

An aerial photograph of a city at sunset, with a warm, golden glow over the buildings and streets. The sun is low on the horizon, creating long shadows and a hazy atmosphere. The city is densely packed with various types of buildings, including residential blocks and commercial structures. A prominent yellow construction crane is visible in the middle ground. The overall scene conveys a sense of urban development and progress.

THE
future
of diesel

FOR FLEETS

Venson fleet management solutions

Company vehicles are an important asset for supporting core business operations and that's why our 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 customer retention rate of over 95%. 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 fleet services, 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 organisation's operational and financial needs.



Executive SUMMARY

Diesel, the favourite fuel of fleets since the introduction of carbon dioxide (CO₂) emissions-based company car benefit-in-kind tax in 2002, has taken a media-led bashing over the last almost two years.



Today all motoring taxes – Vehicle Excise Duty and capital allowances as well as company car tax – are directly linked to CO₂ emissions with successive governments focused on protecting the environment.

Diesel bashing started in the wake of the 2015 Volkswagen Group emission-cheating scandal dubbed 'dieselgate' and has grown louder amid concerns over air quality and it being a 'silent killer'.

However, those denigrating diesel as a fuel conveniently choose to ignore the huge technological strides motor manufacturers have made in recent years. Indeed, the Society of Motor Manufacturers and Traders (SMMT) call today's Euro6 emission compliant diesel engines "the cleanest in history – and light years away from their older counterparts".

Nevertheless, despite businesses being responsible for buying the vast majority of new vehicles sold in the UK, the motor industry and corporate voice has been little heard in defence of diesel.

Meanwhile, new initiatives, such as Clean Air Zones and London's Ultra-Low Emission Zone are due to be introduced and new tax measures, likely to penalise diesel are anticipated, as legislators seek to appease the environmental and health lobbies.

Against that background, the introduction later this year of a new mechanism for testing the fuel economy and emissions of cars – the Worldwide harmonised Light vehicles Test Procedure – is likely to throw a proverbial spanner in the works.

Furthermore, motor manufacturers are providing fleets and consumers with the widest ever choice of car fuel options – petrol, hybrid and plug-in as well as diesel.

Unfortunately the diesel bashers have chosen to target all diesel vehicles. There is no doubt that older oil burners are far dirtier than today's 'clean' Euro6 emission models.

Therefore, with fleets and small businesses operating the majority of new cars and commercial vehicles in the UK it is those organisations that are at the forefront of driving the introduction of the 'cleanest' vehicles and thus improving air quality and health.

Yet, all diesel vehicles are being tarnished when the powers that be should be much more focused on removing the typically oldest and most polluting cars and commercial vehicles – and that also includes some petrol-engined models – from the roads.

Nevertheless, that is not to say diesel is the perfect fleet fuel. Indeed, given the choice available today, it is likely that the vast majority of organisations should move to a blended fleet policy with a mix of petrol, hybrid and plug-in as well as diesel vehicles operated.

This white paper seeks to put the diesel debate in context, highlight the legislation and taxation changes that local authorities and government are driving through, touch on the strategies of the motor manufacturers and ultimately provide guidance to fleet decision-makers as to how they should shape their vehicle policies over the short to medium term.

What is clear is that the government is directing fleets along the plug-in and ultra-low emission route, but that does not mean to say that diesel does not have its place when considering vehicle replacement programmes.



Vehicle manufacturers have invested heavily to develop, deliver and market lower CO₂ emitting cars.

Setting the scene

What's the problem with diesel vehicles?

Concern at the “dieselisation” of the UK car parc – to which massive growth in corporate use of diesel engined company cars and vans has contributed following the 2002 introduction of a CO₂ based benefit-in-kind tax regime – is the fundamental issue.

It is being blamed for poor levels of air quality in towns and cities across the UK and the so-called pollution “silent killer” is calculated to contribute to 40,000 premature deaths a year in the UK. As if that was not enough, diesel's image was also tarnished by the emission-cheating scandal that engulfed the Volkswagen Group in 2015.

Vehicle manufacturers have invested heavily to develop, deliver and market lower CO₂ emitting cars, supported by CO₂ based company car benefit-in-kind tax, and the subsequent introduction of CO₂ based Vehicle Excise Duty and capital allowances and related lease rental restrictions.

In pursuit of tax savings, as well as MPG benefits, demand for diesel vehicles has soared – SMMT figures reveal that in the year 2000, sales of new diesel cars accounted for just 14% of all new registrations. At one time demand for petrol and diesel model was split virtually 50:50, but in 2017 – amid air quality concerns – registrations of diesel cars are running at around 44% with petrol demand at 52% and alternatively fuelled vehicles at 4%.

However, while diesel vehicles have lower CO₂ emissions than petrol-engined vehicles they emit greater levels of nitrogen oxides (NOx), which is blamed for air pollution.

Air quality concerns at a European level have resulted in:

- **The introduction, which was completed by September 2016, of mandatory Euro6 emission standards for cars and vans that focus on NOx reduction.**
- **The setting of the toughest CO₂ new car emission targets in the world – by 2020 with a one-year phase-in of an average 95 g/km, which represents a 40% reduction from the 2007 level of 158.7g/km.**
- **A fleet average new van target of 175g/km in 2017 reducing to 147g/km by 2020.**

However, air pollution is a dangerous and deadly risk to people's health, especially the cardiovascular system. Exposure increases the risk of developing heart disease, as well as having a heart attack or stroke.

British Heart Foundation head of policy John Maingay said:

“ We know that dangerous levels of air pollution are putting people – both healthy individuals and particularly those with heart disease – at greater risk of a heart attack or stroke. Despite these alarming health risks, exposure to air pollution is not a choice the public have control over and giving advice to people to stay at home when air pollution is high is nowhere near good enough. ”

It is against that background that environmentalists took legal action against the UK government after it was revealed that 16 urban areas failed to meet the European Union Air Quality Directive due to NOx limits being breached.

Ultimately, the government lost the legal battle and that led to the Department for Environment, Food and Rural Affairs publishing its new draft Air Quality Plan, which includes the introduction of Clean Air Zones.

Clean Air Zones

to improve air quality

Clear Air Zones are set to be introduced by local authorities that have breached air quality standards making them the central focus of the government's long-awaited plans to reduce NOx levels nationally.

The government hopes that its proposals will reduce the impact of diesel vehicles, and accelerate the move to cleaner transport, notably plug-in vehicles.



Local authorities are already responsible for improving air quality in their area, but will now be expected to develop new and creative solutions to reduce emissions as quickly as possible, while avoiding undue impact on motorists.

The draft Air Quality Plan names around 80 local authorities with roads with concentrations of NOx forecasted at above legal levels. In summer 2017 the government is expected to confirm the local authorities which will formally and legally be required to develop and implement comprehensive Clean Air Zone plans.

They will be in addition to Birmingham, Leeds, Nottingham, Derby and Southampton where the ruling councils have already been told to introduce Clear Air Zones due to poor air quality standards.

Additionally local authorities in Greater Manchester and in Bristol and South Gloucestershire have secured Air Quality Grant funding to develop Clean Air Zone proposals and the world's first and much-publicised Ultra-Low Emission Zone is due to be introduced in London on April 8, 2019.

The government says it will work closely with local authorities with a view to them finalising detailed proposals covering entry and charging criteria to the Clean Air Zones within 18 months.

It expects that for most local authorities that need to do so, introducing a charging scheme will not take until the end of 2020 – or 2019 for the five local authorities named in the UK Air Quality Plan for tackling nitrogen dioxide (NO₂) published in December 2015 – although local authorities would need to deliver sooner if they could.

The government is recommending that the minimum emission standards for Clean Air Zones are: Cars and vans, Euro6 diesel or Euro4 petrol; HGVs, buses and coaches, Euro VI; and motorcycles/mopeds, Euro3. Vehicles that do not meet those standards could be charged to enter a Clean Air Zone. The suggested entry criteria mirrors that of the Ultra-Low Emission Zone scheduled to be introduced in central London in April 2019.

Implementation of each Clean Air Zone must be approved by the government before it can go ahead. A framework document outlining a range of measures that should be incorporated within a Clean Air Zone to improve the urban environment and thus move towns and cities to what the government calls “a low emission economy” includes:

- Exploring innovative retrofitting technologies targeted at local bus, taxi or HGV fleets. That and new fuels;
- Buying ultra-low emission vehicles and encouraging local transport operators to do the same;
- Encouraging private uptake of ultra-low emission vehicles via ensuring adequate chargepoints for plug-in vehicles;
- Encouraging use of public transport, cycling, walking, park and ride schemes, and car sharing;
- Improving road layouts and junctions to optimise traffic flow, for example by considering removal of road humps;
- Working with local businesses and neighbouring authorities to ensure a consistent approach; and
- Charging certain types of vehicles to enter or move within the Clean Air Zone.

However, the government argues that charging zones should be treated by local authorities as a last resort, pointing out it should only be used where local authorities fail to identify equally effective alternatives.

If local authorities conclude that charging is the only way to achieve compliance in the shortest possible time, they will be required to set out the detail of: the roads and classes of vehicles subject to a charge, what the charges will be, the manner in which charges would be made, collected, recorded and paid, the hours during which charges would apply, exemptions and reduced rates from charges and enforcement

regimes and penalties for non-payment of charges. Automatic number plate recognition (ANPR) would be used for the operation of charging Clean Air Zones.

The government says that local authorities should set the level of charge for vehicles entering a zone appropriate to their local circumstances. The level of charge would be within upper and lower bands, which the government says it will publish at a later date.

However, the government appears not to be much in favour of a scrappage scheme to remove older diesel cars and vans from the UK's roads.

It does not completely rule out a scrappage scheme, but says:

“Such a scheme would have to be targeted at those most in need of support and be limited in scope. In devising mitigation measures, it will be important to consider the viability of any scheme and its overall cost. If scrappage is identified as an appropriate mitigation measure, any scheme would need to provide value for money, target support where it was most needed, be deliverable at local authority level and minimise the scope for fraud.”

The government's analysis of a national scrappage scheme examines scrapping all pre-Euro 6 diesel cars and vans in the UK in 2019 (eight million cars and two million vans, with grant levels of £6,000 and £6,500 respectively) at a cost to central government of £60 billion. Such a programme would almost certainly be ruled out on cost grounds.

However, a smaller scale option is also considered, assumed for the analysis to be a national scrappage scheme open to drivers of diesel Euro1-5 cars and drivers of petrol Euro1-3 cars. It is also assumed that vehicles would have to be replaced with a new zero emission electric vehicle. The modelling assumes that 15,000 vehicles (9,000 diesel vehicles and 6,000 petrol vehicles) would be scrapped and replaced over a 12-month period with grants of £6,000 available alongside £2,000 to cover the residual value of a vehicle. The cost to the government is estimated at around £110 million.

Other measures to improve air quality suggested in the raft of government documents published include:

- Reducing speed limits notably on motorways from 70mph to 60mph, although the documents say further monitoring in real world conditions was required
- Improved vehicle labelling to encourage a shift of purchasing behaviour away from new diesel vehicles to alternative vehicle types
- Influencing driver behaviour through eco-driving schemes.

The London

Ultra-Low

Emission Zone

The world's first Ultra-Low Emission Zone (ULEZ) will be introduced in central London from April 8, 2019 – 17 months earlier than the previously announced September 7, 2020 start date.

Fleet operators should check the emission standards of their current vehicles – particularly ensuring that replacement programmes mean Euro6 diesel emission standards will be met by the time of the ULEZ's introduction – or they will pay the price for entry. Typically petrol-engined cars operated by fleets will be of an age that they meet entry eligibility.

The ULEZ will cover the same area as the capital's existing congestion charging zone. Petrol vehicles that don't meet Euro4 emission standards and diesel vehicles that do not meet Euro6 emission standards will have to pay a ULEZ daily fee (£12.50 for cars, vans and motorbikes; £100 for buses, coaches and HGVs) to drive in the zone, 24 hours a day, 365 days a year.

It means petrol cars more than 13 years old in 2019, and diesel cars more than four years old in 2019, are unlikely to meet the new standards. The total cost, with the congestion charge added (during the times of day it is applicable), for drivers with non-compliant cars to drive in central London will be £24 a day (£23 for congestion charge fleet auto pay customers).

London Mayor Sadiq Khan has already confirmed that a £10

T-Charge (Toxicity Charge) will start in October this year. He is now proposing, following a public consultation that will be replaced by the ULEZ.

Furthermore, the Mayor is proposing to extend the ULEZ across Greater London for heavy diesel vehicles, including buses, coaches and lorries, in 2020, and up to the North and South Circular roads for cars, vans, minibuses and motorcycles in 2021.

The Mayor says he is committed to taking ambitious action to protect Londoners from the damaging health impacts of air pollution from toxic vehicle emissions.

The ULEZ will apply to all vehicle types, except black taxis. It is estimated that introducing the initiative in central London will result in nearly a 50% reduction in road transport NOx emissions in 2020.

Once the Mayor has finished consulting on the current ULEZ proposals, he will start consulting on actions that will expand the scheme in 2020 and again 12 months later.

The Mayor said that the planned timescales would provide Londoners, motorists coming into the capital from elsewhere and businesses which will be affected, sufficient

These measures will help improve the air that millions of Londoners breathe.

time to take the necessary steps to prepare for the new standards. They also reflected the minimum amount of time needed for Transport for London to consult on and implement such technically complex schemes over such large parts of the capital.

Mr Khan said:

“The air in London is lethal and I will not stand by and do nothing. I am introducing a new T-Charge this October and subject to consultation, I want to introduce the ULEZ in central London in April 2019. This alone will mean the capital has the toughest emission standard of any world city.

But the scale of our air quality challenge is so big that I need to go further. I want to expand the ULEZ from 2020 for heavy vehicles such as buses, coaches and lorries so that all of London will benefit from cleaner air. Then from 2021, I want to expand it up to the North and South Circular roads for light vehicles, including cars and vans. These measures will help improve the air that millions of Londoners breathe.

I want to announce my intention to consult on these proposals in good time so that business and those affected by new charges will have time to make changes they need to adapt to our low emission requirements.



If a vehicle does not meet the ULEZ emissions standards and the daily charge is not paid, a Penalty Charge Notice (PCN) will be issued payable by the registered owner or operator. The penalty would be in addition to any congestion charge or London Low Emission Zone penalties received. For motorcycles, cars, vans and minibuses the penalty is £130 (reduced to £65 if paid within 14 days) and for HGVs, coaches and buses it will be £1,000 (reduced to £500 if paid within 14 days).

- **The T-Charge (Toxicity Charge) will be introduced on October 23. It applies to vehicles, including cars, vans, minibuses, buses, coaches and HGVs, that do not meet Euro4 standards, typically those diesel and petrol vehicles registered before 2006. It will operate on top of, and during the same operating times, as the congestion charge (Monday to Friday 7am-6pm).**

The government's vehicle *taxation plans*

The government's vehicle taxation plans are long-established in driving fleets along 'the green route' and following the June 2017 general election that will not change.

The newly-elected Conservative Party made clear in its manifesto that "we are working through one of the largest-ever investment programmes in our roads and railways, putting some £40 billion into transport improvements across the UK over the rest of this decade".

The government has already ploughed hundreds of millions of pounds into the research and development of plug-in vehicles and electric vehicle recharging and the manifesto said "more cash would be spent on research and development including batteries that would power a new generation of "clean, efficient, electric vehicles"; while £1.1 billion would be invested in improving local transport infrastructure.

The manifesto said that it remained the Conservative Party's ambition for Britain to "lead the world in electric vehicle technology and use".

It continued: "We want almost every car and van to be zero emission by 2050 – and will invest £600 million by 2020 to help achieve it."

By 2020, the government expects ultra-low emission vehicles to account for up to 5% of UK new car registrations – it is currently around 4% – and by 2040 for all new cars sold to have zero tailpipe emissions.

It is against that background and allied to the air quality and health concerns around the continuing use of diesel vehicles that the government has served notice that the "tax treatment for diesel vehicles" could change as it looked to cut pollution from the transport sector.

In the 2017 spring Budget the government said it was committed to improving air quality and followed that up with its Air Quality Plan focussing on the introduction of Clean Air Zones.

However, alongside that, the government is continuing to explore what it called "the appropriate tax treatment for diesel vehicles", which includes engaging with stakeholders ahead of making any tax changes at Autumn Budget 2017.

As a result, fleets can expect diesel vehicle tax changes – and potentially increases – as the government reinforces its air quality strategy and its mission to convert fleets and consumers to plug-in and ultra-low emission vehicles.

Under current rules, drivers of diesel company cars pay a 3% benefit-in-kind tax supplement and that is presently scheduled to remain in place until April 2021.

Simultaneously, the government is aiming to increase corporate demand for plug-in vehicles through the company car benefit-in-kind tax system, Vehicle Excise Duty regime and a continuing tightening of the emission thresholds on capital allowances and related lease rental restriction.

Whatever the newly-elected government decides, the British Vehicle Rental and Leasing Association (BVRLA) said that the fleet industry "fully understands the need to address air pollution in the UK, which requires a change in the way we travel and the vehicles we use".

In its 'A Fleet and Mobility Services Manifesto 2017', the BVRLA called for a "carefully blended mixture of incentives and restrictions that would encourage more sustainable behaviour", while also demanding that motorists were not punished for decision they had already made based on previous government policy.

The Manifesto continued: "There must be a clear guarantee that no business making purchasing decisions on the basis of the current emissions standards will be penalised retrospectively if they are amended."

THE WORLDWIDE HARMONISED LIGHT VEHICLES

test procedure



The Worldwide harmonised Light vehicles Test Procedure – the acronym for which is WLTP – is the name being given to the new vehicle test procedure that from September 2017 replaces the long-established New European Driving Cycle (NEDC).

The WLTP is designed to provide a more realistic real-world driving picture of vehicle fuel consumption and CO₂ emissions than the laboratory-based NEDC and is being billed as "the world's toughest-ever emissions standard".

However, using MPG figures based on real-world driving conditions will result in CO₂ emission increases.

Industry experts suggest that CO₂ figures on a car-by-car basis could increase by about 20% with introduction of the WLTP.

Consequently, once WLTP test figures start to be published fleet operators, company car drivers and retail motorists are likely to see significant variations on a per model basis versus NEDC figures.

That's why from the WLTP's introduction in September to December 2019, CO₂ and MPG figures are expected to be published using both the new system and the existing NEDC

regime. From 2020 new vehicles will only be tested using WLTP type approval procedure.

However, with taxes – company car tax, Vehicle Excise Duty and capital allowances – currently linked to the NEDC test, HM Treasury has yet to decide when to move the tax system to WLTP. Industry speculation suggests that 2020/21 could be the financial year for changes to be introduced.

An HM Treasury spokesman told trade publication Fleet News earlier in 2017: "We will look to agree a suitable moment to move the tax system from NEDC to WLTP, based on industry input."

Consultancy Emission Analytics publishes its EQUA Index, which features fuel consumption, carbon dioxide, carbon monoxide and nitrogen oxide figures on more than 60,000 vehicles. It recently claimed that average CO₂ emissions from new petrol cars had fallen by 6% since 2012, when it started collecting data. However, over the same period, the average emissions from diesel cars had risen by 5%.

Claimed to be "drastically" more realistic than even the new WLTP, Nick Molden, CEO and founder of Emissions Analytics, said:

“In recent years, we have been kidding ourselves about our actual achievement in reducing CO₂ from cars. Encouraging official data has given a misleadingly positive impression. The new official WLTP will help close the gap, but only partially.”

Euro6/VI compliant diesel vehicles are not an air pollution problem

As a result, the annual Society of Motor Manufacturers and Traders' (SMMT) 'New Car CO2 Report 2017' revealed that carbon tailpipe emissions fell to an all-time low in 2016, with new cars averaging just 120.1g/km. That beat the previous year's record by 1.1% and 2000 levels by more than a third (33.6%).

Average new van CO₂ emissions, meanwhile, fell 1.9% to a new low of 173.7g/km, ahead of the 2017 deadline for the pan-European target of 175g/km.

The growing alternatively fuelled vehicle market and the shift of fleets and consumers towards diesel cars, which emit on average 20% lower CO₂ than petrol equivalents, was critical to the emissions reduction, said the SMMT.

However, while the motor industry had, said the SMMT, "achieved tremendous gains", against the background of media headlines, buying behaviour had changed. In 2016 it recorded a 0.8% drop in the market share of diesel cars causing what it called "the rate of progress to slow", although new diesel car registrations were at a record level.

As a result, the SMMT has sprung to defend today's diesel engine technology. When vehicle emissions are measured they must comply with either Euro6 'light duty' or Euro VI 'heavy duty' regulations. The CO₂ content of 'light duty' models is expressed as g/km as the whole vehicle is tested. However, the CO₂ content of 'heavy duty' vehicles is expressed as g/kWh as only the engine is tested. Some larger vans, including box van, tipper or dropside, are homologated to meet both 'light duty' and 'heavy duty' regulations and some only the latter.

SMMT chief executive Mike Hawes said:

“Euro6 diesel cars on sale today are the cleanest in history. Not only have they drastically reduced or banished particulates, sulphur and carbon monoxide but they also emit vastly lower NOx than their older counterparts – a fact recognised by London in their exemption from the Ultra-Low Emission Zone that will come into force in 2019.”

Criticising some media reports citing the "death of diesel", Mr Hawes said: "Some recent reports have failed to differentiate between these much cleaner cars and vehicles of the past. This is unfair and dismissive of progress made."

The SMMT has claimed that the current anti-diesel agenda was "of great concern" due to the failure to distinguish between old models and the latest cleaner vehicles on sale and that could "have a negative effect on future CO₂ reduction progress".

Mr Hawes added: "In addition to their important contribution to improving air quality, diesel cars are also a key part of action to tackle climate change while allowing millions of people, particularly those who regularly travel long distances, to do so as affordably as possible."

Describing diesel as being "critical" to future emission progress, the SMMT said new Euro6 and VI technology was addressing air quality concerns.

What's more, although the UK now has Europe's largest market for zero emission capable cars, accounting for almost a quarter (23.8%) of European Union electric and plug-in hybrid registrations in 2016, the growth in alternatively fuel vehicle demand had slowed, from 40.3% in 2015 to 22.2% last year.

Additionally, the preference for SUVs – the Mitsubishi Outlander PHEV is the UK's best-selling plug-in model – over smaller cars continued to make progress on CO₂ reduction much harder, warned the SMMT.

The SMMT said: "If these trends continue, the UK's contribution towards the European Union target of 95g/km average CO₂ in 2021 will become tougher, requiring a 20.9% cut in CO₂ emissions over the next five years, or 4.6% per year."

Mr Hawes concluded: "The automotive industry has some of the most challenging CO₂ reduction targets of any sector and continues to deliver reductions as it has for nearly two decades. For this positive trend to continue, modern low emission diesels and alternatively fuelled vehicles such as plug-ins, hydrogen and hybrids must be encouraged with long term incentives. Turning our back

There is no doubt that diesel has been getting some bad press over the last two years, notably in respect of tailpipe emissions being blamed for poor air quality and the Volkswagen Group 'dieselgate' scandal over the fitment of so-called 'emission cheating technology' to vehicles.

However, while those issues have grabbed the national newspaper headlines, motor manufacturers have been ploughing billions of pounds worth of investment into new advanced engine, fuel and battery technology, as well as increasing use of lightweight materials such as aluminium and composites.

on any of these will undermine progress on CO₂ targets as well as air quality objectives. The UK has a successful track record in encouraging these new technologies but this must be maintained through a consistent approach to fiscal and other incentives."

Further aiding the defence of diesel was that Euro6 diesel models, which have been on sale for more than two years, were not being penalised under entry proposals for either London's Ultra-Low Emission Zone or future Clean Air Zones in towns and cities across the country.

Mr Hawes said:

“Industry is committed to improving air quality across our towns and cities and has spent billions developing new low emission cars, vans, trucks and buses and getting these new cleaner vehicles onto our roads quickly is part of the solution. We look forward to working with government to encourage the uptake of the latest, low emission vehicles, regardless of fuel type.”

The fleet industry, according to the British Vehicle Rental and Leasing Association (BVRLA), "fully understands the urgent need to address air pollution in the UK". To do that, it argues, requires a "change in the way we travel and the vehicles we use".

Transport is responsible for 80% of NOx pollutants in the areas with the worst air quality, most of which is related to direct emissions from motor vehicles, says the BVRLA.

The organisation admits that the problem has been exacerbated by growth in the uptake of diesel cars driven by government policies aimed at reducing CO₂ emissions.

As a result, the BVRLA said that while it would like to see a carefully blended mixture of incentives and restrictions that encouraged more sustainable travel behaviour, it did not want the government to "punish motorists" for decisions they had previously made based on government policy.

The BVRLA acknowledges that air quality is a "big issue" for Britain's urban areas and says as the government calls on local authorities to establish Clean Air Zones: "Fleets operate vehicles on three, four and five-year contracts, and need time to prepare for any significant change."

BVRLA chief executive Gerry Keaney said: "Fleets need consistency, but a blanket ban of all diesel vehicles in city centres would be damaging to businesses."

Nevertheless, he predicted that diesel demand would come under pressure, particularly in urban areas, with a gradual shift to petrol and electric powertrains.

Mr Keaney concluded: "Progress to improve air quality in cities is already being made, and the rental and leasing industry is leading the way, pioneering new integrated transport solutions such as car clubs, and investing in ultra-low emission vehicles. BVRLA members operate the newest, cleanest, most environmentally-friendly vehicles on UK roads, while their innovative range of new mobility services encourage motorists to adopt more sustainable transport habits."

- **Tougher proposals for post-2020 new car and van CO₂ regulations and CO₂ monitoring requirements for HGVs are expected to be published by the European Commission later in 2017. A previous impact assessment suggested CO₂ emission manufacturer fleet average levels could be as low as 70g/km for cars and 110g/km for vans in 2030. The UK referendum vote to leave the European Union gives the country an opportunity to consider whether to continue to align with the European Union approach or adopt something different, according to the SMMT.**

Diesel car fact file

Diesel is critical to reducing CO₂ emissions, which in turn is tackling climate change.

Why diesel cars are popular and the “important role they can play in helping improve air quality in towns and cities, and in tackling climate change”.

- In 2016, a record 1.3 million new diesel cars were registered in the UK, up 0.6% on the previous year – a trend that’s continuing in 2017. In March 2017, more businesses and consumers chose a new diesel car than in any other month in history, with almost quarter of a million leaving showrooms.
- Diesel is critical to reducing CO₂ emissions, which in turn is tackling climate change – diesel cars emit, on average, 20% lower CO₂ than petrol equivalents. In fact, since 2002, diesel cars have saved 3.5 million tonnes of CO₂ from going into the atmosphere.
- Almost one in every two new cars registered in the UK is a diesel, with fleets leading the way and valuing their high performance and low fuel consumption. On average, diesels use 20% less fuel than like for like petrol models, and with diesel drivers typically covering 60% more miles, lower fuel bills are essential.
- Advanced diesel technology has virtually eliminated emissions of particulate matter, with 99% of those soot particulates captured by special filters fitted to all new diesel cars since 2011. Around half of diesels on the road now boast a diesel particulate filter.
- The latest Euro6 vehicles are the cleanest in history – and light years away from their older counterparts. As well as special filters, they also feature clever technology that converts most of the NOx from the engine into harmless nitrogen and water before it reaches the exhaust.
- The latest Euro6 cars are classed as low emission for the purposes of the London Ultra-Low Emission Zone due to come into force in 2019, meaning drivers of these vehicles will be free to enter the zone without charge.
- Contrary to recent reports, diesel cars are not the main source of urban NOx. In London, gas heating of homes and offices is the biggest contributor, responsible for 16%. While road transport as a whole is responsible for around half of London’s NOx, diesel cars produce just 11%, although concentrations will vary at different times depending on congestion. Keeping traffic moving is the key to keeping emissions low.
- In September 2017, a new official European Union-wide emissions testing system will come into force, known as WLTP. It will involve, for the first time, on-road testing to better reflect the many and varied conditions involved in ‘real-world’ driving such as speed, congestion, road conditions and driving style. It will be the world’s toughest-ever emissions standard.

Source: Society of Motor Manufacturers and Traders.

Why diesel

Diesel vehicles drive Britain's economy and at the 2017 Commercial Vehicle Show, the SMMT brought motor manufacturers together to promote the very best in low emission technology.

will continue to dominate **commercial vehicle fleets**



While plug-in vans are available and come with government grant aid, operationally they meet the requirements of very few fleets due typically to the impact of load carrying requirements on battery range and minimal payload.

Rachael Dillon, climate change policy manager at the Freight Transport Association (FTA), said: "There are still a huge number of barriers to adopting electric vehicles including higher costs, lack of charging infrastructure, short range, reliability and limited payload due to the weight of batteries. Whilst electric won't suit every operation or truck, FTA hopes that the grant system can encourage uptake."

Indeed, Department for Transport figures reveal that since the 2012 launch of the Plug-In Van Grant sales have been "limited" with fewer than 3,000 grants claimed.

More than 99% of the UK's 4.4 million commercial vehicles are powered by diesel and they transport people, essential goods and are driven by the emergency services over 61 billion miles every year. Without them, said the SMMT, "life would be much harder".

Despite the dominance of diesel fuelling vans and trucks, the Office for Low Emission Vehicles hopes that the October 2016 extension of the Plug-In Van Grant scheme from applying to only small commercial vehicles of up to 3.5 tonnes to also including N2 (maximum mass exceeding 3.5 tonnes but not exceeding 12 tonnes) and N3 (maximum mass exceeding 12 tonnes) category vehicles would not only increase demand for electric versions, but also encourage new entrants into the market.

When announcing extension of the Plug-In Van Grant to larger commercial vehicles, then Business and Energy Secretary Greg Clark said:

“The electric car revolution is well underway and this funding will encourage more businesses to consider switching to cleaner vans and trucks.

The Office for Low Emission Vehicles, a joint unit of the Department for Business, Energy and Industrial Strategy and the Department for Transport, believes extending the scheme will stimulate demand for more electric vans and trucks, and consequently encourage new entrants into the electric van market.”

The FTA said the government's plan to extend its Plug-In Van grant scheme to trucks was "a positive step to encourage take-up of green technologies in the logistics sector".

Ms Dillon said: "We are delighted that government has recognised that freight operators need support as much as other vehicle users to adopt greener fuels and technologies in order to reduce carbon and contribute to improved air quality.

"The cost of an electric vehicle can be prohibitive so any financial support that government can give may allow operators to make the business case to invest."

Nevertheless, the SMMT says: "The commercial vehicle sector has invested heavily to ensure that the Euro VI diesel trucks and vans on sale today are the cleanest in history."

It continued: "On average, diesel vans use around 50% less fuel than petrols, meaning lower fuel bills for operators and affordable costs for consumers and taxpayers."

What's more, billing Euro VI diesel as "the power behind the UK's essential emergency and delivery services", the SMMT said:

“Small businesses and sole traders in particular are on the front line of the UK economy, providing services that are vital to our day-to-day lives.

Further, thousands of emergency response vehicles look after our health and safety, buses keep millions of people across the country mobile, while utility and delivery vans and trucks together move three times more goods than water and rail combined – contributing some £27.5 billion to the UK economy. Almost all of these vehicles are powered by diesel, which delivers the high levels of efficiency and performance needed to transport heavy goods over long distances.

“The development of the latest low emission technology has resulted in Euro VI vehicles that have virtually eliminated particulates, while on-road tests of the latest heavy commercials show a 95% reduction in NOx over their older Euro V counterparts. These modern, low-emission vehicles play a critical part in improving air quality.”

Highlighting that 1.8 million owner-operators depended on vans for their livelihoods, SMMT chief executive Mike Hawes said: "Commercial vehicles play an essential but often overlooked role in keeping Britain functioning, performing jobs and transporting vital goods and services that we all rely on every day.

"This sector has never been so important to the UK economy – and to British jobs – and diesel's role in powering these vital vehicles should not be downplayed. Nearly all our commercial vehicles are driven by diesel, and thanks to heavy investment by industry to develop world-leading low emission technology, the latest Euro VI commercial vehicles on our roads today are the cleanest and safest ever."

The life of a commercial vehicle is varied, but each played an important part in powering the country's essential services, said the SMMT. In 2016 in the UK, 13,513 ambulances carried almost five million people to accident and emergency departments; 9,155 fire service vehicles attended 496,000 incidents; and 7,877 police commercial vehicles helped to keep us residents safe. In addition, some 45,000 postal vehicles kept businesses and people connected, collectively delivering an estimated 19 billion letters across the UK and commercial vehicles transported 1.52 billion tonnes of goods across the UK – including medicines, clothing and groceries.

Furthermore, said the SMMT, Euro 6 technology worked and highlighted real world tests using a London bus route that showed a 95% drop in NOx compared with previous generation Euro 5 buses. The SMMT concluded: "If every older bus operating in the capital were replaced with a Euro 6 version, total NOx emissions in London would fall by 7.5%."

Euro6 diesel company cars have a place on fleets

– THE MARKET INTELLIGENCE VIEW

Manufacturer investment in new Euro6 emission diesel engine technology has been driven by fuel economy and government legislation and James Dower, senior editor of CAP HPI's Black Book, said: "It is still more beneficial to run a diesel car as a company car because of the lower CO₂ and also lower benefit-in-kind tax rates."

The organisation argues that a lot of media reporting "demonising diesel" has "not been very insightful, well-led or well-informed" in relation to the impact of CO₂ and NOx emissions and what is happening long term.

"Pollution is not the same across all diesel vehicles," according to Andrew Mee, senior forecasting editor CAP HPI. "Euro6 vehicles are very clean, but older vehicles are more polluting."

It's a view shared by Rupert Pontin, director of valuations at rival Glass's. He said:

“There is a lot of negativity in the market at the moment but it tends to come from the press and also the dealer network. From a press point of view there are a number of people making connections that just aren't there at the moment. Although there is a high level of speculation around what will happen to inner city congestion charging for diesels, there is little actual fact to date. Equally we wait to hear what will happen to diesel company car benefit-in-kind taxation in the Autumn Budget. Some clarity on these points – and whether there will be a scrappage scheme [for older diesel vehicles] – would be very settling and helpful for both the fleet and private market.

“It must also be remembered that dealer groups by their nature are also quite shrewd and where they see a chance to be able to buy cars more cost effectively for whatever reason they will latch on to it and perhaps exacerbate the issue.

The multi-billion investment in "clean" Euro6 diesel engine technology versus the emissions standards of older vehicles had, according to CAP HPI, created marketplace confusion

based on "either incorrect assumptions or implications or information that is just wrong", according to Mr Setterfield.

"One of the biggest implications is that air quality is getting worse in the UK. It is absolutely not true; it is getting better. NOx has gone down about 70% in the last 30 years so the air we are breathing today is so much cleaner and that will have a cumulative benefit as older vehicles come off the road," he said.

However, while Euro6 diesel emission vehicles have been in showrooms since 2014, the used car market is suffering because of potential legislation – Clean Air Zones and potential changes in diesel vehicle taxation as well as the impact on consumers of the fall-out from the September 2015 Volkswagen Group scandal surrounding the fitment of emission cheating devices to diesel models – and that was having an adverse impact on residual values. But that decline is not all due to second hand buyer concerns over air quality.

New diesel models typically cost around £1,200-£1,400 more than their petrol-engined equivalents and that additional percentage of cost new premium is reflected in the used market translating into perhaps around £750.

Improvements in small car petrol-engine fuel economy and performance with the advent of three-cylinder engines coupled with the volume of small diesel cars in the market has resulted in an erosion of the diesel premium to perhaps £250-£300 and, in some cases, price parity.

As a result, some petrol models, especially in the city car and supermini segments, have moved towards parity with their diesel equivalents on a whole life cost basis.

Mr Mee said: "Slippage on diesel values has been happening for a number of years and looking to the future that is likely to continue as part of a long-term trend. It is likely that with all the bad press and publicity that the rate of deflation for small diesel vehicles will slightly increase."

But with the vast majority of diesel company cars being in the lower medium sector and above, Mr Mee said: "It is likely that larger vehicles where diesel engines make sense [the publicity] may not have that effect."

There is nothing wrong with today's Euro6 diesel engined cars, which are a "world away" from models of just five years ago and compared with 10 or 15 years ago they are "completely different".

That's the view of Dylan Setterfield, international forecast manager at automotive data and intelligence providers CAP HPI.

However, any potential decline is likely to hit older diesel vehicles as they will almost certainly be the models impacted by new legislation – as indicated by the entry criteria for London's Ultra-Low Emission Zone and future Clean Air Zones – and therefore, according to Mr Mee: "Lose their value more quickly. But those older vehicles are worth less so there is less money to lose if they are impacted."

Meanwhile, Mr Pontin has hinted at a potential 'regionalisation' of demand for defleeted diesel cars in the future.

He said: "It will be older diesel cars that will be more difficult to sell, although this will possibly become a regional issue bearing in mind the fact that it will be city drivers that will be penalised by Clean Air Zone charging. Older diesels that spend more time driven in the country will not be affected."

Meanwhile, with "a significant number of diesel vehicles being registered and significant demand for diesel" – despite some retail customers switching to petrol-engined cars and the rise of alternatively fuelled models – Mr Setterfield forecast that the time was right for introduction of a system of taxation that "drives the right behaviour".

He explained: "We need to look at the full environmental impact of each type of vehicle; we need to get the oldest polluting vehicles off the road and encourage new better vehicles on to the road."

"There is nothing wrong with today's diesels. We need to concentrate on the most polluting vehicles and that is certainly not today's modern diesel cars."

Agreement came from Mr Pontin, who said:

“The newest generation Euro6 diesels are much better for the environment than their predecessors and from a pollution perspective are only marginally worse than a petrol car.

Petrol models also produce CO₂ and that may become a problem for those cars moving forward. The arrival of the new WLTP process in September 2017 will cause petrol models some difficulty as their real world fuel

consumption becomes clearer. This will affect smaller engined cars more than larger engined variants whose engines do not have to work as hard to be able to move the car at a sensible everyday speed.

This will put some advantage back to diesel engine models, particularly for high mileage users. Therefore from a fleet perspective whilst there is a need for concern there is no need for panic yet. Residual value setters, Glass's included, have yet to significantly downwardly adjust forecast values and at this stage see no reason to, based on the facts.



The gloomiest forecast on future diesel car residual values comes from ExpertEye, which provides advice to auto manufacturers, leasing providers and fleet operators, and forecasts that the so-called "war on diesel" was likely to see used values drop by 15%-20% over the next five years.

While that may be viewed as a doomsday scenario, Experteye's 'European Automotive Report – 2017 Quarter 1', compiled by industry expert Dean Bowkett, of Bowkett Auto Consulting, highlights that the "war on diesel" has already seen used values drop by 9% in April 2017 in France, whilst values in the United States have dropped by more than 20%.

Acknowledging that one of the challenges facing UK car buyers is whether they should buy diesel after the recent about turn by the government from "promoting diesel to all but vilifying it", the report says: "A lack of a clear message from both the politicians and the industry bodies is doing nothing to help the latest and very clean diesel engine vehicles gain traction amongst new or used car buyers."

Blaming the "headline grabbing coming from the press and the misinformation coming from government" for the decline in "new, clean diesel cars", the report says: "The end result of this is that if you are a motor manufacturer selling 800,000 diesels a year or more you are looking at €1-2 billion being wiped off their second hand values and with many leasing companies sitting on fleets where diesel is 75% or more of their portfolio we could be looking at a financial crisis to mirror the banking crisis."

...but the UK government says differently and urges public sector fleets to ‘avoid diesel’

Local authorities and other public bodies, including government departments, have been charged to demonstrate leadership both to businesses and their local community in the procurement and operation of fleet vehicles and the requirements placed on contractors, including avoiding acquiring diesel vehicles.

The government's draft Air Quality Plan, the final version will be published by July 31, 2017, says that local authorities and other public bodies operating within a Clean Air Zone should ensure the fleet they operate, or is operated on their behalf, and ideally in the wider authority, meets the standards for the Zone.

The government also says that with Clean Air Zones at the heart of its bid to improve air quality, local fleets had an opportunity to demonstrate how new technologies and approaches could go further than the standard implemented.

It says that the use of ultra-low emission vehicles, alternative fuels and approaches to ‘grey fleet’ – employees driving their own cars on work-related journeys – could all demonstrate a lead.

The documents published by the Department for Environment, Food and Rural Affairs go on to say: “This might include working with staff on engagement and incentive schemes to reduce vehicle use, such as car clubs and car sharing schemes, cycling incentives and facilities, or flexible working practices.”

In procuring vehicles and services operating in a Clean Air Zone, local authorities should, says the government:

- **Ensure vehicles related to local authority use conform to at least the Clean Air Zone standards**
- **Set minimum supplier requirements related to air quality in procurement award criteria and for contract operations**
- **Develop approaches to incentivise and encourage employees to address air quality impacts**
- **Develop approaches to minimise the air quality impact of their day to day operations**
- **Seek to publicise their approaches to demonstrate and encourage others to follow their lead.**

The government also says that it is “determined to lead by example” and was taking action to ensure its operations and purchasing power supported reductions in NO₂ and other pollutants.

The Government Buying Standards for vehicles set down minimum mandatory and best practice standards for cars, vans, buses and trucks. All central government departments and their related organisations must ensure that they meet the minimum mandatory requirements in the guidance.

However, the current Government Buying Standards is focused primarily on reducing carbon emissions and later this year the government is to publish revised standards with the intention of encouraging the purchase of ultra-low emission vehicles where appropriate. The government is also updating the standard for cars and vans.

The information note accompanying the revised standards will have a statement that central government must play its part in reducing emissions of harmful pollutants, contributing to statutory limit values.

That, according to the proposals, will drive buying choices in favour of low NO_x, as well as low carbon, for around 3,000 new cars procured each year by central government.

Additionally, the government says it will work with the Energy Savings Trust and with local authorities to promote the use of Government Buying Standards throughout local government, the wider public sector and beyond in order to “avoid purchasing diesel vehicles wherever possible”. It says the Standards should be used as the “starting point for fleet procurement and operations”.

BVRLA chief executive Gerry Keaney said with reference to the government updating its procurement policy:

“It’s reassuring that the government has listened to our calls and is going to lead by example. The current Government Buying Standard focuses on CO₂ emissions, so it’s welcome news that the government’s revised standard will focus on NO_x emissions when it is published later this year. This will further encourage public sector fleets to choose ultra-low emission vehicles where possible.”

Businesses could also play an important role in improving air quality through both how they operate and through influencing their employees’ behaviour.

The government says: “Improving air quality should be considered an important part of corporate responsibility and sustainability. Businesses which make improvements should be supported and rewarded for their action creating a virtuous circle where the city becomes an attractive place for businesses and their customers.”

The Air Quality Plan recommends that: “Local authorities should work with local businesses to explain the aims of a Clean Air Zone and encourage the uptake of programmes to address air quality. Authorities should encourage businesses to take a lead and work with their local communities.”

That may include:

- **Working with SMEs and other businesses to help them understand their options for adapting to a Clean Air Zone, and the support available to them**
- **Engaging business participation in environmental sustainability and training programmes, for example to improve driver behaviour, and campaigns to raise employee awareness**
- **Working with local employers to increase awareness in their staff about local public transport choices and alternatives, and initiatives such as car clubs and car sharing**
- **Encouraging businesses to commit to use only their cleanest vehicles in a Clean Air Zone**
- **Encouraging businesses to commit, when buying new vehicles, to purchase those in line with or higher than Clean Air Zone standards**
- **Encouraging businesses to adopt approaches to operations that can support a Clean Air Zone**
- **Encouraging large taxi or private hire users, such as universities and hospitals, to require ultra-low emission vehicles within their contracts and promote travel planning to minimise use**
- **Encouraging the uptake of business recognition schemes such as Go Ultra Low Company status, ECO stars, Logistics Car Reduction Scheme and Fleet Operator Recognition Scheme**
- **Developing delivery service plans with local businesses.**

The government says it will also consult separately on regulatory changes to support the uptake of alternatively fuelled (non-diesel) vans.

The government said: “Vans spend much of their time driving around our towns and cities and over 96% of them are diesel powered so there is a pressing need to support innovative new solutions.”

It suggests that one way of achieving that was to encourage the uptake of cleaner fuels in delivery vehicle fleets. Proposals include:

- **Increasing the weight limit of alternatively-fuelled vans that can be driven on a category B driving licence in the UK [up to 3.5 tonnes]**
- **Exempting certain alternatively-fuelled vans from goods vehicle Operator License requirements in Britain**
- **Introducing roadworthiness testing for electric vans in Britain.**

The rise of plug-in vehicles



and will they replace the internal combustion engine?

Last year 36,907 electric vehicles were registered in the UK, according to the motor industry and government-backed campaign organisation Go Ultra Low. Nevertheless, it points out that there are now more than 100,000 plug-in cars on the nation's roads, although that is a tiny fraction of the 33.5 million cars on the nation's roads.

Yet, the government, which supports electric car purchases with a Plug-In Car Grant, says: "By 2020, we expect ultra-low emission vehicles to make up to 5% of new UK car registrations. By 2040, our aim is that all new cars sold in this country will have zero tailpipe emissions. And our ultimate goal is to make almost every car and van to be zero emission by 2050 – and will invest £600 million by 2020 to help achieve it."

Virtually every motor manufacturer has plug-in vehicles either in its range or in the pipeline, while hydrogen-fuelled cars are also being introduced by some producers.

In 2017, the UK automotive sector demonstrated its commitment to developing the latest low emission vehicles during a special display in London. Set against the backdrop of Tower Bridge, 26 vehicles from 16 different brands underlined the diversity and appeal of alternatively fuelled vehicles now on sale across the UK.

There are presently almost 100 different alternatively fuelled cars and vans available to fleets and company car drivers, designed to suit all lifestyles and driving needs – from hybrids to plug-in hybrids, fully electric and hydrogen powered vehicles; and from city run-arounds to SUVs, saloons, and sports cars.

It is that ever-increasing selection of electric cars that will play a key role in plug-in vehicle uptake, according to Go Ultra Low.

However, with a market share running at around 4% in 2017, alternatively fuelled cars have a long way to go to overhaul the domination of diesel and petrol models on company fleets.

Nevertheless, the government's vehicle-related tax policy – benefit-in-kind tax, Vehicle Excise Duty and capital allowances and the related lease rental restriction – is designed to drive fleets and company car drivers towards plug-in and ultra-low emission vehicles.

Poppy Welch, head of Go Ultra Low, said: "Year after year, we see record levels of electric vehicle registrations as more and more motorists realise the cost-saving and environmental benefits of driving a plug-in electric car. With ongoing government incentives and increasing product choice we expect this trend to continue."

She added: "We've been encouraged by the growing number of fleets realising the multiple advantages of electric vehicles through education on whole life costs and employee benefits. More businesses need to be bold, opening their thinking to incorporate electric vehicles and the cost savings they bring."

But, there are concerns that the April 1, 2017 introduction of a new Vehicle Excise Duty regime for newly registered cars could have a negative impact. Under the new system, two thirds (66%) of alternatively fuelled vehicles previously on the £0 standard rate are now subject to an annual flat charge of £130, in addition to varying levels of first year tax. Meanwhile, a £310 surcharge for five years for cars with a showroom price of £40,000 could affect demand for some of the lowest emitting vehicles – which are invariably more expensive than conventional technologies. As a result, industry experts have suggested "take up of innovative technology such as hydrogen fuel cell and plug-in hybrid vehicles could suffer".

Furthermore, the BVRLA believes not only does the new Vehicle Excise Duty regime "do little" to support the government's 'green' agenda or tackle air quality, neither does the company car benefit-in-kind tax system.

Chief executive Gerry Keaney said:

“A 20% taxpayer choosing between a pure electric BMW i3 and a hybrid Mitsubishi Outlander – both of which have similar P11d values and sit in the same tax band – will pay the same company car tax over the next three years. The current regime provides no incentive to choose a pure electric vehicle until 2020.”

That's when the government, at the lower end of the company car benefit-in-kind tax regime, links CO2 emission to electric mileage range with tax levels starting at 2% for a zero emission car or one with a 130-mile electric mileage range.

The BVRLA says the government should introduce the new 2% rate earlier to incentivise drivers to choose cleaner cars now.

Suggesting that the more 'granulated range of company car tax bandings' from April 2020 – the appropriate tax rate for zero emission cars will drop from 16% to 2% – could deliver a cut to basic rate taxpayer's company car tax bill by around £70 per month, or save a higher rate taxpayer up to £140 on a Nissan Leaf Acenta 30Kw, Mr Keaney said: "The company car tax regime is the single most powerful tool

policy-makers can use to drive behaviour change, but it is not being used effectively.

"By signposting these tax incentives but delaying them until 2020, the government could encourage thousands of pragmatic, cost-conscious drivers to defer the move to low emission motoring."

What's more, ACFO has highlighted for some time the failure of HM Revenue and Customs (HMRC) to publish tax-free company car Advisory Fuel Rates for plug-in cars as being a handicap to some organisations including them on their fleet choice lists.

In spring 2017, following an industry round table, ACFO called on HMRC to publish Advisory Fuel Rates for plug-in cars after providing it with real world mileage reimbursement figures.

ACFO is still waiting for a response from HMRC, but the organisation's chairman John Pryor, who chaired the industry summit, said: "ACFO acknowledges that it is possible for businesses to calculate rates themselves and then obtain permission from HMRC to use them to reimburse drivers. However, it can be extremely time consuming and difficult to obtain all the relevant data to undertake those calculations. Far better for HMRC to publish official figures as it does for petrol, diesel and LPG cars. Advisory Fuel Rates for plug-in cars are essential."

Meanwhile, Venson Automotive Solutions is a long-time supporter of the new generation of plug-in models with managing director Samantha Roff saying: "Venson is committed to promoting 'greener' fleets and helping make the shift to electric and hybrid vehicles. The signal that the government is looking at introducing diesel vehicle tax changes that are likely to mean tax rises could prove to be the catalyst to further drive fleets towards plug-in vehicles. Our consultative approach to business means that we will be working with fleet decision-makers to review their operations to see where such vehicles can be incorporated into policies."

Additionally, Mr Pryor said: "If the total cost of ownership, vehicle range and convenience factors all align there is no reason for fleets and company car drivers not to embrace plug-in cars."

However, that is not to say that diesel and petrol models will be completely ditched by fleets – or at least not for many years – with Mr Pryor adding: "ACFO believes that ultimately a mix of powerplants – plug-in, petrol and diesel – is the solution for the majority of fleets."

Interestingly the latest BVRLA statistics show that diesel cars continue to reduce as a proportion of its leased fleet, as use of ultra-low emission vehicles becomes more popular – particularly in urban areas.

But, concluded: Mr Keaney: "Diesel vehicles remain a vital part of the fleet mix, as diesel engines are the most energy-efficient internal combustion engines. It is often the most appropriate powertrain for long distance journeys and non-urban freight transportation, and the latest Euro6 diesel engines have made some major gains in reducing harmful NOx emissions."



What the vehicle manufacturers are planning

If that strategy is pursued, Volvo would become the first leading motor manufacturer to abandon diesel engine technology.

Volvo has now confirmed that every car it launches from 2019 will have an electric motor, marking the historic end of models that have only an internal combustion engine and placing electrification at the core of its future business. It will introduce a portfolio of electrified cars across its model range, embracing fully electric cars, plug-in hybrid cars and mild-hybrid cars.

Volvo says it will launch five fully electric cars between 2019 and 2021, three of which will be Volvo models and two of which will be high-performance electrified cars from Polestar, Volvo Cars' performance car arm. Full details of the models will be announced at a later date.

2020 European Union emission standards require manufacturers' model range to average 95g/km of CO₂. However, while Mr Samuelsson believes that figure cannot be achieved without diesel the expectation of even

tighter emission standards being introduced in the future, particularly to cut NOx, meant the cost of investment was prohibitive, the paper reported.

Volvo subsequently confirmed that Mr Samuelsson had been "discussing options" rather than a firm plan to stop the further development of diesel engines. In a statement the company said: "We have just launched a brand new generation of petrol and diesel engines, highlighting our commitment to this technology. As a result, a decision on the development of a new generation of diesel engines is not required." Nevertheless, the newspaper interview is an indication of one major motor manufacturer's current thinking.

Meanwhile, Volvo has announced a global electrification strategy that will see plug-in hybrid models introduced across its entire range. It will also develop a new range of smaller electric cars with a zero emission model due to go on sale in 2019 and plans to have up to one million electrified Volvos on the world's road by 2025.

Volvo Cars shocked the world when its chief executive Håkan Samuelsson was quoted in a German newspaper in May 2017 as saying that it would abandon diesel.

In an interview with the German newspaper Frankfurter Allgemeine Zeitung (FAZ), he was quoted as saying: "From today's point of view, we will not develop any new generation diesel engines."

It's a strategy that is being followed by the vast majority of volume manufacturers with their model range typically already – or in the near future – featuring a mix of petrol, diesel and plug-in models and some also offering hybrid.

However, notable exceptions are Hyundai and Toyota, which have each added a hydrogen-fuelled model to their UK range – the ix35 Fuel Cell and Mirai respectively – while Tesla is selling only pure electric cars.

The current thinking among most manufacturers being that it is too soon to place the internal combustion engine on the hard shoulder, let alone the scrapheap.

Nevertheless, for most manufacturers hybrid and ultimately plug-in is the future. When Honda revealed its 'Electric Vision' earlier this year, the manufacturer's European president and chief operating officer Katsushi Inoue, said it was the company's aim to have electrified powertrains in two thirds of European cars sold by 2025.

The electric vehicle range will initially be driven by a roll-out of hybrid technology across Honda's line-up in 2018, but it will also make plug-in hybrid and battery electric vehicles available to European customers and has promised a hydrogen fuel cell car.

Meanwhile, plug-in vehicle range, which is viewed by many drivers as the Achilles heel of those cars, is extending as battery technology improves. Renault, for example, which has been at the forefront of the electric vehicle revolution, now claims a "real life" driving range of up to 186 miles in summer and 124 miles in winter for the latest generation Zoe supermini. That is significantly higher than when the model was first launched.

Meanwhile, indicating the mileage range possible from an all-electric car is the Tesla Model S, which claims to be capable of an industry-leading 335 miles on a single charge.



The future of fuel prices and *the ability to recharge plug-in vehicles*

Fuel typically accounts for at least 25%-30% of fleet expenditure – invariably the second biggest fleet cost after vehicle acquisition/depreciation – so any savings that can be made will have a major impact on total cost of ownership figures.

Fuel savings are one of the benefits of running a plug-in vehicle, with the Go Ultra Low campaign suggesting that costs for a pure electric car are potentially 80% less than for a conventional vehicle.

What's more, the Department for Transport has calculated that electric vehicle running costs are as low as 2p a mile and the Energy Saving Trust suggests such models cost around £2-£3 to fully charge, for a typical range of 100 miles.

An equivalent petrol or diesel car costs £12-£18 to drive 100 miles – 600% more on a mile for mile basis.

Research by Go Ultra Low also suggests that collectively British motorists are missing out on savings of almost £24.5 billion annually by not taking advantage of ultra-low emission motoring. It is therefore, clear that fleets that replace petrol and diesel cars with plug-in vehicles will slash their fuel bills.

However, what is the long-term outlook for the price of fossil fuels at the pumps? Today, the average price of a litre of diesel is around 117p with a litre of unleaded petrol costing about 116p – that's a long way short of the 148p recorded for a litre of diesel in April 2012 when petrol cost a record 142p a litre.

Much will depend on UK government policy as fuel duty – frozen for seven consecutive years – is currently levied at a flat rate of 57.95p per litre for both petrol and diesel, while VAT at 20% is then charged on both the product price and the duty. It means that currently tax accounts for almost two-thirds (66%) of the pump price. The other key factor is the price of a barrel of crude oil, which today is around \$51 compared with \$111 in April 2012 when UK fuel prices reached their record high.

Meanwhile, the Organisation of the Petroleum Exporting Countries (OPEC) expects demand for fossil fuels to soar despite the global focus on climate change and the need for renewable energy.

The oil sector is transportation driven and by 2040 OPEC predicts another 1.2 billion people will be behind the wheel of a vehicle and the number of commercial vehicles on the roads will double. As a result, a 50% increase in energy demand is forecast.

In 2016, then OPEC secretary general Abdalla Salem El-Badri said: "Fossil fuels will need to supply more than three-quarters of the energy mix by 2040."

With non-fossil fuel energy having a 22% market share, he said: "Fossil fuels remain abundant and are necessary for our future, just as they have been an essential part of our past."

Technological refining developments will contribute to the ultimate elimination of emissions associated with fossil fuels, but with the extra production capacity required to meet demand, Mr El-Badri said: "Crude [oil] prices need to return to a more reasonable range. For the foreseeable future, renewables, however admirable, will only ever be supplementary, at best."

However, some cities, including London, could see fuel

consumption from cars and light commercial vehicles fall by 60% by 2030, as the switch from petrol and diesel vehicles to electric gathers momentum, according to a report by Bloomberg New Energy Finance and McKinsey & Company.

Colin McKerracher, head of advanced transport at Bloomberg New Energy Finance, said:

“Vehicles and the way they are used will change more in the next two decades than they have in the last 100 years, due to falling battery costs and the advance of connected technologies.”

The study, 'An Integrated Perspective on the Future of Mobility', forecasts that the switch to plug-in vehicles will deliver cleaner air while the growth in electric vehicle battery demand will drive down costs and help integrate more renewable energy generation into the electricity mix through distributed energy storage.

However, if plug-in vehicle demand takes off as the UK government hopes is there enough electricity available to power the cars and commercial vehicles?

Environmental think tank Green Alliance is concerned. It highlights what it calls "grid congestion" resulting in expensive short notice network upgrades and inadequate generation at peak times.

It forecasts without upgrades to the UK's electricity grids, just six electric cars charging in close proximity at peak times could overload the network and disrupt local power supplies.

Meanwhile, the lack of recharging points across the UK has in surveys been shown to be the biggest deterrent for drivers to go electric, including in Venson Automotive Solutions' own survey.

But the facts prove otherwise. The government calculates that there are more than 11,000 charging points in place and the network is continually growing – that's already more recharging points than there fuel station forecourts (2015: 8,490).

The government is making millions of pounds available for more charging points to be located in key areas, which include retail shopping car parks, railway station car parks and other popular locations.

Furthermore, fuel companies such as Shell and Total have pledged to put charging points on their forecourts. What's more, Go Ultra Low research suggests that because of journey patterns more than 90% of electric vehicle charging takes place at home.

Nevertheless, despite the increase in recharging points, Mike Hawes, chief executive of the SMMT, said: "Greater investment in the charging network is essential if we are to grow this emerging market."

There are currently 13 hydrogen fuel stations in the UK with a further eight expected to open in the near future.

WHAT THE 'EXPERTS' SAY ON THE fuel of the future

FOR MOTOR VEHICLES

A seemingly endless stream of reports on the future of motor vehicles are published at regular intervals with hugely variable conclusions. Below we highlight some of the comments, but are they realistic or just headline grabbing?

The definitive answer is impossible to arrive at – but it seems far-fetched to believe that fleets will not be operating a blend of petrol, diesel and electric cars for the short and medium term, while commercial vehicles – except in rare circumstances – will remain diesel.

However, while some reports, such as CAP HPI's 'Petrol versus Diesel' analysis take a balanced view, the Liberal Democrats in their June 2017 election manifesto went as far as to call for a ban on the sale of diesel cars and small vans in the UK by 2025 as part of a Green Transport Act.

Elsewhere, the San Francisco think tank RethinkX and Stanford University economist professor Tony Seba in a spring 2017 report, 'Rethinking Transportation 2020-2030: The Disruption of Transportation and the Collapse of the Internal-Combustion Vehicle and Oil Industries', said: "What the cost curve says is that by 2025 all new vehicles will be electric, all new buses, all new cars, all new tractors, all new vans, anything that moves on wheels will be electric globally."

And, global financial services firm UBS said recently: "The cost of owning an electric car will reach parity with combustion engines from 2018. This will create an inflection point for demand. We raise our 2025 forecast for electric vehicle sales by 50% to 14.2 million – 14% of global car sales."

However, that does not mean that an electric car and a conventional petrol or diesel engine car will cost the same

to buy new. It means that the UBS team believe total cost of ownership will be similar.

While those two reports tend to focus on the global picture, ExpertEye's latest Fleet Industry Review suggests there has been a dramatic increase in the proportion of fleets operating electric and hybrid vehicles over last two years.

Based on a survey of more than 200 UK fleet operators the study revealed that the proportion of fleets with hybrid fuel vehicles had increased from 32% to 62% and electric from 8% to 22%.

The study also revealed that 99% of respondents operated diesel company cars, 67% petrol-engined models and 24% range-extended electric vehicles.

The consulting arm of motor industry date suppliers and forecasters CAP HPI forecasts that diesel's share of the UK new car market is set to gradually decline from 50% to less than one-third in the years to 2025, notably as fleets take a more "open-minded approach" to petrol-engined cars and demand for plug-in and hybrid models increases.

Last year business and fleet sales accounted for 1.5 million new car registrations, 55.2% of total new car volume and almost 60% of diesel models. But, in the private sector petrol-engine new car registrations dominate.

However, CAP HPI's 'Petrol versus Diesel' report highlights three key factors that could undermine demand for diesel vehicles over the next decade:

- **Environmental issues and concerns around air quality particularly with NOx from diesel emissions resulting in the advent of Clean Air Zones and London's Ultra-Low Emission Zone;**
- **Improved petrol-engine technology eliminating the MPG advantages of diesel cars;**
- **The increased range and user-convenience of alternatively-fuelled cars such as hybrids, plug-in hybrids and 100% electric vehicles.**

Furthermore, CAP HPI has already highlighted declining diesel residual values with the premium charged by motor manufacturers for diesel models over their petrol equivalents now being almost completely eroded in some segments of the second hand market.

The report says:

“We are starting to see saturation of diesels and we have seen some brands effectively flood the market with diesels. Diesels are no longer seen as the only solution for many buyers who are aware that improved petrol engine efficiency and alternatively fuelled vehicle competitors are available as an alternative to a diesel.”

However, CAP HPI agrees with both the SMMT and the BVRLA that diesel is not "dying", with the fuel being notably resilient in the fleet and business sector, particularly in the short to medium term.

The report says: "Whilst some fleets are opening up their ranges to petrol the vast majority remain wedded to diesel, and there is no indication that this will change in the short term."

What's more, the report adds that vehicle manufacturers will continue to develop diesel technology, focusing on weight improving efficiency and reducing emissions and particulates.

Nevertheless, the report says: "It is clear that the fleet market is concerned enough about future diesel values to reduce their exposure to them. As we start to see restrictions in the use of diesel vehicles in our cities, used buyers will become increasingly wary of the technology and this will impact residual values.

"As these disadvantages begin to outweigh the benefits of diesel vehicles – and the increasing awareness of total cost of ownership is already putting paid to this – we will start to see a vicious circle of declining used demand and declining residual values."

Simultaneously, there will be the emergence of next-generation electric vehicles delivering battery ranges of 300 miles plus and the installation of thousands of high-speed charging points.

The report continues: "With declining diesel residual values starting to become apparent, fleets are moving to balance their portfolios to reduce their exposure to falling diesel residuals. Similarly, there is an increased demand for low and zero-emission vehicles from businesses wanting to show themselves as environmentally aware.

"At the same time, end-users are also looking to shift away from diesel. With benefit-in-kind taxation on company cars planned to increase over the remainder of the decade, more and more company car user-choosers are looking at low and zero-emission alternatives, some of which offer a better deal for company car drivers."

Consequently, concludes the CAP HPI report:

- **Diesel residual values will continue to fall across the market as over-supply to the fleet and business sector means supply outstripping demand from used car buyers;**

- **A wider and broader understanding of the true total cost of ownership of diesel vehicles by used buyers will expose the poor value that many offer for typical consumers;**
- **Fleet and business buyers will continue to diversify their fleets to decrease their exposure to lower diesel residual values; increase choice for user-choosers seeking non-diesel options and, there will be pressure from both employers and employees seeking lower tax options as the tax burden on diesel cars rises;**
- **The attractiveness of diesel cars will be further undermined by local Clear Air Zones;**
- **Motor manufacturers will nurture demand for alternatively fuelled vehicles at the expense of diesel vehicles.**

What's more CAP HPI is forecasting that in sectors where diesel demand is already weak, such as the city car segment, new generation models will not offer a diesel powertrain option.

Additionally, it predicts that in strong growth segments, such as the SUV sector, motor manufacturers will drive customers towards electric vehicle offerings. Also, in the mainstream sectors, petrol engine models will be promoted.

The report says: "Fleet-focused segments will see more petrol demand as changes to company car tax, and a more open-minded view of petrol engines makes them a more popular choice for both fleet managers and user-choosers.

"We can foresee a gradual decline in diesel – from half the market to less than one-third, with growth in petrol engines, hybrids and electric vehicles to compensate."

Across Europe registrations of new diesel cars has been falling and vehicle information provider JATO Dynamics sees the latest figures as indicative of an ongoing trend.

A 15% decline in diesel registrations across European markets in April 2017 resulting in a 46% market share versus a 50% market share in April 2016 indicated, said JATO Dynamics, that "the fuel type has lost its dominance".

The company said there were several reasons for the shift, but claimed that "all the evidence" pointed to the Volkswagen Group 'dieselgate' scandal as the start of the decline.

Felipe Munoz, global automotive analyst at JATO Dynamics, said: "Since the scandal, which broke in 2015, the fuel type has suffered major setbacks to its reputation as governments consider new legislation that directly affects diesel car owners. In tandem with this, the media continues to advise consumers to avoid the fuel type wherever possible. When factoring in the ongoing push for electric/hybrid vehicles, which are particularly prevalent in markets like the UK, it is perhaps no surprise to see this decline in performance from diesel."

Conclusion

Is it the end of the road for diesel as a fleet fuel? Absolutely not, but as legislators grapple with introducing measures to improve air quality and potentially change tact with their vehicle taxation strategy it does mean that diesel is no longer the default option for corporate travel.



In the company car sector, fleet decision-makers and drivers have a clear choice of petrol, hybrid, plug-in as well as diesel, which has been the mainstay of corporate travel operations for 15 years.

As a result, it is critical that fleet decision-makers not only future proof their vehicle operating decisions against a changing legislative and taxation background – incorporating Clean Air Zones – that drives company car choice firmly along the ‘green’ road, but they analyse employee vehicle requirements on an individual basis.

That almost certainly means that the vast majority of fleets will feature a mix of vehicles fuelled by petrol and electricity, while diesel will continue to have its place, particularly for high mileage drivers.

Ultimately, as Venson Automotive Solutions continually highlights, company car selection comes down to whole life costs and fitness for purpose.

Today’s range of Euro6 emission diesel cars are, as the SMMT argues, a completely different technical offering to the models of yesterday and are the ‘cleanest’ in history. It is a fact that has been conveniently ignored by many in the media who have ‘demonised diesel’.

Consequently, fleet decision-makers and company car drivers have a tightrope-like balancing act to perform that means future proofing their vehicle operating decisions against a changing landscape.

There is no definitive ‘right’ fleet fuel and, while diesel as well as petrol, pure electric, hybrid and plug-in hybrid cars all have their merits they also have their drawbacks – financial and operational – that must be taken into account in the decision-making process.

In the commercial sector, Venson Automotive Solutions anticipates that diesel will remain dominant as, while plug-in vans are available, their viability, notably due to range and payload, make them suitable for only niche requirements.

Finally, perhaps the clearest indication that, despite some media reporting, diesel remains an ‘OK fuel’ is that the government and the Mayor of London are respectively using Euro6 emission standards as the entry criteria to Clean Air Zones and the capital’s Ultra-Low Emission Zone.

Therefore, while emission standards and taxation will continue to tighten over the coming years and the government is clearly signposting businesses and consumers towards driving plug-in vehicles, for the short and medium terms best practice dictates that fleets will operate a mix of fuel types, including diesel.

Sources:

Bloomberg New Energy Finance: ‘An Integrated Perspective on the Future of Mobility’ study –
<https://about.bnef.com/blog/integrated-perspective-future-mobility/>

British Heart Foundation:
www.bhf.org.uk

British Vehicle Rental and Leasing Association: ‘A Fleet and Mobility Services Manifesto 2017’ –
<http://www.bvrla.co.uk/2017-manifesto>

CAP HPI: ‘Petrol versus Diesel’ report –
<http://extras.cap-hpi.com/petrol-versus-diesel>

Department for Environment, Food and Rural Affairs Draft UK Air Quality Plan:
<https://consult.defra.gov.uk/airquality/air-quality-plan-for-tackling-nitrogen-dioxide/>

Emission Analytics:
<http://emissionsanalytics.com>

ExpertEye: ‘European Automotive Report – 2017 Quarter 1’ –
www.experteye.com

Go Ultra Low ‘Fleet Guide to Plug-In Vehicles’:
https://www.goultralow.com/wp-content/uploads/2016/05/go-ultra-low_2016_aw_web.pdf

Society of Motor Manufacturers and Traders: ‘New Car CO₂ Report 2017’ –
<https://www.smmt.co.uk/reports/co2-report/>

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