



# Chinese

*Battery Electric Vehicle*

# Power

*An opportunity or a threat?*





# Executive Summary



*This Venson Automotive Solutions white paper explores the greatest disruptive force in global manufacturing: Chinese battery electric vehicle (BEV) power.*

According to the Society of Motor Manufacturers & Traders (SMMT), 314,687 new BEVs were registered in the UK in 2023, an increase of almost 50,000 on the previous year. However, their annual market share dipped very slightly from 16.6% in 2022 to 16.5% last year, leading to accusations of stalling progress.

The direction of travel seems clear though. We're a world away from the rather pitiful 1.4% of 2017, and the SMMT emphasises that this electrification has been **"driven entirely by fleet investment"**, propelled by **"compelling tax incentives"**.

SMMT Chief Executive, Mike Hawes, said: **"With vehicle supply challenges fading, the new car market is building back with the best year since the pandemic. Energised by fleet investment, particularly in the latest EVs, the challenge for 2024 is to deliver a green recovery."**

Within this battery electric revolution is a fascinating and far-reaching new megatrend: Chinese BEVs have achieved incredibly high penetration, described variously in the UK media as a "flood", "influx" and "invasion".

We call it Chinese BEV power, a twist on the nineteenth century British sea power. The bottom line, as highlighted by The Guardian in September 2023, is that China's share of the European electric car market had more than doubled in less than two years.

In Q4 2023, Shenzhen-based BYD sold more BEVs than any other manufacturer (526,000 worldwide), overtaking Tesla, which also hit record numbers (1.8m across the year), with many manufactured at its Shanghai Gigafactory.

What a turnaround in fortunes! It was only a few short years ago that Chinese VMs were derided for their copycat designs. An important moment was the 2019 Beijing court victory for Jaguar Land Rover (JLR) against Jiangling Motors, over a Range Rover Evoque parody which JLR challenged on grounds of copyright infringement and unfair competition.

Fast forward three years and the picture could hardly be more different. In October 2022, Auto Retail ran the eye-catching headline **"Chinese brands star at Paris Motor Show"**. In particular, it praised the Ora Funky Cat small family car, with Peter Vardy and Lookers confirmed as the first UK retailers, and BYD's Atto 3 compact SUV, with models soon to be available from Pendragon.

While both the SMMT and the Department for Business and Trade (DBT) are keen to foster relations, as illustrated by their recent joint trade mission, others are less enthusiastic about China's electric car sales triumphs.

Writing in The Telegraph, Professor Jim Saker, president of the Institute of the Motor Industry (IMI), asserted that Chinese BEVs pose a serious threat to national security, due to security vulnerabilities and spyware. **"A car manufacturer in Shanghai could stop 100,000 to 300,000 cars across Europe,"** he said. **"Virtually every country is trying to fight against an over reliance on China, except the UK."**

Parliament's Intelligence & Security Committee agrees that China is actively targeting British interests **"prolifically and aggressively"** by **"seeking to control key industrial and energy assets"**.

There are obvious parallels with the data privacy controversies swirling around brands like TikTok.

A prescient 2022 KPMG report detailed how the shift towards green electric mobility could favourably open-up the international car market to Chinese OEMs. **"Chinese brands are typically able to offer cars at lower price levels than their European EV counterparts. Currently, nine are active in either the B- or C-segments, while four are active in the D-segment or above,"** it noted.

With Chinese BEV roll-out accelerating, several major European VMs called foul and appealed to the European Union to level the playing field. Stellantis CEO Carlos Tavares complained of the **"brutal scenario"** of having to compete with Chinese-made cars which are **"a quarter less expensive to build"**.

Which brings us to the European Commission's anti-subsidy investigation. Formally launched in October 2023, this pivotal work must be concluded by November 2024. However, provisional duties on BEVs imported from China could be imposed as soon as July 2024. That's a massive variable.

Another important factor for the UK is the new Zero Emissions Vehicle (ZEV) Mandate, which requires 22% of all new cars (and 10% of new vans) sold in 2024 to be electric.

This Venson white paper will introduce you to the biggest and best Chinese BEV brands, profile key models, and predict the likely implications for UK fleets and the wider automotive industry.

# Meet the Makers

## A-Z

*Over the coming pages we'll introduce you to an array of Chinese vehicle manufacturers, from state-owned giants such as Chery, FAW and SAIC, to private powerhouses like BYD and Geely, and software-focused start-ups like Nio and XPeng.*

### BYD



Founded in 2003 by Wang Chuanfu, BYD Auto sold over three million vehicles globally in 2023, making it one of the world's leading new energy vehicle (NEV) manufacturers. Parent company BYD is a global leader in batteries and energy management. Using the tagline Build Your Dreams, it is in the process of establishing a UK retail network, and expects to have 100 sites by 2025. It has appointed Eric van Munsteren as UK fleet sales director and signed a new energy cooperation memorandum of understanding (MOU) with Octopus Electric Vehicles. Managing Director of BYD Europe, Michael Shu, said: **"This is an exciting new chapter for BYD as we bring our latest products and leading technologies to customers in the UK, as shown in our innovative range of electric passenger cars."**

In the UK, BYD is currently best known for the single-decker Enviro200EV electric bus, with a 160-mile range. BYD UK Managing Director, Frank Thorpe, said: **"We are proud that our pioneering technology is contributing to the success of our electric bus partnership with Alexander Dennis."** BYD has also partnered with four UK franchised dealers – Arnold Clark, Pendragon, Lookers and LSH Auto – promising lead times of less than three months on its new passenger cars. Upcoming models include the Atto 3 compact SUV, Dolphin hatchback and Seal D-segment saloon. We profile the Atto 3 in the included supplement.

### Changan

With roots dating back to 1862, state-owned Changan Automotive Group produced 2.3 million vehicles in 2022, including passenger cars and commercial vehicles. It currently employs 68,000 people worldwide, is heavily involved in developing self-driving technologies, and has strategic partnerships with several leading international automakers, including a 50-50 joint venture with Ford.

Last year, Changan signed a partnership agreement with Nio on battery swapping in the Chinese city of Chongqing. Also in 2023, Changan Chairman, Zhu Huarong, unveiled the new Vast Ocean strategy, along with the new Deepal EV brand. Key features of the Vast Ocean plan are investment of over US\$10 billion in overseas markets, becoming a world-class brand, and launching 60 global products by 2030. We profile the Deepal S7 in the included supplement.



### Chery

With confirmed franchise partners including Endeavour Automotive, Listers and Peter Vardy, Chery Automobile will launch both the Omoda and Jaecoo brands in the UK in 2024. With established customer bases in Asia, Russia and South America, Chery sold 1,063,157 vehicles worldwide between January and August 2023, a 42% year-on-year increase. It also ranked highly in the respected J.D. Power 2023 China Initial Quality Study for its Tiggo 7 and Arrizo 8 models. In early 2023, Chery announced that it would set up new factories in Indonesia, Malaysia and Thailand.

Venson extends special thanks to Chery brand manager Wenlong Liu for taking the time to be interviewed for this paper. Tasked with building up the UK sales company, he explained via Zoom that he wants an initial dealer network of 50 sites, rising to 100 by the end of 2024. The target is 15,000 registrations of the mid-size crossover Omoda 5 in the first year, a mix of fleet and retail, with both petrol and electric versions available at launch. Jaecoo will be pitched as a more premium offering, with sales of the J7 mid-size SUV scheduled for summer 2024. It is already sold in China, badged as the Chery Tansuo 06. We profile the Omoda 5 in the included supplement.





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## FAW

Founded in 1953 and based in Northeast China's Jilin province, state-owned FAW (First Automobile Works) has produced over 55 million vehicles, including passenger cars, trucks, and buses. With annual sales of over three million units, and a presence in 85 countries, it sells vehicles under the Hongqi and Bestune brands, as well as joint ventures such as FAW-Toyota and FAW-Volkswagen. FAW came to the attention of the UK press in 2018 when it appointed former Rolls-Royce director of design, Giles Taylor, as global chief creative officer of Hongqi.

In 2023, FAW signed a memorandum of understanding (MoU) on “**deepening strategic cooperation**” with VW and Audi, and a further MoU with autonomous driving and driver assistance technology specialist, Mobileye. “**We need a more internationalised, specialised and diversified team with a more globalised mind and vision in order to deeply fuse China's rich high-level culture with other advanced global cultures,**” said FAW Chairman, Xu Liuping. We profile the Hongqi E-HS9 in the included supplement.



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## Geely

Li Shufu, Zhejiang Geely Holding Group owns international automotive brands including Geely Auto, London Electric Vehicle Company, Lotus, Lynk & Co, Polestar, Volvo Cars, ZEEKR, and commercial vehicle manufacturer Farizon, as well as stakes in Aston Martin and Daimler AG (owner of Mercedes-Benz and Smart). Together, Geely brands sold over 2.3 million vehicles in 2022, with many models sharing the Sustainable Experience Architecture (SEA) platform. Geely also boasts key strategic partnerships with Renault and Baidu, the latter frequently referred to as “**China's Google**”.

Volvo needs no introduction but spinning-out the Polestar performance arm into a 100% EV brand proved to be a masterstroke, quickly establishing cool credentials. In November 2023, Polestar announced two new UK EV strategic partnerships, with Ohme as home charging partner, and Octopus as green energy provider. Head of Polestar UK, Jonathan Goodman, said: “**By charging your EV on renewable energy, whether at home or away, the carbon footprint can be more than halved during the car's lifecycle compared to a petrol car. Our partnership with Ohme and Octopus makes this process easier and offers significant off-peak savings**”. We profile the Polestar 4 in the included supplement.



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## Great Wall

For many UK fleet managers, the name Great Wall probably brings to mind the competitively priced Steed pick-up truck, now discontinued. Well, Great Wall Motor (GWM) is back and targeting the BEV sector with its Ora models, handled by IM Group, which imports Isuzu and Subaru.

As well as Ora, Great Wall also has the Haval and Wey brands. It sold 1.28 million units globally in 2021, boasts the Spotlight Automotive BEV joint venture with BMW, and also has strategic partnerships with BorgWarner, Bosch, Continental, Hella, Webasto and ZF. We profile the Ora Funky Cat (now rebranded as the '03') in the included supplement.







## HiPhi

Only founded in 2019, HiPhi is the premium EV brand of Shanghai-based technology company Human Horizons. HiPhi CTO, former-JLR engineering director Mark Stanton, told Auto Express: **“We will definitely be going right-hand drive and going to the UK.”** Asked about a 2026 arrival, he said: **“I hope it’s not going to be that long.”**

Human Horizons describes itself as an innovative mobility technology company focused on future intelligent transportation – smart vehicles, smart roads, and smart cities – with HiPhi its new luxury vehicle brand. Key models include the HiPhi Z and X. We profile the latter in the included supplement.

## Leapmotor

Founded in 2015 and based in Hangzhou, Leapmotor hit the business pages in October 2023 when it announced that Stellantis was investing €1.5 billion to become a significant shareholder (taking around 20%). **“As consolidation unfolds among the capable EV start-ups in China, it becomes increasingly apparent that a handful of efficient and agile new generation EV players, like Leapmotor, will come to dominate,”** said Stellantis CEO Carlos Tavares. **“We feel it’s the perfect time to take a leading role in supporting the global expansion plans.”**

Strong on R&D and focused on the mid-to-high end market, since launch, Leapmotor has declared 1,474 patents. Back in 2020, it entered into a strategic partnership on EVs with state-owned FAW. In 2022, it announced that its C01 sedan would feature revolutionary cell-to-chassis (CTC) battery technology, integrating battery cells into the vehicle body, a mass production first. We profile the Leapmotor C10 in the included supplement.



## Nio

Already up and running using a direct-sales model in Denmark, Germany, the Netherlands, Norway and Sweden, in October 2023 Fleet News described Nio as **“The Chinese brand with the biggest USP”**. This is largely thanks to its Power Swap Stations – local hubs where a drained Nio EV battery can be swapped for a fully charged one in less than five minutes. There are also Nio Houses – sales offices which double as social venues for Nio users, incentivised via the Nio app. In China, Nio has over 1,200 Power Swap Stations. It has already established a national sales office in Milton Keynes and appointed senior staff, including UK managing director Matt Galvin (formerly of Volvo) and national fleet sales manager Marc Samuel (formerly of Honda).

Nio established a European headquarters in Munich in 2015, has an engineering centre near Oxford and a factory in Hungary. It delivered 55,432 vehicles in Q3 2023, a 75% year-on-year increase. Key models include its BMW i5 rival, the Nio ET5, and Audi Q8 e-tron rival, the EL6. In November 2023, the UK trade press carried speculation that Nio was considering creating a dealer network, drawing a forthright response from Galvin. **“Being a user-centric business means we need to have ultimate control over that user experience,”** he said. **“That’s very difficult when you’re introducing third parties or agents. It’s really important that when we do launch Nio in the UK, everything’s ready to go.”** Nio will reportedly offer subscription packages and options to buy. We profile the ET5 in the included supplement.



## SAIC

With an operating revenue of over US\$110 billion in 2022, Chinese state-owned SAIC Motor (formerly Shanghai Automotive Industry Corporation) is China's largest vehicle manufacturer. It already enjoys considerable EV success in the UK via its 150-strong MG dealership network, particularly the multi-award-winning MG4 and MG5 models. It recently introduced extended range versions of both, all with a 7-year/100,00-mile warranty. Highlighting the MG5 EV's Green NCAP performance, Guy Pigounakis, Commercial Director at MG Motor UK, said: **"We are extremely proud of the work done in electrifying our model line-up, and for independent assessors to ratify our efforts is great news for both us and our customers."**

Over the coming months MG is due to unveil solid state batteries and the Galaxy Full Stack 3.0 centralised computing system. SAIC also produces vehicles under joint ventures such as SAIC-Volkswagen (Audi, Skoda and VW) and SAIC-General Motors (Buick, Cadillac and Chevrolet), as well as its own IM, Maxus, Rising, Roewe and Wuling brands. Notably, Maxus offers the T90 EV, officially the first electric pick-up truck to be sold in the UK, and also recently introduced the MIFA 9 MPV. At the Goodwood Festival of Speed 2023, William Wang, MG head in the UK and Europe, confirmed that he is considering the UK for a new European plant. We profile the MG Cyberster in the included supplement.



## XPeng

Headquartered in China, with offices in California and Munich, Guangzhou Xiaopeng Motors Technology Co trades as XPeng Motors, with stock publicly traded on the New York and Hong Kong exchanges. Specialising in AI-defined mobility, it makes great play of its XBrain assisted driving architecture and XOS Tianji cockpit operating system.

In China, XPeng has developed its own charging network likened to the Tesla Supercharger network, and is investing heavily in self-driving technology. **"The innovative advancements powering our industry-leading ADAS and new EV models help actualise the technological evolution shaping today's EV industry,"** said CEO He Xiaopeng. We profile the new XPeng P7 in the included supplement.

## Others...

Founded in 1969 and based in Wuhan, state-owned Dongfeng is probably best known for its joint venture with Nissan. In 2021, foreign-branded cars took 79% of its sales. However, in 2023, it unveiled the new Shine sedan under its own brand, for sale in the Middle East, and announced a restructure of its Aeolus brand.

Backed by technology companies Foxconn and Tencent, AiWAYS is already present in Germany, where it sells the U5 and U6 SUVs via a direct sales model. It has confirmed the UK will be its first right-hand drive market.

Founded in 2015, and backed by the company behind TikTok, Beijing-based Li Auto has an ambitious aim to outsell the likes of BMW and Mercedes in its home market in 2024. It delivered 173,251 cars in the first seven months of 2023, up 145% year-on-year.

Cirencester-based Innovation Automotive Electric Vehicles has confirmed that it will import models by two new Chinese brands, Seres and Skywell, in 2024.

Others to keep an eye on include Hozon Auto (particularly the Neta brand), Jianghuai Automobile (JAC), and state-owned Beijing Automotive (BAIC) and Guangzhou Automobile (GAC).





*In December 2023, the stat of the month by the highly respected Schmidt Automotive Research was that half a million new passenger cars from China had entered the West European market during the first 10 months of the year.*



# *The EU Anti-subsidy Investigation*

This consisted of 150,000+ models from Western VMs manufacturing in China, including BMW, Dacia, Honda and Tesla, and 250,000+ Chinese brand vehicles, including SAIC-owned MG and Geely-owned Polestar, plus smaller volumes from the likes of BYD, Chery, Nio and Xpeng.

Schmidt also reported that these Chinese (sometimes called “Sino”) brands accounted for about 5% of all new car sales in the UK in the first seven months of 2023, a market share second only to Sweden. In terms of total sales, therefore, the UK is now the biggest market in Europe for Chinese EV brands.

Meanwhile, China celebrated 10 years of its Belt & Road Initiative (BRI), a flagship policy of President Xi Jinping, by holding an international summit attended by Russian President Vladimir Putin and Hungarian Prime Minister Viktor Orban. Likened to the silk road, the BRI involved a trillion US dollar investment in energy and transport projects abroad. It appears to have been phenomenally successful.

In Europe, there was mounting concern among the legacy manufacturers about Chinese state backing for expansion into their domestic markets. BMW chief executive, Oliver Zipse, told the Financial Times that Chinese carmakers posed an “imminent risk” to the European automotive industry, particularly for the manufacturers of cheaper models. **“The base car market segment will either vanish or will not be done by European manufacturers,”** he said.

France, famously protective of its manufacturing base, began a review of its own subsidies, which contribute to leasing rates for lower-priced BEVs. These had a significant positive effect in boosting sales of models such as the all-electric Dacia Spring. However, discussions were underway about switching to a points-based system, taking into account logistics routes. This would effectively rule out the extra financial incentive for Chinese-built BEVs.

Multiple manufacturers, industry bodies and national governments lobbied, and the EU listened and acted. In her 2023 State of the European Union speech, Ursula von der Leyen, President of the European Commission, announced an anti-subsidy investigation into the import of BEVs from China.

The investigation will first determine whether Chinese BEV value chains do indeed benefit from illegal subsidisation. If so, it will then consider whether this subsidisation causes economic injury to EU BEV producers. It will follow strict EU and World Trade Organization (WTO) rules and the Chinese government is expected to present evidence.

Von der Leyen said: **“The electric vehicle sector holds huge potential for Europe’s future competitiveness and green industrial leadership. EU car manufacturers and related sectors are already investing and innovating to fully develop this potential.**

**“Wherever we find evidence that their efforts are being impeded by market distortions and unfair competition, we will act decisively. And we will do this in full respect of our EU and international obligations – because Europe plays by the rules, within its borders and globally. This anti-subsidy investigation will be thorough, fair and fact-based.”**

Reuters reported that The Chinese Chamber of Commerce to the EU was **“very concerned and opposed to the investigation’s launch”**, arguing that its competitive advantage was not due to subsidies.

The result is far from certain, but there are useful indications as to how things might play out. With political headwinds, a shortage of pure car truck carrier (PCTC) ships, and increasing crew, fuel and port costs, local production makes ever more sense.

Geely-owned Volvo recently announced that it will build the new electric EX30 in Belgium from 2025. **“Adding production in Ghent is a logical move as we aim to capture the strong demand for our exciting small electric SUV across the globe,”** said Volvo CEO Jim Rowan.

The much-vaunted small SUV, winner of The Sun’s Car of the Year, is currently built in Zhangjiakou, China, but Volvo has a stated ambition to build cars close to where it sells them. Will Geely also shift production of the Smart 1 and Zeekr X models, both based on the same architecture, to Belgium?

Chery Europe’s Managing Director, Jochen Tueting, was dismissive of the EU threat, telling Reuters: **“Wherever we get confidence that we can sell proper volumes, that’s the indication we should have local production as well.”** There are rumours of a Chery assembly plant in Europe this year, and it won’t be alone.

As 2023 came to a close, Hungary’s foreign minister Péter Szijjártó announced that BYD will open a new factory near the southern city of Szeged. It will be **“one of the largest investments in Hungarian economic history,”** he said.

Applying its own pressure, China recently launched an investigation into French Brandy, widely seen as a tit-for-tat reaction. We do indeed live in interesting times, as the ancient Chinese proverb goes.



# Battery Electric UK

*At the 2023 UN Climate Change Conference (COP28) in Dubai, nations finally agreed to “transition away” from coal, oil and gas. If you need to ask why, we recommend David Attenborough’s bestselling book, A Life on Our Planet.*

2023 has now been confirmed as the hottest on record, with more than 200 days seeing a new daily global temperature record for the time of year. **“As well as the climate emergency, there’s the practical day-to-day problem that much of our road network is constantly on the verge of gridlock,”** said Anne Snelson, of Lead With Sustainability.

**“We push the move to electric and also the fact that we simply must reduce car use. I’m rather a fan of the Chinese coming in and shaking up the market, especially if it means us all moving to electric that much quicker. The new leasing options, such as those from SAIC-owned MG, are interesting because they bring cleaner fuel cars within the reach of a lot more people. Then, after four years, they will be sold into the second-hand market.”**

But why BEV over other clean fuel options? Transport & Environment (T&E), Europe’s leading non-governmental organisation campaigning for cleaner transport, has produced a handy chart detailing why direct electrification is “by far” the best solution.

Its headline figures on the drive towards 100% renewable by 2050 are: 94% for direct electrification, 68% for hydrogen and 55% for power-to-liquid (petrol and diesel). Pure electric is also the clear winner in terms of the amount of original energy required, up to five times more efficient than power-to-liquid alternatives.

Matt Finch, UK Policy Manager at T&E, said: **“By 2050, the vast majority of cars around the world, certainly in the UK, will be 100% battery electric. There are a few good reasons for this. The first is blindingly obvious: the grid infrastructure exists and every household has an electricity supply. It might be slow, and we advise people to use proper chargers, but technically you can already charge an electric car from billions of points around the UK.**

**“Using electricity is dirt cheap compared to burning oil, biofuel or hydrogen. That’s the main reason everyone will switch, apart from a few classic cars running on e-fuel. EVs are also quieter, smoother and generally nicer to drive.**

**“Virtually every major OEM has now stopped R&D on combustion vehicles in favour of battery vehicles. Some are funding their own battery development, some are buying them from the likes of Panasonic, but they’re all investing millions.**

**“There are tens of thousands of people in universities and manufacturing facilities around the world working on battery chemistries. That simply isn’t happening with combustion vehicles. The aviation industry is keeping a close eye on what’s happening in automotive, and it’s all focused on direct electrification.”**



With roots dating back to Robert Davidson’s 1830s electric locomotive, BEVs use a rechargeable lithium-ion battery connected to at least one electric motor. Current bestsellers in the UK include Tesla’s Y and 3, Kia’s e-Niro, VW’s ID.3 and Nissan’s Leaf.

The UK government has committed £1.6bn to adding 300,000 new public chargers by 2030. According to charging map provider Zap Map, there were around 50,000 points across the UK at the end of 2023, up 43% in just 12 months.

Technology and decarbonisation minister, Anthony Browne, said: **“We are providing investment certainty for the charging sector to expand our charging network. This will support the constantly growing number of EVs in the UK, which currently account for over 16% of the new UK car market.”**

Impressive advances are being made on recharging times too, with BP claiming its new Pulse 150kw charger can deliver up to 100-miles-worth of juice in around 15 minutes. The range anxiety argument is fading as ever more models deliver 300+ miles on a full charge, and amazing battery advancements are being announced almost daily.

This all sounds so positive, why isn’t everyone switching? Well, purchase price is still an issue. In 2023, the RAC quoted the example of MG Motor UK’s ZS Hatchback, with the electric version £8k more than its petrol equivalent, even with the plug-in grant. Attractive finance options, such as those highlighted by Snelson, help to soften this blow.

The picture gets even rosier when you look at running costs. Research by Compare the Market found an average saving of £600 per annum for EVs over petrol cars, taking into account insurance, fuel and road tax.

Aware that they had something of a problem in terms of consumer perception, leading Chinese VMs responded in the best possible way – they improved their product quality dramatically, and quickly, as proven by recent Euro NCAP results.

In October 2023, the BYD Dolphin, BYD Seal and XPeng P7 all achieved five-star ratings in the programme’s most stringent testing yet. **“The new Chinese brands have hit the ground running, recognising that European car buyers will not compromise on safety,”** said Dr Michiel van Ratingen, Secretary General of Euro NCAP.

All three Chinese models excelled in adult and child crash protection, with an impressive range of safety technologies, including lane and speed assistance.

With new tests reflecting changing European weather patterns, Euro NCAP praised BYD for fitting Child Presence Detection (CPD), a system which issues a warning when it recognises that a child has been left in the car. This is particularly crucial in the hot summer months when cars can become overheated – conditions which are likely to become more commonplace.

To address increased risks from heavy storm conditions and flash flooding, Euro NCAP now tests the automatic unlocking of doors underwater, and the time electric windows remain functional following submergence. The BYD and XPeng cars all picked up points in these parts of the assessment.

According to a recent survey by Great Wall’s Ora brand, UK consumers are paying attention to such developments. When asked specifically about electric vehicles manufactured in China, 74% of the 2,000 UK adult drivers surveyed said they were open to the idea of owning one. 75% saw no compromise on quality in buying a Chinese BEV.

Auto Trader’s commercial director, Ian Plummer, says the drive to electrify has presented Chinese brands with an opportunity bigger than the 2008 scrappage scheme seized on by the likes of Hyundai and Kia.

**“Not all of the Chinese brands will succeed,”** he said. **“But we are experiencing forces of change that give them the very best opportunity.”**

# The ZEV Mandate

*Some national governments have been far more proactive and innovative than others when it comes to incentivising the shift to clean fuel.*

Norway set ambitious adoption targets early, including that all new cars sold by 2025 should be zero-emission (electric or hydrogen), with sweeteners such as no annual road tax, no toll fees and free municipal parking. It proved to be a winning combination. By 2021, 86% of sales were EV.

China set more modest targets, including that 40% of all vehicles sold by 2030 should be EV, but it prioritised infrastructure. Its 2021-2035 New Energy Vehicle (NEV) Industrial Development Plan included targets for chargepoints and assigned implementing entities, with the Ministry of Industry & Information Technologies as lead, and a clear role for local governments.

The UK seemed to be somewhat behind the curve, pushing back the deadline for sales of new petrol and diesel cars to 2035, and giving the green light to new North Sea oil initiatives. Then came the Zero Emission Vehicle (ZEV) Mandate.

Following an extensive consultation process, in October 2023, the Department for Transport (DfT) confirmed a new mechanism with strict targets – a realistic pathway for switching to clean fuel in a reasonably short timescale.

The headline is that the ZEV Mandate requires 22% of new cars and 10% of new vans sold in the UK to be electric in 2024, ramping up to 80% of cars and 70% of vans by 2030, and increasing to 100% of both by 2035.

The vital DfT statement read: **“The UK government and devolved administrations are taking joint action to accelerate the pace of road transport decarbonisation, creating thousands of highly skilled jobs, stimulating investment, and driving new export opportunities for UK businesses.**

**“As the UK realises the commitment for all new cars and vans to be zero emission (ZE) at the tailpipe by 2035, drivers will benefit from reduced running costs and the UK will see significant new investments in the development and manufacture of batteries, electric motors, and power electronics, as well as in the chargepoint network essential for a fleet of zero emission new cars and vans.**

**“In 2021, cars and vans accounted for 18% of the UK economy’s greenhouse gas emissions, making decarbonising road transport a key focus as we transform the economy, and end our contribution to climate change. ZEVs are the only route to tackling car and van emissions, as ZEVs emit no**

**greenhouse gases at the exhaust and produce 81% less emissions than combustion engine counterparts over their lifetime, including manufacture. They are cheaper to own, require less maintenance and will deliver significant benefits to air quality by reducing harmful pollutant emissions.**

**“The final consultation on a ZEV mandate and carbon dioxide emissions regulation for new cars and vans in the UK ran from 30 March 2023 to 24 May 2023. This response outlines the joint approach that the UK government, Welsh Government, Scottish Government and the Department for Infrastructure (Northern Ireland) are taking to regulating the minimum pace of this transition, ensure sufficient supply of vehicles for consumers and provide investment certainty for the deployment of supporting infrastructure.”**

Transport Secretary Mark Harper confirmed further important details. Vehicle manufacturers that fail to achieve the ZEV Mandate sales targets will be subject to sizeable fines: £15,000 for every car that doesn’t comply, and £9,000 for every van in 2024 (with a plan to double this to £18,000 per van).

Flexibility is provided via a trading scheme, enabling vehicle makers to bank compliance in years when they exceed annual targets (for use in future years), or trade them with other manufacturers that have fallen short. In the first year, car manufacturers can borrow up to 75% of their annual target, to support them in the initial stages, although this will decrease sharply to just 25% in 2026.

The ZEV Mandate is a highly significant development with far-reaching implications, not least for Chinese BEV manufacturers and UK fleet managers. The annual targets for the years to 2030 are as follows:

	Cars	Vans
2024	22%	10%
2025	28%	16%
2026	33%	24%
2027	38%	34%
2028	52%	46%
2029	66%	58%
2030	80%	70%





## “The path to zero emission vehicles makes sure the route to get there is proportionate, pragmatic, and realistic for families”

**“The path to zero emission vehicles makes sure the route to get there is proportionate, pragmatic, and realistic for families,”** said Transport Secretary Harper. **“Our Mandate provides certainty for manufacturers, benefits drivers by providing more options, and helps grow the economy by creating skilled jobs. We are also making it easier than ever to own an electric vehicle, from reaching record levels of chargepoints to providing tax relief for EV owners.”**

Alongside the ZEV Mandate, new regulation will also apply to non-ZEVs to ensure that their emissions don't get any worse. Mike Hawes, Chief Executive of the SMMT, said: **“The automotive industry is investing billions in decarbonisation and recognises the importance of the ZEV Mandate as the single most important measure to deliver net zero.**

**“We welcome the clarity the mandate's publication provides for the next six years and the flexibilities it contains to support pragmatic, equitable delivery across this diverse sector. Manufacturers offer a vast range of zero emission vehicles, but demand must also match supply – that means making ZEVs affordable by incentivising drivers to make the switch now and delivering the infrastructure to meet consumer expectations.”**

The Chief Executive of the British Vehicle Rental and Leasing Association (BVRLA), Gerry Keaney, also praised the clarity of the Mandate. **“It will wrestle back some of the confidence dented by the delay to the ban on new petrol and diesel sales,”** he said. **“Businesses planning their decarbonisation journeys need to be sure of their destination and deadline.**

**“The decarbonisation divide is growing. The company-provided car sector is well on its way and will be fully ZEV ahead of official targets. Others face much harder transitions. Vehicle rental, the retail market, and commercial vehicles have a mountain to climb if they are to adopt zero emission vehicles in the volumes required. Targeted financial support and incentives will play a vital role.**

**“For those challenging market segments, the breathing space afforded by the ZEV Mandate van trajectory changing, car club parameters being adjusted, and commitment to an accessible transition will be welcome.**

**“The Prime Minister may have applied the brakes to the Government's phase-out targets, but the fleet sector still has its foot on the throttle. The road to zero is building momentum and we will continue to work with Government officials and stakeholders in the automotive and energy sectors to make sure it is not lost.”**

To give an idea of the scale of the task ahead, in the first half of 2023, 16% of all new car sales were electric and only 11 carmakers exceeded the 2024 target of 22%. Major brands facing a particularly uphill struggle include Ford (with EVs making up just 2% of its UK registrations in the first half of 2023), Honda and Mazda.

Ian Plummer, commercial director at Auto Trader, said: **“Confirmation of the ZEV Mandate at least gives the industry the clarity it needs, even though some manufacturers will struggle to hit these targets. To close the gap and avoid fines, we could see prices come down to encourage consumer demand.**

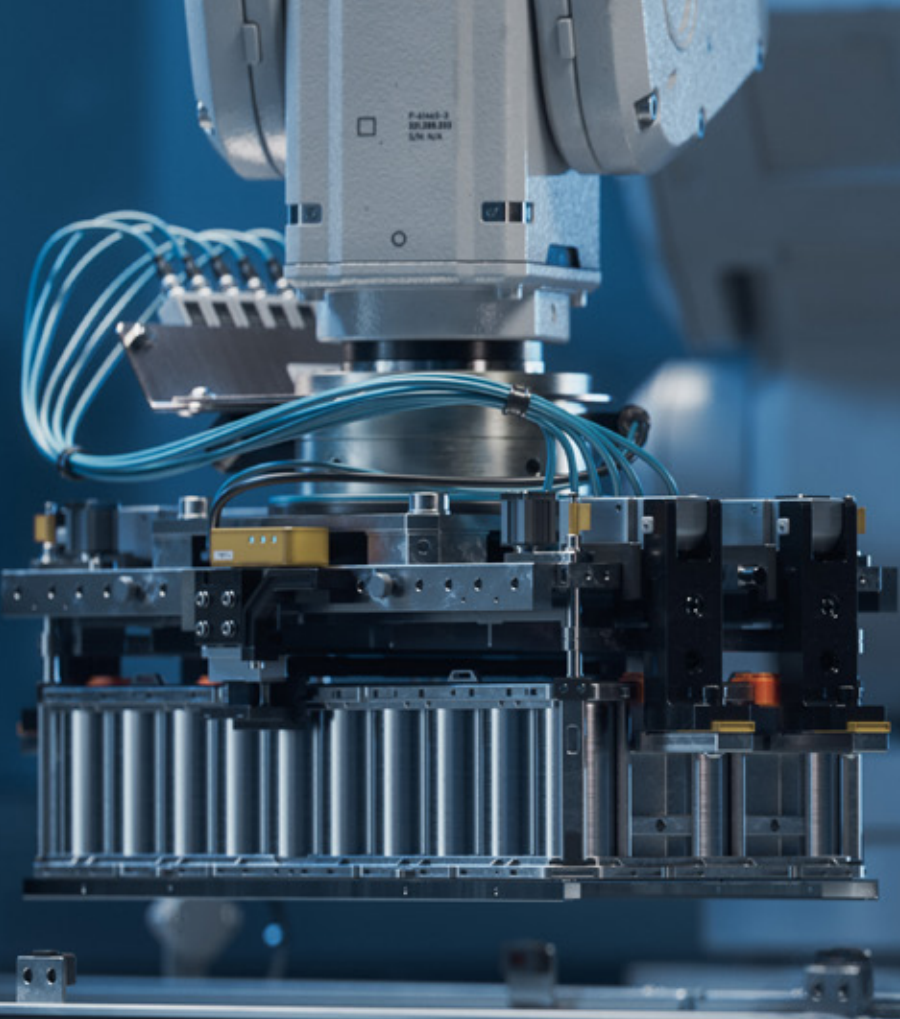
**“When it comes to the vans mandate, the softening of the annual targets is a pragmatic step that will provide much-needed breathing room for certain manufacturers. It also gives the fleet and business sectors – the biggest van buyers – more choice while electric van technology catches up with business requirements, and electric vans become more affordable for small businesses.”**

This puts the UK firmly in the leading group of Western countries in terms of transitioning to clean fuel at pace. Importantly it has all-party backing here, unlike the US, where both Nissan and General Motors have voiced concerns about Donald Trump's threat to dump the Inflation Reduction Act, President Biden's landmark climate legislation, should he be re-elected.



# UK-EU Trade

*While patting ourselves on the back for the ZEV Mandate, the UK and Europe came dangerously close to a major BEV faux pas last year.*



As we moved from spring, through summer and into autumn 2023, industry alarm reached fever pitch regarding the potentially devastating impact of the “Rules of Origin”. From 1 January 2024, carmakers in both the UK and EU faced a new 10% tariff on vehicles traded in either direction across the Channel.

The proposed new charge was part of the UK-EU Trade & Cooperation Agreement, the Brexit deal. Designed to protect Europe from cheap imports, it insisted that locally sourced components represent at least 40% of an EV’s value, rising to 45% from 2026 and 55% from 2027.

The problem is neither EU nor UK battery production has ramped up as expected. The powerful European Automobile Manufacturers’ Association (ACEA) warned that, should the European Commission fail to act, it would cost EU carmakers around £3.75bn over three years, and dramatically reduce EV production – to the tune of nearly half a million cars.

**“Driving up consumer prices of European electric vehicles, at the very time when we need to fight for market share in the face of fierce international competition, is not the right move – neither from a business nor an environmental perspective,”** said ACEA president and CEO of Renault, Luca de Meo. **“We will effectively be handing a chunk of the market to global manufacturers.”** He might as well have said China.

Fortunately, in mid-December, the UK and EU stepped back from the brink and agreed to extend the existing trade rules until the end of 2026. Cheers could be heard from Sunderland to Turin.

Prime Minister Rishi Sunak said: **“We have been listening to concerns of the sector throughout this process and I know this breakthrough will come as a huge relief to the industry. The UK government is delivering a pragmatic solution to keep costs down for businesses and for people who want to make the switch to electric vehicles. We are also leaving no stone unturned to bolster our domestic battery industry and deliver long-term certainty for our thriving automotive sector to help them grow their roots in the UK.”**



Business and Trade Secretary, Kemi Badenoch, added:

**“This government is determined to ensure the UK remains one of the best places in the world for automotive manufacturing.”**

**“We listened to the concerns of the sector and worked hard with counterparts in Brussels and across Europe to deliver a solution that works for both sides.”**

SMMT Chief Executive, Mike Hawes, was certainly relieved, if slightly frustrated at cutting it so fine. **“After a lengthy period of campaigning for a solution, the 11th-hour plan to extend the current rules for electric vehicles until 2027 is a simple and sensible approach,”** he said. **“One that will avoid a hit to our mutual trade, maintain competitiveness and, crucially, keep costs down for consumers.”**

**“When the UK-EU Trade and Cooperation Agreement was designed, no one could have anticipated a global pandemic or war in Ukraine; nor the seismic supply chain disruption, spiralling energy costs and inflation that followed – all of which restricted the battery industry’s ability to build up the local EV supply chains, in particular batteries, needed to meet the rules.”**

**“As the past year has shown, investment is coming – big announcements for EV production and gigafactories, £2bn of government funding to support industrial transition. Extending the current Rules of Origin will give the time and certainty necessary for investments to come to fruition – but, again, there is no time to lose.”**

To this end, the UK’s Advanced Propulsion Centre, established in 2013 to focus industry, academia and government on net-zero technologies, emphasised that the UK **“has both hard rock and geothermal brine sources of lithium”**. It is funding **“a number of companies involved at varying stages in the lithium extraction process”**.

2026 will doubtless come round quickly though, so the UK EV battery picture is very much one to keep an eye on. The Rules of Origin pinch point has been delayed, not solved.



# Fleet BEV Strategies

*UK fleets are miles ahead of private car owners in terms of BEV acceptance, and we're also leading the way in adoption strategy – identifying the strongest early use cases.*

Way back in 2017, the McKinsey Center for Future Mobility published a “**granular assessment of battery-electric commercial vehicles across 27 segments**”. The variables considered included different regions (China, Europe and the US), different weight classes (light, medium and heavy trucks), and different applications, including urban, regional and long-haul cycles.

This was an incredibly advanced piece of work, much smarter than a blanket ‘roll-out everywhere’ approach. It even explored the relative merits of early and late adoption, with two scenarios reflecting “**different beliefs regarding core assumptions, such as the effectiveness of any regulatory push, the timing of infrastructure readiness, and the supply availability.**”

More recently, Paul Hollick, Chairman of the Association of Fleet Professionals (AFP), has consolidated his thinking into this five-step approach to electrification:

- 1) **Profile your fleet – how and where are they used?**
- 2) **Pick the low-hanging fruit first – identify a group of drivers with space to install an off-street charger at home and who rarely cover more than 100 miles in a day – make them your early adopters.**
- 3) **Choose drivers who will be advocates – employee education is essential.**
- 4) **Rethink your fleet structure – an unexpected effect has been drivers becoming receptive to brands outside the established fleet mainstream – this strategy is even more pertinent to van operations.**
- 5) **Recognise the limitations – even for businesses that are the biggest advocates of electrification, there may well be restrictions forced by the current technology and spread of models available – good use of telematics data can help you keep the use of legacy ICE vehicles to a minimum.**

Great advice and the LCV issues are particularly urgent. With the ZEV Mandate now in place, 10% of every van manufacturer’s sales in the UK must be BEV.

That’s a big ask as, according to the SMMT, UK electric van sales represented just 5.9% of a market still dominated by diesel (90%+) in 2023, the same as in 2022. That’s flatlining and cleaning up the heavy commercial vehicle sector will be more challenging still.

SMMT Chief Executive, Mike Hawes, said: “**If 2024 is to be the year of the electric van, investment in chargepoint infrastructure is mission-critical, bringing with it the successful green transition and economic growth the nation needs.**”

Immediate action to reduce barriers to BEV uptake is crucial, with the single biggest obstacle being the insufficient number of van-suitable public chargers. It requires significant infrastructure investment in every UK region.

At the same time, a long-term commitment to the Plug-in Van Grant will be necessary to make the switch accessible and equitable for operators across all sectors and parts of the country.

The National Franchised Dealer Association (NFDA) is among those lobbying government to remove the remaining barriers. “**Adapting current regulation to enhance the uptake and accessibility of zero emission vans is an important step towards the sector reaching net-zero targets,**” said Steve Latham, Head of NFDA’s Commercial Vehicle division.

For starters, the government has committed to remove the additional 5-hour training requirement and make e-vans subject to the same towing rules as equivalent internal combustion engine vehicles.

“**While we welcome the government’s response to industry feedback in eliminating aspects of previous regulations that discouraged the adoption of heavier electric vans, there are still outdated rules regarding tachograph usage if the vehicle travels more than 62-miles from its base,**” said Latham.

FleetCheck managing director Peter Golding is among those still seeing a role for hydrogen in future fleet zero emissions strategies, particularly for vans. Could it be given more of a chance after the next general election?

“**We will get a new government this year or early in 2025, and the polls show that it is very unlikely to be the same as the current administration,**” he said. “**That moment will provide an opportunity for change.**”

“**The truth is that one of the victories that this government can claim over the last few years is the rate of electrification by car fleets. Their taxation strategy and other measures means that the average company car is now very likely to be an EV.**”

“**However, it has been a zero emissions all-eggs-in-one-basket approach concentrating on EVs and, while there is some support for hydrogen in their planning, it is pretty limited.**”

“**The hydrogen refuelling infrastructure across the UK is almost non-existent. There are plans to build 40 or so stations in support of truck and bus operators but the whole approach is very much based on larger commercial vehicles and buses.**”

“**This is an issue because many van fleets are discovering very real limits to electrification when it comes to range and payload, and hydrogen is a potential zero emissions alternative with real promise.**”

So, the long-standing debate about the best clean fuel rumbles on.

# Insurance & SMR

*As a fast-evolving technology, there's a multitude of BEV-related insurance, service, maintenance, and repair (SMR), and cost of ownership issues which fleet managers need to be aware of.*

**According to 2023 analysis by the Institute of the Motor Industry (IMI) and Garage Industry Trends, tyres remain the weakest link when it comes to MOTs, with worn rubber representing “the greatest risk to road safety”. This is an especially pressing problem for BEVs because, being heavier than their ICE counterparts, they suffer from faster tyre wear.**

Aside from the safety aspect, which must always be paramount, there are important cost implications for fleets. For example, it would be reasonable to budget for an additional set of tyres during an average four-year car lifecycle.

It's a priority issue which tyre manufacturers are working hard to address, as Jaap Leendertse, General Manager at Falken Tyres, told the IMI: **“With EVs, you**

**have more weight and torque to contend with, so we're designing compounds to avoid faster wear. We're making tyres that can carry more weight, with tyre patterns designed to leave some flexibility when rolling, resulting in no immediate abrasion.”**

National Tyres highlights the importance of fitting EV-specific products, with key benefits including reduced rolling resistance and improved grip. On

the other hand, using the wrong specification tyres will not only hit performance and range, but also increase the risk of punctures and blowouts.

Fleets can use telematics and driver training to mitigate these new issues, with more conservative driving styles delivering dramatically less tyre wear, as well as significantly reducing accident risks.

**Of all the variables related to BEV ownership, the speed and shape of charging infrastructure rollout is perhaps the biggest. Risk specialist Marsh McLennan quotes 2022 research suggesting that the world will need to invest over a trillion US dollars to meet forecasted levels of chargepoint demand by 2030.**

On the upside, Marsh's Time to Recharge report endorses the huge potential of vehicle-to-grid (V2G) technology – the tantalising prospect that **“EV uptake may even switch from being a strain on the grid to a critical supporter, if regulations allow vehicle batteries to store excess power that can be sold back to the grid during peak demand.”** It notes that a lack of public policies and uneven stakeholder awareness is slowing down progress in this space.

Paul Bergamini, Global Project Director for Automotive at Reuters Events, also highlights the massive potential of V2G. **“It will allow for more opportunities to optimise energy usage,”** he says. **“We need to come together and plot a strategy for the future.”**

Fleet managers will be familiar with the term Vehicle-to-Everything (V2X) in relation to connected cars, but in the EV sector it is used to refer to the bi-directional transfer of energy from the car battery to other energy-consuming destinations, such as homes (V2H) and buildings (V2B).

It means that energy that is generated during one part of the day can be stored in an EV battery and then discharged back when it is needed. In the UK, EDF and Nissan have partnered on the country's first V2G program not in receipt of public funding, and Nissan is actively promoting the benefits of its V2G-compatible models to fleet owners.

In further good news, Venson partner, the AA, has reported a steady decline in ‘run out of charge’ issues, down from 8% of all EV breakdowns in 2019, to 4% in 2022, to just 2.1% for the first half of 2023.

**“The 70% drop in out of charge breakdowns is a clear sign that range, infrastructure, and education are improving,”** said AA President, Edmund King. **“Our data clearly shows ‘charging anxiety’ does not match the reality.”** Also interesting is that, in May 2023, just 2.83% of all AA breakdown calls were related to EVs.



As to the oft-quoted increased fire risk, Alistair Schuberth, Risk Partner at Marsh, provides welcome reassurance. “Early data indicates that the risk of EV fires might be overstated,” he said. “A study by AutoinsuranceEZ, based on data from the US National Transport Safety Board, indicates that this risk may actually be lower in EVs than in ICE.”



New data from both Australia’s Department of Defence and Sweden’s Civil Contingencies Agency appears to confirm this. The former found there was a 0.0012% chance of a passenger electric vehicle battery catching fire, compared with a 0.1% chance for internal combustion. The latter reported 3.8 fires per 100,000 electric or hybrid cars in 2022, compared with 68 fires per 100,000 all fuel type cars, although the ‘all fuel’ figure also included cases of arson.

Myth or not, there are currently real-world consequences. Damaged BEVs awaiting repair must initially be stored in an outside quarantine area, at a safe distance of 15 metres from other cars and objects. As such, a car park with capacity for 100 ICE vehicles might accommodate just two BEVs! Thatcham says this 48 hour protocol adds a minimum £60 to every EV claim, along with further costs associated with transportation.

Schuberth also flags the troublesome spectre of cybersecurity, describing it as “critical to EV charging infrastructure”. Security compromise incidents present multiple new risks including user safety, commercial loss and compromises to various types of data, particularly payment systems and vehicle telematics.

In general, insurers will remain cautious until greater data becomes available to help refine underwriting models. “We’ve recently clarified our cover for EVs, looking at things like cables trailing and chargers blowing up,” says Doug Jenkins, Motor Technical Risk Manager at AXA Insurance UK. “These are new eventualities, but it’s just a case of changing the wording to respond to these new customer needs.”

In terms of crash repair, in 2023, Thatcham Research published a new report into the technical and practical differences between BEVs and internal combustion engine vehicle insurance claims processes.

Funded by the government’s Innovate UK agency, the main finding was that BEV incident claims are currently 25.5% more expensive than ICE, with repairs also taking 14% longer. Thatcham’s modelling showed that 9,400 vehicles were involved in collisions resulting in battery damage in the UK 2022. This is estimated to reach up to 260,000 per year by 2035.

**“Much of the motor insurance industry is yet to adapt to mass BEV adoption challenges, and the implications remain unquantified on repair capacity, training, cost, and the lifetime**

**sustainability of BEVs,”** said Adrian Watson, head of engineering research at Thatcham Research.

**“This lack of awareness means many BEVs are often deemed irreparable, leading to premature write-offs because of high battery cost and the lack of value the UK ecosystem can recover from them.”**

The current cost of a high voltage battery ranges from £14,200-£29,500 depending on the model, Thatcham found. This means the cost of a replacement battery is often more than the used value of the entire vehicle after only one year – that’s unsustainable.

**“Technical solutions do exist for most, if not all, of these challenges,”** said Watson. **“However, it is vital that credible cross-industry plans are urgently put into place that focus on addressing battery cost, diagnostics, and the creation of a sustainable ecosystem for battery repair.”**

For mandated technologies, that’s a lot of uncertainties for fleet managers to handle, and a lot of pound notes at stake. Fortunately, the UK aftermarket is changing rapidly to meet increased BEV demand.







## *Expert comment:*

# Dr Jan Klein

*Dr Jan Klein is Associate Professor of Digital Marketing at the IÉSEG School of Management in France.*

“The EU’s directive to ban combustion engine car sales by 2035, along with the UK’s similar zero-emission mandate, is reshaping the automotive industry. Considering the current technologies, this legislation compels the market to transition entirely to electric vehicles (EVs).

“This forced adoption poses a tremendous challenge as it clashes with established consumer behaviour in the car market. Traditional car buyers are not likely to embrace this forced adoption and might even lack financial resources to buy EVs. Thus, the eventual outcome in 2035 remains uncertain, with the potential for a surge in sales of used cars with combustion engines.

“Ongoing debates, exemplified by discussions on tariffs for Chinese EVs, underscore the challenges surrounding the problems with the zero-emission mandate when it comes to customer behaviour in the car market.

“The adoption of new technologies (such as EVs) is driven by the promise of enhancing the customer’s status quo. However, traditional car buyers often view EVs as costly and the transition as difficult, citing concerns about range, battery reliability, and charging infrastructure.

“This perception hinders widespread adoption – EVs are simply not seen as an improvement to the customer’s current situation. Financial incentives, such as substantial price discounts, thus play a crucial role in encouraging EV purchases. Currently, this approach is benefiting providers of more affordable EV options, with China leading in this regard.

“Discussions within the EU and member countries about imposing tariffs on Chinese EVs will hinder progress. Protectionist measures risk stifling innovation by limiting the availability of financially attractive EV options, leading customers to delay or forgo purchases, ultimately slowing EV adoption.

“A tariff would even further propel the customer’s perception of EVs as expensive or even non-affordable. Moreover, given China’s significance as a market for European car manufacturers, engaging in a tariff war appears unwise in general.

“A pragmatic strategy to boost EV adoption involves implementing legislation targeting company cars and car fleets, rather than imposing regulations on the entire market at once. Company cars and fleets represent a substantial portion of new car registrations in the EU.

“Notably, drivers exhibit less resistance to EVs in this context, as the perceived hurdles shift from the individual customer to the company providing the car. This approach, beginning with larger fleets, would foster the growth of a used EV market, ultimately enhancing affordability and driving wider adoption.”



# *Expert comment:* Toby Poston

*Toby Poston is Director of Corporate Affairs at the British Vehicle Rental & Leasing Association (BVRLA).*



“The next decade will be transformative for the UK’s electric vehicle market. Although the Government has set a slower deadline for phasing out sales of new petrol and diesel vehicles, it is the ZEV Mandate that will set the pace. The Mandate will ensure the transition gathers momentum every year. It sets the trajectory and will shape which vehicles are being brought to the UK market and when.

“Demand is already there from the fleet sector, which has its foot on the throttle. The sector is responsible for the majority of electric vehicles on our roads. Those to have made the switch are seeing the benefits that come with greener motoring. Beyond enabling companies to meet their own sustainability goals, zero-emission vehicles offer Total Cost of Ownership (TCO) savings with lower running costs and reduced maintenance requirements.

“That TCO picture is set to evolve in the years ahead as the EV motoring taxes are normalised. Electric cars will start paying Vehicle Excise Duty (VED) from 2025 and whichever Government comes to power next year will have to start looking at some kind of road user charging model to replace the £25bn+ raised annually from fuel duty and other emissions-based motoring taxes.

“Vans are also covered by a ZEV Mandate, but the trajectory of their transition is much less certain. The supply and suitability of electric vehicles are not there

yet for many operators. Vehicle range and charging infrastructure are preventing many from being able to make the switch, causing the transition to stall.

“Targeted financial incentives from government, alongside vehicle manufacturers launching electric vans with improved performance when fully laden will facilitate an effective transition. Electric van adoption will catch up to that of cars within the decade, but only if industry and government take steps now to give it the shot in the arm it needs.

“The UK’s charging infrastructure network will be unrecognisable a decade from now. The sheer volume of publicly accessible chargepoints will make them a common sight across residential areas, places of work, and retail hubs. More important than the volume will be the distribution and utilisation of different solutions for different use cases.

“There is no one-size-fits-all approach to charging. The needs of fleet users vary greatly to those of a private motorist, especially when considering commercial vehicles. Funding being made available now, and the collaborative efforts of local authorities and the fleet sector, will create a network that works for all road users.”

# Conclusions

*As we've demonstrated throughout this Venson white paper, Chinese BEV power will prove a revelation for UK fleet operators, invigorating the new and used car and van markets with quality new vehicles, finance options and price competition.*



## If this is the future then bring it on.

If the ZEV Mandate is the stick, then desirable product is the carrot. Only one of Car Dealer's top 10 new cars for 2024 isn't an EV. In terms of Chinese models, their list includes the Polestar 3 SUV and much-anticipated MG Cyberster two-seater sports car. If this is the future, bring it on.

The final word goes to an expert perfectly placed to predict the most likely scenarios: Tony Whitehorn. As someone who has worked with both Chinese OEMs and UK dealers, in 2023, AM-Online posed the trillion-dollar question: If you had to put your money on one Chinese EV brand, what would it be?

**"That's a fascinating question because there are advantages and disadvantages to private companies, while the state-owned companies will be slow coming to market, so they're not for the here and now,"** he said.

**"BYD is super interesting by virtue of its size. Geely is interesting as well, getting all the expertise by going with Volvo, then doing Polestar, Lynk & Co and Zeekr. The Nios, Lis and XPengs are very innovative, looking at autonomous vehicles and battery swapping. Their biggest challenge is securing investment.**

**"VW has just put US\$700m into XPeng. Nio has just got funding from the Middle East. You've got businesses which historically have put money into European or American car companies now investing in Chinese car companies."** Such statements and sums would have been unthinkable a decade ago.

We began this paper talking about tariffs and level playing fields. In fact, the game has changed. Whatever the outcome of the EU anti-subsidy investigation, Chinese BEVs will play an increasingly significant role in UK fleet electrification.



## *Venson fleet management solutions*

Company vehicles are an important asset for supporting core business operations and that's why our contract hire and fleet management solutions are created in response to our clients' needs and are based on our commitment to long term partnership and exceptional customer service.

Testimony to this is our client retention rate of 98%. Along with exceptional service we ensure our clients receive great value from their fleet, by delivering solutions that are based on impartial advice and that provide tangible financial return. We can do this because we've only ever specialised in managing fleets, so our knowledge and in-depth understanding of the market is the best in this sector and relevant to public, private, not for profit and emergency service organisations.

We also believe in true partnership, working with fleet operators and their drivers to ensure they always receive the most appropriate solution to support their operational and financial needs.

If you have any questions or would like to discuss the future of your fleet, please call 0330 094 7803 and speak to one of our fleet consultants or visit [www.venson.com](http://www.venson.com) for more information.

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Venson Automotive Solutions Ltd  
13 Castle Mews  
Hampton  
Middlesex  
TW12 2NP  
Tel: 0330 094 7803  
[www.venson.com](http://www.venson.com)  
email: [sales@venson.com](mailto:sales@venson.com)

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