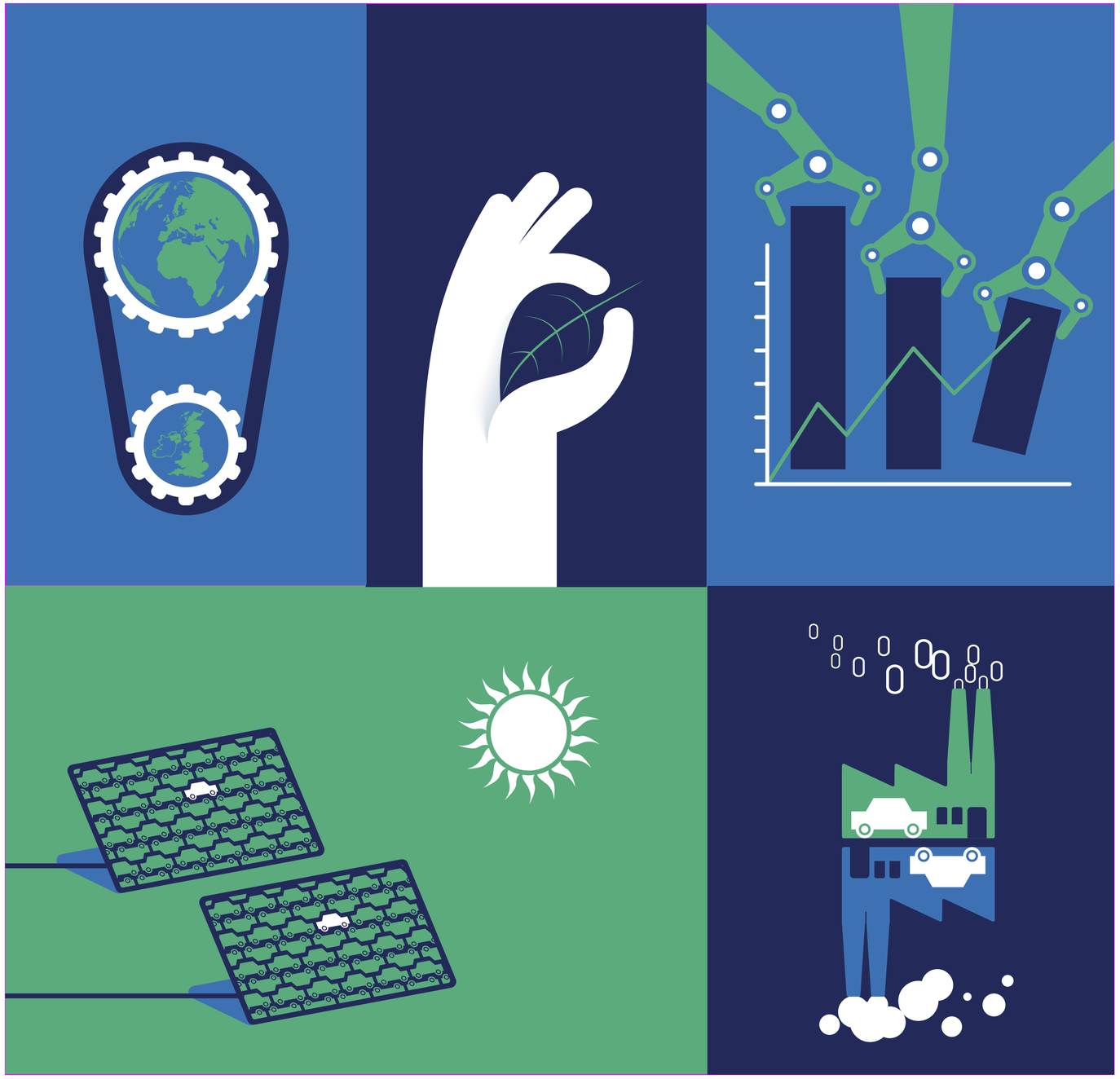


SMMT
DRIVING THE
MOTOR INDUSTRY

MANIFESTO 2030: AUTOMOTIVE GROWTH FOR A ZERO EMISSION FUTURE

June 2023

Supported by:

SHOOSMITHS

Mike Hawes, Chief Executive
The Society of Motor Manufacturers and Traders (SMMT)

A CRITICAL DECADE FOR UK AUTOMOTIVE TRANSFORMATION, AN OPPORTUNITY FOR THE NEXT GOVERNMENT

UK Automotive plays a critical role in the economy and society – keeping Britain on the move. We are a major contributor to the nation's economic wellbeing, investing in and developing technologies to advance zero emission mobility, and providing well-paid skilled jobs in businesses and their supply-chains in all regions across the UK. Society, communities and individuals would be left in the slow lane without the benefits automotive brings today and will continue to bring in the future.

But we are at a critical moment.

Automotive must carry the greatest burden of the decarbonisation of transport. We need to meet accelerated government mandated zero emission vehicle targets from 2024 and end of sale dates for specific technologies in 2030 and 2035. We must do this while taking consumers (and voters) on this journey – delivering affordable, sustainable mobility solutions and creating high paid, rewarding jobs and economic value for the UK.

Whichever party forms the next government, the next parliament will be critical to achieving the UK's net zero targets and the long-term future of the UK's automotive sector in the transition to zero emission vehicles.

All parties and all stakeholders must make binding commitments to ensure the UK continues to thrive and prosper in a future driven by green industry and clean technologies. Automotive is at the heart of this.

The next government must recognise the strategic importance of automotive to the UK economy, maintain its diversity and strong heritage, and its strengths as a global leader in advanced manufacturing and technology. All parties should commit to five key pledges:

01 A Green Automotive Transformation Strategy for a stronger economy
02 Net Zero mobility for everyone
03 Green skills for a greener future
04 Made in Britain – Made for the world
05 Powering the UK clean tech revolution

Finally, we call on all parties to enshrine our shared 2030 vision:

To develop a UK automotive ecosystem fit to deliver a zero emission future. An ecosystem which delivers a healthy market and vibrant domestic production footprint, founded on a resilient supply chain successfully evolved to meet current and future technological needs for a zero emission future. An ecosystem which delivers the affordability, mobility and charging solutions for everyone.

Only together can we achieve success.

CONTENTS:

UK AUTOMOTIVE: A PRODUCTION POWERHOUSE WITH A GLOBAL REPUTATION

Driving the economy and providing mobility solutions for all – from passenger to commercial vehicles – with a huge opportunity for delivering growth and prosperity in the net zero economy.

ECONOMIC IMPACT

£16 billion in GVA to the UK economy, we are home to everything from OEMs and supply chain to potential unicorns and high value start-ups

£34 billion We are the UK's largest source of exports for manufactured goods

More than 180 companies already involved in producing components for electric vehicles

UK has Europe's second largest car and van markets – a healthy domestic market is seen as key driver of inward investment

VEHICLE OUTPUT AND EXPORTS

70+ vehicle models built in Britain by 25+ manufacturing brands

Battery electric vehicles, hybrid, hydrogen, and fuel cell technologies.

UK manufacturing is diverse including: Car, van, taxi, bus, coach, trucks & HGV

1/3 Electrified vehicles comprise more than a third of all car production

£24 billion Finished vehicles are among Britain's most valuable exports, delivering revenue of £24 billion, £10 billion of which was for electrified vehicles

80% 80% of the vehicles produced in the UK are exported, more than half to the EU

JOBS AND SOCIETY

2.2 For every job in our sector, another 2.2 jobs are supported in adjacent sectors who benefit from a strong UK automotive industry

208,000 people employed directly in automotive related manufacturing

800,000 across the wider automotive industry

14% Automotive manufacturing wages that are 14% higher than the UK average.

SUPPLY CHAIN AND AFTERMARKET

Every part of the UK is involved in electric vehicle or component manufacturing

25% EV supply chain growing by more than 25% in the past five years

The UK automotive manufacturing supply chain currently employs 134,000 people

More than 2,500 automotive-specific companies

£29 billion Total turnover of £29 billion for supply chain

£51 billion Total turnover for aftermarket

THE PRIZE

If successful, by 2030 UK Automotive could be set for:

10X rise from 74,000 to over 750,000 electric vehicle car and van production

worth

£106 BILLION

between now and 2030

with further growth opportunities in supply chain, aftermarket and heavy duty vehicles

FIVE AUTOMOTIVE PLEDGES FOR THE NEXT GOVERNMENT

PLEDGE 1

A GREEN AUTOMOTIVE TRANSFORMATION STRATEGY FOR A STRONGER ECONOMY

POLICY ACTION

Publish a Green Automotive Transformation Strategy that supercharges UK Automotive to achieve Net Zero. A strategy which enables innovation, attracts investment and secures manufacturing of clean technologies in the UK to deliver economic growth and zero emission mobility.

PLEDGE 2

NET ZERO MOBILITY FOR EVERYONE

POLICY ACTION

Foster a reliable and affordable UK-wide recharging and refuelling network through binding targets complemented by a motor tax and regulatory system that ensures no one is left behind in the transition to Net Zero.

PLEDGE 3

GREEN SKILLS FOR A GREENER FUTURE

POLICY ACTION

Offer the skills workers want by creating a one-stop-shop national upskilling platform, and develop the future talent business needs, combined with greater STEM education in schools and a dynamic immigration system that attracts global talent.

PLEDGE 4

MADE IN BRITAIN – MADE FOR THE WORLD

POLICY ACTION

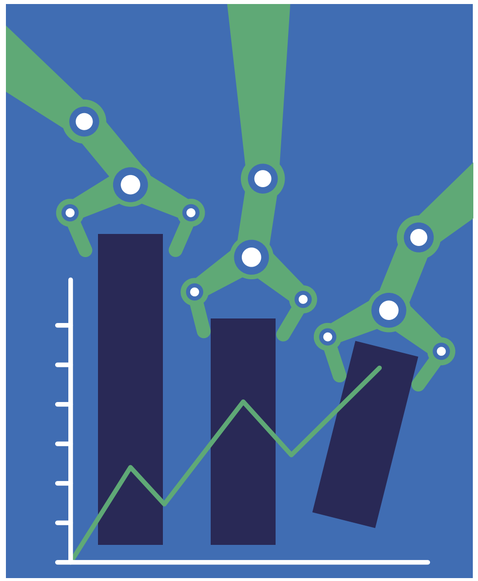
Position automotive and advanced manufacturing supply chains at the core of UK trade policy and market access. Secure access to global markets for tariff-free export of British-made vehicles, batteries and green technologies, and deliver export support services that allow businesses of all sizes to succeed.

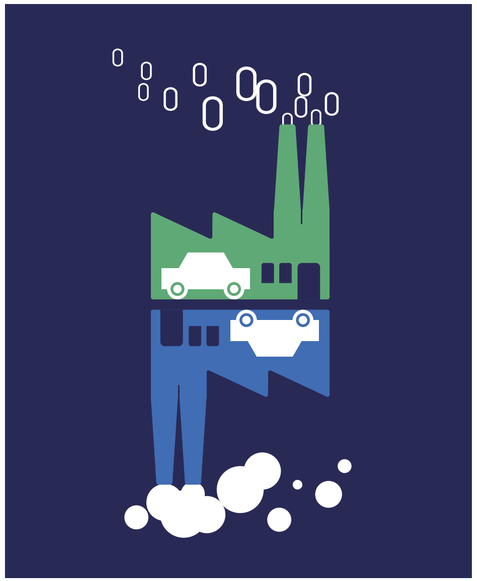
PLEDGE 5

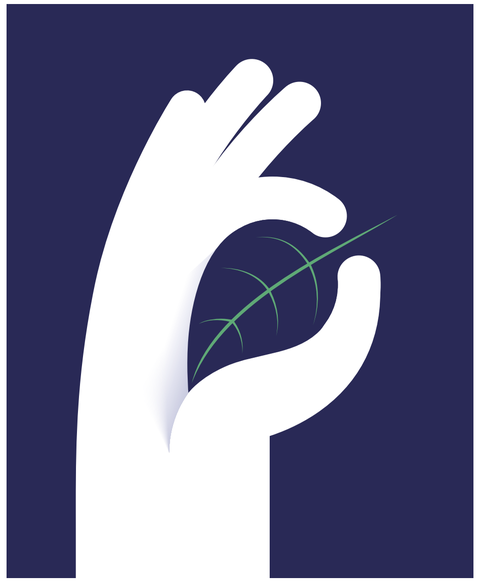
POWERING THE UK CLEAN TECH REVOLUTION

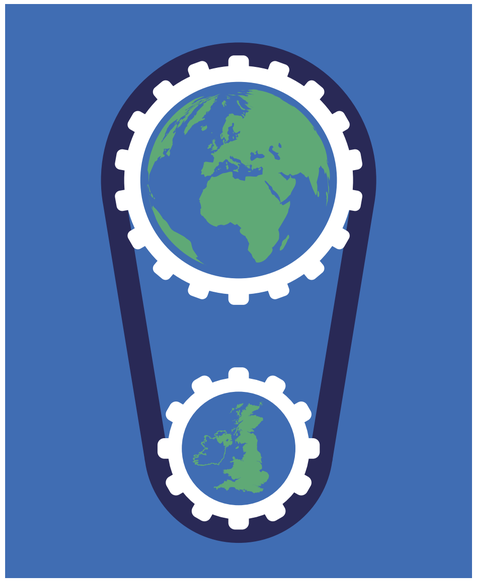
POLICY ACTION

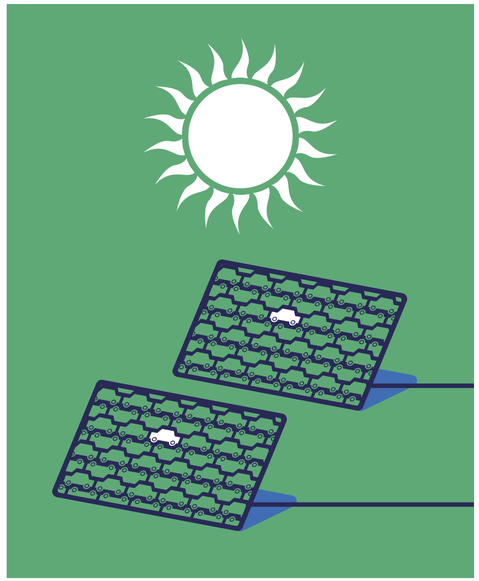
Ensure Net Zero-critical industries such as automotive are able to access affordable and internationally cost-competitive zero emission energy to power the clean tech revolution. Dedicated energy and investment measures should be available to make zero emission vehicle production and use a reality.











PLEDGE 1:

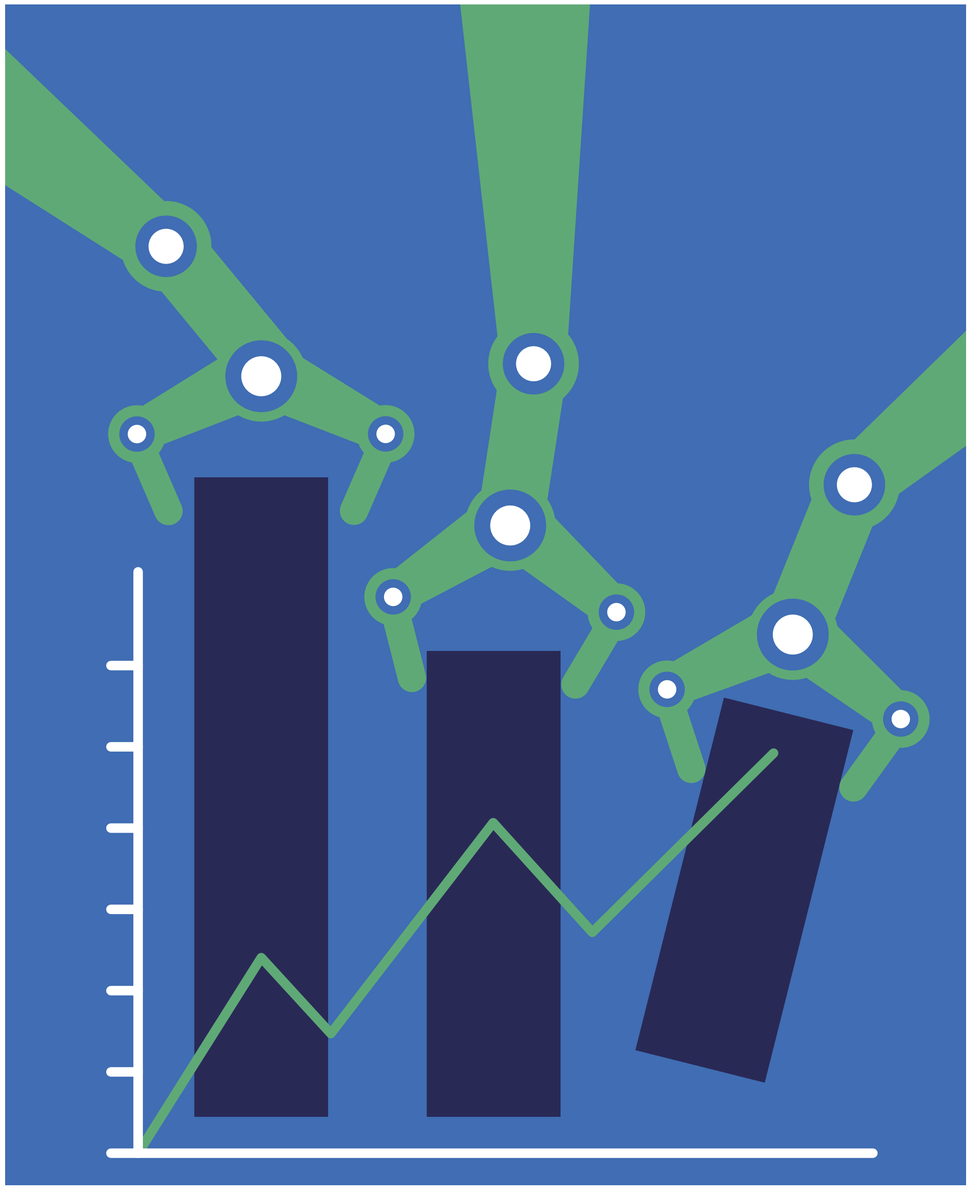
A GREEN AUTOMOTIVE TRANSFORMATION STRATEGY FOR A STRONGER ECONOMY

POLICY ACTION

Publish a Green Automotive Transformation Strategy that supercharges UK Automotive to achieve Net Zero. A strategy which enables innovation, attracts investment and secures manufacturing of clean technologies in the UK to deliver economic growth and zero emission mobility.

RECOMMENDATIONS

- An all-party, cross-Whitehall transformation strategy that inspires confidence in the UK, supercharges UK competitiveness and delivers on our 2030 vision
- A strategy which:
  - is holistic and comprehensive, covering volume and specialist vehicle engineering and manufacturing to supply chains and critical input materials
  - de-risks private capital investment and reflects the evolving international landscape to deliver a level playing field on which to compete with key markets and trading partners
  - maintains our world class innovation ecosystem – from academia and institutions – and critical programmes from the Automotive Transformation Fund to R&D tax credit, scale-up and commercialisation regimes
  - is dynamic, responsive and establishes best practice
  - utilises all the UK's available policy, fiscal and regulatory levers
  - is developed and championed in partnership by government and industry



KEY DATA

UK Automotive contributes

£16 billion in GVA

£78 billion turnover

from auto manufacturing annually

More than

£11 billion

2011 – 2022

has been committed to UK electric vehicle production and gigafactories between 2011 and 2022, with billions more invested globally to bring new technology to market

The automotive sector typically invests more than

£3 billion

in research & development annually and boasts 22 dedicated R&D centres across the country

The United States has put forward more than

$2 trillion

in the race for Net Zero across grants and loans for clean tech, including automotive and energy, infrastructure and semiconductors, with the EU responding in kind

BACKGROUND

A diverse economy is a strong economy. Advanced manufacturing is a fundamental component and major contributor to the UK economy with automotive adding £16 billion GVA last year, and vital to achieving Net Zero by 2050. The UK automotive sector operates in a highly competitive, global environment and has been hugely successful, historically attracting significant inward investment. That position is now under threat.

From technological transformation to changing trade rules, from climate ambitions to zero emission mobility, we need a clear, unambiguous industrial strategy dedicated to automotive and advanced manufacturing. Governments in competitor markets are offering sizeable subsidies and streamlining investment opportunities and bureaucracy to entice mobile capital from within the global industry. To compete, we must be dynamic, harnessing a cross-departmental strategy that de-risks private capital, accelerates permissions and seizes opportunities, that regulates with both business and consumer needs at pace and with purpose.

The UK needs to outline a generous medium-term incentive and subsidy programme and co-investment vehicles (similar to sovereign funds) that is easily accessible to business and deployed at pace. This should include grants and tax breaks to encourage the localisation and scaling of, in particular, a battery value chain and promote a circular economy. Funding should be prioritised for high-value or strategic activities such as minerals processing, cell manufacturing, battery reuse and remanufacturing, materials recovery and recycling, electric drive unit manufacturing and fuel cell production to position the UK through the remainder of the decade for a bright, zero emission future.

The UK can act as a regulatory leader and innovator in the age of zero emission vehicles. Certainty and direction of travel are hugely invaluable in highly regulated sectors such as automotive. Regulatory roadmaps developed across key government departments from Transport, to Business & Trade, and Environment to guide the future of holistic UK automotive regulation would help to create a framework that boosts business confidence and resilience in our sector. Simplifying red tape or fasttracking appropriate approval processes for capital projects – such as battery production or materials refining facilities, onshore and offshore windfarms, solar farms, energy storage, electrolysers, and carbon capture and storage, and automatically granting permits for defined green projects (like solar or wind) that meet specific technical criteria if there are no objections to the application within two months could, for example, halve the development time for green projects without compromising environmental and social considerations.

Maintaining our world class innovation ecosystem from R&D, start-up and scale-up pathways and linking academia, business and policy makers will keep the industry at the forefront of the technological revolution. The next government should protect these competitive advantages with long term funding and the supporting institutional establishments, including the UK Battery Industrialisation Centre, Faraday Institution, High Value Manufacturing Catapult and the Advanced Propulsion Centre.

This will act as a beacon to investors and consumers alike, aiding localisation of key production and supporting anchor vehicle manufacturers around which an active and healthy supply chain can co-locate and co-exist. The fundamentals of our sector are strong, despite recent headwinds. The UK is open and primed for Net Zero by 2050. UK Automotive can and must be at the forefront of this green transformation.

A GREEN AUTOMOTIVE TRANSFORMATION STRATEGY - EV SUPPLY CHAIN FOCUS

DE-RISK PRIVATE CAPITAL

- More generous incentives and subsidies
- Competitive energy costs
- Support renewable and decarbonisation projects
- Support clean-tech start-ups and scale-ups
- Green tech co-investment
- Upskill the workforce

REGULATORY REFORM

- Update outdated regulation and planning requirements to be appropriate for the electric vehicle age
- Reduce red tape and fast-track approvals for battery production and renewable energy projects
- Speed up green technology project funding
- Decouple electricity prices and renewables from gas

GLOBAL DIPLOMACY

- Expand and enhance free trade agreements
- Partner with mineral-rich nations
- Promote British investment in critical material mining
- Provide best possible trade conditions for remanufacturing

Source: Race to Zero, smmt.co.uk/wp-content/uploads/sites/2/SMMT-Race-to-Zero-report.pdf

PLEDGE 2:

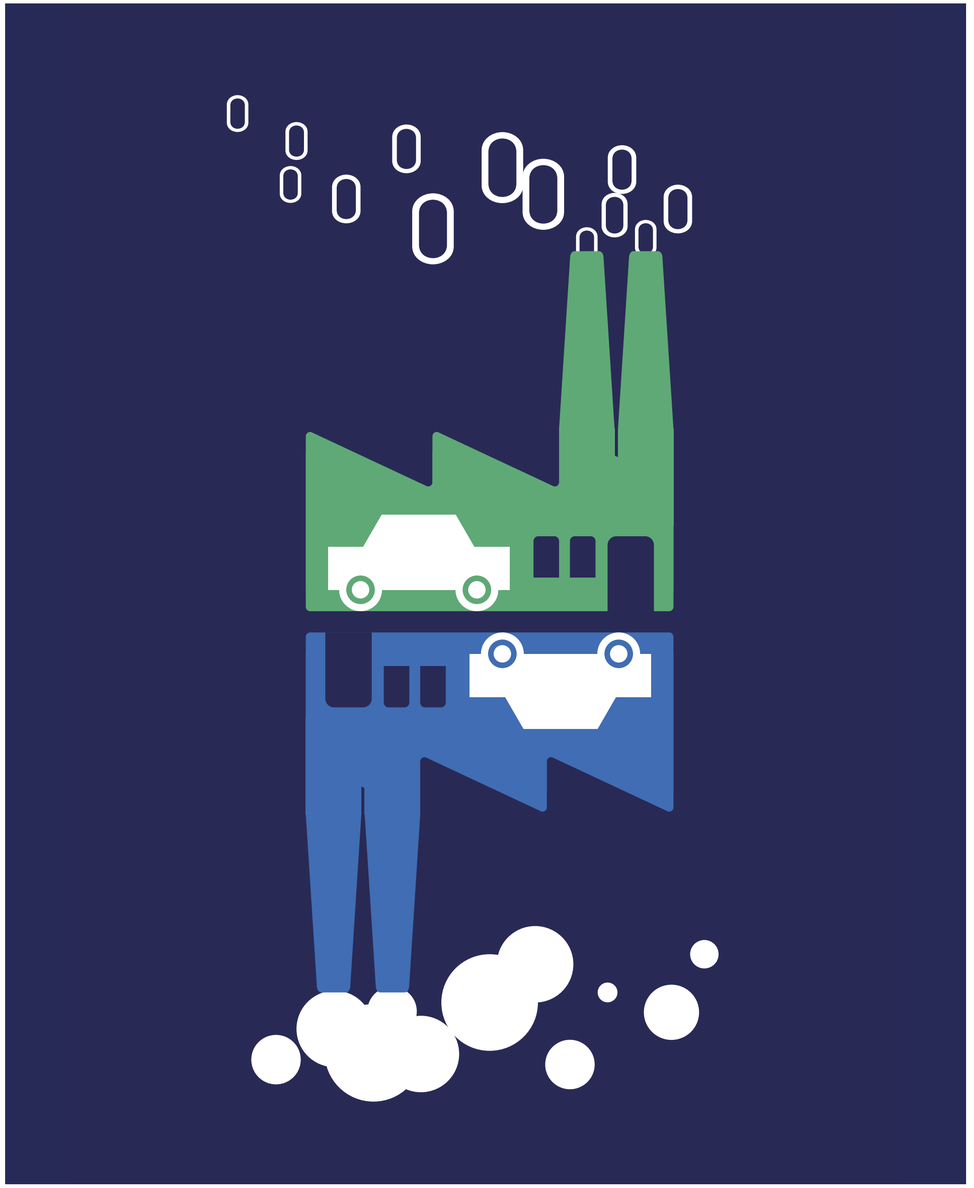
NET ZERO MOBILITY FOR EVERYONE

POLICY ACTION

Foster a reliable and affordable UK-wide recharging and refuelling network through binding targets complemented by a motor tax and regulatory system that ensures no one is left behind in the transition to Net Zero.

RECOMMENDATIONS

- Ensure everyone has a ‘right to charge’ by mandating delivery of public charging and refuelling infrastructure through binding targets, leading to a significant uplift and reliability of all types of public chargers across the whole UK.
- Commit to an infrastructure strategy which enables the rollout and funding of commercial and heavy duty networks to support the movement of goods and people across the country.
- Maintain appropriate incentives and grants, particularly for commercial and freight vehicles, to support the development, adoption, and total cost of ownership of zero emission vehicles and attract zero emission products to the UK market.
- Ensure a fair system of motor taxation and duties that encourage the switch to zero emission and provides long term certainty and affordability to consumers.



BACKGROUND

Successful decarbonisation can only be achieved if no one is left behind. For everyone to benefit, we need a reliable infrastructure network plus taxation and regulatory frameworks that preserve prosperity, equity and enhance choice wherever drivers may live or work. This will require all stakeholders to play a role. With a zero emission vehicle mandate from 2024 to 2030, greater and faster investment in infrastructure and more incentives to encourage purchase are essential to drive consumer confidence and accelerate uptake.

Our outlook remains positive. With the right regulatory framework, the right flexibilities and the right support mechanisms, the UK automotive industry can deliver a successful and competitive ZEV transition., however, this is contingent on the key assumption that charging infrastructure is no longer a barrier to mass market uptake. Left entirely to market forces, the rollout of chargepoints will risk prioritising commercial rather than consumer interests, with more profitable types of chargers and high-utilisation locations dominating and the equitable provision of public chargers becoming increasingly inadequate, inequitable and disproportionate as EV uptake accelerates.

Unlocking the full environmental and socioeconomic benefits of this transition requires collaboration involving industry, government and key sectors, including infrastructure and energy providers. Credit should be given to government, local authorities and charging sector for the growth in infrastructure since 2011. However, myriad studies and consumer surveys have invariably and consistently shown that inadequate infrastructure provision is still a major concern for many consumers – and is a main barrier to mass uptake. Range anxiety has been replaced by charging anxiety.

The next government must put consumer interests first in every aspect of charging infrastructure development and expansion with three key principles in mind: adequacy, experience and equity. We must challenge all stakeholders to make charging as easy as, if not easier than, conventional refuelling. No socioeconomic groups or communities, particularly those in rural areas or reliant on on-street residential charging, should be disadvantaged or left behind. Public charging must also be affordable so that consumers are not 'penalised' in the pocket for not having a private driveway or access to a dedicated home charger.

We also recognise the need to develop the future motor taxation roadmap as the transition to zero emission vehicles changes the obligations on drivers. This must be carefully crafted as consumers make the shift to new technologies, allowing them to make an informed choice and have greater understanding of their total cost of ownership and financial obligations. Anything that could act as a deterrent to those who are making, or considering making, the transition to zero emission vehicles when there is already a step-change in cost compared with the same combustion engine vehicle equivalent should be carefully considered and well publicised.

Today, consumers face a double hit on cost as purchase incentives for private buyers in the UK have been systematically reduced and removed in the last two years, making the UK one of the few markets around the world to have no direct consumer incentives – while other major markets still maintain or are introducing them in both new and used markets. A comprehensive review of motoring taxes and zero emission incentives is required to provide longer-term consumer confidence and to support mass market uptake and fleet renewal.

> For everyone to benefit, we need a reliable infrastructure network plus taxation and regulatory frameworks that preserve prosperity, equity and enhance choice wherever drivers may live or work

KEY DATA

Government will phase out new sales of:

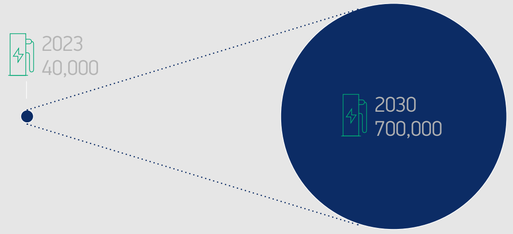
- Pure internal combustion engine cars and light vans by 2030 — 2030
- Other non-zero emission technologies by 2035 — 2035
- Non-zero emission heavy vehicles (>26t) by 2040 — 2040

Car registrations for battery electric (267,000) and plug-in hybrid (101,000) represented 22.9% of the market in 2022. In 2024 figures are forecast to be:

444,000 BEV

145,000 PHEV

The UK is targeting between 300,000 and 700,000 public chargers by 2030



with just over 40,000 available in May 2023. By comparison, Germany is targeting 1 million by 2030.

PLEDGE 3:

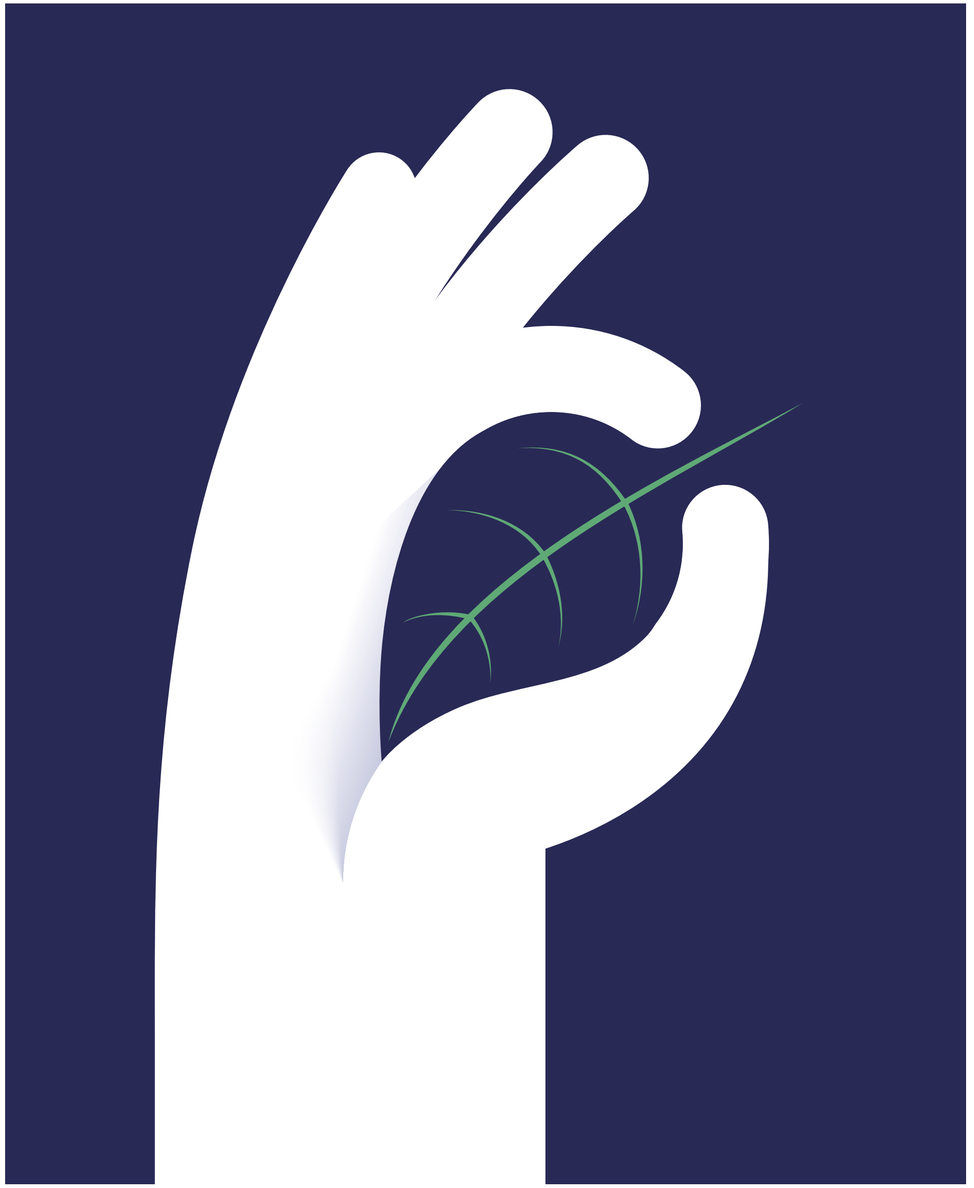
GREEN SKILLS FOR A GREENER FUTURE

POLICY ACTION

Offer the skills workers want by creating a one-stop-shop national upskilling platform, and develop the future talent business needs, combined with greater STEM education in schools and a dynamic immigration system that attracts global talent.

RECOMMENDATIONS

- Enable a Net Zero automotive workforce that develops future domestic talent, retains and upskills the existing workforce, and continues to attract global talent and expertise.
- Champion the delivery of a long-term, online National Upskilling Platform for automotive and advanced manufacturing.
  - Identify and accelerate the growth of electrification and digital upskilling which will provide insight into skills opportunities and link employers' needs to appropriate modular training provision.
  - Create centralised governance structures and trusted, government-backed branding.
- Support workforce upskilling through the reform of the Apprenticeship Levy, allowing a proportion of unspent Levy funds to be focused on priority training areas such as electrification, decarbonisation and digitalisation.
- Continue to elevate STEM in further education and promote automotive and manufacturing as life-long career opportunities, contributing positively to green growth.
- Regularly review skilled visa routes and shortage occupation lists to reflect business needs as technology evolves at pace to attract international talent to the overall benefit UK industry.



KEY DATA

Automotive employs more than:

208k directly

800k wider supply chain

Every job in the sector creates another 2.2 jobs in sectors from chemicals and steel to finance and advertising

Automotive manufacturing annual salaries are typically 14% higher than the average across all UK employment and the combined national salary contribution of automotive manufacturing amounts to over

£6 billion

There are more than 3,000 apprenticeships employed by vehicle manufacturers and Tier 1 suppliers

The Faraday Institution indicates a thriving industry could provide employment for 170,000 in EV manufacturing,

35,000 in gigafactories

65,000 in the battery supply chain

by 2040

BACKGROUND

Automotive creates a highly skilled, high wage workforce across the UK from the production floor through design and engineering to the executive offices across every region in the UK. More than 208,000 people are directly employed with more than 800,000 in the wider automotive sector including retail. A broad range of other industries rely on automotive, such as raw materials and chemical producers that make up parts, components and vehicles, in turn providing mobility and logistics which power the whole economy – from food deliveries to the school run. The end of sale of traditional internal combustion engine vehicles in the UK by 2030 means that despite our world-renowned manufacturing force, the sector must urgently re-establish itself as an attractive and diverse sector in which to build a career. Many existing workers, already contributing to our industry, will see roles and opportunities evolve in the zero emission transition and we need new and emerging skills at all levels and across multiple business areas today, as well as to secure the talent pipeline for the future.

Apprenticeships have long played a key role in our industry and, as a result, getting apprentice training and funding right is of utmost importance. It's why the sector has always been so committed to employer-led apprentice standards and called for reforms to the Apprenticeship Levy. It's critically important to make sure that course content and spending matches business needs, so that the individuals entering the industry and the companies employing them are confident in their ability to be job-ready.

An Automotive Council survey at the start of 2023 found there are approximately 7% production labour vacancies in the automotive supply chain, compared with a UK national average of circa 3.4%, with soaring demand for emerging skills requirements in digitisation, software and electrical engineering. The level of digitalisation to automotive products is highly complex and manufacturers have specific skill requirements relating to systems engineering, the digital factory of the future, and software design. Manufacturers also need to ensure technical compliance, for example in cybersecurity certification, and that their technically skilled workforce can reskill from ICE vehicles to BEVs.

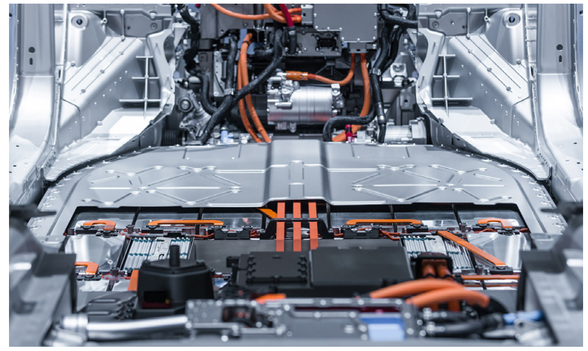
To maintain world-leading levels of productivity and meet consumer demand, we must continue to attract international talent and skilled labour, and develop a critical mass of domestic capability and training capacity, while recognising that development of a domestic talent pipeline will take some time. We must also more regularly review shortages to be dynamic in responding to rapidly changing skills demands and bring in the very best talent from around the world.

The UK's retail and aftermarket sectors contain a range of organisations, from small vehicle repair and service workshops to large dealership chains. These equally face an urgent need to maintain existing internal combustion engine skillsets for vehicle technicians while transitioning to new powertrains, enabling their employees to work safely with electric vehicles so that these products can be serviced, maintained, and repaired.

Much of the UK's automotive workforce is also employed by small and medium-sized (SME) companies that are exempt from the Apprenticeship Levy and do not have large future talent transformation programmes. For these companies, finding and keeping skilled and experienced labour is increasingly challenging.

Finally, we must continue to increase the diversity of our workforces, which will make the sector collectively stronger, more resilient and ready for whatever challenges lie ahead. Manufacturers are committed to schools outreach at all ages and recognise the contribution they must continue to make to elevate STEM awareness in young people from all backgrounds.

Many existing workers, already contributing to our industry, will see roles and opportunities evolve in the zero emission transition and we need new and emerging skills at all levels



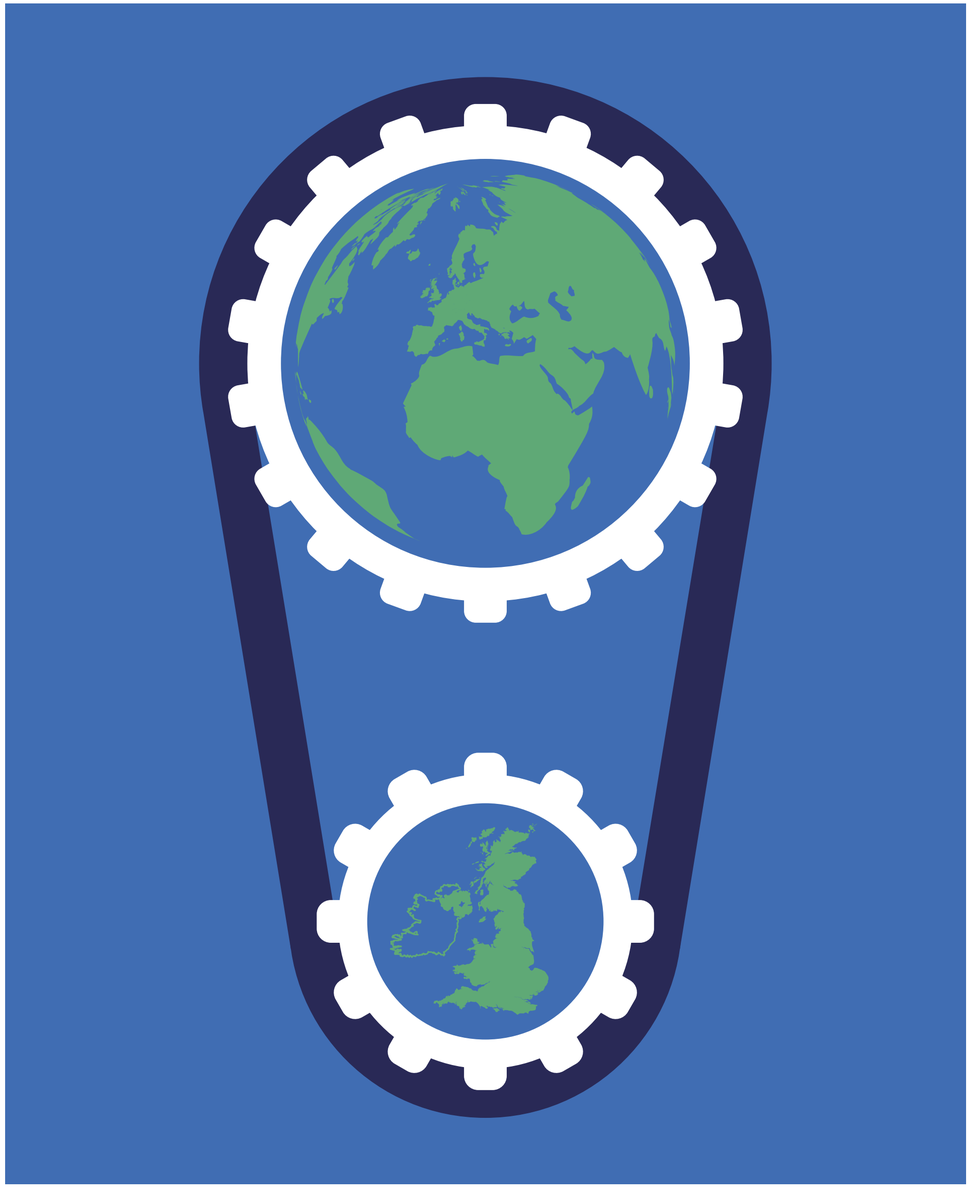
MADE IN BRITAIN – MADE FOR THE WORLD

POLICY ACTION

Position automotive and advanced manufacturing supply chains at the core of UK trade policy and market access. Secure access to global markets for tariff-free export of British-made vehicles, batteries and green technologies, and deliver export support services that allow businesses of all sizes to succeed.

RECOMMENDATIONS

- Ensure Free Trade Agreements support the UK's industrial capability and changing technologies through appropriate Rules of Origin and market access rules.
- Establish and maintain new and innovative partnerships with minerals-rich countries such as Australia, Canada and Indonesia to secure supplies of critical raw materials and other inputs.
- Create the best possible conditions for remanufacturing and the circular economy to source tariff-free from anywhere, to process and/or recycle them in the UK for re-use at home and abroad without tariffs.
- Deliver a modern border and customs framework that facilitates smooth, cost-effective trade, supported by trade and export services and funding.



BACKGROUND

Britain has always been an outward-facing champion of free and global trade, which has given consumers wide-ranging choice at competitive prices across different zero emission technologies.

UK Automotive is an exemplar of innovative, high value, high quality British design, engineering, manufacturing and assembly – with global market appeal. From small volume and luxury producers to large volume car and light van manufacturing; heavier commercial vehicles, including buses, trucks and coaches, to remanufacturing and the circular economy, the UK offer is unrivalled. We produce and export it all. The automotive sector delivers almost 10% of the UK's total annual goods exports with our products sold in more than 150 countries around the world. Last year, exports were valued in excess of £34 billion despite the economic headwinds and disruption in changing trade rules, the pandemic and supply chain issues. But competition is fierce, and the race to zero is global.

To continue our success, we need free trade agreements and trade partnerships which prioritise our strengths, build economic resilience, and open up new markets and supply chains for world-class vehicles and components to be made here in Britain and exported to the world. For example, challenging local content requirements under free trade agreements require our industrial and trade policy to be co-ordinated to drive investment in domestic capabilities (such as minerals refining, cathode and anode active materials, battery component and cell manufacturing, and electric drive units). Also crucial are achievable trade and origin requirements to ensure we can benefit from and maximise tariff-free trade, including with the EU, which will continue to be the UK's most significant automotive trading partner.

As technology evolves, we need greater access to critical minerals and new inputs of production which are sustainable, affordable and support our industrial capabilities and international treaty obligations, and avoid non-tariff technical barriers to trade. The rapid shift to electrified, low emission and automated vehicles offers a huge market opportunity as British manufacturers develop new vehicles and powertrain technologies. The window of opportunity is open now but will not wait forever.

Finally, businesses need a modern border and customs framework that facilitates smooth, cost-effective trade and export support services and funding which elevate and promote the UK as the best place to do business and as a global manufacturing destination of choice: Made in Britain, made for the world.

The automotive sector delivers 10% of the UK's total annual goods exports with our products sold in more than 150 countries around the world

Global demand for British cars, market share 2022

8 out of 10 cars made in the UK are exported

606,838 cars manufactured for export in 2022

USA 13.3%
China 8.7%
Japan 2.9%
South Korea 2.0%
Australia 1.9%
Turkey 1.4%
Canada 1.3%
Switzerland 0.9%
South Africa 0.7%

KEY DATA

The UK exports around

80%

of all production to some 150 countries, with more than half headed for the EU, with significant growth in Asian markets.

Total automotive trade was worth

£94 billion

in 2022 for finished vehicles, engines, parts and components.

Exports of UK-built battery electric, plug-in and hybrid passenger cars to the EU were worth £5.6bn in 2022,

exceeding the £2.8bn value in exports of internal combustion engine cars (An increase of more than 137% since the end of 2020).

PLEDGE 5:

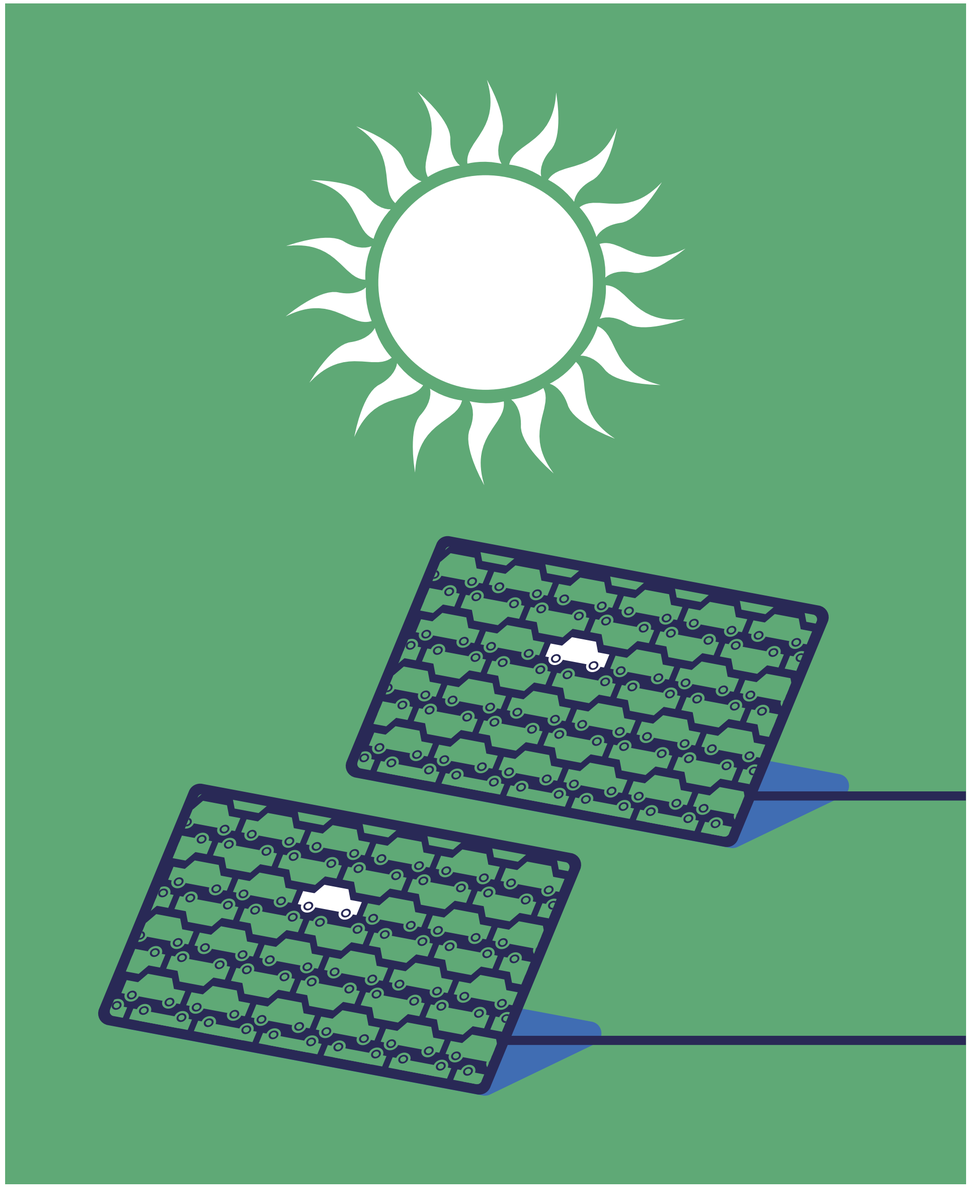
POWERING THE UK CLEAN TECH REVOLUTION

POLICY ACTION

Ensure net zero-critical industries such as automotive are able to access affordable and internationally cost-competitive zero emission energy to power the clean tech revolution. Dedicated energy and investment measures should be available to make zero emission vehicle production and use a reality.

RECOMMENDATIONS

- Deliver an easily accessible abundant supply of low cost zero emission electricity for both consumers and industry
- Commit to maintain and grow programmes that enable industrial transformation and decarbonisation, such as the Industrial Energy Transformation Fund and Climate Change Agreements, through to 2030.
- Accelerate funding and permissions, and increase capability, to reduce waiting times for grid connections, and upgrades for production facilities and charging infrastructure.
- Confirm a long-term cross-sector demand-side strategy for hydrogen, including manufacturing and transport, with targeted support to develop a national hydrogen refuelling network and an efficient and affordable supply of hydrogen for transport applications.



KEY DATA

Automotive costs are significantly higher in the UK than in sister plants across the EU,

60% higher

with electricity costs on average double those in the EU, and gas costs 60% higher.

Seven in 10 SMMT members are concerned about the impact of onerous energy cost increases on their business operations.

The UK has a strong renewable energy foundation. As of 2022, Britain's second largest source of energy was wind power and, overall, almost a third of all electricity used in the UK came from renewables

Of the world's top 20 automotive producing countries, the UK currently ranks seventh best for low carbon energy generation

269gCO2 /kWh **7th**

ahead of Germany and the USA, but behind France, Spain and Italy. As of 2021, emissions from UK energy generation were -17% lower than the EU average.

BACKGROUND

The automotive sector is predominantly a highly competitive, low margin industry but must spend millions of pounds on energy each year. Energy is typically the second largest in-house cost in manufacturing, and the UK has the highest electricity costs in Europe – and they are increasing more rapidly than in competitor countries. With projections of electricity demand facing large increases by 2035 and 2050, there is no doubt that more capacity, better use and flexibility is required. Zero emission energy supplies can be an important hook to attract investment in UK automotive, with businesses keen to produce zero emission products in fully decarbonised manufacturing facilities.

The entire industry is committed to decarbonising industrial practices from well to wheel, but this is impossible without access to low cost, stable supplies of clean energy to maintain the sustainability and competitiveness of UK vehicle manufacturing. Abundant renewable energy can unlock the clean technology revolution for business and consumers at this pivotal moment in the transition to zero emission. Electric vehicles and batteries are typically more energy intensive to produce than conventionally fuelled cars, meaning affordable clean energy will play a major role in investment decisions on where to build next generation models.

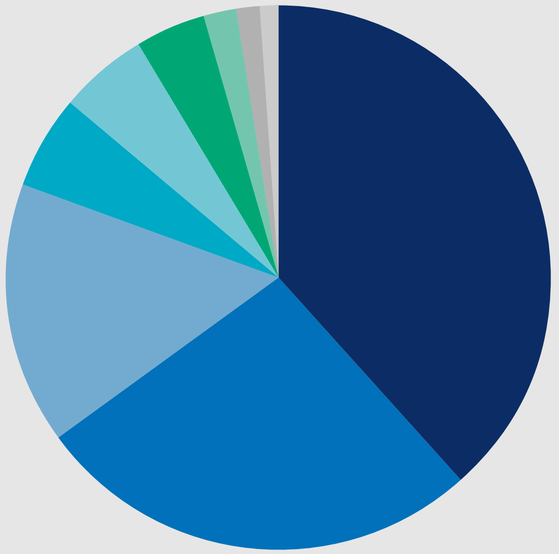
There is a leading role for government to ensure industries – particularly those on which it has set accelerated decarbonisation targets – are not held back. Attention should be given to net zero critical industries that can secure quick carbon savings efficiently, and enable the UK to meet carbon budgets in the lead up to 2030 and beyond. With the right conditions, the UK's energy mix provides an opportunity to be a low carbon hub for EV production and the EV supply chain and eliminate emissions – not just displace them. The UK can be positioned as a place where green energy is used to produce green batteries and powertrains, which then power green vehicles.

Tackling high energy prices is a win-win for businesses and consumers. Expensive electricity bills are a deterrent to making the switch from combustion to zero emission vehicles, as they damage cost of ownership comparisons, inflate production costs, and undermine consumer and business confidence.

The UK's Carbon Budgets delivery of Net Zero depends on a rapid transition to zero emission vehicles, manufactured with, and powered by, clean energy. With the growth of zero emission vehicles, the transport and electricity sectors are becoming increasingly interlinked. The next government should therefore designate the automotive sector as a net zero critical industry, linked to a dedicated package of energy and investment policies that encourage growth and transformation within the sector, and fast-track long-term decarbonisation of the UK's energy mix across the whole economy.

Current UK energy grid mix 2022 %

38.5%	Gas	4.4%	Solar
26.8%	Wind	1.8%	Hydro
15.5%	Nuclear	1.5%	Coal
5.5%	Imports (mixed source)	0.9%	Energy storage
5.2%	Biomass		



With the growth of zero emission vehicles, the transport and electricity sectors are becoming increasingly interlinked

JLR
CREATING MODERN LUXURY AND DELIVERING NET ZERO, FROM BRITAIN TO THE WORLD

JLR is a house of world-renowned luxury British brands including Range Rover, Defender, Discovery and Jaguar. The company has committed to invest £15 billion over the next five years into their industrial footprint as the next chapter of their Reimagine strategy unfolds.

The UK is at the heart of JLR's global operations with over 3,000 employees across twelve sites. JLR's industrial footprint, vehicle programmes, autonomous, AI and digital technologies, and people skills will all benefit from this significant uplift in funding.

In a boost to the nation's own net zero ambitions, the company will accelerate its transition to modern luxury car manufacturing and electrification here in the UK.

- The Halewood plant in North West England will become an all-electric production facility and its next generation medium-size SUV architecture will now be pure-electric, adapting its vehicle line up to meet the needs of different markets around the world.

- In the West Midlands, the first of three reimagined modern luxury Jaguars – a 4-door GT – will be built in Solihull, for sale in selected markets from 2024. Castle Bromwich's stamping facilities that prepare pressed body metalwork for JLR's vehicles will evolve to provide bodywork for electric models. The Engine Manufacturing Centre in Wolverhampton – currently producing internal combustion engines – will become the Electric Propulsion Manufacturing Centre moving to produce electric drive units and battery packs.

- Progress on industrial decarbonisation will see a 46% reduction in Greenhouse Gas emissions across manufacturing and operations (Scope 1 & 2) and by 54% across vehicle emissions and value chains by the end of the decade.

- State-of-the-art digitalisation will help to deliver end-to-end visibility throughout the supply chain, greater control and in-house design of the BEV value chain, and a long-term strategy to ensure security of supply and resilience.

To realise the full potential of the transition the government must work in partnership with domestic manufacturers like JLR to create the competitive business and trade environment, regulatory certainty, skills provision, and overarching strategy that this critical period leading up to 2030 requires. However, the challenge is also clear. For example, by the end of the decade JLR forecast global demand for approximately 50 giga-watt hours of battery cells for their electrified vehicles.

JLR's public commitment and substantial investment in local production epitomises automotive's commitment to a net zero future and showcases the very best of British industry. Together, we have the ability to position UK automotive at the centre of the global transition to zero emission mobility if the right conditions are in place.

To continue to compete in the highly competitive, global automotive market. To invest with confidence in the UK's industrial footprint. And to accelerate net zero for everyone.

TOYOTA MOTOR MANUFACTURING (UK) LTD
CHAMPIONING VEHICLE AND ENGINE MANUFACTURING FROM THE HEART OF BRITAIN

Since 1992, Toyota – the world's largest volume vehicle manufacturer last year – has been producing vehicles and engines here in the UK and continues to innovate for the future with the development of the prototype hydrogen fuel cell Toyota Hilux. TMUK employs 3,000 employees across two sites and the Burnaston site is home to the iconic Corolla hybrid model in Europe. For more than 20 years, Toyota globally has been promoting a multi-path approach to carbon neutrality by offering a diverse vehicle line-up of all electrified technologies including hybrid, plug-in hybrid, battery electric and hydrogen fuel cell vehicles.

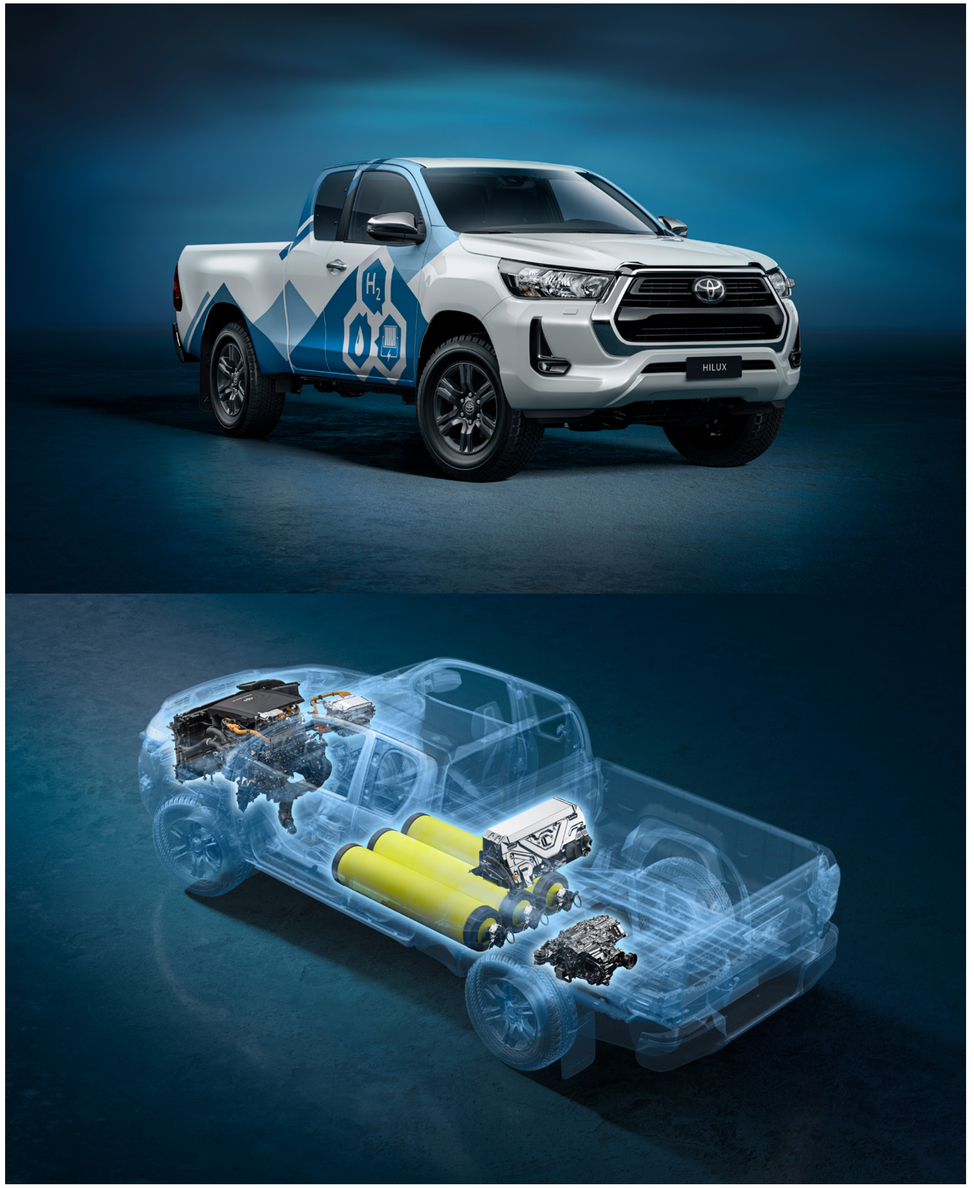
In September 2021, TMUK was able to establish a project consortium to pioneer the next generation of hydrogen fuel cell technologies in Derbyshire at the Burnaston Plant, leveraging targeted funding from UK Government through the Advanced Propulsion Centre (APC) for zero-emissions vehicle development to make the project a reality, and build long term expertise and self-sufficiency in advanced manufacturing of new drivetrains.

In collaboration with highly skilled UK-based technical engineering partners, including Ricardo, ETL, D2H and Thatcham Research, the project aims to adopt second generation Toyota fuel cell components, as used in the latest Toyota Mirai, for the transformation of a Hilux into a fuel cell electric vehicle. The initial prototype vehicles will be produced at Burnaston during 2023, which if successful would lead to preparations for small series production.

The successful achievement of the project for TMUK in a globally competitive industry epitomises the symbiotic link between domestic, vibrant production and a healthy market, accompanied by a supportive innovation ecosystem. The UK is one of the key markets for pick-up trucks and is an important market for Toyota. This funding represents a tremendous opportunity to develop a zero-emission solution in a critical market segment, which will in turn help to foster a virtuous cycle to bring greater innovation and emerging technologies to market.

The UK's innovation ecosystem plays a fundamental role in the UK automotive landscape offering unique opportunities to bridge the gap between industry and future technological requirements, and notably support later stage R&D that takes a product from proof of concept to prototype vehicles. Maintaining a world-class, well-funded collaborative approach to innovation to 2030 and beyond should be a win-win ambition for government and industry.

From product to production, Toyota is also driving industrial decarbonisation to support net zero, with ambitions to make Deeside Engine Plant carbon neutral by 2025 and Burnaston by the end of the decade. The installation of 7.8 MWp of solar capacity has already delivered significant carbon savings. Prioritising upgraded grid connections and ongoing support for decarbonising industrial processes could unlock a further 16.3 MWp clean energy during 2024 to accelerate ambitions. TMUK is fully committed to delivering a zero-emission future today, and for decades to come.



HYDROGEN VEHICLE SYSTEMS (HVS): THE UK'S FIRST INDIGENOUS HYDROGEN COMMERCIAL VEHICLE, DESIGNED AND BUILT FROM THE GROUND UP

HVS was founded in Glasgow, and rejuvenated in 2020, rapidly growing from seven to fifty employees across three sites. This new British OEM seeks to disrupt the commercial and heavy goods vehicle markets with new zero emission powertrain technologies.

HVS is committed to manufacturing in the UK with a predicted workforce of 600 across all key disciplines, following a growth strategy that prioritises agility, remains lean, and utilises partnerships to further enhance capability.

The ZEV challenge will shape the future of the heavy-duty segment, which will increasingly demand the right technology for the right use and force the evolution of traditional business operating models that can amplify these high value assets with maximum return on investment, improved total cost of ownership, and profitability.

A government-backed automotive ecosystem has so far helped HVS to catalyse wider investment and can act as a vote of confidence that the UK wants to be a leader in zero emission mobility. Early private funding of £5 million to develop a medium commercial vehicle technology demonstrator was quickly followed by APC grant funding – worth £30 million – to develop a propulsion project for the HGV tractor unit powertrain. A further £25million of private investment was received during that time to match fund the APC and further develop their vehicles.

As a consequence HVS has been able to successfully pursue a ground up approach to this new technology creating innovative patents, groundbreaking software systems, and optimising the vehicle for high-load carrying zero emission use – helping to develop a product refuelled in around 20 minutes, comparable to diesel, with up to 600km range.

From start-up, to scale-up and commercial rollout, HVS also faces similar challenges to those facing incumbent manufacturers on the decarbonisation journey:

- Incentives to bridge the investment gap until cost parity is achieved later in the decade, e.g. Germany currently offers up to 80% of the cost differential for heavy ZEVs to equivalent diesel models.
- A reliable UK hydrogen refuelling network, where HVS analysis suggests as few as seven hub stations could offer initial UK-wide coverage for set-route, long distance requirements
- Regulatory certainty to ensure suitable interoperability with the EU and peer markets to avoid costly or multiply derivative vehicles (especially in the N3 category).
- Access to global supply chains and help to mature and diversify the emerging fuel cell component markets, typically dominated by Asia-Pacific and North America.
- And; develop new skills and courses across high voltage, hydrogen, and aftersales through an all stakeholder approach. e.g. HVS are working with local colleges to raise awareness and skills training in hydrogen and electric vehicles, to deliver job ready workers in the absence of nationally available advanced courses.

Ultimately, there is an opportunity for an active role and greater collaboration by government to raise awareness and public perception of hydrogen technologies, foster the heavy commercial vehicle sector, build out infrastructure, and remove barriers to growth.

HALFORDS:
GREEN SKILLS FOR TODAY, TOMORROW AND THE FUTURE, KEEPING BRITAIN ON THE MOVE

With a heritage stretching back over 125 years, Halfords has established itself today as one of the UK's leading retailers of motoring services and products. Through Halfords Autocentres, it is also one of the nation's leading operators in vehicle, servicing, maintenance and repairs from a 650 garages and over 700 mobile vans – with 90% of the UK population living within 20 minutes of a Halfords location.

The Independent Aftermarket is, however, facing acute skills challenges in the transition to zero emission mobility. There is a shortfall in apprenticeships programs and those seeking a career pathway in automotive as the established model is upended by the net zero transformation.

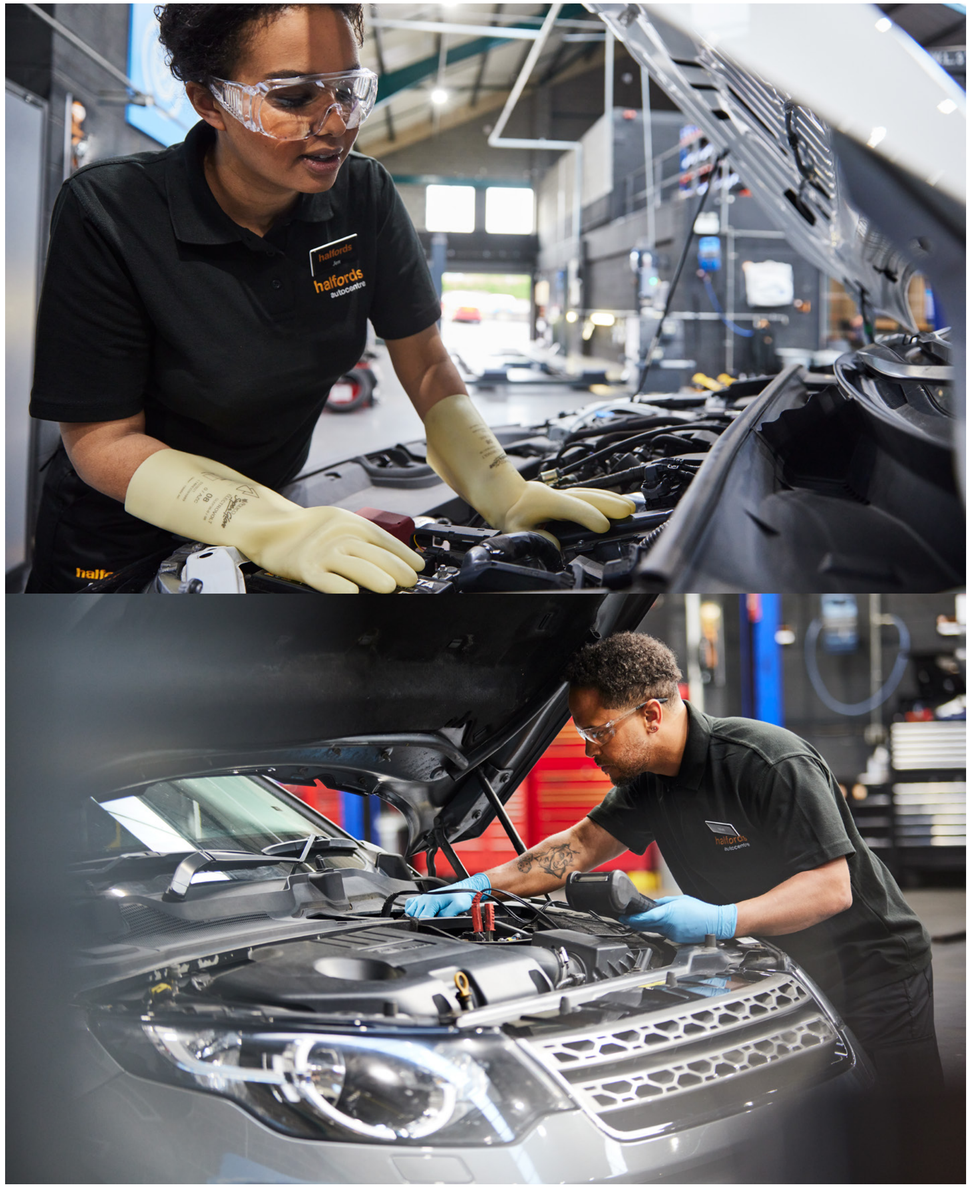
There is an ever greater demand for STEM-based competencies as existing roles evolve from traditional hands-on, heavy labour to wiring diagrams and data analysis. Positively, the changing profile of these jobs also opens up the sector to greater diversity and opportunities to attract a wider range of candidates with differing abilities. But the aftermarket must now balance servicing the existing UK car parc from combustion engine to hybrid to the growing zero emission fleet.

Halfords have sought to lead the way, running in-house programs since 2016 and trained over 1100 technicians with these new skills, introducing EV courses at level 3 from 2018 but there is a high demand across the entire of automotive. As a result, Halfords can now service every make and model on the UK market with the right skills, equipment and data access. In November 2022, they committed a further £3.5 million for training and recruitment over next 12 months, introduced over-50s apprenticeships and continued expand the catchment for potential talent by pioneering new avenues.

One example is a new programme in collaboration with the Palmer Foundation, Institute of the Motor Industry, First Step Trust and London South East Colleges, to get young people from disadvantaged backgrounds into automotive. It brings new VR platforms and controlled environments to help people embark on the first step of a career in automotive who may not have naturally gravitated to these positions. Launched in late 2022, the trial is already yielding success with 6 young people due to start apprenticeships in September from 22 work trials drawn from this emerging, diverse talent pool.

There is a convening role for the next government to grow the volume and standards of skilled EV and hydrogen technicians across the whole industry in partnership with employers, including through the dynamic use of apprenticeships levy funds, schools engagement, and appropriate skilled visa routes. This will improve consumer choice and drive competition in the marketplace given a potential shortfall of 4,500 qualified technicians by 2029, increasing to 16,000 by 2032.[1]

[1] IMI EV Technicians Forecast – March 2023



LKQ EURO CAR PARTS: RETHINKING SUSTAINABILITY, EQUITY AND INCLUSION TO BETTER SERVE PEOPLE, PLANET, AND COMMUNITY IN THE MOST DIVERSE VEHICLE PARC IN EUROPE

LKQ Euro Car Parts is one of the UK's leading distributors of parts for all makes of cars and light commercial vehicles. They employ more than 8,000 employees across almost 280 branches, 15 rapid fulfilment centres and 2 central distribution centres supporting independent aftermarket and consumers. The business is starting to support over 4000 models including new Battery Electric Vehicle models, with over 2000 BEV parts stocked today and introducing a wider sustainability strategy that emphasises planet, people and community.

From a planet perspective, LKQ Euro Car Parts operates a significant transport and distribution fleet to keep the business and customers supplied and decarbonising from within. Their HGV fleet of 120 vehicles now includes thirty CNG vehicles to reduce CO2 emissions and enable the exploration of different ways of operating to improve sustainability and environmental performance. They have also introduced electric models into the LCV fleet to support last mile delivery. This goes beyond the vehicle too, with planned changes to packaging that will help create positive impact through optimised loads and use of space to reduce the number of required journeys.

Government must now ensure critical infrastructure is available so businesses can go further and faster to secure logistics networks that enable all businesses to rethink delivery solutions and satisfy customer needs. This will boost confidence in the shift towards zero emission vehicles in automotive and elsewhere.

From a people and community perspective the company is championing equity, diversity and inclusion, as well as skills and talent development. A public '25 by 25' commitment will ensure that at least a quarter of its entire workforce is made up of women by the end of 2025. The creation of a new internal taskforce – PAVE (People Adding Value Everywhere) – will support this effort and the wider ED&I agenda by exploring cultural challenges and championing change across the business, including training, peer support, and mentorship. They are also translating learnings from the wider industry and active patrons of the Automotive 30% Club, whose purpose is to achieve a better gender balance within the automotive industry.

A strong aftermarket can also help more people make the switch by growing capabilities covering new powertrains and battery health which will foster a resilient second hand market, and strengthen the second and third life opportunities for electric vehicles and batteries. The rise of new technologies and software also demands new skills to keep drivers on the road. For example, customers are now being trained to repair new systems and equipment such as Advanced driver assistance systems (ADAS) systems – which are increasingly common and already on around half of all vehicles – so that advancements from industry are well-supported in the marketplace.

Government will play a major facilitative role in setting the conditions to allow businesses like LKQ Euro Car Parts to prosper through good regulatory frameworks – from MOT cycles, to right to repair, and evolving battery regulations to the skills agenda – to keep the UK on the move.

This will help to ensure the existing and future car and van parc is supported across all vehicle technologies on the journey to Net Zero, and build a brighter future for all.

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