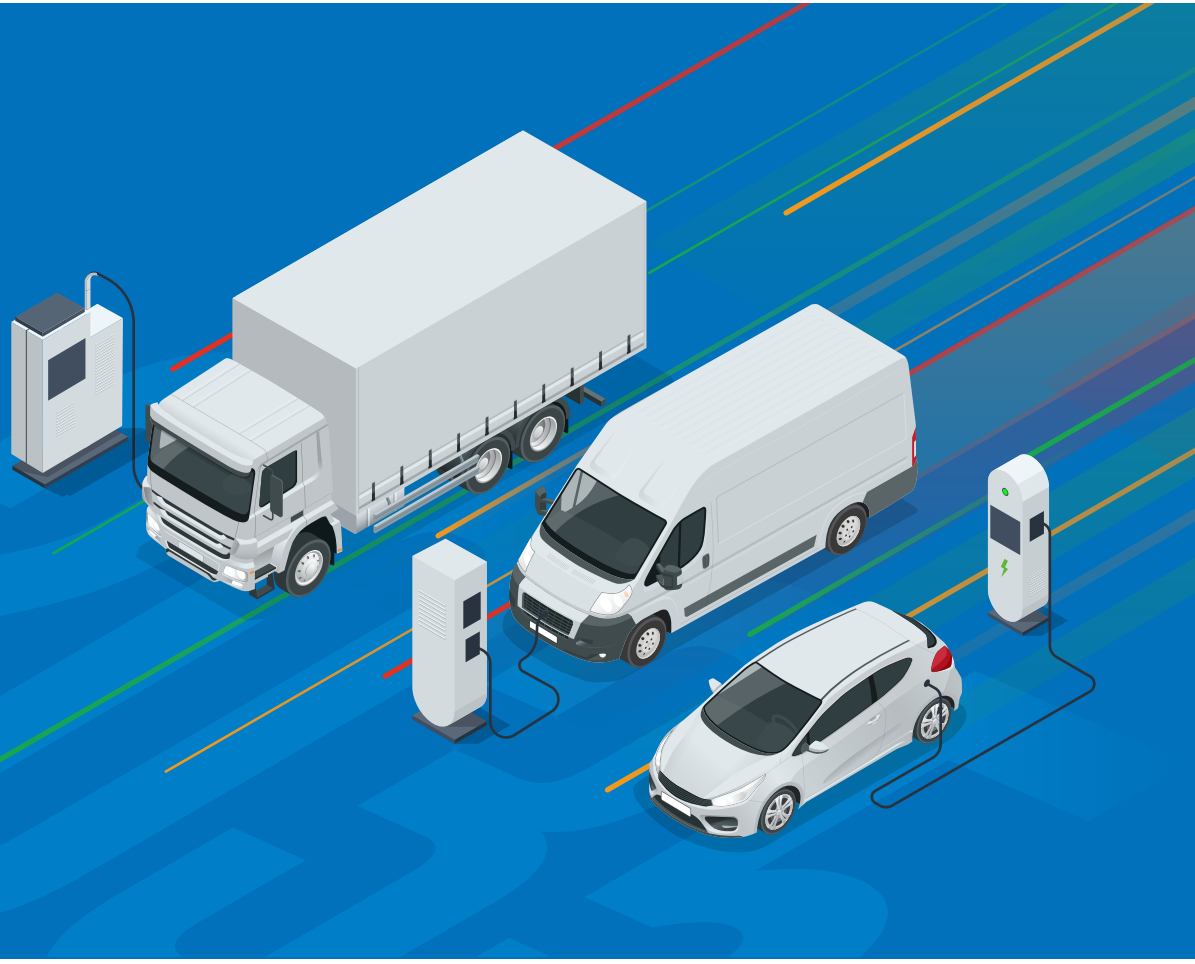
Road to Zero:
Report Card 2022



Produced in association with:

CORNWALL INSIGHT

CREATING CLARITY

CORNWALL INSIGHT
CREATING CLARITY

BVRLA

Contents

Sector Scoring

As with previous years, an overall red-amber-green (RAG) score is provided to each of the sectors in this report. These overall RAG ratings consider progress made within the last year, and grade each of the sectors from 'Parked' (red), to 'Cruising' (green). In this year's report, key performance indicators (KPIs) have been used to assess the market position under Demand, Infrastructure and Supply and determine their RAG rating. The table below shows the criteria used for each of the RAG ratings and what this scoring means for the market this year.

Score	General definitions
Red *Parked*	• Progress is significantly behind targets that have been set • Market is not responding well to government policy / fiscal incentives • EV market significantly behind ICE market • No progress made since 2021 Report
Amber *Brakes On (getting worse) Or Accelerating (improving)*	• Progress is slightly behind targets that have been set – room for improvement • Market response to government policy and fiscal incentives is average and/or varied • EV market approaching parity with ICE market • Some / limited progress made since 2021 Report
Green *Cruising*	• Progress is inline with, or exceeding, targets that have been set. • Market is responding well to government policy / fiscal incentives. • The UK is a 'front runner' compared with other countries. • EV market at parity with / exceeding ICE market • Significant progress made since 2021 Report.

CORNWALL INSIGHT

CREATING CLARITY

BVRLA

Foreword

As the world struggles with global automotive supply challenges, the UK zero emission vehicle (ZEV) market has been a rare beacon of growth, with car and van registrations both up by around 50% in the first six months of 2022[1]. A deeper dive into the market shows that the transition is being led by fleets, where battery electric cars are now the most popular option and electric vans are a sought-after corporate status symbol.

This year's report card shows the positive impacts of powerful incentives, including low ZEV benefit-in-kind (BiK) rates and commercial vehicle grants, which have successfully shifted the dial for ZEV uptake. These positive policy interventions need to be celebrated and further embedded. The UK's BiK policy is world-leading but to maintain the momentum it has provided we need more visibility on future rates, which must not be increased too quickly. Government grant support has rightly been refocussed on the zero emission van and truck markets, which are at a much earlier stage of development and will need significant long-term financial support to bridge the yawning cost and performance gap between electric/hydrogen and diesel powertrains and infrastructure.

As electric vehicle adoption reaches its 'tipping point', it is reassuring that the government continues to lay the policy groundwork that will underpin the transition. Its Zero Emission Vehicle Sales Mandate, EV Infrastructure Strategy and 2035 HGV Phase Out strategy will hopefully give many fleets a more defined roadmap and the confidence to continue investing billions in new technology.

The recent Covid pandemic, war in Ukraine and cost-of-living crisis have taught us that even the most comprehensive roadmap or strategy can be thrown off course by external events. As a key participant in transport decarbonisation, it is essential that the fleet industry provides timely and detailed feedback on the current status and outlook for zero emission vehicle adoption – in all its use cases. This is where the BVRLA's Road to Zero Report Card comes in.

Now in its fourth year, our report continues to assess progress across the key areas of vehicle demand, infrastructure and supply for cars, vans and HGVs. It recognises the diversity of the UK fleet sector and that the journey is proving more challenging for some segments than others.

This year we have incorporated some new key performance indicators (KPIs) to start to create objective metrics around the UK's progress on the Road to Zero.

As ever, we would like to thank the dozens of BVRLA members and stakeholders who have shared their insight and perspectives for this report.

We will continue to update this Road to Zero Report Card on a regular basis as the fleet industry navigates its journey towards a sustainable future.

CORNWALL INSIGHT
CREATING CLARITY

BVRLA

Road to Zero Report Card 2022
Overall Assessment

Overall score - 'Accelerating'

Improvement on last year's 'Brake's On' score

Demand - 'Cruising'

Improvement on last year's 'Accelerating' score

Key recommendation:

Keep BiK rates as low as possible for as long as possible.

Supply - 'Accelerating'

The same as last year's score

Key recommendation:

Build on the Zero Emission Vehicle Mandate by creating a wider resilience plan for the automotive supply chain.

Infrastructure - 'Brakes On'

A downgrade from last year's 'Accelerating' score

Key recommendation:

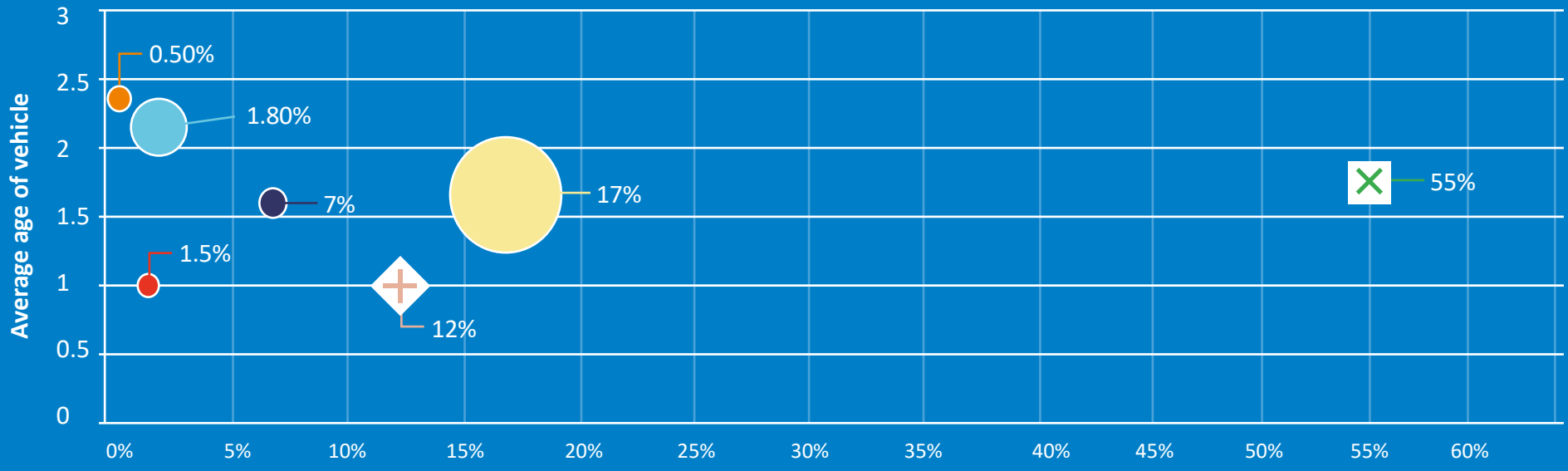
Local authorities need to develop comprehensive, fleet friendly EV infrastructure strategies.

Road to Zero Report Card 2022 - Overall Vehicle Scores

	Cars	Vans	HGVs
Demand	**Cruising** Fiscal incentives, ESG commitments and innovative mobility offerings have propelled strong growth in demand. Momentum will only be maintained through certainty on BiK rates.	**Cruising** Interest in e-vans is high, with growth in order books across multiple use cases. The Plug-in Van Grant is essential in making the growing number of e-vans affordable.	**Accelerating** From an almost non-existent base, firms are giving serious thought to how they can deploy zero emission HGVs.
Infrastructure	**Accelerating** A continued expansion of publicly available infrastructure is improving the situation for current users. As supply bottlenecks recede, infrastructure rollout will need to speed up.	**Parked** Concerns over vehicle downtime and inaccessible chargepoints are not being addressed. Van needs must be considered at the design and deployment stages of future infrastructure.	**Parked** Whilst freight trials are welcome, we are no nearer to a definitive powertrain roadmap. This clarity is essential in developing a long-term HGV infrastructure plan.
Supply	**Accelerating** Zero emission car model choice has surged this year. Ongoing global market supply chain pressures are holding back demand.	**Accelerating** The first generation of mass market ZEV vans are starting to come to market. Growth is being constrained by enduring delivery challenges and a continued lack of appropriate ZEV vans for many use cases.	**Parked** HGV supply chain resilience for vehicles and parts is also dependent on a clear zero emission powertrain roadmap.

Figure 1 - Fleet EV Census

The Fleet EV Census sets out the key data points for the different fleet segments and the proportion of vehicles that are ZEVs. The age of the vehicles reflects how rapidly fleets are able to shift into new products. The size of the market shows the scale of the challenge, or opportunity, that the segment represents of the road to decarbonisation. The percentage of the fleet parc that is ZEV is the tracker of progress to date. The Fleet EV Census shows clearly the diversity of fleet segments and how they are all in different places on their Road to Zero.



Key

- Rental - Car
- Business Lease - Car
- Personal Lease - Car
- Rental - Van
- Lease - Van
- Car Club
- Salary Sacrifice - Car

Overall vehicle parc[2]

UK car parc:
Size: 32.9 million
Average age: 8.8 years
Percentage ZEV: 1.3%

UK van parc:
Size: 4.5 million
Average age: 8.6 years
Percentage ZEV: 0.7%

The size of the bubbles in the plot represents the relative size of the fleet sectors. For car clubs (5,800 vehicles) and salary sacrifice vehicles (52,000), the bubbles are replaced by symbols due to the small size of these sectors.

357,000 personal lease cars

1.3 million business lease cars

The changes in Fleet EV Census data between 2021 and 2022 quantify a number of key trends that the sector has seen:

- The proportion of ZEVs on fleet has increased across all segments
- Segments able to access benefit-in-kind incentives saw the biggest ZEV increases
- Personal leasing is growing in volume and ZEV proportion
- Van fleets are growing, with van rental showing the greatest rate of increase
- Rental operate the youngest of all vehicle fleets but have been starved of supply. Both car and van rental fleets have increased in age whilst leasing fleets have got younger.

Figure 2 - Change in relative size of market on 2021

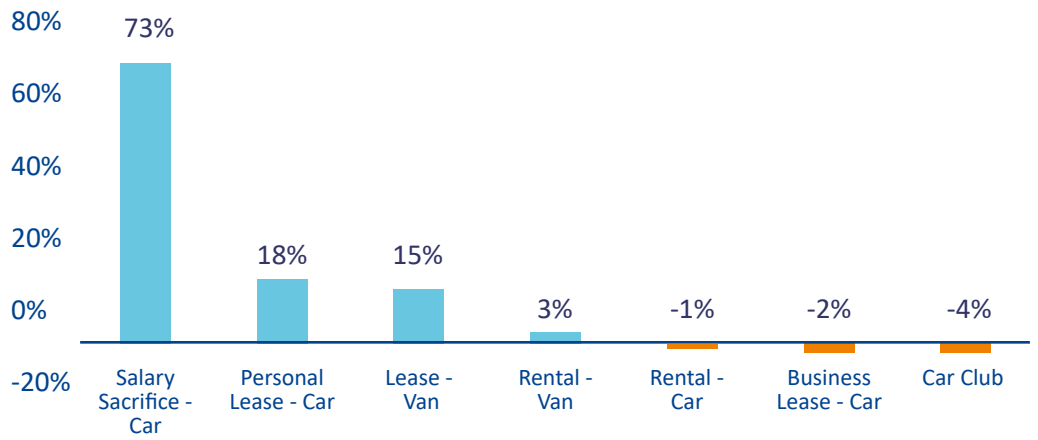


Figure 3 - Proportion of fleet that is ZEVs, change on 2021

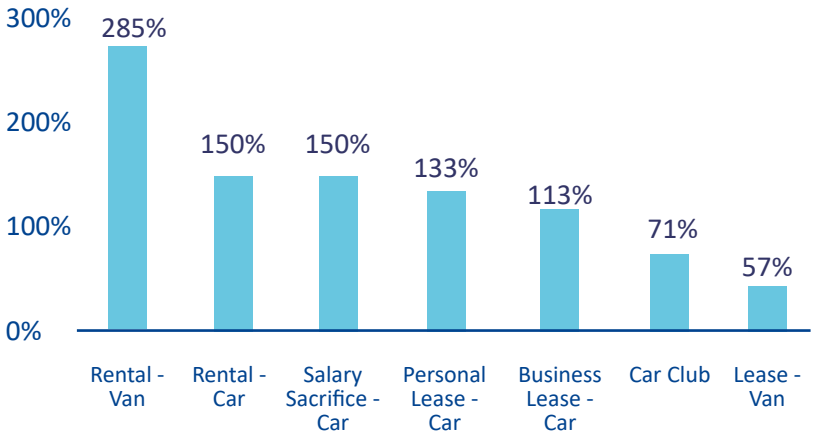
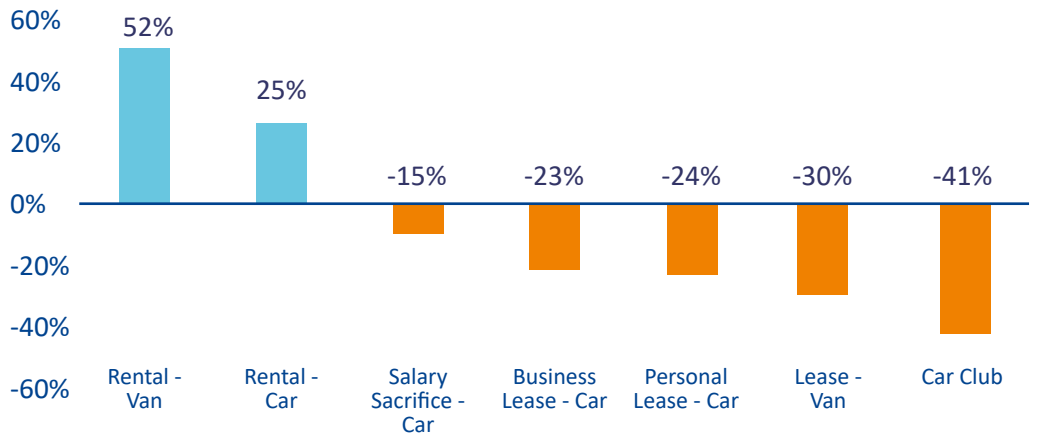


Figure 4 - Change in average age of vehicle on 2021



CORNWALL INSIGHT

CREATING CLARITY

BVRLA

Demand

1

CORNWALL INSIGHT
CREATING CLARITY

BVRLA

Demand

Vehicle demand has improved since 2021 and now gets a green light (cruising). More fleets are embracing BEVs and setting ambitious decarbonisation targets. This confidence is underpinned by strong business and consumer demand and a robust, if small, used BEV market.

Rating

Cruising

Amber Accelerating in 2021

KPIs

The key performance indicators used to track demand levels

Business Fleet ZEV Uptake

Cruising

Retail Leasing & Rental Uptake

Cruising

Total Cost of Ownership

Brakes On

Fleet Ambition

Cruising

Used Vehicle Market

Cruising

Top recommendations

Ensure ZEV BiK rates stay as low as possible for as long as possible

Reform the Advisory Electricity Rate (AER) for cars to more accurately track energy prices and support those who charge at home or via the public network

Introduce 100% writing down allowances for green assets, including leased and rented vehicles

Key Performance Indicators: Demand

Indicator & Score	*Metric*	*Rationale*
Business Fleet ZEV Uptake *(Cruising)*	• **Car leasing:** 17% of business leasing and 55% of salary sacrifice cars are ZEVs (August 2022)[4] • **Car rental:** 1.5% of rental cars are ZEVs (August 2022)[5] • **Vans:** 1.8% of leased vans and 0.5% of rental vans are ZEV (August 2022)[6]	• **Car leasing:** driven by benefit-in-kind tax rates corporate leasing has seen an explosion of ZEV uptake, BVRLA data shows 32% of new leased cars in Q1 2022 were BEV • **Car rental:** rental fleets have been particularly starved for supply in 2022, reducing their ability to transition. Until infrastructure and supply are abundant the rental sector will see demand suppressed • **Vans:** leased and rental vans lag significantly behind cars. Restricted model choice, supply issues and lack of appropriate infrastructure have curbed demand
Retail Leasing & Rental Uptake *(Cruising)*	• **Personal car leasing:** 7% of the personal lease market are ZEVs (August 2022)[7] • **Car club:** 12% of car club cars are ZEVs (August 2022)[8] • **Subscription:** The EV car subscription market is estimated to have more than doubled from 3,000 to 8,000 vehicles	• **Personal car leasing:** number of ZEV personal leases have more than doubled in one year (they were 3% in 2021) • **Car club:** these fleets are leading the transition for rental firms driven by consumer demand • **Subscription:** a rising star of ZEV access, the subscription model has continued to see phenomenal growth across 2022
Total Cost of Ownership *(Brakes on)*	• **Car total cost of ownership (TCO) differential:** BEV car TCO cost advantage over ICE has decreased by 5 percentage points during 2022[9] • **Stakeholder feedback** **Missing metrics:** • HGV and van total cost of ownership differential	• **Car TCO:** 2022 has seen severe cost inflation both for the upfront cost of BEVs and energy prices. These have eroded BEV TCO benefits. In January 2022 BEV cars were 8% cheaper than diesel and 9% cheaper than petrol on a TCO basis, by September 2022 this advantage has shrunk to just 3% against both. The BEV vs ICE TCO comparison will continue to worsen for BEVs as the energy costs increase and fuel prices decrease • **Stakeholder feedback van and HGV TCO:** Van and HGV TCO evaluations between ZEV and ICE are reliant on the specific use cases for the vehicles, making market-wide comparisons difficult. In some use cases TCO parity is being reached or is close to it, while in others a large gap remains. As with cars increased energy costs and stabilising fuel prices will undermine these evaluations
Fleet Ambition *(Cruising)*	• **Fleet commitments:** UK fleets have committed to shifting 636,715 vehicles to zero emission by 2030[3]	• **Fleet commitment:** UK fleets are second globally for the scale of their commitments, above the UK's position as the fifth largest EV market
Used Vehicle Market *(Cruising)*	• **Market health:** BEVs have seen an average market health score of +28% for the first 8 months of 2022 compared to the first 8 months of 2021, according to AutoTrader. In comparison, the full market is -14%[10] • **Stakeholder feedback** **Missing metrics:** • Number of used ZEVs expected to enter the market in the next three years	• **Market health:** BEVs have continued to perform well in the used market in 2022 with demand consistently outstripping supply. This is fuelled by a massive increase in consumer interest levels in BEVs. There was a 51% increase in the number of consumers looking at used BEVs in Q2 2022 compared to Q2 2021[11] • **Stakeholder feedback – number of ZEVs expected:** current demand and supply trends are for a very small market. Stakeholders flagged a need to understand market capacity to absorb vehicles expected in the next years

CORNWALL INSIGHT

CREATING CLARITY

"Long-term certainty over benefit-in-kind tax rates is needed to give more people the confidence to change from petrol or diesel vehicles."

- Paul Hyne, Lloyds Banking Group

"We need greater foresight on benefit-in-kind rates. For salary sacrifice, people are taking 3-4 year leases and they don't know what they're going to pay – it's a problem."

- Natalia Peralta Silverstone, Octopus Electric Vehicles

"It is important to maintain the benefit-in-kind advantages that EVs have. Many people have jumped into an EV who otherwise wouldn't have done so."

- Rui Ferreira, Onto

"Benefit-in-kind incentives have been a massive driver for people to get into EVs."

- Ashley Tate, Mina

BVRLA

ZEV uptake: Role of BiK

Supportive benefit-in-kind (BiK) rates for electric vehicles were universally highlighted as driving demand for vehicles and facilitating drivers to make the switch to EVs.

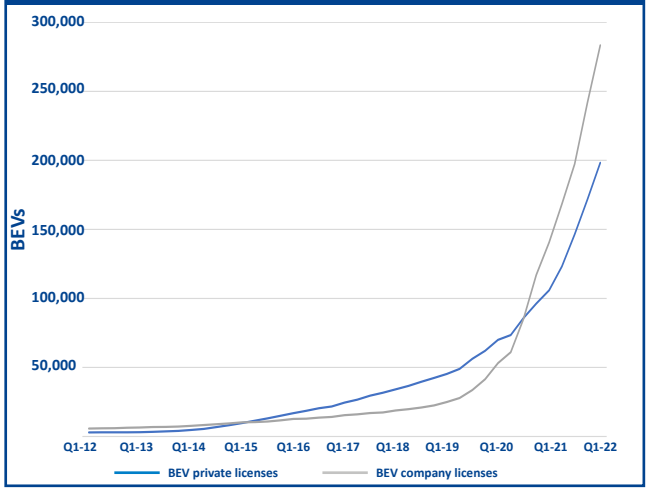
Interviewees advocated increased visibility of BiK rates beyond the current 2024/25 cut off point, and the need for gradual change if there is to be any increase for ZEVs.

Based on BVRLA data, Q1 2022 saw 84% of salary sacrifice new fleet additions and 43% of company car new fleet additions comprised of ZEVs, compared with 16% of all new car registrations in June 2022. Respondents also highlighted the positive impact that BiK has had on the democratisation of ZEV access with BVRLA data showing that over 60% of salary sacrifice users are basic rate taxpayers.

This positive impact of BiK is seen in the huge proportional increase of ZEVs on BVRLA member fleets. Business car leasing has seen one of the biggest increases in the proportion of ZEVs, rising from 8% of the fleet in 2022 to 17% in 2021.

Salary sacrifice has also recorded a large increase in the proportion of ZEV cars, rising from 22% to 55%.

Figure 5 - Cumulative licensed BEVs by company and private ownership, DfT



ZEV uptake: Beyond BiK

Strong demand in business rental and leasing has benefited from increasing competitive pressure to deliver ZEV fleets. Fleet managers that may have deferred their transition to 2025 or the next

cycle of change are now bringing this forward as their competitors make announcements about sustainability and ESG commitments. The rise in uptake from companies with large fleets also gives the wider sector confidence in the technology and its operational performance, particularly for heavier ZEVs.

Consumer rental has seen increased interest in ZEVs, with more individuals looking for a flexible and affordable entry point. For car club members, ZEVs have increased from 7% of the vehicle parc in 2021 to 12% in 2022. Over the last three years, a consumer ZEV subscription respondent reported an increase in its fleet from circa 150 vehicles to more than 7,000 in 2022. For car clubs, an interviewee highlighted that rising demand means almost all new vehicles being added are ZEVs.

Vans continue to lag cars across leasing and rental. With very limited model ranges for e-vans and infrastructure not designed to support them, their firms have not moved as quickly. With new mass market models entering the market demand could rapidly increase. The refocussing of fiscal support through the extended Plug-in Van Grant has been vital to continue to nurture green shoots of demand.

Zero emission HGVs remain far behind the delivery timescales for cars and vans. As a newer technology, uptake is expected to focus on early adopters while confidence builds. This will likely include those businesses that have electrified part of their existing fleet (vans, cars), have specialist use cases and/or have strong ESG commitments. The ICE HGV phase out was cautiously welcomed by the sector, but fiscal support, such as the Plug-in Truck Grant will need to continue or be deepened, such as opening up 100% first year allowances to leasing and rental, to achieve it.

Total Cost of Ownership

Almost all stakeholders highlighted the important role played by financial incentives in achieving comparable whole life costs between ZEVs and ICE vehicles. In June 2022, the Plug-in Car Grant was removed for electric cars, with funding redirected to other vehicle types (including vans and trucks) and the public charging network. Industry views on the car grant removal were mixed. Whilst a minority felt the step sent a negative message about commitments to ZEVs, the majority of commenters suggested the grant had been removed ‘at the right time’, having boosted momentum to a point where it was no longer needed. All welcomed the extension of support for the heavier vehicle segments. Interviewees highlighted that the grant would need to remain in place for e-vans until mass market options can serve all use cases at reasonable price points.

For some fleets, higher capital costs for ZEVs over ICE comparator vehicles continue to hold back the transition, with Autotrader reporting that outright price parity won’t be achieved for cars until the end of 2024, provided key tax incentives aren’t changed[12]. However, there is an increasing level of data demonstrating the cost benefits over the life of a vehicle. Transport and Environment Total Cost of Ownership Modelling in 2022 found that electric vans “are already cheaper to own than diesel in the UK”, for both light and heavy models, for all average users[13] and Leaseplan 2021 Car Cost Index[14] found that “EVs in the premium mid-size” and compact car segments are “cost competitive compared to ICEs” in the UK. Combined with the increased awareness of the whole life cost case in many use cases, demand has continued to rise, even for heavier ZEVs.

This strong TCO picture has been weakened over 2022 due to inflationary pressure on the cost of vehicles and a 160% increase in the wholesale cost of electricity in the year up to August 2022[15]. As energy prices rise, the whole life costs for BEVs increase. Up until now fuel price increases (pushing up ICE whole life costs) have balanced these but as energy prices continue to spike the BEV position will worsen. Drivers have already reported shortfalls between the price they pay for electricity and their reimbursement, with some reportedly falling into debt. Consumer rental and leasing arrangements offering an all-inclusive price have seen pressure on margins, and the ability to maintain an appealing price to consumers.

These challenges will drastically worsen without intervention, as prices continue to rise into winter. Even with government support, domestic bills will increase to £2,500 a year in October and business will continue to see stark rises.

In the face of cost headwinds, interviewees highlighted that higher residual values would support firms' ability to fund these vehicles and create compelling offerings. Higher demand in the used vehicle market and improved battery health information were raised as key challenges in maintaining residual values across both cars and vans. Strong residual values were viewed as a greater challenge for e-vans. The relatively early generational stage for these vehicles and the potentially greater reliance on rapid chargepoints were identified as causing heightened uncertainty in battery health.

Beyond vehicle and running costs, business needs and charging behaviours play an important role in assessing the whole life costs of ZEVs. Although these issues were raised for all vehicle types, they were most often highlighted when assessing the costs of operating e-vans. For these vehicles the opportunity costs of charging are often not reflected in upfront cost calculations. This is most pertinent for vans that do not have ready access to out-of-hours charging facilities, whether at a business depot or driver's home. In these use cases, which will become increasingly common, the need for dedicated travel to public charging infrastructure, potential time spent queuing, and actual charging time, all have the potential to represent a cost to the firm.

HGVs continue to lag behind cars and vans with vehicles, where available, far more expensive than their ICE counterparts. However, in some use cases there are now reports that whole life costs for the duration of a lease (six to eight years) are becoming comparable when taking account of all costs (insurance, charging infrastructure, maintenance etc).

Figure 6 - BVRLA car fuel choices for new fleet additions, Q1 2022[19]

Fleet Ambition

There is a significant level of ambition across the sector, demonstrated through a rising number of commitments to decarbonise fleets. The UK has the second largest EV100 corporate fleet commitment (636,715)[16]. Through its Plug-in Pledge the BVRLA[17] has committed to the registration of 400,000 battery electric cars and vans each year by 2025, across the vehicle rental, leasing and fleet industry. This means it will be responsible for 80% of ZEV sales in the UK, and the industry will own and operate 75% of battery electric vehicles on UK roads.

These commitments are translating in purchasing decisions, BEVs accounted for 32% of new additions to the car leasing fleet in Q1 2022 (BVRLA, see Figure 6 - above), demonstrating a high level of commitment. Salary sacrifice recorded the highest proportion of of BEV fleet additions at 84%, with business contract hire second at 43%.

Used Vehicle Market

Rental and leasing vehicles typically provide a steady flow to the used vehicle market, creating a more affordable entry point to prospective second-hand ZEV buyers. Demand from these users has been growing; Autotrader reports that the used EV market has seen sudden spikes in interest over the last year due to rising fuel prices, and that searches for used ZEVs have increased, accounting for 5% of the searches for used cars (sub five years old), up from 2.5% a year ago[18]. However, the supply constraints of the last year have resulted in a reduction in the number of vehicles available to backfill those moving off fleet into the used vehicle market, leading to fleets holding onto their vehicles for longer, creating unmet demand in the used market. This slows down the transition to ZEVs across the parc. With rising numbers of consumers searching for used EVs, vehicle availability and prices will be essential in maintaining these levels of demand.

BVRLA

"We have committed to providing £8bn of financing for electric vehicles and plug-in hybrids by 2024 – as we play our role in helping the transport sector transition to Net Zero."

- Paul Hyne, Lloyds Banking Group

"Problems with supply have made it harder to replace vehicles so operators are holding on to them for longer. The number of vehicles going into the second-hand market has been greatly reduced."

- Laura Holloway, Enterprise

"The rental industry feeds the used market. It plays a critical role in getting the latest technology into the car parc."

- Tim Bailey, Redde Northgate

CORNWALL INSIGHT
CREATING CLARITY

BVRLA

Recommendations: Demand

Key recommendations

Provide more foresight on future ZEV BiK rates (at least two more years of foresight), and ensure they stay as low as possible for as long as possible

Reform the Advisory Electricity Rate (AER) for cars to more accurately track energy prices and support those who charge at home or via the public network

Introduce 100% writing down allowances for green assets, including leased and rented vehicles

Other asks

- Work with industry to assess the health of the used ZEV market and make targeted interventions if required, especially access to battery health information
- Reform BiK and cut VAT to encourage greater uptake of shared mobility options
- Provide clarity on road pricing by developing a national plan for fuel duty replacement and how ZEVs will be taxed for their road use
- Give all public sector employees access to salary sacrifice car schemes
- Reform national minimum wage rules for those who can afford salary sacrifice ZEVs and are currently excluded
- Publish a zero emission HGV roadmap to give clarity on which drivetrains are likely to meet users' needs

CORNWALL INSIGHT

CREATING CLARITY

BVRLA

Infrastructure

2

CORNWALL INSIGHT
CREATING CLARITY

BVRLA

Infrastructure

Thousands of new public chargepoints have been added to the UK network over the last twelve months, but there is growing fleet industry concern about whether they are arriving in sufficient numbers or are fit for purpose and accessible. Local Authorities (LAs) must step up to ensure that neighbourhood infrastructure meets the needs of all car and commercial vehicle users.

Rating

Brakes On

Accelerating in 2021

KPIs

The key performance indicators used to track infrastructure rollout

Public Charging Availability

Accelerating

Public Chargepoint Data Availablity

Brakes On

Local Authority Engagement

Brakes On

Fleet Suitability

Parked

Top recommendations

Local authorities (LAs) must develop EV infrastructure strategies which acknowledge fleet users and cater for all users and vehicle types

Equalise VAT rates between home and public charging

Work with local authorities and the fleet industry to develop van-friendly chargepoint standards

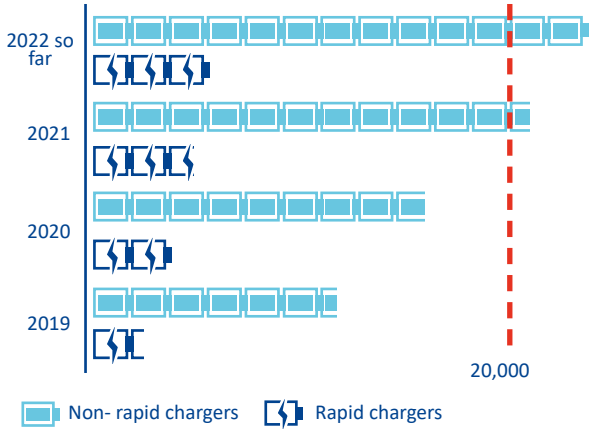
Key Performance Indicators: Infrastructure

Indicator & Score	*Metric*	*Rationale*
Public Charging Availability *(Accelerating)*	• **UK wide public chargepoint numbers:** 33,996 devices and 6,236 were rapid or ultra-rapid chargers (August 2022)[22] • **UK public chargepoint growth rate:** Rapid devices risen 21% at August 2022, compared to the end of 2021[23] • **Distribution of UK public chargingpoints:** UK average of 48 devices per 100,000 of the population with a high of 116 per 100,000 in London and a low of 17 per 100,000 in Northern Ireland[24]	• **Chargepoint numbers:** despite continued growth, 50% of fleets who have not taken on BEVs cite infrastructure availability as the reason why. The UK lags the EU where 44% see it as the prime barrier[20] • **Chargepoint growth:** chargepoint numbers are growing rapidly. However, so are BEV numbers. The latest DfT figures show an over 95% increase in the BEV parc between end-March 2021 and end-March 2022 (from 249,209 to 486,521)[21]. There are concerns that chargepoint growth is not fast enough to keep pace with demand • **Distribution of chargepoints:** the uneven distribution of chargepoints across the UK means that there are still many "blackspots" in the network
Public Chargepoint Data Availability *(Brakes on)*	• **Stakeholder feedback** **Missing Metrics:** • **Percentage of network with open live usage data** • **Percentage of network with open van accessibility data**	• **Stakeholder feedback - live usage data:** chargepoint data provision is improving, but fleets still regularly see downtime impacts due to a lack of access to accurate live data on whether chargepoints are in use or broken • **Stakeholder feedback – van accessibility:** there has been almost no improvement for access to data on the van suitability of chargepoints
Local Authority Engagement *(Brakes on)*	• **Stakeholder feedback** **Missing metrics:** • **Percentage of LAs with fleet engagement programs** • **Percentage of LAs with fleet friendly EV strategies** • **Percentage of LAs with appointed specialist/team focussed on charging infrastructure**	• **Stakeholder feedback – LA engagement with fleet:** currently very few LAs are actively engaging with fleets to understand their infrastructure requirements, but there are notable exceptions engaging proactively • **Stakeholder feedback – LA EV strategies:** currently very few LAs have EV strategies that will meet fleet needs, but OZEV resources designed to help LAs develop these strategies highlight a need to think of fleets • **Stakeholder feedback – LA EV strategies:** currently very few LAs have the skills on staff to manage the rollout of EV infrastructure in a way that works for fleets, OZEV's LEVI funds are expected to assist this but have not yet had an impact
Fleet Suitability of Public and Private Charging Infrastructure Rollout *(Parked)*	• **Reliability**: 8% of devices out of service at June 2022[25] • **Stakeholder feedback** **Missing metrics:** • **Average grid connection costs for depot/site-based fleets** • **Average grid connection times for sites/depots** • **Percentage of public chargepoints on network e-van accessible** • **Percentage of e-van accessible public chargepoints pre-bookable** • **Percentage of public chargepoint networks covered by e-fuel cards**	• **Reliability**: fleets need reliability levels near 99%, current levels impact operations • **Stakeholder feedback - grid connections times:** The current norm of waits of up to 18 months for network connections are unacceptable for fleets • **Stakeholder feedback - grid connections times:** high costs are holding back depot/site based fleets • **Stakeholder feedback - van accessibility:** vans cannot access many chargepoints limiting their ability to rely on public charging, there has not been any systematic action to improve this • **Stakeholder feedback - booking:** no progress highlighted regarding ability to book where needed for "workhorse" vehicles, unneeded downtime persists • **Stakeholder feedback – e-fuel cards:** fleets do not yet have the ability to use one card across the public network

Public Charging Availability

Over 600 new chargepoints are being added to the UK's roads each month, of which over 100 are rapid. Whilst this growth is welcome, there are still gaps in provision that are not being met and fleet-specific barriers when it comes to charging.

Figure 7 -Electric vehicle charging device statistics



Source: Cornwall Insight, DfT

There have been vast improvements to chargepoint provision over the past year. 17% of people now live within five minutes of a chargepoint compared to 12% in 2020[26], so there have been noticeable improvements. However, there are inconsistencies across localities.

The EV Infrastructure Strategy launched by OZEV in March 2022 was a key point in trying to address these challenges. The strategy set out a bold vision for the UK charging network. While they were mentioned, fleets were not the focus of the EV Infrastructure Strategy and more work is needed to ensure the UK's charging vision works for them.

An example of collaboration is the Electric Vehicle Energy Taskforce (EVET). This group brought all relevant stakeholders together and set out a vision for a minimum viable charging network, recognising fleet needs. Collaborative work such as that performed by EVET is critical for the charging sector to supply the right changepoints in the right numbers at the right locations.

For fleets operating outside large urban areas charging "blackspots" can create operational issues, particularly where fleets have limited downtime, need to top up in the day or drivers do not have home charging. All stakeholders need to work more closely with fleets to understand their needs and coordinate with them. Only by working with CPOs, DNOs and LAs can fleets overcome their challenges in provision. OZEV's guidance to LAs encouraging fleet engagement is a key first step in facilitating this.

One clearly identified blackspot is at airports where rental operators are struggling to meet the infrastructure needs of a growing ZEV fleet. This is a complex area that will need to be explored further and where government support is likely to be necessary.

"With a lot of the focus on rapid charging and infrastructure on the motorways and A-roads, it is clear that fleets in other areas will need support and the Government and CPOs/ businesses must take action now – this is something we are already doing."

- Simon Pickett, SSE Energy Solutions

CORNWALL INSIGHT

CREATING CLARITY

"Looking at electric vehicles, you don't necessarily want to charge them up overnight to their full capacity. You want to ascertain how many kilowatt hours you need to put in that vehicle to be able to go about its business the next day."

- Colin Ferguson, The Algorithm People

"There is a fear of reliance on the public charging network. It's still not developed, consistent or cost effective enough. It means that businesses are still needing to provide other options to their drivers alongside BEVs."

- Ian Hughes, Zenith

BVRLA

Public Chargepoint Data Availability

There has been a rise in available charging maps, apps and telematics for route planning. Looking ahead, there is a need for additional and timely information on the availability of chargepoints in use and those not working. While drivers could often find chargers online to travel to or to visit enroute, they did not know if these would be out of service or in use when they arrived, potentially increasing downtime. The physical challenges for vans is compounded by a lack of available information letting drivers know if the chargepoint can fit a van.

OZEV's Open Data Project is working to resolve these challenges and was welcomed by fleet stakeholders. If this work can open up access to van charging specific information shortly it will be extremely beneficial to fleets.

For those committing to the transition, access to chargepoint development information is needed to help fleets identify where charging locations would be in the future. While users have visibility of current locations, understanding what could be accessed in the future would help firms make the shift. Fleets view LAs as having a key role in collecting and distributing this information.

Local Authority Engagement

Engagement with LAs is vital to ensure the rollout of fleet focussed charging infrastructure. Zap-Map[27] scored local authorities outside of London on the percentage of households within a five-minute walk of a public charger. It found that the top five local authorities were Brighton & Hove, Portsmouth, Watford, Coventry and East Lothain. These LAs can provide on-street parking to those that do not have access to home charging, which can also support different fleet use cases. Developing viable and valuable charging infrastructure strategies is a key step for LAs to support ZEV uptake in their areas. These strategies need to include fleets in their thinking.

LAs and fleets have had minimal engagement to date, with some exceptions specifically among sub-national transport bodies. This will need to improve as local EV infrastructure strategies develop. Fleets are early adopters of ZEVs and hold valuable knowledge and data that can

be utilised to support LAs. If LAs develop EV infrastructure strategies with fleets this will ensure there is a robust charging network that can cater for all users and vehicle types.

There are clear challenges that LAs face in establishing an EV strategy and these are feeding through to their engagement with fleets. In this critical area, there is currently a lack of data on how many and which LAs have been able to cater to the need of fleets in their locality.

To try to support LAs who are on this journey we have created a fleet checklist which LAs can use to deliver impactful EV strategies for fleets. To support LAs and those engaging with them. This checklist is based on suggestions from stakeholders on what steps LAs could take to ensure that they put in place the right foundations to be able to engage with fleets going forward.

OZEV is poised to make great progress in addressing these challenges. Some interviewees were optimistic that the LEVI funding provisions specifically aimed at hiring EV strategy and delivery personnel and improving internal capabilities at local authorities is a step in the right direction. If this funding enables local authorities to engage with local fleets and to adopt the key areas raised in the checklist, then LAs are more likely to develop robust strategies that work for all who operate within their jurisdiction. We hope that the nine LAs who won a share of the £10 million LEVI pilot funding will all have an appropriate level of focus on fleets in their work.

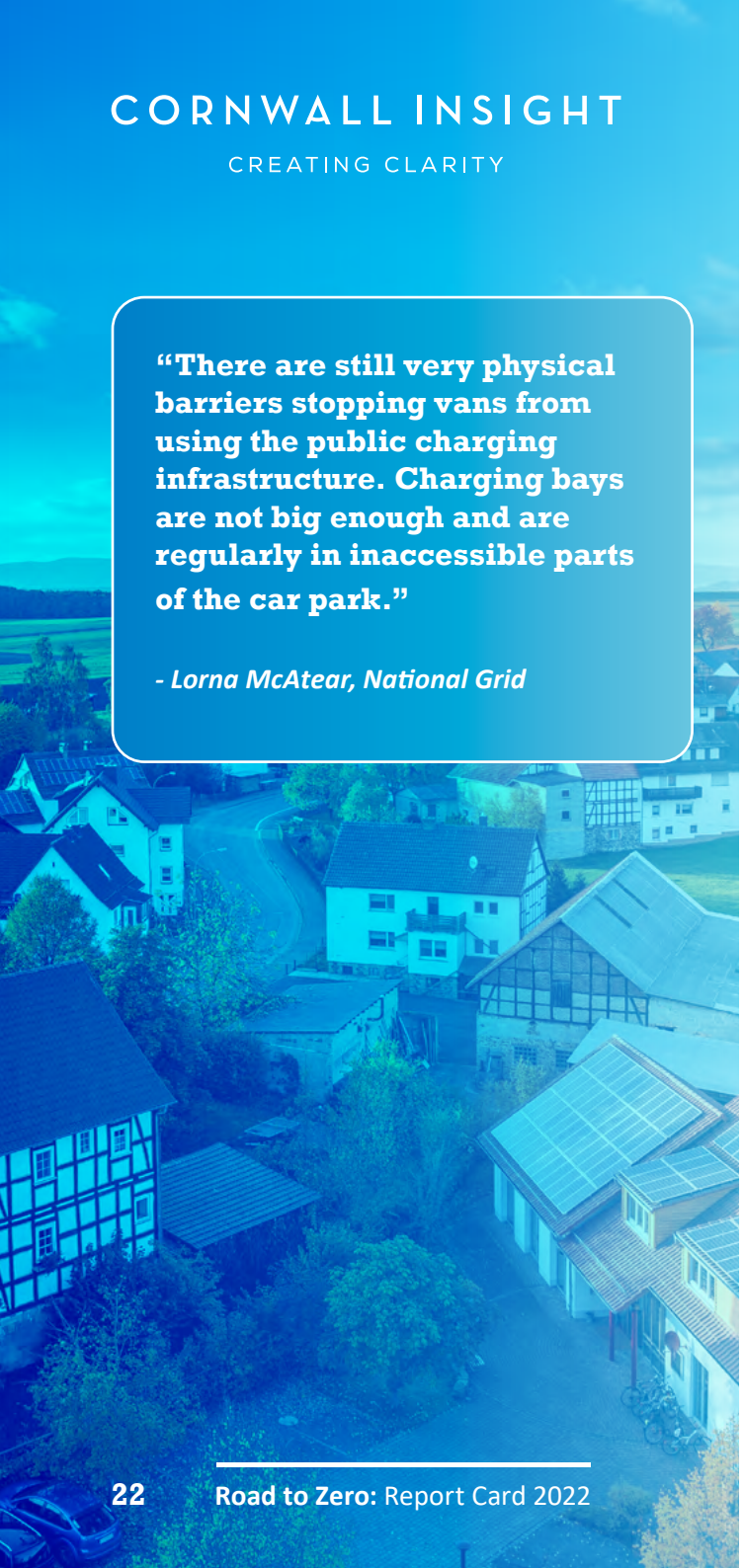
Checklist for Local Authorities

Local authorities can support fleet decarbonisation and build robust charging networks if they:

- ✓ Take part in peer-to-peer communication with other local authorities and fleets by establishing relationships as part of an EV strategy
- ✓ Provide access to standardised procurement frameworks to make the chargepoint procurement process easier
- ✓ Employ an appointed specialist or team to deal with EV strategy and planning that can be a point of contact to the fleet sector
- ✓ Adopt standardised progress tracking of how accessible chargepoints are to fleets and continually highlight areas for development
- ✓ Have a local energy and/or transport strategy to support EV infrastructure uptake

CORNWALL INSIGHT

CREATING CLARITY



"There are still very physical barriers stopping vans from using the public charging infrastructure. Charging bays are not big enough and are regularly in inaccessible parts of the car park."

- Lorna McAtear, National Grid

BVRLA

Fleet Suitability

Overall, stakeholders found that charging infrastructure has mostly not been designed with fleets in mind. This is particularly acute in the van market, where respondents highlighted that the pace of rollout for van accessible charging infrastructure has been slow, and has not tangibly increased since last year. Principal challenges were identified around the physical accessibility of chargepoints – for example where the parking bay was too small to accommodate a van or the chargepoint was installed in an inaccessible part of the car park.

Reliability data from Zap-Map provides a snapshot from June 2022, showing that 8% of all chargepoints were out of service. These numbers improve as more maintenance services are available and chargepoint technology improves. This is shown by the higher percentage of issues reported for chargepoints installed before 2021 (12% vs 4% for those installed after 2021). The reliability standards the government is looking to introduce are welcome and will continue to support uptake by minimising driver downtime.

Some fleets may benefit from a chargepoint booking system for "priority access" or the ability to schedule public charging in specific locations. This would reduce uncertainty and the downtime associated with charging. For chargepoint providers, this could also support utilisation predictability and levels. Creative solutions will be needed to create chargepoint networks that are affordable, accessible and viable for fleet users. Some stakeholders flagged suggestions such as solar canopies and onsite battery storage to reduce energy costs.

Vans may also have a limited window for charging to reduce downtime, and accessibility during this time can be difficult. There is an appetite, but not yet an avenue, for greater collaboration between firms to create shared access charging infrastructure that can be used by multiple fleets with different operational patterns.

This year, most stakeholders highlighted the variation in charging prices on the public network. Even fleets that sought to limit downtime by utilising the nearest available charger had begun to change operations to avoid certain chargepoints where costs were viewed to be too high. Public network costs are

also increased by a VAT differential with these chargepoints facing 20% VAT on the energy they provide while home charging is taxed at 5%.

Fleet stakeholders highlighted that they still face barriers around payment solutions for the chargepoint networks. There are not yet universal payment solutions that would enable smoother fleet operations and reduce complex reimbursement requirements. OZEV has signalled that they will act to enforce roaming if this is not resolved, if no market-wide solution emerges urgently fleets would welcome action.

Significant challenges are also faced outside of the public charging space. Due to the costs and challenges of electrifying depots, more fleets are favouring using the public network, putting it under additional pressure. It has been taking fleets up to 18 months to get connections established which has prevented them from electrifying sooner. These time constraints have been compounded by the high and volatile cost of securing network connections, with costs upwards of £1mn reported by prospective depot charging developments.

BVRLA

"There is huge potential for blue-sky thinking that will get the most out of any charging network."

- Rob Gwynn, Volta Trucks

"Attitudes and ambitions have grown significantly in the last 18 months for vans. Now more than ever we need to accelerate the delivery of appropriate infrastructure also for vans, which often require larger bays and rapid charging close to their daily routes"

- Elisa Fenzi, SSE Energy Solutions

Recommendations: Infrastructure

Key recommendations

Local authorities (LAs) must develop EV infrastructure strategies which acknowledge fleet users and cater for all users and vehicle types	**Equalise VAT rates between home and public charging**	**Work with local authorities and the fleet industry to develop van-friendly chargepoint standards**

Other asks

- Conduct a regular review on whether private Chargepoint Operators (CPOs) are filling gaps in public charging provision
- Ensure that public funding only goes to chargepoints that are secure and accessible for a variety of vehicle types
- Work with LAs to develop a peer learning and support network to improve local provision and outcomes
- Review airport decarbonisation strategies and take targeted action to overcome barriers such as grid capacity
- Ensure that open chargepoint data provision reflects fleet needs by including information on van accessibility, ease of payment/roaming and booking ability
- LAs and Distributed Network Operators (DNOs) must work with the private sector to explore ways of mutualising the cost and reducing delays of grid connections

CORNWALL INSIGHT

CREATING CLARITY

BVRLA

Supply

3

CORNWALL INSIGHT
CREATING CLARITY

BVRLA

Supply

This year has seen a major improvement in the choice and performance of ZEVs on sale, with reassuring signs that the UK automotive market is investing in electrified skills and battery production and recycling. Ongoing vehicle and parts shortages highlight the need to develop a more resilient supply chain.

Rating

Accelerating

Accelerating in 2021

KPIs

The key performance indicators used to track the supply of ZEVs

ZEV Product Choice
Cruising

Aftermarket Services
Accelerating

ZEV Production, Reuse & Recycling
Accelerating

ZEV Product Delivery
Parked

Top recommendations

Work with fleets, manufacturers and other parts of the automotive industry to create a resilience plan that ensures long-term security in vehicle and parts supplies

Introduce an annual evaluation process for the ZEV sales mandate, consulting with vehicle manufacturers and end-users

Extend the plug-in grant eligibility window beyond 12 months until the supply constraint issues end

Key Performance Indicators: Supply

Indicator & Score	*Metric*	*Rationale*
ZEV Product Choice *(Cruising)*	• **Number of models:** Over 70 models of ZEV are available, with circa 60[29] across cars and circa 15 vans[30]	• **Model choice:** has continued to improve in the last year, with 26 ZEV cars and 13 ZEV vans launched in 2022.[28] Some mass market e-vans have now come to market, but this segment needs more model choices. The HGV market remains in early stages, with further technology clarity required to improve product choice
Aftermarket Services *(Accelerating)*	• **Number of EV qualified technicians:** 15% qualified to work safely on EVs[33] • **ZEV repair times:** Average labour hours per job for a BEV car is 1.36 hours and ICE car 1.98 hours (September 2022)[34] • **ZEV repair costs:** Average parts components per job cost is £85 for a BEV car and £139 for an ICE car (September 2022)[35]	• **Technicians:** the number of EV qualified technicians has risen 10% on the start of 2021, and is well ahead of the total ZEV vehicle parc penetration (circa 1.2%[38]) • **ZEV repair:** interviewees noted challenges in securing parts and services needed for repairs but that BEVs were performing better than ICE vehicles when it came to labour hours needed or replacement parts required per job
ZEV Production, Reuse & Recycling *(Accelerating)*	• **UK battery annual production capacity:** Circa 2GWh[31] (August 2022) • **Proportion of UK automotive manufacturing focussed on ZEVs:** 8.25% in 2021[32] • **Stakeholder feedback** **Missing metric** • Proportion of UK waste batteries reused or recycled in the UK	• **UK battery production capacity:** the UK's current battery manufacturing capabilities are limited. However, there have been large commitments made by firms to increase this with nearly 45GWh planned.[36] This still falls short (by circa 65GWh) of forecast requirements • **UK ZEV production:** BEVs increased from 4.5% of total UK production to 8.25% between 2020 and 2021 • **Stakeholder feedback – reuse/recycling:** stakeholders flagged early signs of manufacturers working on reuse and recycling, for example, the Britishvolt Glencore joint venture[37]
ZEV Product Delivery *(Parked)*	• **Stakeholder feedback** **Missing metrics** • Vehicle lead time database across market segments	• **Stakeholder feedback – vehicle lead times:** interviewees reported wait times of up to 18 months for vehicles, causing severe operational challenges

ZEV Product Choice

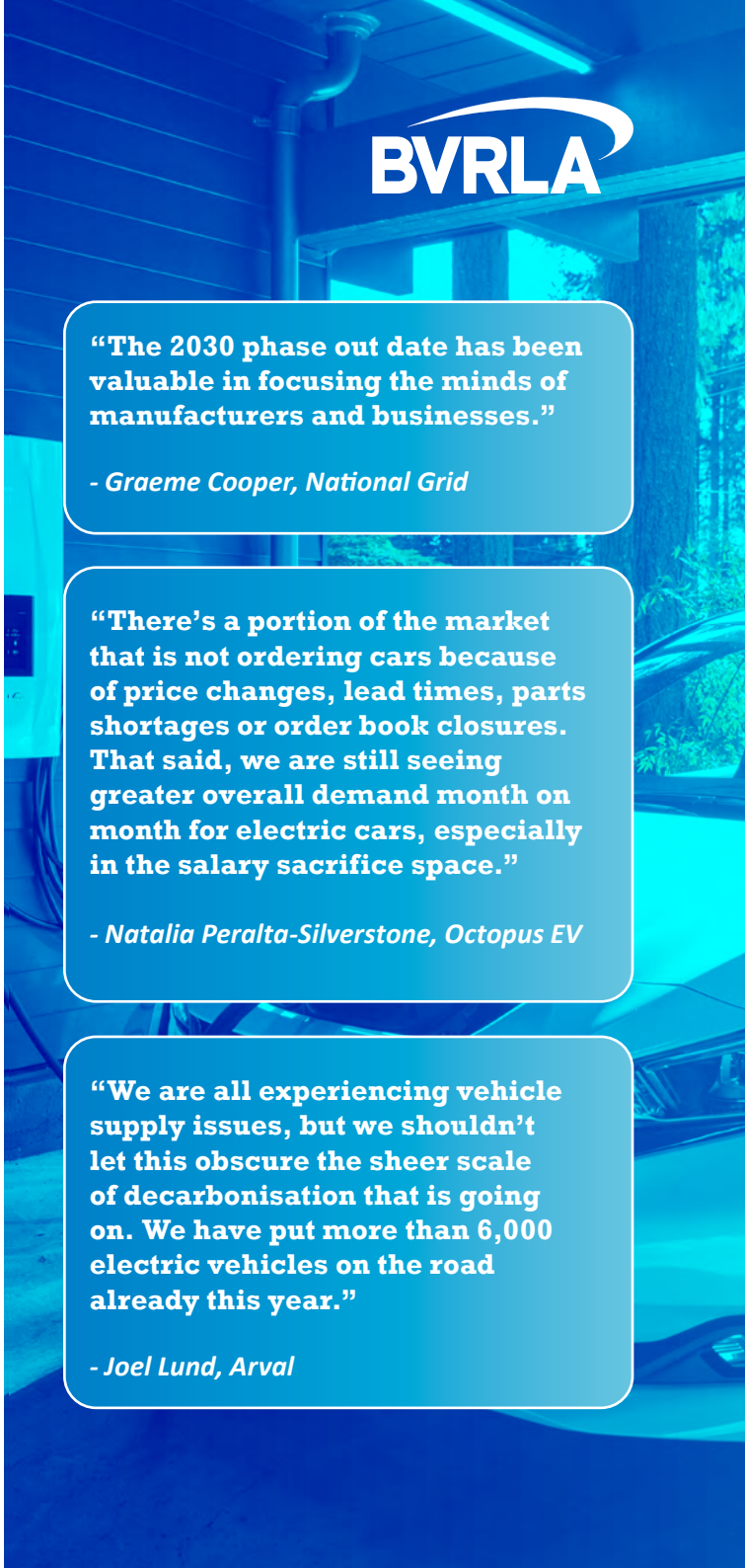
Despite the issues faced in getting hold of ordered product, the range of ZEV models has improved dramatically in the last 12 months according to stakeholders interviewed for this year's Report Card. Over 70 EV models are available across the car and LCV markets, with new launches from manufacturers across all vehicle segments.

The vast majority of new ZEV models entering the market are cars. The release of new car models over the last year has supported the continued growth in ZEV registrations. The SMMT reported 132,498 BEV car registrations in the year to August 2022, up 49% compared to the same period in 2021. The SMMT has attributed the significant growth of ZEVs compared to ICE vehicles to manufacturers prioritising ZEVs to sustain progress towards the decarbonisation of transport. Compared to last year, there has been a 50.6% increase in the number of BEV light commercial vehicle registrations to 9,809.

A better range of ZEVs has helped drive this growth in registrations as the UK market welcomes a more capable range of vehicles at more variable price points. Growth has been particularly strong in the fleet sector, where 200,000[39] new BEV cars have been registered in the last two years. The 2030 phase out date has been valuable in focussing the minds of manufacturers and businesses.

However, in the van market, fleets continue to highlight the narrow product range of ZEV vans as an acute problem for many use cases; particularly where there is a need for longer ranges, heavier loads, or towing. There are currently circa 15 models available in the ZEV LCV segment[40], compared to circa 60 on the car side[41]. This shortage of choice becomes more pronounced the heavier and more specialised the vehicle becomes, with use cases such as 4x4s and pick-ups having very limited or non-existent options.

The lack of product range in this segment has also had knock-on consequences for other vehicle segments and users. For example, the availability of wheelchair accessible ZEVs is directly linked to wider ZEV van model availability. Constraints in product variety and availability has limited deployment of wheelchair accessible ZEVs for drivers.



"With e-vans, the lighter the load demand and the shorter the range requirement, the easier it is to make EVs work. But with cars, reasons for not going electric are diminishing rapidly."

- Tim Bailey, Redde Northgate

"The coming years will see a relentless wave of new electric commercial vehicles. But there are still big gaps that need filling, particularly for drivers with high daily energy consumption or who cannot afford much charging downtime."

- Iain Brooks, Ford

This lack of a defined market for certain van segments has made manufacturers more cautious about channelling their limited battery supply to the sector. Batteries are instead reportedly being prioritised for BEV cars, where customer demand and regulatory incentives are strongest. This exacerbates the existing supply chain constraints on vehicle choice, delaying the positive growth that is building in the van market.

The emergence of new vehicle manufacturers in the market supported optimism that availability and choice will improve. Several interviewees noted that this has brought positive change to ZEV product choice. In both car and van sectors, firms noted increasing ranges of viable product emerging, not from traditional car brands but from newer Chinese and American players.

"Achieving zero tailpipe emissions in long distance heavy trucks is one of the greatest challenges. Trials of different technologies are starting, and efficiency and operating cost are likely to determine which predominates."

- Justin Laney, John Lewis Partnership

Aftermarket Services

The aftersales picture for ZEVs is generally positive for cars with BEVs outperforming ICE when it comes to labour hours needed (1.36 hours compared to ICE cars at 1.98 hours[42]) or the cost of replacement parts required per job (£85, versus £139 for an ICE car[43]).

The number of qualified technicians to work safely on EVs has risen 10 percentage points since the start of 2021 to reach 15% in 2022.[44] The number of qualified professionals is well ahead of the total ZEV vehicle parc penetration (circa 1.2%[45]). Initiatives like the Hybrid and Electric Vehicle Repair Alliance (HEVRA)[46] show a strong appetite to cater to EVs from not just the franchised repair network but also parts of the independent network.

However, interviewees highlighted concerns that wider skills and recruitment challenges in auto repair and maintenance could negatively impact the EV market in the longer term. The IMI predicts a 160,000 shortfall of workers in the UK automotive sector by 2031.[47]

For electric cars and vans, interviewees stressed the need to have visibility of a vehicle's battery health. This is critical for both BEV repairs and servicing and for improving confidence in the used vehicle market.

"We have seen huge growth in the electric market, but we need to ensure a just transition so people from all backgrounds have the choice to make the switch."

- Paul Hyne, Lloyds Banking Group

CORNWALL INSIGHT
CREATING CLARITY

"We need to transition existing automotive jobs into electronic powertrain manufacturing and battery production ones. This will benefit the UK supply chain as well as the wider economy."

- Lauren Pamma, GFI

BVRLA

ZEV Production, Reuse & Recycling

Positive steps have been taken over the last year to increase the UK's domestic battery production capacity. Since our 2021 report, Britishvolt confirmed government and private sector funding to develop its Blythe battery manufacturing site[48] and Envision AESC received planning permission for a second 9GWh-capacity gigafactory in Sunderland[49]. The Faraday Institute[50] also highlight plans for future sites at Coventry airport and domestic vehicle manufacturing plans from BMW, Ford, Stellantis, and JLR.

This positive momentum will need to be maintained. The circa 2GWh of current operational gigafactory capacity in the UK is currently set to rise to circa 57GWh in 2030, based on committed plants[51]. Despite this growth, this could still leave a significant production gap to the more than 100GWh per year demand for UK-produced batteries that the Faraday Institute expect to see by 2030. There is substantial uncertainty about the ability of the UK to bridge this production gap without sustained engagement and investment in this area. Capitalising on the positive early-stage momentum seen will be key to progressing this sector in the coming years.

The need to bridge the production gap is pressing, with interviewees across the supply chain highlighting that failure to do so could lead to supply shortages and product delays similar to those currently experienced. This is in addition to the missed opportunity for wider economic growth and resilience offered by transitioning existing automotive jobs into this valuable sector.

To minimise these risks, respondents stressed the need for improved resilience in the production supply chain, both overall and specifically concerning key parts such as batteries. Although the battery recycling sector is still in its early stages, ensuring that this market is included within resiliency planning was highlighted as an important step, both to develop this key sector and to deliver an integrated supply chain strategy from first to last use.

ZEV Product Delivery

Delays in receiving vehicles was raised by interviewees across the board as the principal challenge in vehicle supply at present, across both ZEV and ICE. There was deep frustration raised by interviewees with the 6-18 month lead times that currently exist for some ZEV product, with multiple resulting challenges highlighted, including:

- Delivery uncertainty and price fluctuations have made it harder to produce TCO arguments that can persuade customers who are anxious about making the leap to electric vehicles
- Challenges securing vehicles and honouring prices to customers amidst changing prices from vehicle manufacturers
- Stakeholders advised that delays in supply of most vehicles mean that users cannot always access their first or second choice model
- There are concerns that lead times will lead to customer Plug-in Grant applications timing out and customers walking away from deals
- Van fleets have been so desperate to obtain new electric vans that they have accepted vehicles that are missing windows, mirrors and other components due to production issues
- Manufacturers prioritising higher-margin retail markets and closing their order books to fleets

Delays have been faced by both ICEVs and ZEVs, somewhat mitigating the relative impact on the latter. The depth of delays and their impacts on the ZEV market have continued to be material and risk impeding long-term decarbonisation trajectories if they persist.

Fleet stakeholders interviewed for this report expect the supply of vehicles and parts to improve through 2023, but the ongoing energy crisis, war in Ukraine and their impacts on European manufacturing may undermine this. The shortening of vehicle delivery lead times and cost certainty will be key metrics for the health of this sector over the next year.

Interviewees also recognised the need to improve resilience to potential future supply chain issues, such as battery materials and products. Building resilience should be a focus for policymakers to limit the likelihood and severity of future product shortages delays and to protect the growing ZEV market.

The ZEV mandate proposed by DfT is a welcome step and represents an opportunity to safeguard the supply of ZEVs into the UK. However, BVRLA members retain concerns about market distortion impacts that may arise from the ZEV mandate. An evaluation mechanism is essential to assessing ZEV uptake and planned trajectories. It must also assess developments across the whole transport eco-system, including demand, infrastructure, and any wider market impacts.

"Currently access to vehicles is a challenge and whereas we expect this will go away in the not-too-distant future, right now we are still seeing very long delivery lead times, particularly for some vehicle types. This is inevitably impacting how quickly fleets and drivers can move into cleaner cars and vans."

- Ian Hughes, Zenith

CORNWALL INSIGHT
CREATING CLARITY

BVRLA

Recommendations: Supply

Key recommendations

Introduce an annual evaluation process for the ZEV sales mandate, consulting with vehicle manufacturers and end-users	**Extend the plug-in grant eligibility window beyond 12 months until current vehicle delivery delays end**	**Work with fleets, manufacturers and other parts of the automotive industry to create a resilience plan that ensures long term security in vehicle and parts supplies**

Other asks

- Policy development continues to acknowledge the differences between the car and van market
- Amend type approval regulations to ensure vehicles being supplied to the market have accessible battery health information
- Establish an 'HGV Decarbonisation Accelerator' combining end users, manufacturers and infrastructure providers, to facilitate the growth of a viable zero emission HGV market
- Significant R&D funding should be ringfenced for projects that will strengthen the model range, performance and affordability of vans
- Work more closely with fleets to create a strong market for second-hand and recycled batteries

CORNWALL INSIGHT
CREATING CLARITY

BVRLA

Appendix

Report approach and methodology

This section sets out the approach taken to this year's Report Card research and analysis. It covers the traffic light scoring adopted, the key performance indicators developed and the ratings against them.

4

CORNWALL INSIGHT

CREATING CLARITY

Developing Key Performance Indicators

The Demand, Infrastructure and Supply sections of this report have each been given a set of key performance indicators that evaluate the current status of decarbonisation efforts.

The aggregated position across the KPIs in each section is then considered and used to establish the overall rating for Demand, Infrastructure and Supply.

The purpose of the KPIs is to:

- Offer a lens to evaluate developments in the fleet decarbonisation space
- Support developing informative metrics that can be used by government and market actors to assess the state of the sector, evaluate market activity, and target interventions

Data is not yet available for all KPIs:

- For some metrics, clear and reported data is readily available to measure progress today. Where this is the case, we have highlighted the metrics used, the current market dynamics, and used this to inform the overall rating for the sector
- For other metrics, transparent data across the market is not currently available or is of limited breadth. In these instances, potential metrics have been highlighted, and stakeholder feedback used to inform the recommendations set out in each of the report cards

Overview of fleet sector decarbonisation key performance indicators

Key performance indicator	Description	Initial metrics used	Key missing metrics
	Demand		
Fleet Ambition	The scale of zero emission vehicle commitment being made by UK fleets	• ZEV commitments made by UK fleets	
Corporate Rental & Leasing ZEV Uptake	The level of ZEV vehicles deployed in the B2B rental and leasing market	• Percentage of ZEVs in market segment	
Consumer Rental & Retail Leasing ZEV Uptake	The level of ZEV vehicles deployed in the B2C rental and leasing market	• Percentage of ZEVs in market segment	
Total Cost of Ownership	The total cost of ownership for ZEVs, including capital, operating, and charging costs, on an absolute and relative-to-ICE basis	• Car total cost of ownership differential Stakeholder feedback	• HGV and van total cost of ownership differential
Used ZEV Market	Demand for second-hand ZEVs	• Market health score • Stakeholder feedback	• Number of used ZEVs expected to enter the market in the next three years

Overview of fleet sector decarbonisation key performance indicators

Key performance indicator	Description	Initial metrics used	Key missing metrics
		Infrastructure	
Public Charging Availability	The number of chargepoints that are available to fleet users	• UK wide public chargepoint numbers • UK wide public chargepoint growth rate • Distribution of UK public chargepoints	
Public Chargepoint Data Availability	The ability for fleet users to access and use key information such as price, occupied status, billing details and van useability for charging infrastructure	• Stakeholder feedback	• Percentage of network with open live usage data • Percentage of network with open van accessibility data
Local Authority Engagement	Are local authorities taking steps to support fleet charging needs?	• Stakeholder feedback	• Percentage of LAs with fleet engagement programs • Percentage of LAs with fleet friendly EV strategies • Percentage of LAs with appointed specialist/team focused on charging infrastructure
Fleet Suitability of Public and Private Charging Infrastructure Rollout	The ability of fleet users across all vehicle types to successfully rollout and use reliable and functioning private and public charging infrastructure	• Reliability percentage • Stakeholder feedback	• Average grid connection costs for depot/ sit-based fleets • Average grid connection times for sites/depots • Percentage of public chargepoints on network e-van accessible • Percentage of e-van accessible public chargepoints pre-bookable • Percentage of public chargepoint networks covered by e-fuel cards

Overview of fleet sector decarbonisation key performance indicators

Key performance indicator	Description	Initial metrics used	Key missing metrics
		Supply	
ZEV Product Choice	The number and variety of zero emission vehicles available to different types of fleet users that are suitable for their needs	• Number of available ZEV models	
ZEV Production, Reuse & Recycling	The domestic capacity for vehicle and component manufacture and assembly, including batteries	• UK battery annual production capacity • Proportion of UK automotive manufacturing focused on ZEVs • Stakeholder feedback	• Proportion of UK waste batteries reused or recycled in the UK
Aftermarket Services	The availability and cost of specific post-purchase services for ZEVs, including diagnostics and maintenance	• Number of EV qualified technicians • ZEV repair costs • ZEV repair times	
ZEV Product Delivery	The length of time taken to receive ZEVs after the point of purchase, lease, or other agreement	• Stakeholder feedback	• Vehicle lead time database across market segments

CORNWALL INSIGHT
CREATING CLARITY

BVRLA

Acknowledgements

The BVRLA and the project team would like to acknowledge and thank all contributors for providing their views to support this year's research.

Contributors to interviews			
Company	**Individual**	**Company**	**Individual**
Arval	Joel Lund	Mina	Ashley Tate
BP Pulse	Dan Riley & Alex Potts	National Grid	Graeme Cooper & Lorna McAtear
ChargePoint	Andrew Ford	Redde Northgate	Tim Bailey
Coventry City Council	Shamala Evans-Gadgil	Octopus Electric Vehicles	Natalia Peralta-Silverstone
Energy Saving Trust	Tim Anderson	Onto	Rui Ferreira
Enterprise	Laura Holloway	Paua	Niall Riddell
Ford	Iain Brooks	ProHire and ProGreen	Pat Skelly & Michelle Miles
Green Finance Institure	Lauren Pamma	SSE Energy Services	Elisa Fenzi and Simon Pickett
Hitachi Europe Ltd.	James Bracegirdle & Ben Kinrade	UKPN	Florentine Roy
John Lewis Partnership	Justin Laney	Volta Trucks	Rob Gwynn
The AA	Edmund King OBE	Zenith	Ian Hughes
		The Algorithm People	Colin Ferguson

Contributors did not set the scores or recommendations nor have sight of them and scores are set by Cornwall Insight and the BVRLA using the inputs gathered

CORNWALL INSIGHT
CREATING CLARITY

BVRLA

Acknowledgements

The BVRLA and the project team would like to acknowledge and thank all contributors for providing their views to support this year's research.

Additional contributing organisations

Association of Fleet Professioanls
ALD Automotive
Alltask
Auto Trader
BT Openreach
cap hpi
Caura
Cleevely EV
Cox Automotive
Dawsongroup vans Ltd
DriveSmart
The Environment Agency
Europcar Mobility Group
EVA England
Fleet Alliance
Fleet Assist
Fleet Operations
Future Motion Solutions Limited
Green Finance Institute
Kinto UK Limited
LeasePlan UK
Lex Autolease
Lloyds Banking Group
loveelectric
Momentum Dynamics
Motability Operations Ltd
Pendragon Vehicle
Management Rivus Group
SSE
Stellantis
Sunbelt Rentals
Tusker
Zap-Map
Zipcar

CORNWALL INSIGHT

CREATING CLARITY

About Cornwall Insight

Cornwall Insight is the pre-eminent provider of research, analysis, consulting and training to businesses and stakeholders engaged in the GB, Australian and Irish energy markets. Our independent experts focus on regulatory, policy, and commercial issues. The Cornwall Insight team leverages a powerful combination of quantitative analytical capability, qualitative and practical understanding of how the markets function, and a detailed appreciation of industry codes, procurement models and policy frameworks.

Cornwall Insight works closely with clients across official bodies (BEIS, Ofgem, LCCC), retailers/suppliers (new and established, household and business), vehicle manufacturers, charging infrastructure providers, metering companies, generation (renewables, conventional fossil fuels, flexible and peaking), storage and demand side, network companies (national and regional), sector investors (equity and debt), market intermediaries, and end customers.

Working across such a wide range of clients provides us with unrivalled insights and understanding of the links between different segments of the entire energy value chain, both today and in the future. We are able to rapidly track how changes in each segment will play out across the whole system, and the impacts they will have on different companies.

BVRLA

About BVRLA

Established in 1967, the BVRLA is the UK trade body for companies engaged in vehicle rental, leasing and fleet management.

BVRLA members are responsible for a combined fleet of nearly four million cars, vans and trucks on UK roads, accounting for 1-in-10 cars, 1-in-6 vans and 1-in-5 trucks. The vehicle rental and leasing industry supports over 465,000 jobs, adds £7.6bn in tax revenues and contributes £49bn to the UK economy each year.

On behalf of its 1,000 member organisations, the BVRLA works with governments, public sector agencies, industry associations and key business influencers across a wide range of road transport, environmental, taxation, technology and finance-related issues. BVRLA membership provides customers with the reassurance that the company they are dealing with adheres to the highest standards of professionalism and fairness.

The association achieves this by maintaining industry standards and regulatory compliance via its mandatory Codes of Conduct, inspection and governance programme and government-approved Alternative Dispute Resolution service. To support this work, the BVRLA promotes best practice through its extensive range of training, events and information-sharing activities.

Resources

Page 3

1 SMMT, https://media.smmt.co.uk/july-2022-new-car-regis tra tions/?utm_source=rss&utm_medium=rss&utm_campaign=ju ly-2022-new-car-registrations

Page 10

2 G-Fleet analysis for the BVRLA - August 2022

3 This covers a commitment to switch their fleets to EVs and/or install charging for staff and/or customers by 2030. This is for vehicles sub 7.5 tonnes. The Climate Group

4 BVRLA, Sustainability Table

5 Ibid

6 Ibid

7 Ibid

8 Ibid

9 TCO calculation performed using a basket of comparable ICE and BEV company cars, and home charging at actual cost. BVRLA Member Data - September 2022

10 Market health is the ratio of supply versus demand compared to the same period the year before. A positive market health indicates more favourable market conditions compared to the prior year. Data provid ed by Autotrader

11 Data provided by Autotrader

Page 12

12 Autotrader, https://www.autotraderroadto2030.co.uk/

13 Transport and Environment, https://www.transportenvironment. org/wp-content/uploads/2022/03/202203_vanTCO_nation alfichesUK-1.pdf

14 LeasePlan https://www.leaseplan.com/en-lu/blog/leasing/2021- car-cost-index/

Page 13

15 Cornwall Insight, Energy Market Bulletin

Page 14

16 BVRLA, https://www.bvrla.co.uk/resource/bvrla-leasing-outlook-re portjuly-2022.html

17 BVRLA, https://www.bvrla.co.uk/resource/2020-plug-in-pledge. html

18 Autotrader, https://www.autotraderroadto2030.co.uk/

Page 13

19 BVRLA, https://www.bvrla.co.uk/resource/bvrla-leasing-outlook-re portjuly-2022.html

Page 18

20 Arval, https://www.arval.co.uk/amo-insight

21 Department for Transport, https://www.gov.uk/government/statis tical-data-sets/vehicle-licensing-statistics-data-tables, VEH0141

22 Zap-Map, https://www.zap-map.com/statistics/

23 Ibid

24 Department for Transport, https://www.gov.uk/government/sta tistics/electric-vehicle-charging-device-statistics-july-2022/ electric-vehicle-charging-device-statistics-july-2022

25 Data provided by Zap-Map

Page 19

26 Zap-Map, https://www.zap-map.com/ev-drivers-off-street-parking-research/

Page 21

27 Zap-Map, https://www.zap-map.com/ev-drivers-off-street-parking-research/

Page 27

28 Solera cap hpi data and analysis
29 Autotrader, https://www.autotraderroadto2030.co.uk/
30 Committee on Climate Change, https://www.theccc.org.uk/wp-content/uploads/2022/06/Progress-in-reducing-emissions-2022-Report-to-Parliament.pdf
31 Faraday Institute, https://www.faraday.ac.uk/wp-content/uploads/2022/06/2040-Gigafactory-Report_2022_Final_spreads.pdf
32 SMMT, https://www.smmt.co.uk/wp-content/uploads/sites/2/SMMT-FACTSJuly-
33 Motor Industry, https://tide.theimi.org.uk/imi-ev-techsafe-qualifications-ramp-first-half-2022-hit-15-penetration-still-lag-behind-electric
34 Fleet Assist data over the last 12 months
35 Ibid
36 Faraday Institute, https://www.faraday.ac.uk/wp-content/uploads/2022/06/2040-Gigafactory-Report_2022_Final_spreads.pdf
37 Britishvolt, https://www.britishvolt.com/news/british volt-and-strategic-partnerglencore-strengthen-relationship-and-agree-to-build-battery-recyclingecosystem-in-the-uk/
38 Department for Transport, https://www.gov.uk/government/statistical-data-sets/vehicle-licensing-statistics-data-tables, VEH0141 and VEH0101

Page 28

39 Comparison of historic SMMT new registration data, https://media.smmt.co.uk/data/
40 Committee on Climate Change, https://www.theccc.org.uk/wp-content/uploads/2022/06/Progress-in-reducing-emissions-2022-Report-to-Parliament.pdf
41 Autotrader, https://www.autotraderroadto2030.co.uk/

Page 30

42 Fleet Assist data over the last 12 months
43 Ibid
44 Motor Industry, https://tide.theimi.org.uk/imi-ev-techsafe-qualifications-ramp-first-half-2022-hit-15-penetration-still-lag-behind-electric
45 Department for Transport, https://www.gov.uk/government/statistical-data-sets/vehicle-licensing-statistics-data-tables, VEH0141 and VEH0101
46 Hybrid and Electric Vehicle Repair Alliance, https://hevra.org.uk/
47 Institute for the Motor Industry, https://tide.theimi.org.uk/sites/default/files/2022-07/Automotive%20Sector%20Employment%202021-31_0.pdf

CORNWALL INSIGHT

CREATING CLARITY

Page 32

48 Britishvolt, https://www.britishvolt.com/news/britishvolt-powers-ahead-withplans-to- build-transformational-uk-battery-gigaplant-to-meet-ev-demand/

49 Envision, https://www.envision-aesc.com/en/newshtml

50 Faraday Institute, https://www.faraday.ac.uk/news-ev-battery-prod-2040-update-june2022/

51 Ibid

British Vehicle Rental & Leasing Association
Badminton Court
Church Street
Amersham
Buckinghamshire HP7 0DD

01494 434747
bvrla.co.uk

Produced in association with CORNWALL INSIGHT
CREATING CLARITY