

DELIVERING THE TRIPLE BOTTOM LINE: A BLUEPRINT FOR THE ELECTRIC VEHICLE REVOLUTION



“UK Automotive shares government’s ambition and is committed to zero-emission motoring.”

The automotive industry is committed to delivering on Britain’s triple bottom line, supporting people (with 864,000 skilled jobs across the country), prosperity (accounting for £326 billion turnover, £58 billion value added, and 10% of UK exported goods) and planet (with a proven track record of reducing CO2 emissions over the past 20 years).

Government has set a clear goal to end the sale of new pure petrol and diesel cars and vans in 2030 – meaning the UK automotive industry is required to make a more significant and advanced commitment than just about any other major car or van market.

Delivering that goal requires the commitment of four parties – the industry itself, government, wider stakeholders, and of course, the consumer.

UK Automotive shares government’s ambition and is committed to zero-emission motoring. More than 150 models of battery electric, plug-in hybrid, fuel cell and hybrid electric vehicle are now currently on the market, meaning one in three models available to buy is zero-emission capable. Acceptance of electric vehicles has been accelerating, accounting for one in 10 registrations in 2020. However, the vast majority of zero-emission cars registered last year were for business or fleet purchasers – not the private consumer. Just 4.6% of new consumer vehicles were battery powered.

If we are to succeed in our 2030 ambition, we must convince the mass market to make the switch. Polling by Savanta ComRes suggested that just under half (47.9%) of drivers don’t expect to be ready to drive a full electric vehicle by 2030 – and more than a quarter are so put off by concerns such as cost and lack of infrastructure they believed they would never transition to electric.

This challenge can be solved. Industry is committed to delivering the vehicles, with manufacturers across the board pledging to add to the vast number of electrified models available, and many already fully committed to being exclusively zero-emission by the end of the decade. The industry is determined to work with government and all stakeholders to deliver an electric revolution that is accessible and affordable for all: to accelerate demand; to expand and improve world-class charging infrastructure; and to create the conditions that will make the UK one of the world’s most attractive places in which to invest in electric vehicle production.

By doing so, we can inspire the consumer to commit to zero-emission motoring – and deliver the transformation we need to support Britain’s triple bottom line.

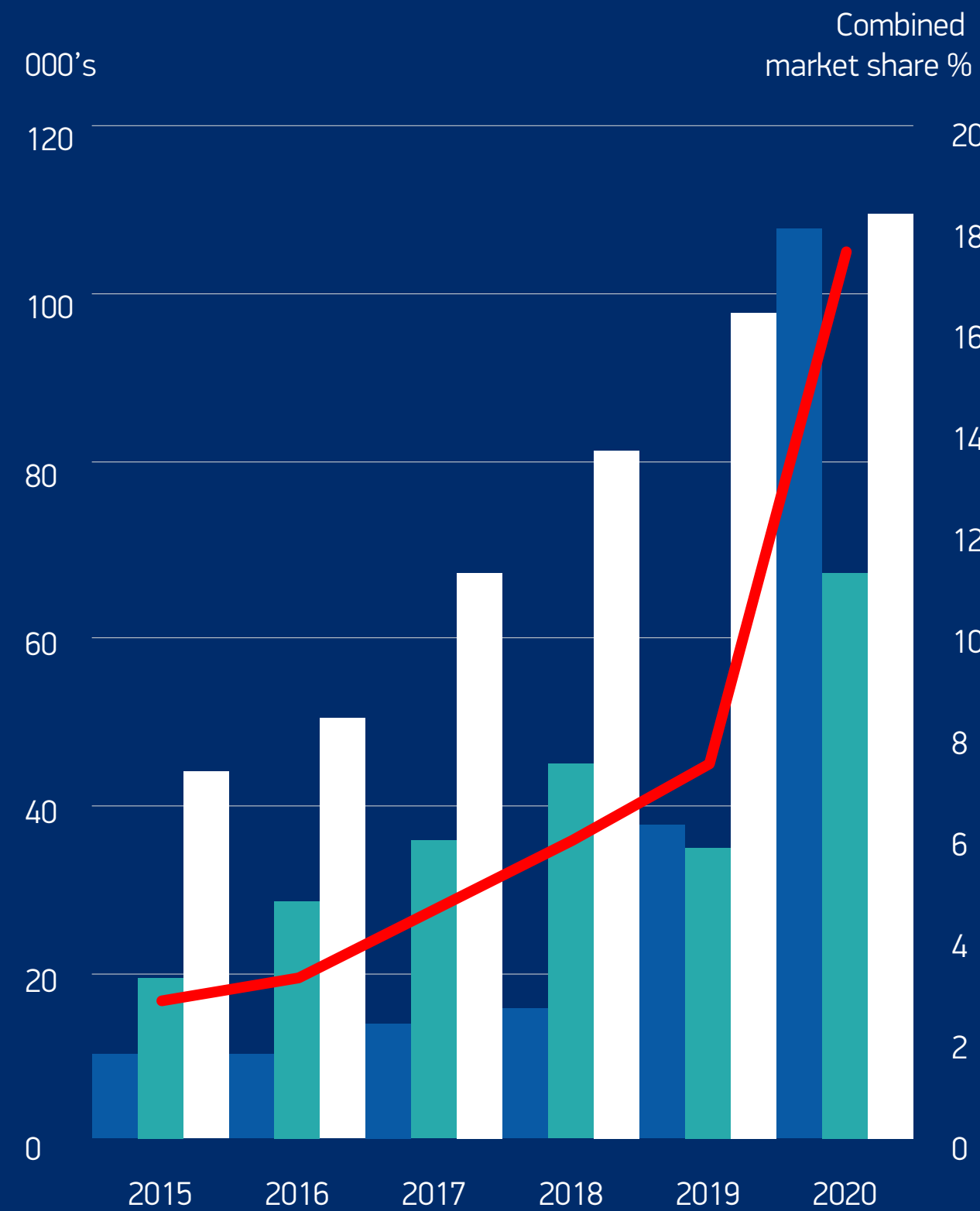
Mike Hawes Chief Executive
The Society of Motor Manufacturers and Traders (SMMT)

THE INDUSTRY'S COMMITMENT

NEW BATTERY ELECTRIC, PLUG-IN HYBRID AND HYBRID ELECTRIC VEHICLES REGISTRATIONS

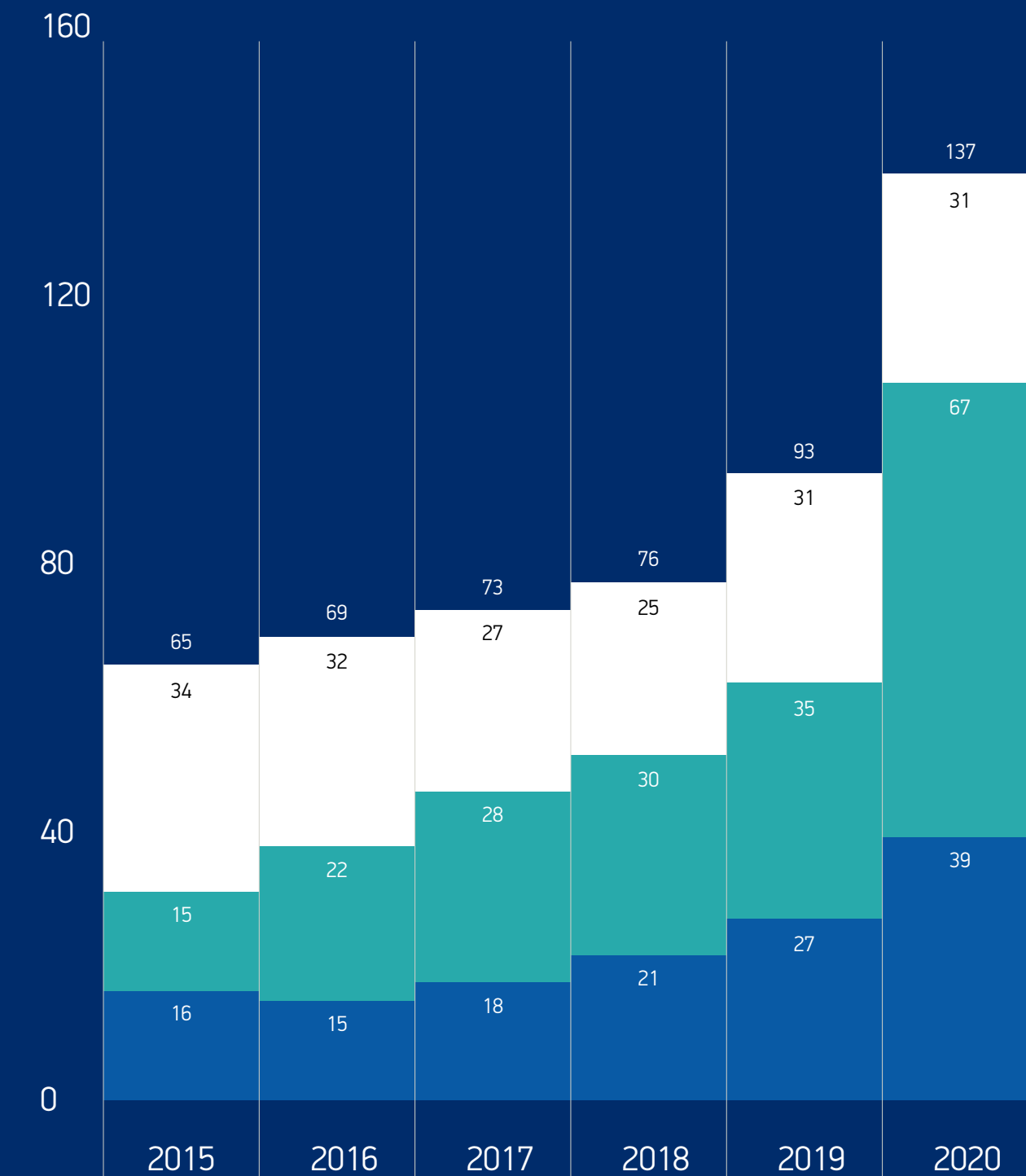
BEVs PHEVs HEVs Market share

Source: SMMT data

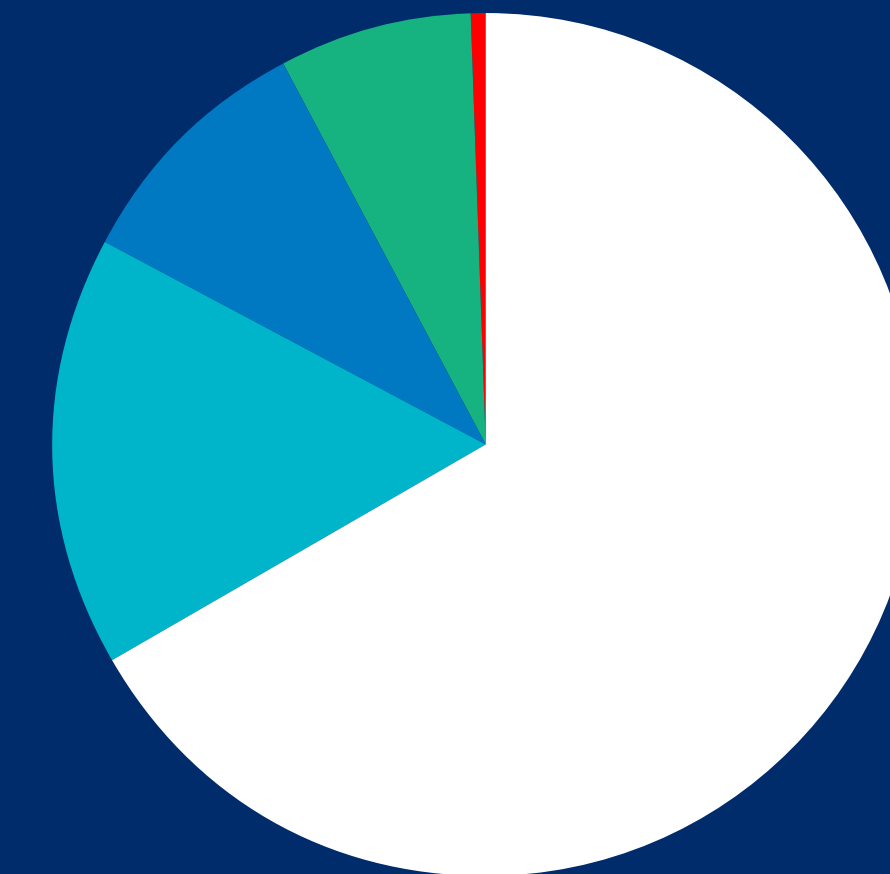


MODELS OF BATTERY ELECTRIC, PLUG-IN HYBRID AND HYBRID ELECTRIC VEHICLES AVAILABLE IN UK

BEVs PHEVs HEVs



AVAILABLE MODELS MARCH 2021



308 Internal combustion engine 66.8%
 75 Plug-in Hybrid 16.2%
 44 Battery Electric 9.5%
 33 Hybrid Electric 7.1%
 2 Fuel Cell 0.4%

TOP 5 ELECTRIC VEHICLES REGISTERED IN 2020

01 Tesla Model 3



02 Jaguar I-Pace



03 Nissan Leaf



04 Kia Niro



05 Renault Zoe



01 COMMITMENT TO ACCELERATE DEMAND FOR ELECTRIC VEHICLES AND ENSURE VEHICLE AVAILABILITY

↳ For many people, a car will be the second-most expensive purchase they will ever make (and for the 37% of UK households that do not own their own home, probably the most expensive).

As of March 2021, manufacturers have already brought more than 150 battery electric (BEV), plug-in hybrid (PHEV) and hybrid electric (HEV) and fuel cell (FCEV) models to the UK market. BEVs and PHEVs alone account for 25% of all available car models. Because of the current higher costs of their components and their raw materials, at present these vehicles are inherently more expensive to manufacture than their pure petrol and diesel counterparts, meaning an electric vehicle will retail for more than its fossil fuel equivalents.

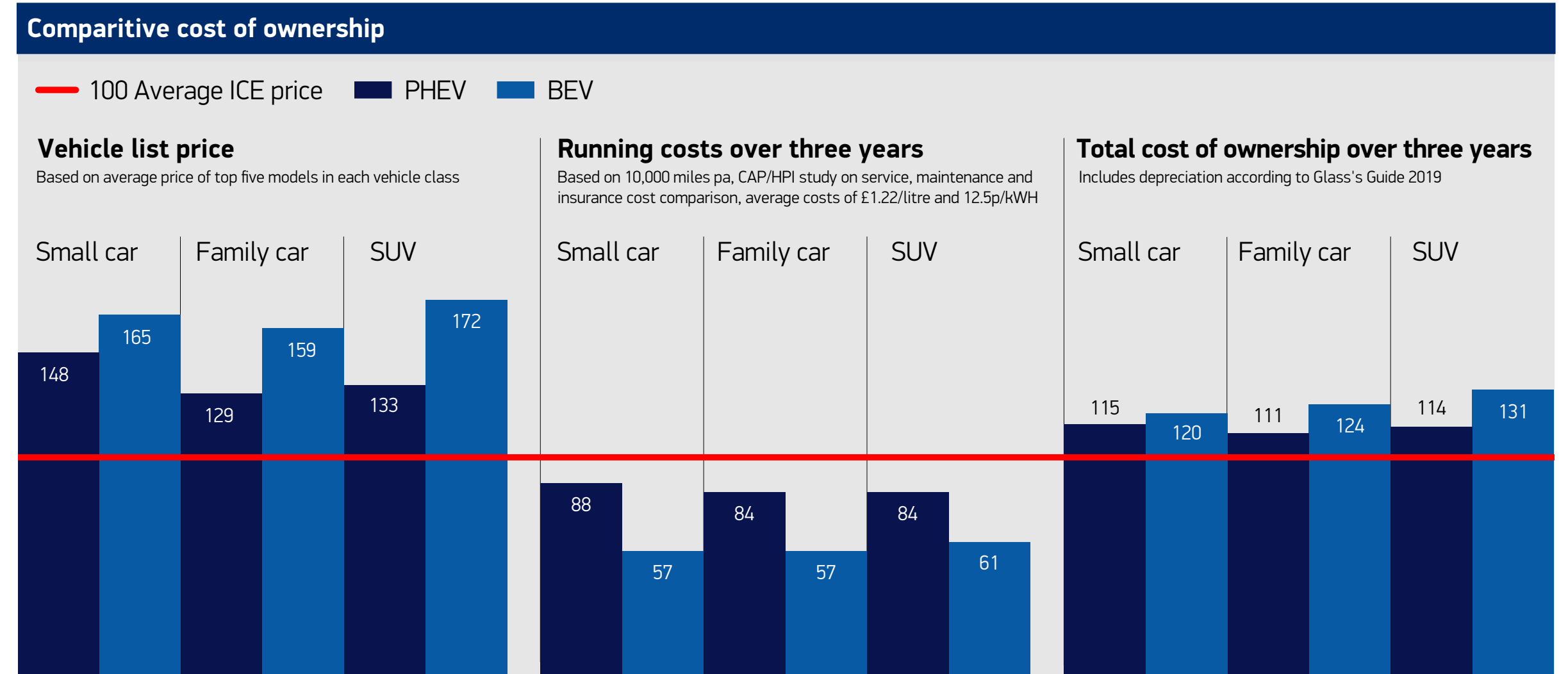
Manufacturers are doing everything they can to bring down the cost of production but are constrained by lower demand and battery production costs which have yet to reach the economies of scale required. It is batteries that have the biggest impact on cost, representing 30-45% of the total cost of production. Despite falling battery costs, BEVs are not expected to reach purchase cost parity with their internal combustion engine (ICE) counterparts across all car segments in the next few years.

Where electric vehicles do have an advantage over their fossil fuel equivalents is that they generally have lower running costs; cheaper VED, cheaper to recharge than refuel and lower maintenance over a three year ownership cycle. Despite these savings, this is not yet enough to offset the higher purchase cost. Manufacturers are committed to reducing product costs so that the differential turns in favour of zero emission vehicles as we head towards 2030.

Demand for electrified vehicles has certainly grown but, for many, switching to electric will remain too expensive without purchase incentives. Around 37% of drivers say they would be more likely to purchase an electric vehicle if it was the same cost as a petrol or diesel model.

While UK plug-in registrations were slightly above the EU-wide average of 10.5% in 2020 – when Covid-19 led to the most disrupted market in a lifetime – uptake in Britain is lower than in several comparable European markets where incentive packages are more generous and long-term.

BEV uptake could increase by a further 62% on current predictions with the PiCG and a consumer VAT exemption

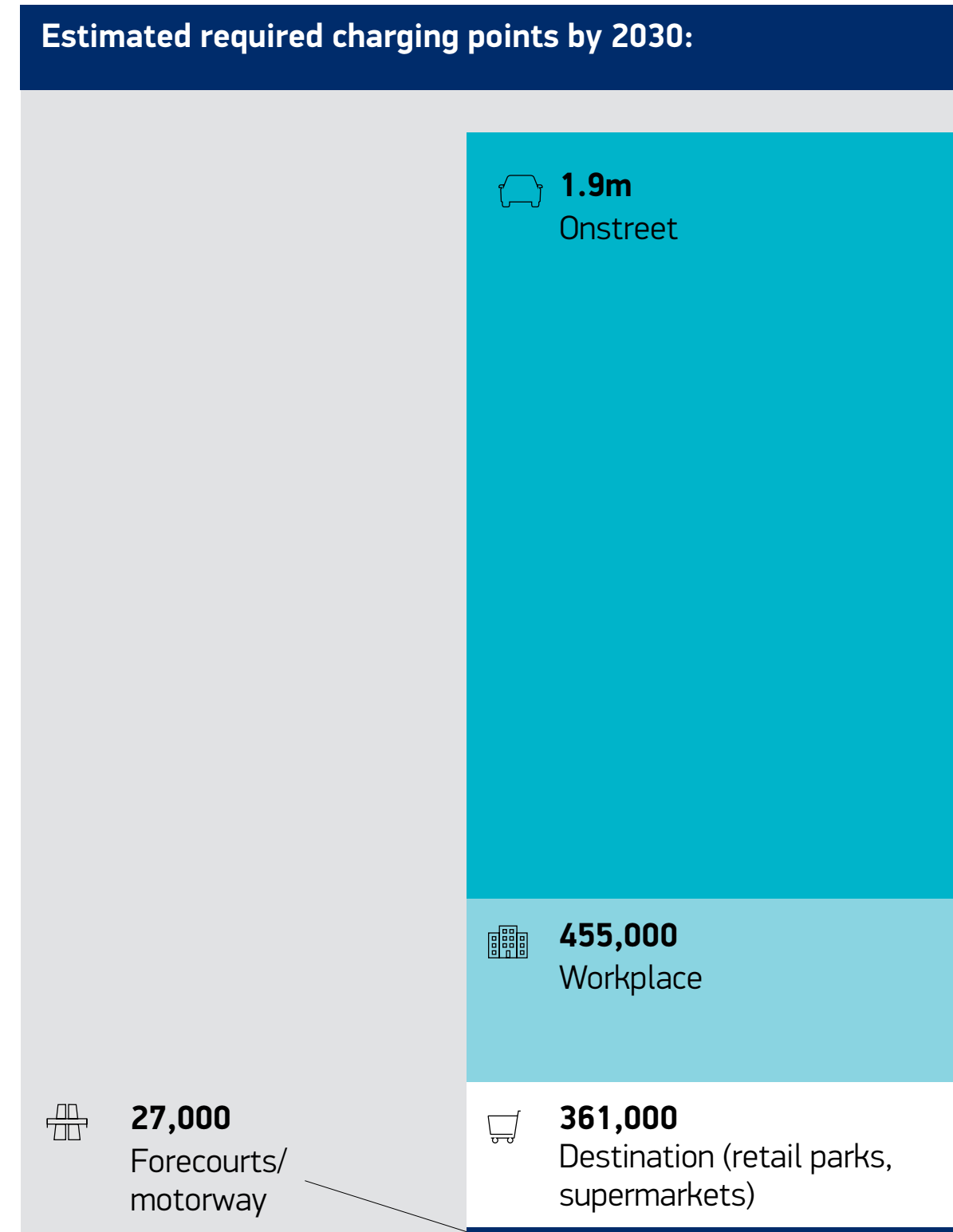


Country	Plug-in market share (2020)	Upfront incentives	Acquisition incentives	Ownership taxation
UK	10.7%	Up to £2,500 for BEVs <£35,000	n/a	BEV/FCEV exempt
Germany	13.5%	Up to €9,000 for BEVs and FCEVs, €6,750 for PHEVs	n/a	10-year exemption for BEVs and FCEVs
France	11.3%	Up to €7,000 Scrapage scheme worth up to €5,000	Exemption (either total or 50%) for electric, hybrid, CNG, LPG and E85 vehicles	Reduction of 75% for BEVs in main cities
Spain	4.8%	Up to €5,000 incentive for BEVs Up to €2,600 for PHEVs up to €4,000	Exemption from 'special tax'	Reduction of 75% for BEVs in main cities
Netherlands	24.9%	Subsidy scheme (SEPP) to buy or lease a new or used BEV Environmental investment deduction for BEV and FCEV LCVs and BEV taxis	Exemption for zero emission cars	Exemption for zero emission cars
Italy	4.3%	Up to €6,000	n/a	Five-year exemption for electric vehicles from the date of first registration

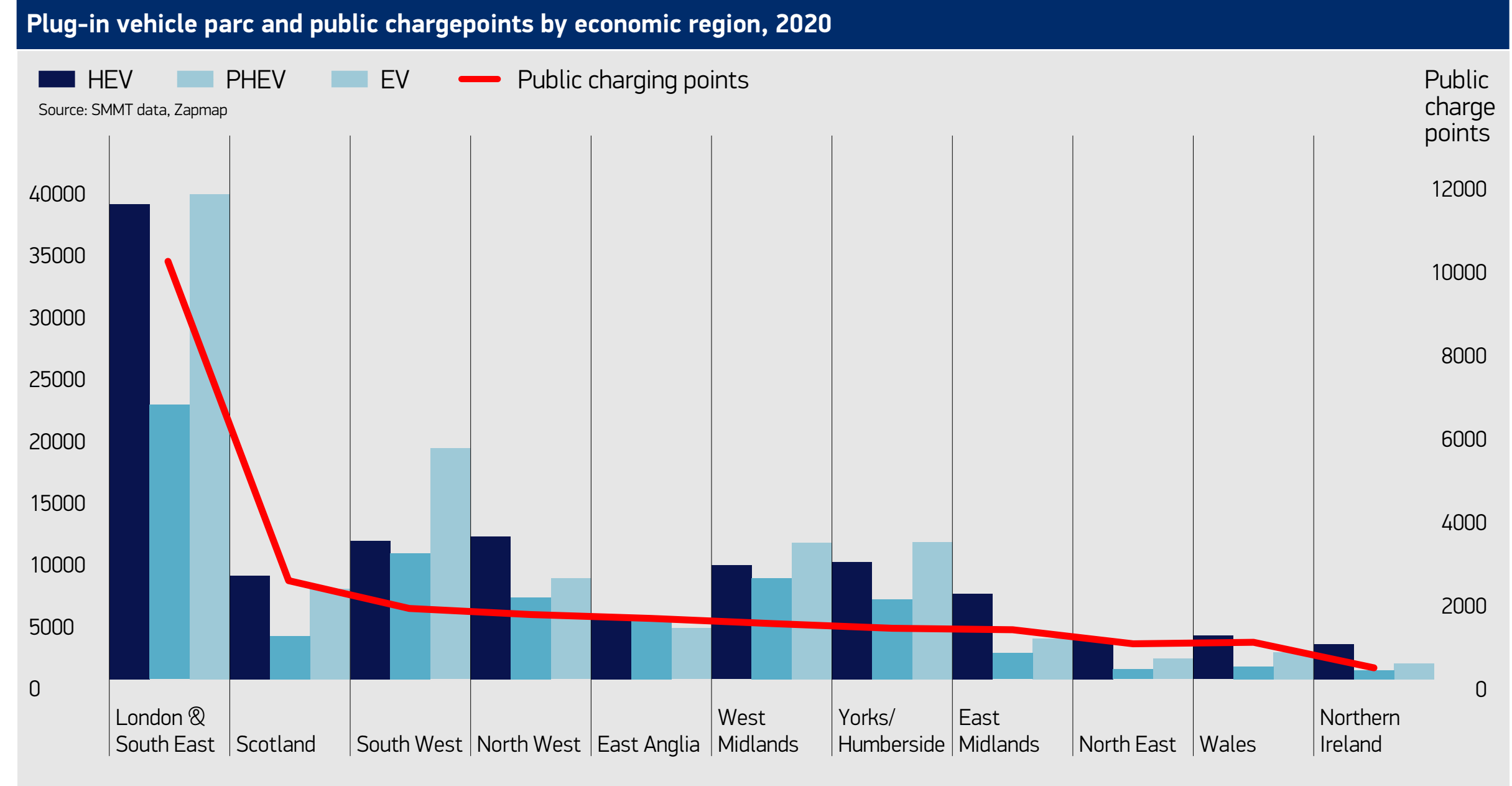
02 COMMITMENT TO EXPAND AND IMPROVE WORLD-CLASS INFRASTRUCTURE

↳ Drivers need certainty that they can recharge their vehicle conveniently and on demand – it must be as easy as filling up a petrol or diesel car.

For many, that means using a charging point at home. However, at least 1 in 3 households rely on on-street parking as they have no driveway or garage and still more have no designated off-street parking. Savanta ComRes research has found that 28.3% of drivers are put off switching to an electric vehicle because they would have nowhere to install their own chargepoint. To ensure those living in accommodation with no location for a dedicated charging point can join the electric revolution, there must be a commitment to expand on-street public charging in residential areas.



There are more public charging points in London and the South East than the rest of England combined.



Funding this expansion is estimated to cost around £17.6 billion – meaning public and private investment must start now to ensure we have the world-class infrastructure required for 2030. Given there are currently less than 40,000 public charge points in total, this means building at least 700 public charging points a day until 2030. By comparison, the current rate is about 42 a day.¹

Delivering a network that is fit for purpose will require a strategic approach. To succeed, Government should commit to creating a nationally co-ordinated infrastructure plan with binding targets for delivery. As well as providing funding to local authorities or other organisations, government should work with all stakeholders in the development of a strategic plan to ensure the network can support the expansion of electric vehicle uptake, putting the right chargers in the right place to suit consumers. Given 44.4% of drivers say they aren't considering an electric vehicle because there is a lack of convenient charging locations, solving the chargepoint challenge will accelerate uptake.

Just as important as increasing the total number of charging points is the need to make them as reliable and easy to use as a fuel pump. All public chargepoints should offer ad-hoc access and payment to all users via debit/credit card payment and/or network roaming, rather than forcing users to join different subscription services or download apps.

Consumer reassurance requires infrastructure that can be trusted. Even if a driver can find a charging point and easily pay for it, many complain about poor reliability. Indeed, the average reliability rate for a charger in the UK is just 91.7%² – hardly reassuring when we need to convince the market to move from familiar to unfamiliar technology. In countries such as the Netherlands, the average rate exceeds 99%.

Government should also commit to ensuring affordability of charging and regulating the charging market. There should be a regulatory body that will enforce a minimum reliability standard, ease of payment, pricing transparency and real-time data sharing from public chargepoints.

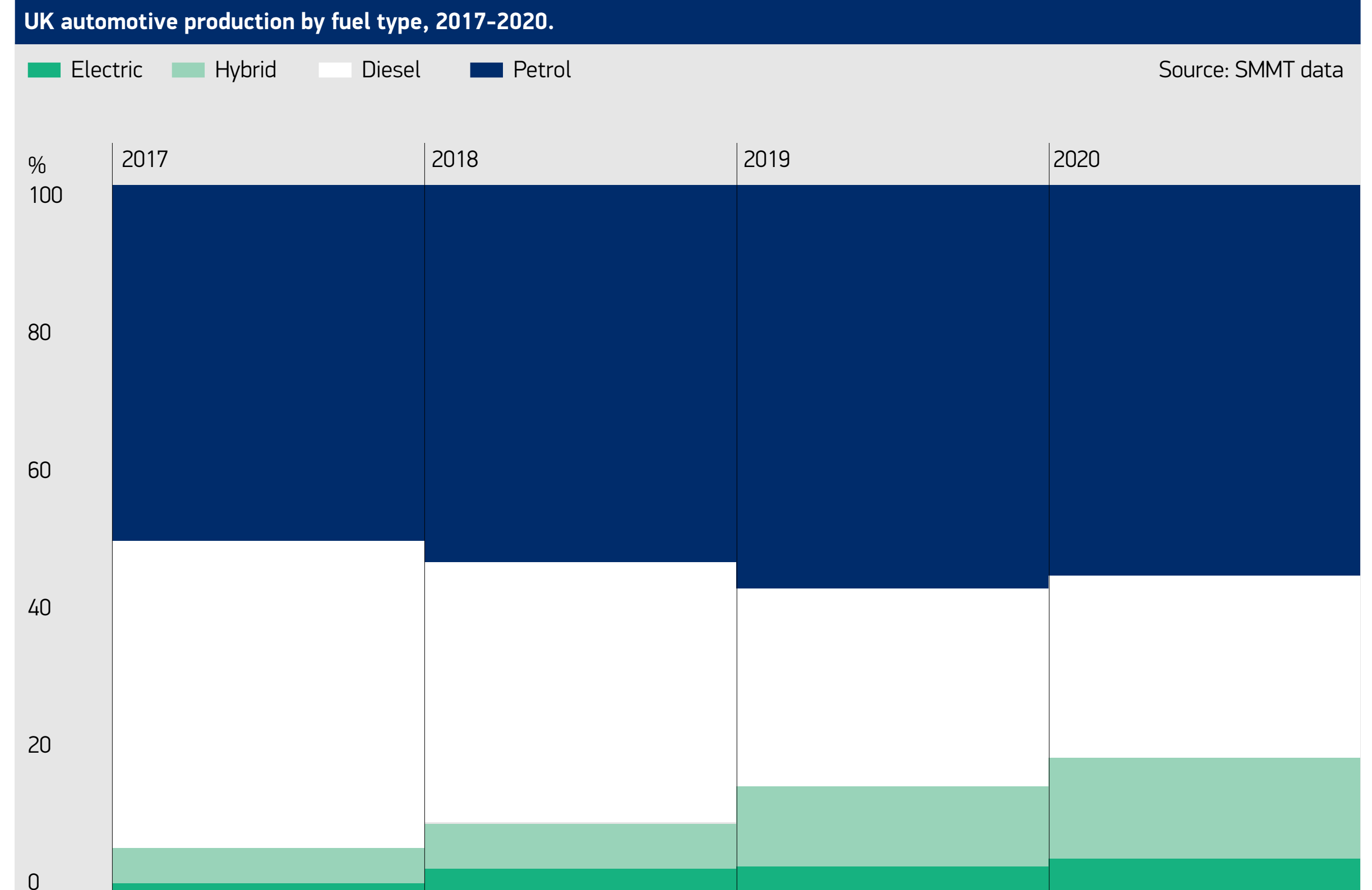
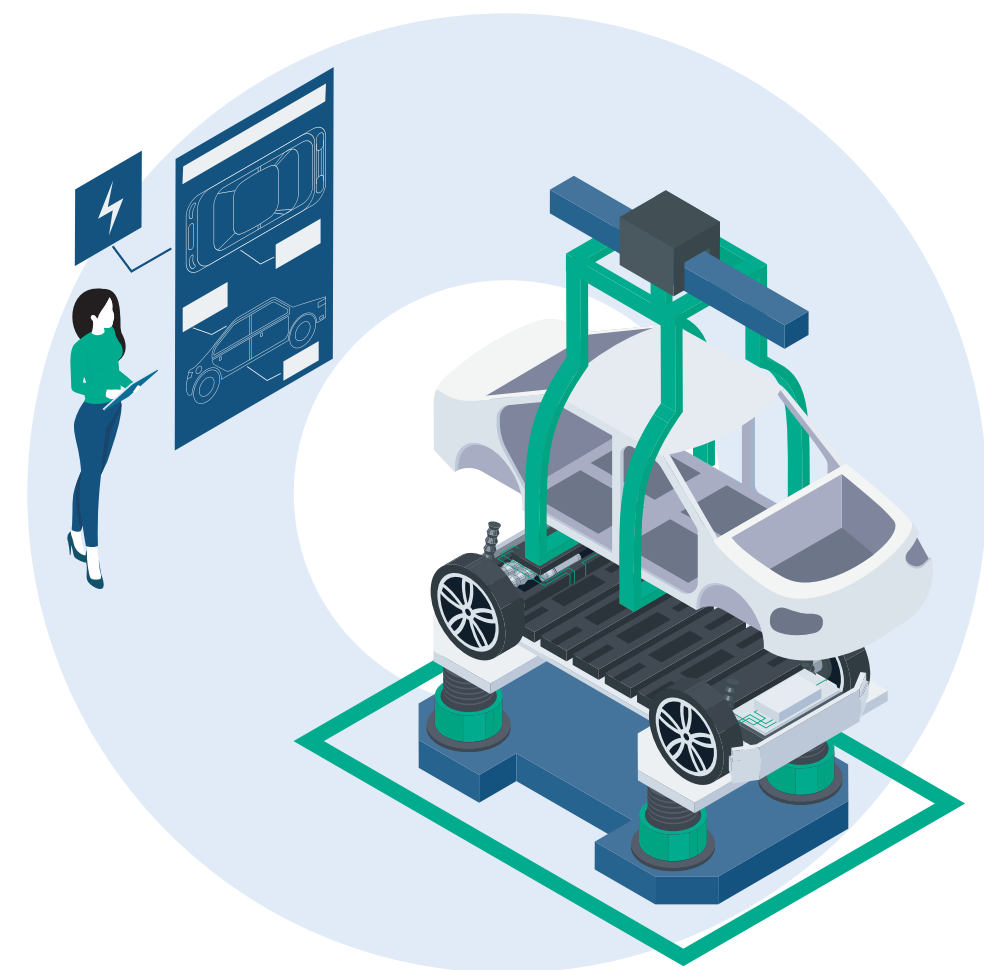
03 COMMITMENT TO CREATE THE RIGHT CONDITIONS TO DELIVER THE MOST AMBITIOUS INDUSTRIAL TRANSFORMATION IN AUTOMOTIVE HISTORY

↳ Automotive manufacturing and its supply chain are essential contributors to the UK's prosperity, accounting for 10% of export of goods, and directly employing 168,000 people. Sustaining this supply chain and supporting the industry's transition to new technologies is critical to the UK's global competitiveness, particularly in the post-Brexit era.

From 2027, the UK-EU Trade and Cooperation Agreement will apply Rules of Origin which will mean tariffs will be applied to any UK-produced electric vehicle unless its battery is manufactured in Britain or the EU. The UK exported 81.0% of its vehicle production in 2019 – 55.0% of which was to the EU. Electric and hybrid vehicle production has grown, accounting for 18.8% of production in 2020.

Manufacturers are likely to want to concentrate electric vehicle production close to where batteries are produced – it provides greater supply reliability, lower logistics costs and allows just-in-time production flexibility. The UK must therefore expand domestic battery production to secure the long-term future of domestic automotive manufacturing.

SMMT estimates that the UK manufacture of up to two million battery electric vehicles a year by 2040, would need a total annual battery production capacity of 120GWh – approximately eight gigafactories. We are currently at just 2.5GWh with a further 13GWh in plan. By contrast, total European battery production capacity is forecast to be 1.2TWh per annum by 2040.



To attract the necessary investment, the industry needs a co-ordinated and long-term strategy that will increase competitiveness and positions the UK at the forefront of advanced manufacturing. For the automotive sector, this means

- Developing a comprehensive and long-term automotive industry **transformation plan**
- Support and investment in the development of **gigafactories** for large-scale battery manufacturing, **a battery materials supply chain** for sourcing of local content and battery recycling facilities to support the circular economy;
- Expansion of the fledgling electric supply chain, by increasing support and investment in **power electronics, motors, drivetrains and fuel cells**
- Support the **reskilling and upskilling** of the workforce to ensure the right skills are available for the design, engineering and manufacturing of electric vehicles and related components and systems;
- Ensure **R&D investment** is strategically targeted at activities that are likely to give the UK a competitive advantage; and
- Create the right **business environment**, including an attractive fiscal and regulatory framework, that makes the UK a highly competitive location for electric vehicle production

A REVOLUTION FOR ALL

↳ Britain's transition to electrified vehicles holds the promise of a greener, cleaner future, one that will create jobs, drive economic growth and help the country achieve its net zero goals. This transition can only succeed, however, if every stakeholder plays their part, so that everyone can benefit.

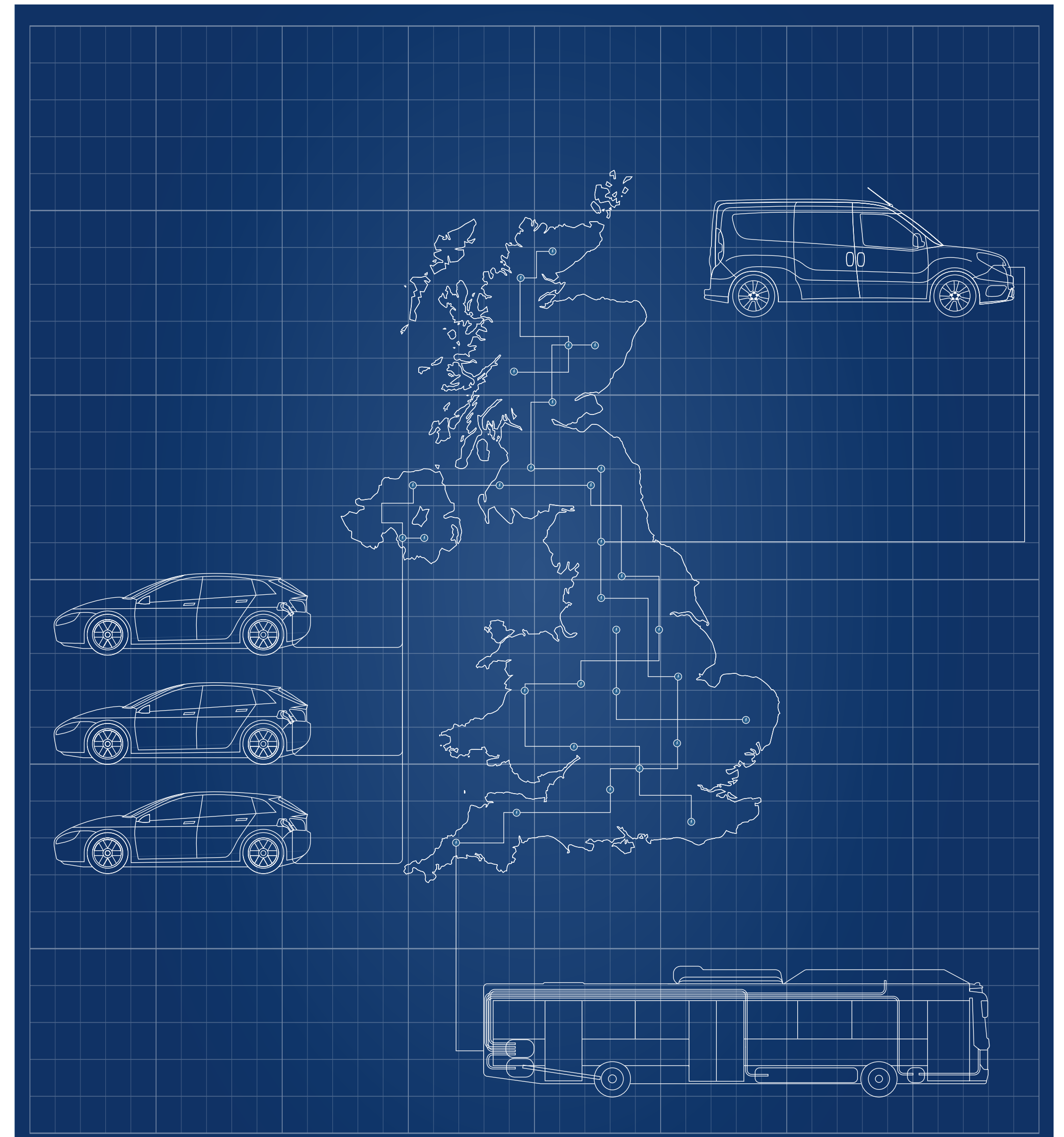
Manufacturers have invested so that a third of available car models are now zero-emission capable with more to follow. The industry is consumer-driven, however, and recognises that the issues of affordability and charging convenience remain and require wider commitments from partners outside the sector.

While electrified vehicle uptake rates have increased dramatically, just 2.1% of vehicles registered in 2020 were battery electric by private owners, a figure reflective of the cost of these vehicles. For there to be a zero-emission revolution, electric vehicles need to be a viable prospect for everyone – rural, urban, homeowner, flat renter, low income, high net worth. No-one should be left behind on our Road to Zero.

We must ensure these vehicles are accessible and affordable. We must ensure every driver can charge their vehicle as easily as they would refuel. And we must ensure the UK automotive industry is at the forefront of this transition.

With less than nine years to go until 2030, there is no time to lose.

We all share the ambition – now we must all share the commitment, so we can deliver for people, prosperity and the planet.



1 ZapMap – 1,255 new connectors installed in the 30 days up to 22 March 2021

2 Dermott, H., Development of the UK Public Chargepoint Network, RAC Foundation, 2018

THE SOCIETY OF MOTOR MANUFACTURERS AND TRADERS LIMITED

71 Great Peter Street, London, SW1P 2BN

Tel: +44 (0)20 7235 7000

E-mail: communications@smmt.co.uk



www.smmt.co.uk

SMMT, the 'S' symbol and the 'Driving the motor industry' brandline are registered trademarks of SMMT Ltd

Disclaimer

This publication contains general information and, although SMMT endeavours to ensure that the content is accurate and up-to-date at the date of publication, no representation or warranty, express or implied, is made as to its accuracy or completeness and therefore the information in this publication should not be relied upon. Readers should always seek appropriate advice from a suitably qualified expert before taking, or refraining from taking, any action. The contents of this publication should not be construed as advice or guidance and SMMT disclaims liability for any loss, howsoever caused, arising directly or indirectly from reliance on the information in this publication.