areas in particular, electric power upgrades may not be possible. **Fig 1.1** below<sup>1</sup> shows clearly the areas where high-voltage network power supply is limited, especially in Wales and across the Pennines.

The DNOs need to have a greater understanding of logistics operators' electrification plans plus the locations and timetables they are working towards to ensure the network will be able to co-ordinate power requirements in time.

*“We know from our usage that EVs are a good investment, but to get to where we are now was challenging and involved significant investment of time! The biggest challenge is aligning the infrastructure with where the vehicles are going live and managing many stakeholders.”*

**Stuart Murphy,**  
Royal Mail

### 1.1 High-voltage Electricity Transmission System in England, Scotland and Wales



Source: National Grid. <https://www.nationalgrid.com/electricity-transmission/network-and-infrastructure/network-route-maps>

<sup>1</sup> <https://www.nationalgrid.com/electricity-transmission/network-and-infrastructure/network-route-maps>

## Supply requirements for different vehicle types and fleet sizes

*“We have deployed a robust charging infrastructure, where it was needed, but it was a very costly and slow process that is unnecessarily bureaucratic and time consuming.”*

**Adam Purshall,  
Menzies Distribution  
Solutions Ltd**

For private cars, a domestic electricity supply will usually be adequate to charge one or two cars on a slow to fast charger overnight, without additional electricity capacity being necessary. The same applies for most vans that are taken home by the driver and charged overnight; they can use a domestic supply or on-street residential chargepoints, if the space is large enough.

Electric van battery technology is developing rapidly to meet the demand for greater payload and mileage range. The smallest car-derived electric van batteries start at 20kWh. For an HGV they will require batteries with capacities of up to, or even beyond, 600kWh. To charge these much larger batteries, greater power supply will be required for charging HGVs. The government’s Zero Emission Road Freight Battery and Hydrogen Demonstration trial<sup>2</sup> requires applicants to be able to provide a ‘theoretical capability of charging vehicles at around 1MW DC peak’.

Operators with large fleets of vans trialling a few EVs usually found their power supply sufficient, especially if they employed smart charging to stagger the times when vehicles were drawing down power from the supply. However, as they moved to electrify their fleets at scale, the limitations of energy supply became apparent, with operators initially looking for ways of managing their current supply, before ultimately increasing it. Several respondents said they would try to avoid installing a substation initially, but most recognised they would need to do this at some point in the future.

Some respondents are now looking beyond their van fleets and are trialling electric trucks. Operators with mixed fleets or wholly truck fleets are fully aware they will need to increase the power supply at their depots.

## Engagement with DNOs

Discussions with participants revealed electricity supply issues are usually handled by other departments within the organisation, such as their facilities teams. Vehicle electrification is setting a very steep learning curve for fleet managers as they strive to understand new alternative fuel technologies while at the same time managing conventional fossil fuel vehicle operations.

There is also a growing understanding of the need for direct engagement with DNOs and many respondents are working to establish relationships. Some reported challenges with their dealings with DNOs, including upgrade installation delays which are poorly communicated and a general lack of understanding of logistics operations. Just as the energy industry is a new technology for fleet operators, the world of logistics is new to the energy suppliers.

<sup>2</sup> <https://apply-for-innovation-funding.service.gov.uk/competition/1241/overview/30a6ba0f-ca5f-4da9-a729-d9687792ccb3#scope>



## Costs

Respondents reported estimated costs to upgrade their energy supply between £100,000 and over £1 million. One respondent had been informed that every additional megawatt of electricity will cost around £5,000.

The uncertainty over energy supply uplifts is complex, as energy supply capacity is not standard across the UK. In some parts of the country, the work required to increase supply to an area requires significant investment in the local grid network. Until recently, this additional cost was borne by the consumer who required the uplift, but from 1 April 2023, local network reinforcement costs have been 'socialised' across the network. However, these costs formed only a small percentage of the total cost and operators requiring additional power at their premises to electrify their fleets will still face significant investment on top of the costs of acquiring new electric vehicles and chargepoint infrastructure.

The current volatility of energy prices was also cited by most respondents as problematic. Business planning can often take several months, if not years, before investments are agreed. The rising cost of electricity has not yet delayed respondents' plans to electrify but is something most are watching with interest.

## Managing limited power supplies

Vehicle to Everything (V2X) is seen as an emerging technology that is expected to be relied on in the future by the energy network to support grid capacity across the networks.

V2X harvests residual charge left in the battery of returning vehicles and either transmits it into the grid when demand is high to obtain a high price for the energy, known as Vehicle to Grid (V2G), or uses it for other vehicles and equipment on site otherwise known as vehicle to everything (V2X). The vehicle is then charged at another time, when there is more energy capacity to the site taking advantage of cheaper energy prices.

Very few commercial EVs are currently set up to allow V2X and of those interviewed, only one respondent had used the technology, with another currently considering its use.

Other methods respondents used to manage limited electricity supply at depots included:

- Smart charging, staggering times when different vehicles are charged and when there is less demand for power and it is potentially cheaper, such as at night.
- Battery storage, which allows for electricity to be drawn from the network when energy consumption on site is lower and used for charging vehicles or within the premises when supplies to the site are constrained. It is also a method of utilising energy collected from solar panels or wind turbines on site and can be used in conjunction with V2X technology.

Of the above, smart charging is most widely used by operators to ensure vehicles are fully charged ahead of their duty shift.

However, it should be noted that business operations where a vehicle is required to be operational at all times do not allow for extended periods of vehicle downtime for long vehicle recharging times, such as overnight charging. This business model

will rely more heavily on rapid charging at depots, which will require increased power supply.

Where companies have invested in solar and wind power to support renewable energy, they have reported that incentives are not always aligned so that when feeding energy back into the grid they receive the benefit.

**Logistics UK is calling for:**

- A fair and equitable approach to funding electricity connections to enable the expansion of depot charging for electric vehicles, including through the tax system and the plug-in grant being available to fund connections and charging infrastructure.
- Transparency on available grid capacity and a common service agreement amongst DNOs for connections.
- Development of an electricity generation roadmap with expected milestones showing the incremental percentages of registered vehicles that need to move to electric to ensure sufficient supply margin as more vehicles rely on the National Grid.
- Energy support to manage shocks, keeping that support under review, and coordination with the logistics sector to enable long-term planning and unlock investment.
- Government to work with the industry to unlock investment in energy generation, by linking feed-in tariffs to wholesale electricity prices, enabling greater levels of commercial energy generation and energy security.





# EV chargepoint infrastructure



While two thirds (65%) of respondents charge EVs at their depot, 30% use a mix of charging options, which includes charging at drivers' homes and using the public network. 5% use their business customers' chargepoints.

## At depots

All respondents had opted to install slow to fast AC chargers in their depots, with around half of respondents saying they would look into faster chargers in the future, increasing battery storage, or assessing new technological developments.

Experiences with chargepoint installation were divided, with almost half of the respondents saying they found it easy and straightforward, and a similar number finding it more challenging. 4% reported mixed experiences.

Of those who have chargepoints at their depots, most found chargepoint operation easy and straightforward, or they experienced minor problems, usually related to software or power balancing issues, which were resolved quickly. The majority of respondents (78%) use a third-party provider to maintain and repair the chargepoints. One respondent who originally purchased their chargepoints is now considering leasing them in future, citing rapidly changing chargepoint technology as the reason.

Logistics UK members have previously reported issues with chargepoints breaking easily and difficulties sourcing replacements or getting repairs done. Respondents to this survey did not flag this as an issue for their depot-based chargers.

Previous comments from operators have also identified issues with leased or rented premises in obtaining landlord permissions for installing charging infrastructure. Comments from participants in this survey suggest that landlords are becoming more aware of the need to provide EV infrastructure although delays are still being encountered and one respondent had experienced outright refusal by their landlord to allow the installation.

In 2019, most respondents were still at the trial stage, so space and suitability of premises was not flagged as an issue. While interviewees said they assessed the suitability of their premises when seeking to electrify their fleets, the locations with sufficient space, electricity supply and a secure tenure were often the ones used first. Of those that responded, 85% said that they currently had sufficient space, however, relocation was something that would be considered in the future if necessary.

## Drivers taking vehicles home

For some business operations, drivers take their vans home at night. The types of businesses that do this include recovery services, small business owners or tradespeople who are based at home, or where depot space is limited or unsuitable for vans to remain overnight.

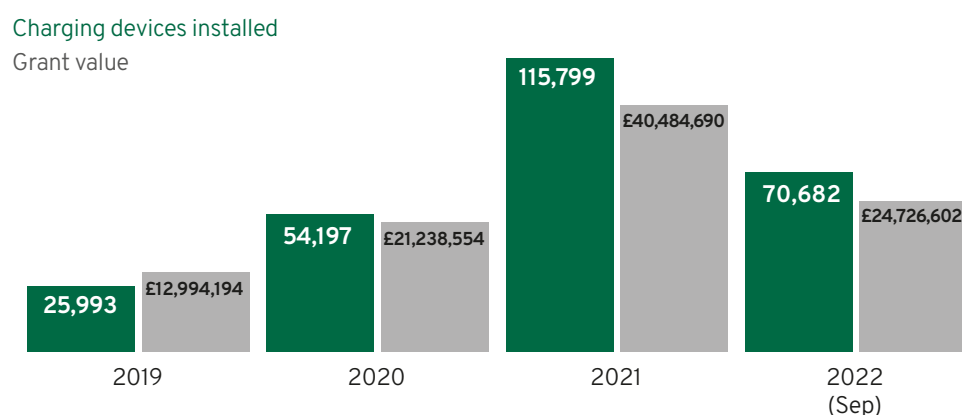
As more fleets introduce electric vans into their fleets, access to a power supply has become a priority. If a driver has off-street parking that can be used to park a van then there is the option to install a chargepoint for that purpose. Where feasible, operators will arrange for chargepoints to be fitted at the driver's home



covering the cost of installation as a company expense, using grants if available. In one case, a respondent found that a new employee already had a chargepoint installed at their home. While some operators have expressed concern about employees resigning after a chargepoint has been installed, in time as more domestic chargepoints are installed, employers may increasingly find that new recruits live where chargepoints are already installed. The value of home charging grants has fallen (see **figs 2.1 and 2.2**).<sup>1</sup>

The number of Workplace Charging Scheme (WCS) grant vouchers redeemed has increased by 201% since 2019 (**fig 2.3**). However, in *Taking charge: the electric vehicle infrastructure strategy* published in March 2022, government signalled its intention to end direct subsidy support (grants) for home and workplace charging.

**2.1 Electric Vehicle Homecharge Scheme (EVHS): Charging devices installed and grant value 2019–September 2022\***



Source: Electric Vehicle Charging Device Grant Scheme Statistics: October 2022, DfT, December 2022  
 \*New ECVG Scheme began April 2022

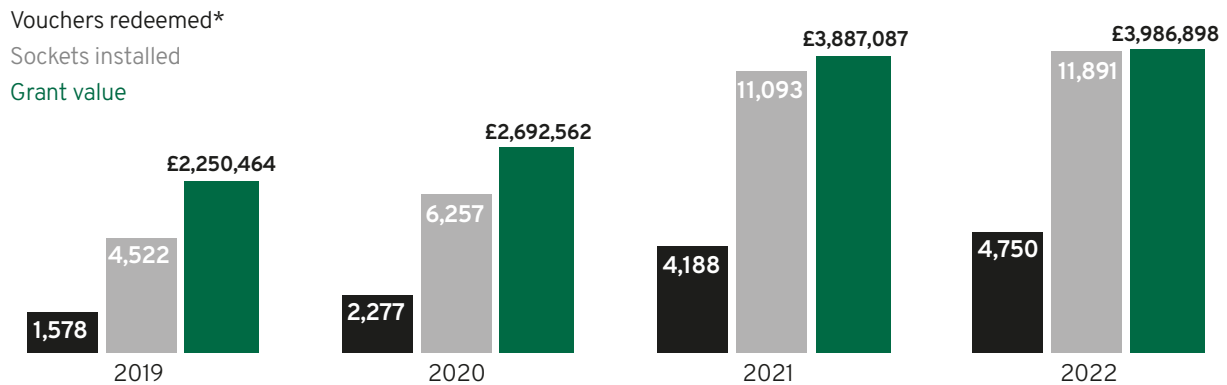
**2.2 Electric Vehicle Chargepoint Grant (EVCG): Charging sockets installed and grant value since the scheme started (March–September 2022)**

Carpark		Flats and renters		Landlord		Total	
Charging sockets installed	Grant value	Charging sockets installed	Grant value	Charging sockets installed	Grant value	Charging sockets installed	Grant value
355	£462,276	562	£196,343	55	£23,500	972	£682,118

Source: Electric Vehicle Charging Device Statistics, DfT, January 2023

<sup>1</sup> <https://www.gov.uk/government/publications/uk-electric-vehicle-infrastructure-strategy>

### 2.3 WCS: vouchers redeemed, sockets installed and grant value from 2019–September 2022



\*There can be 1 voucher for up to 4 sockets installed in the same workplace carpark

Source: Electric Vehicle Charging Device Grant Scheme Statistics: October 2022, DfT, December 2022

All respondents reimburse their drivers for electricity use if connecting to their domestic supply, but the method of reimbursement varies. Some are utilising new technology from smart meters to pay for electricity used for the company vehicle direct to the energy supplier, others reimburse the driver through expense claims.

However, not all drivers are able or willing to park their employers' vehicle on their drive and in those instances they will need to rely on the public chargepoint network (**fig 5**).

## Public chargepoint network

While the majority of respondents prefer to charge their EVs at depot, the public chargepoint network is a vital element of electrifying fleets. Even those who undertake their primary charging at depot will still use the public chargepoint network as a regular part of their EV operations or want to rely on it for emergencies.

Van drivers without access to off-street parking who take their vehicle home will need to rely on residential public charging, as will small business owners who use a van and operate from home, and tradespeople working in domestic locations.

Of those respondents who use the public chargepoint network, over half (53%) report difficulties in finding a free EV chargepoint space, with 30% encountering broken or inoperable chargers. Significant frustration was expressed by those who regularly use public chargepoints at the lack of reliable and up to date information about available working chargepoints. They report that apps often showed a space was free and operating, but on arrival the driver would find that it was out of order and in some cases, seemed to have been for some time.

*“Chargepoints are often not working and they are broken or the space is taken by other vehicles – not always by EVs. We’ve even been given parking tickets while charging.”*

**Darren Holloway,**  
JB Riney Ltd

While DfT figures show that London and the south east have the highest number of public EV chargepoints per 100,000 head of population, (see **fig 5** on p 14), numbers of chargepoints are not evenly distributed across the country, with some regions and rural areas poorly served.

However, these statistics only show the total number of chargepoints installed across the UK. To date the public charging network has largely been focused on electric cars, resulting in chargepoint spaces that will not accommodate electric

*“Experience at public chargepoints is awful; uncertainty of whether they will work or if they are being used, and rapid chargers are too far apart.”*

**Justin Laney,  
John Lewis Partnership**

vans or trucks. Indeed, there are growing numbers of media reports of long queues to charge EVs and tensions between electric car owners and commercial vehicle users. Operators have suggested this may be because of a perception that the public chargepoint network is solely for the use of electric car drivers.

As uptake of EVs of all types accelerates, this situation will become more difficult unless the roll out of public chargepoints increases at pace to match EV acquisition and the needs of commercial EVs are recognised and provided for within the public charging network.

Early adopters of commercial EVs have previously reported issues with payment methods at public EV chargepoints requiring myriad apps with inappropriate or inadequate information provided for commercial fleet operators. Of those respondents who use the public chargepoint network, half (50%) now use fuel cards as their routine payment method, now that more fuel card operators include EV charging in their service offering.

#### **Logistics UK is calling for:**

*“Challenge with the public network, it is not designed for LWB, utility vehicles with something on roof, or towing.”*

**Lorna McAtear,  
National Grid Plc**

- EV charging and refuelling infrastructure roadmap designed in collaboration with business to work for logistics vehicles, backed with clear guidance and incentives for local authorities.
- Significantly accelerated rollout of public charging infrastructure that is fully accessible to commercial vehicles, with clear milestones for minimum levels of suitable chargepoint provision across the country.
- A centralised and standardised public chargepoint system operating to high reliability standards providing live availability updates and information about chargepoint space size and suitability for use by large electric vans now and for electric trucks in the future.





# Vehicles



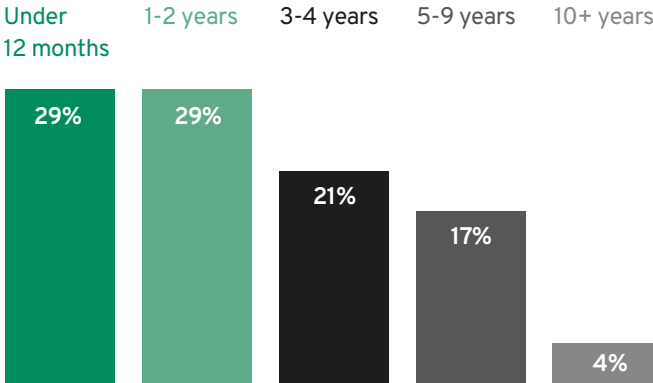
During the Logistics UK member interviews undertaken in December 2022 and January 2023 for this report, members were asked about their experiences with acquiring and using EVs.

## Vehicle acquisition

Of those respondents who have introduced EVs into their fleet, over half (58%) have done so in the last two years (**fig 3.1**)

### 3.1 Period of EV acquisition by respondents

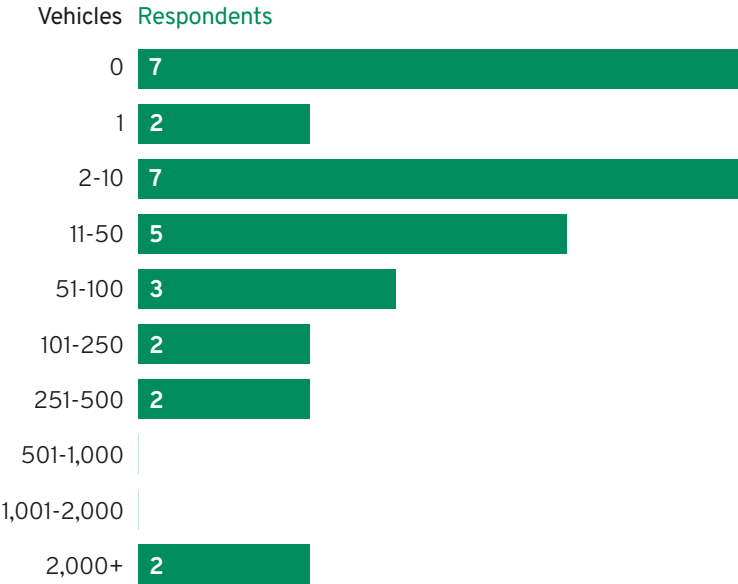
EVs acquired in last:



Source: Logistics UK EV research 2022/23

However, in 2019 most respondents had only introduced up to 10 EVs into their fleets, and only six respondents had more than 100 EVs, whereas in 2023 nine respondents report operating over 100 EVs in their fleet, with two organisations operating fleets with over 2,000 EVs (**fig 3.2**).

### 3.2 Number of EVs currently operated by respondents



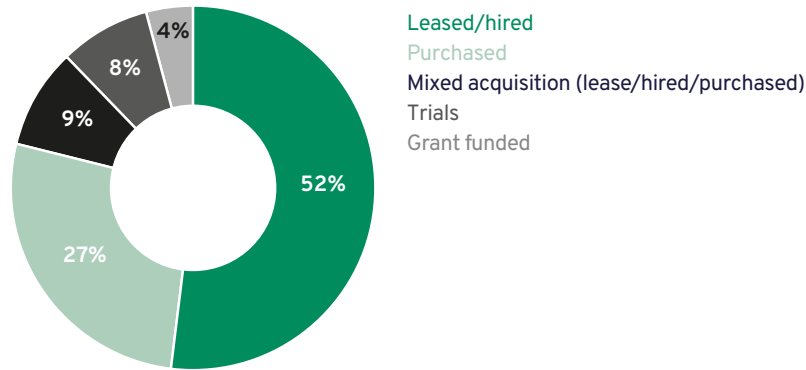
Source Logistics UK EV research 2022/23:

Lease or hire of EVs was the acquisition method favoured by more than half (52%) of those who had introduced EVs into their fleet, with 27% purchasing their vehicles outright. 9% opted for a mix of lease, hire and purchase. 8% had used trial schemes to obtain EVs and 4% had been able to make use of full grant funding (fig 3.3).

*“The biggest shock in finances was the purchase grant being reduced without notice.”*

**Ben Hodgson,  
DHL Express**

**3.3 Respondents’ mix of leased and owned vehicles**



Source: Logistics UK EV research 2022/23:

## Use of grants, scrappage schemes and tax allowances

The plug-in van grant is applied to new vehicle purchases as a discount on the list price by the manufacturer.

More than half (55%) of respondents had taken up fiscal support, mostly in the form of vehicle grants applied as a discount to new vehicle purchases, including one respondent who was able to use the super deduction allowance to purchase vehicles and chargepoints. Another respondent has received financial support from the Mayor of London for installing charging infrastructure. No operator reported using a scrappage scheme, suggesting that these are limited in availability for commercial vehicles. However, Logistics UK members regularly state that grants are a key part of their business planning and sudden changes in the allowances and eligibility criteria is unhelpful.

Large operators that will require significant power increases to transition their fleets to electricity want to see capital expenditure allowances criteria apply to energy supply uplift costs. Sole asset extensions installed at customer premises are not owned by the customer, they are an asset of the energy network, even though the customer has to pay for it. Additionally, if the fleet operator leases or hires vehicles, this expenditure is not eligible for the annual investment allowance.

## Mileage range, duty cycles

Almost half of respondents (45%) used EVs on duty cycles over 100 miles and a third (32%) use them on routes under 50 miles. This is consistent for goods vehicles across GB.

Two-thirds (64%) said the mileage range obtained from their EVs was as they expected it to be and 9% achieved longer mileages than expected. However, 27% obtained a shorter mileage range from their EVs than expected.

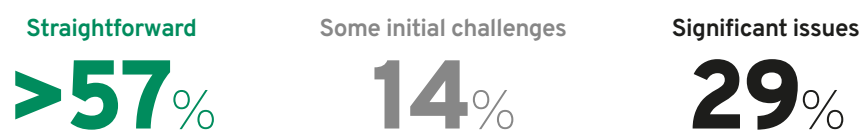
While the majority said the vehicle mileage range on a single charge was what they expected, a recurring comment was that respondents did not rely on manufacturer's claims about maximum mileage and only deployed EVs on routes that were shorter than the manufacturer's stated range.

Heatwaves and very cold weather were regularly observed to reduce mileage range, with some operators seeing reductions of as much as 50%. Hot weather was a particular problem for vehicles with refrigerated units that took power from the main battery. In cold weather, some of the impact on mileage could be mitigated by pre-conditioning the vehicle while still connected to the main electricity supply, to avoid using battery charge to heat and demist the vehicle when starting off. There were also reports of problems with vehicle handling in snow and ice, due to the increased torque.

## Servicing, maintenance and repairs

Availability of trained technicians has been reported by members as a concern for conventional vehicles in recent years. However, of those interviewed, 57% said servicing and maintenance for EVs itself was straightforward while around 14% had experienced initial problems, usually connected with software and IT and 29% reported significant issues. Operators of large fleets often serviced and maintained their vehicles in-house and trained their own technicians.

Those who invested, found maintenance to be:



*“Most challenging part of investing in EVs? Making the business case. Got to be cheaper than diesel.”*

**Justin Laney,  
John Lewis  
Partnership**

However, those who experienced ongoing issues reported disruption to business operations, with vehicles off the road for long periods.

Of those who outsourced servicing of EVs, increased costs of servicing were reported, despite service times being shorter than a conventional internal combustion engine vehicle. Reasons given included the use of specialised EV technicians which attracted higher hourly labour rates.

The safety record of EVs within fleets was as good as other vehicles in the fleet, if not better, with reports of EV drivers adopting more passive driving styles to conserve battery range. However, the issue of the quietness of the vehicle was referenced by several respondents who have adapted driver training and installed additional audible warnings.

## Total cost of ownership

EV availability is still a major challenge for many fleet operators, as world events constrain supply chains. Almost all respondents (95%) report higher total costs of ownership, with 64% reporting costs being two to three times more expensive than an equivalent diesel vehicle.

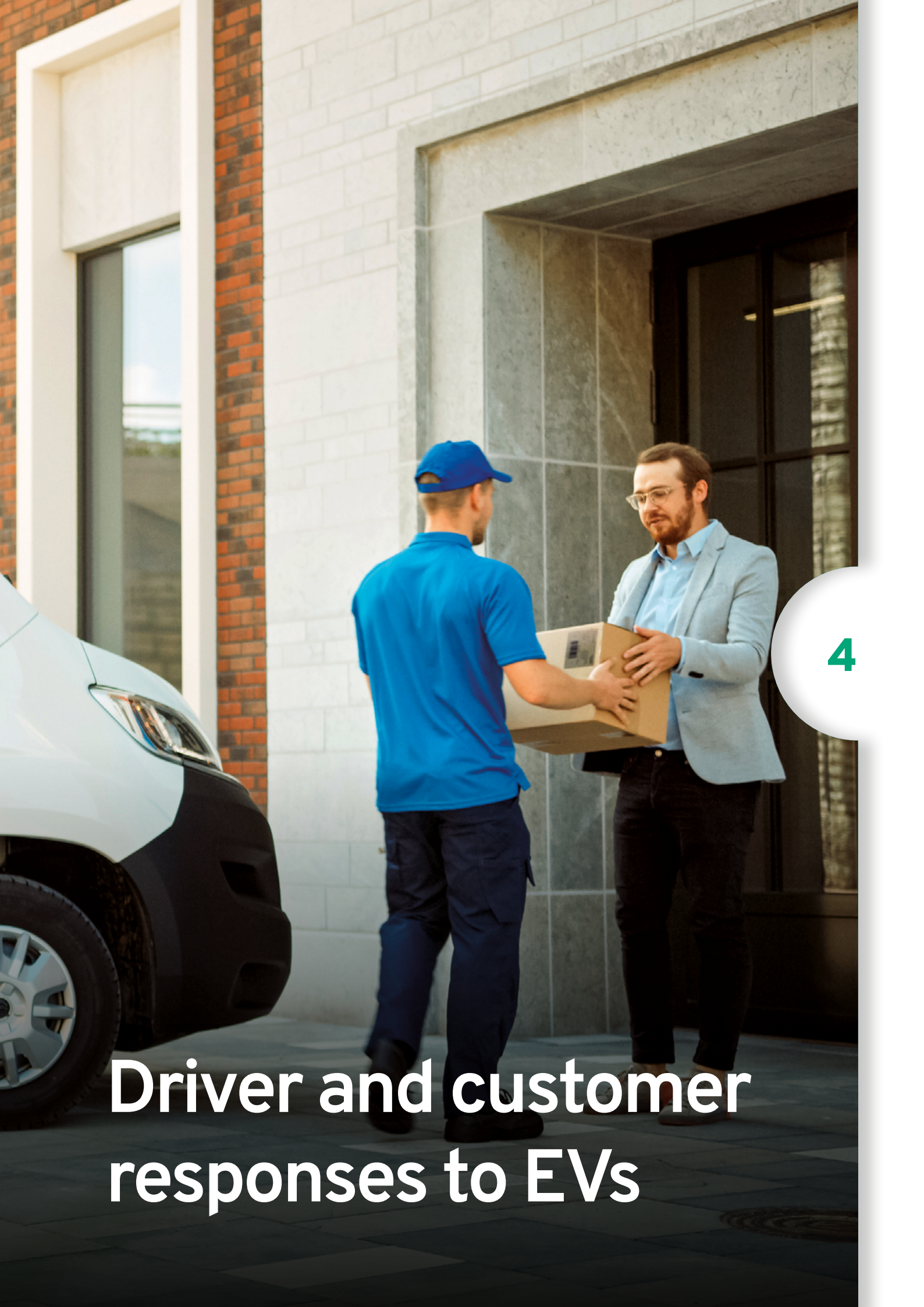
During the interviews reference was made to the volatility of energy prices, increased costs of vehicles, parts and servicing, together with vehicle supply constraints and increased demand for EVs worldwide.

### Logistics UK is calling for:

- Amendment of the qualifying criteria for the 100% tax deductible annual investment allowance for capital spending in the year of expenditure that was announced in the Spring Budget 2023 to include vehicles acquired via leasing or hiring, and clarification of the usage of the allowance for investments in both buildings and equipment, including costs associated with increasing electricity supply at commercial vehicle premises to support the transition to net zero logistics and increased productivity.
- Sudden changes to plug-in vehicle and chargepoint grant schemes to be avoided where possible to support better business planning and provide certainty for operators.







# Driver and customer responses to EVs

During the Logistics UK member interviews undertaken in December 2022 and January 2023 for this report, members were asked how their employees responded to using EVs and how customers reacted to goods and services being provided by an EV.

## Driver response

Over half (59%) of respondents reported a good response from their drivers to operating EVs, with almost a third (31%) noting they had not received any comment from their drivers about the move to EVs. Only 10% reported negative or mixed reactions from their drivers.

Those who had received a good response from their drivers spoke of driver enthusiasm for the vehicles, with the only negative comments being from those on the team who were yet to be allocated an EV. The drivers enjoyed using quiet, clean vehicles, and for those making multi-drops or operating in urban areas, the lack of gear changes was also a big plus point. Those drivers who took their vehicles home said they were pleased not to disturb their neighbours when setting off, especially on an early shift.

Respondents had been careful to start the roll out of EVs by involving enthusiastic EV champions although some said they still expected some negativity once EVs were to be used by all drivers.

Respondents reported the following response from drivers to operating EVs:



## Colleague response

When asked about the most positive aspect of introducing EVs into fleets, respondents expressed surprise at how well it had been received by colleagues as well as the drivers. Respondents also commented that fleet electrification demonstrates visible green credentials to potential recruits.

## Reaction of customers and stakeholders

Participants commented that where customers see deliveries being made in an EV they receive a very positive response. The drivers particularly enjoyed the warm comments, as they were more used to receiving poor reactions from the public when working. Procurement and competitive contract processes often specify zero emission vehicles (ZEVs) as part of the qualifying criteria, allowing organisations with EVs within their operations to submit tenders. Adopting EVs into fleets was seen to provide a competitive advantage in winning new business and retaining existing customers.

### Logistics UK is calling for:

- Fundamental reform of regulatory weight thresholds, not just with alternatively fuelled vans, but across all vehicle classes to avoid regulatory conflict and ensure driver and operator compliance, as well as reforms to training and vehicle inspection regimes for large electric vans up to 4.25 tonnes GVW to take into account that those vans are currently being unfairly caught in costly rules designed for HGVs, as they are heavier than diesel vans.

*“We’ve been running EVs since 1998. On our fifth generation now. Lots of pain and aftermarket conversions in the beginning - now they are all excellent and the drivers love them.”*

**Norman Harding,  
London Borough  
of Hackney**

*“Our drivers are used to getting negative publicity from the public but with EVs other road users are more tolerant and so our drivers have a better working experience.”*

**Mark Karekeek,  
South West Water Ltd’**

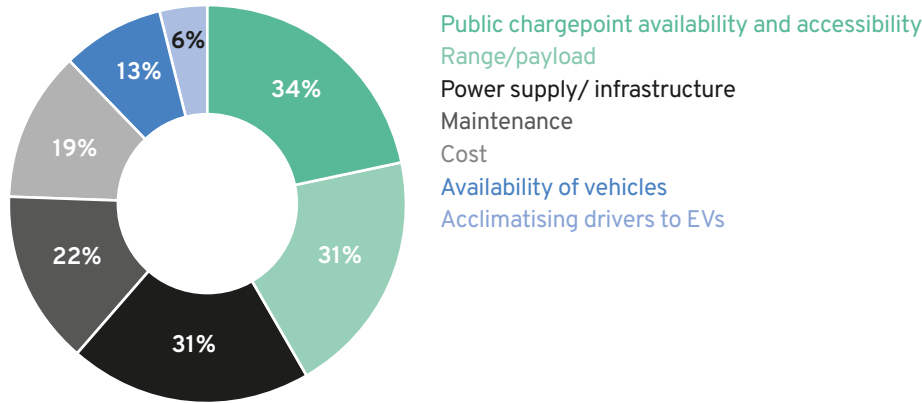




# Lessons learned

During the interviews, respondents spoke of several challenges they had experienced (**fig 5.1**), with many respondents keen to help other operators learn from their experiences highlighting key matters to consider when seeking to electrify fleets.

### 5.1 Challenges for those investing in EVs



## Plan well in advance for on-site charging

- Check whether the premises are owned or rented/leased.
- If not owned, ensure the landlord will allow changes necessary for electrification.
- Make sure that tenure at the property is secure for long enough to provide a return on any investments made to the property.
- Understand how many vehicles will be charged at the depot, when charging will take place and how much power and space will be required – now and in the future.
- Seek to develop relationships with DNOs and ensure colleagues that normally deal with them are included.

## When using the public charging network

- Check the places where vehicles will need to charge are accessible and can meet charging needs.
- Factor in that not all online maps accurately show which chargepoints are available, in working order or suitable for a large commercial vehicle.
- Plan scheduled charging stops for when demand is lower to avoid queues.
- Consider using a fuel card that includes EV charging to avoid myriad apps.

*“Learn as much from the manufacturers and other fleet operators as you can. In the early days as a big business we talked a lot before we did anything. We employed a third party to support us – we did the right thing without knowing. If you don’t know something, use people that do to support you.”*

**Clifford Smith,**  
Tesco  
Distribution Ltd

*“You have to accept you will need to make some operational changes. Minimise the compromises in your business and look for the gains.”*

**Justin Laney,**  
John Lewis Partnership



*“We’ve trained all our own technicians – as more EVs come into the fleet we expect there will be less servicing work to do, so we’ll be keeping a close eye on workshop loading as the number of EV’s we’re supplying increases.”*

**Justin Bower,  
Vehicle Lease &  
Service Ltd**

*“Current EVs in fleet were not as operationally flexible as the diesel counterparts. We have devised our strategy and now we are sourcing vehicles where the range and payload is more suitable.”*

**Adam Purshall,  
Menzies Distribution Ltd**

## If drivers currently take their vehicles home

- Check if drivers have off-street parking that they are willing to use for a company EVs.
- If off-street space is available, look into installing a smart chargepoint where electricity used for charging the vehicle is paid direct to the supplier.
- If no off-street parking is available, find out what public chargepoints are available nearby or reorganise operations so that the vehicle is returned to depot.

## Be realistic about vehicle ranges

- Ranges quoted by the manufacturers are for unladen vehicles, and mileage range between charges will be impacted once a vehicle is carrying a payload.
- Weather can impact mileage range by up to -50% and allowances should be made when route planning during periods of very cold temperatures as well as during heatwaves.
- Passive driving styles will help to maximise mileage range.
- EVs do not need to be charged every day unless mileage undertaken requires a full charge, which can help if space is limited at the depot.

## Arranging vehicle maintenance

- Upskill in-house technicians for EVs.
- If in-house maintenance is not possible, ensure service contracts are adequate for business operations.
- EV servicing takes less time due to fewer moving parts and vehicles being newer, but the service may cost more at dealers as EV technicians have undergone additional training.

## Seek as much advice as you can

- Early adopters are usually very willing to share their experiences and help others avoid mistakes, so seek out industry peers and mentors, attend conferences and webinars, and ask lots of questions.
- Engage with internal colleagues that have skills not normally found in the transport team, such as the finance teams and facilities managers who are used to dealing with energy supply and property contracts.
- Consider bringing in external expertise such as consultants for planning on-site infrastructure installations.
- Remember, everyone is working to the same deadlines.





# Glossary

AC	Alternating current
AFV	Alternatively fuelled vehicle
BEV	Battery electric vehicle
CAZ	Clear air zone
CCA	Climate Change Act
CNG	Compressed natural gas
CPs	Chargepoints
DC	Direct current
DfT	Department for Transport
DNOs	Distribution network operators
EV	Electric vehicle
EVCG	Electric vehicle chargepoint grant
EVHS	Electric vehicle homecharge scheme
GHG	Greenhouse gas
GVW	Gross vehicle weight
HVO	Hydrotreated vegetable oil
kWh	Kilowatt hour
LCFs	Low carbon fuels
LCV	Light commercial vehicle
LEZ	Low emission zone
LNG	Liquified natural gas
HGV	Heavy goods vehicle
MAM	Maximum authorised mass
MW	Megawatt
OZEV	Office for Zero Emission Vehicles
PiV	Plug-in vehicle
R&D	Research and development
SMMT	Society of Motor Manufacturers and Traders
ULEZ	Ultra low emission zone
V2G	Vehicle to grid
V2X	Vehicle to everything
VED	Vehicle excise duty
WCS	Workplace charging scheme
ZERFT	Zero emission road freight trials
ZEV	Zero emission vehicles

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