

A close-up, low-angle shot of a car's headlight assembly, heavily tinted with a blue color. The image shows the intricate details of the lens and the internal components of the headlight. The lighting is dramatic, with strong highlights and deep shadows, creating a sense of depth and texture. The overall mood is professional and technical.

**What does  
WLTP mean  
*for your fleet?***

## *Venson fleet management solutions*

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

Testimony to this is our client retention rate of 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 managing fleets, so our knowledge and in-depth understanding of the market is the best in this sector and relevant to public, private, not for profit and emergency service organisations.

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

**venson**

# Introduction

The impact of the introduction of the Worldwide harmonised Light vehicles Test Procedure (WLTP) on vehicle carbon dioxide (CO<sub>2</sub>) emissions and MPG data has been described as having a “seismic” impact on the motor industry, and that includes fleets.

**WLTP is the replacement for the long-established New European Driving Cycle (NEDC) vehicle testing procedure.**

Cars and light vans are now being tested in more ‘real-world’ like conditions, but that means CO<sub>2</sub> emissions are rising and MPG reducing on a per model basis when compared to figures quoted under the obsolete NEDC test process.

However, until April 2020, when the UK government will introduce a motoring tax system based on WLTP CO<sub>2</sub> values, a transitional period sees manufacturers publish figures obtained under WLTP testing but converted back to a comparable NEDC value. It is known as an NEDC-correlated figure.

Vehicle data provider JATO Dynamics says its research reveals that the new NEDC declared values – either calculated via Co<sub>2</sub>mpas, the tool developed to convert WLTP CO<sub>2</sub> measurements to an NEDC equivalent, or via double testing for new engine calibrations, which have been re-homologated using the WLTP test cycle – are higher than under the previous NEDC test cycle.

Consequently, the upshot of WLTP is almost certainly likely to be higher vehicle-related taxation. Additionally, vehicle list prices could rise as manufacturers introduce new technological breakthroughs in a bid to limit any rise in CO<sub>2</sub> emissions and reductions in MPG.

Until August 31, 2018 cars and vans are available – albeit in small numbers – with published CO<sub>2</sub> and MPG figures based on testing under the NEDC regime; simultaneously, vehicles are emerging that have been tested under WLTP with the resulting CO<sub>2</sub> and MPG figures converted to NEDC-correlated numbers. NEDC-correlated data will be published and used for tax purposes until April 2020 when WLTP protocol derived figures will be used and NEDC-correlated data axed.

Notwithstanding previously announced increases in vehicle taxation by the government for 2018/19 and beyond, it will, in the short-term be current models that will suffer the most from tax rises as they go through WLTP testing, with CO<sub>2</sub> emission and MPG figures converted back into NEDC-correlated numbers.

Winners, or at least vehicles that will potentially suffer the least under the transitional NEDC-correlated regime, are where manufacturers have a product cycle in which they have been able to launch new models and thus use technological developments to ‘manage’ the switch to WLTP-based testing.

What is absolutely certain is that if vehicle CO<sub>2</sub> figures have not been influential in the compilation of company car policies to date they are now critical. Meanwhile, not only is CO<sub>2</sub> data vital, but those ‘must have’ optional extras beloved of many company car drivers may be confined to the dustbin come April 2020. That’s because, for the first time, options will be included in the CO<sub>2</sub>/MPG testing process.

WLTP is here and fleet managers must understand its impact on company car policies and fleet choice; understand the timeline for the full implementation of WLTP and the related Real Driving Emissions (RDE) test; get to grips with how both WLTP and RDE impacts on all aspects of vehicle-related taxation between 2018 and 2020; and be prepared for further change once the government announces the shape of all vehicle-related taxation from April 2020.

## Glossary

.....

<b>WLTP</b>	Worldwide harmonised Light vehicles Test Procedure
<b>NEDC</b>	New European Driving Cycle
<b>RDE</b>	Real Driving Emissions
<b>MPG</b>	Miles Per Gallon
<b>LCV</b>	Light Commercial Vehicle
<b>CO<sub>2</sub></b>	Carbon Dioxide



*Q: I understand there are changes in the way CO<sub>2</sub> emissions and MPG of cars and light commercial vehicles are being measured. Please can you explain them?*

.....

**A:** Yes that is correct. For many years' official CO<sub>2</sub> emissions and MPG figures of cars and light commercial vehicles (LCVs) have been calculated according to the long-established NEDC protocol. That is a laboratory-based test, but there has been international concern that the resulting figures are far from accurate in 'real-world' driving conditions. Consequently, the WLTP test procedure has been developed. It is still a laboratory-based test but, without getting too scientific, has been designed to be more transparent and representative of 'real-world' driving, so will provide CO<sub>2</sub> values and MPG figures more reflective of actual motoring. The WLTP test has been billed as "the world's toughest-ever emissions standard". As a result, the impact of WLTP testing in simple terms is that published car and LCV CO<sub>2</sub> figures will be higher and MPG figures will be lower than under NEDC.

*Q: I also understand that something called the Real Driving Emissions test procedure is being introduced. How does that fit in with WLTP?*

.....

**A:** The RDE test procedure is applicable to cars and light commercial vehicles, but is particularly relevant to today's Euro6 diesel engine vehicles. It has been designed to check that the emission levels of nitrogen oxides (NO<sub>x</sub>), and particle numbers (PN) measured during the WLTP are accurate in on road driving conditions. RDE does not measure CO<sub>2</sub> emissions. As with WLTP, RDE is designed to reduce emissions measured in the laboratory and those measured on the road in 'real-world' driving conditions. Although WLTP will deliver 'real improvements' to the testing regime, it is still a laboratory test and cannot take into account driver style, traffic conditions, weather, gradients or load of the vehicle into its calculation. All of those factors have an impact on the consumption and emissions performance of the vehicle. The RDE test will support in providing customers with that insight by the fitting of Portable Emissions Measuring (PEMS) equipment to a vehicle to record exhaust emissions while it is being driven on roads.



# THE WORLD'S *toughest ever* *emissions* *standard*

*Q: I understand, but what is the timetable for introduction of the WLTP and RDE test regimes?*

.....

*A:* This is where it gets a little complicated, but we hope the following provides some clarity.

#### **WLTP**

- All new car and lighter van models (Class I up to 1305kgs) requiring type approval have been tested under WLTP rules since September 2017
- All cars and lighter vans (Class I up to 1305kgs) must be tested under WLTP rules from September 2018
- New types of heavier vans (N1 Class II 1305-1760kgs and III above 1760kgs) must be tested under WLTP rules from September 2018
- All heavier vans (N1 Class II 1305-1760kgs and III above 1760kgs) must be tested under WLTP rules from September 2019.

However, the government has said that WLTP emission figures will not be used as the basis for calculating motoring-related taxes until April 2020. As a result, there is a transitional period during which vehicle manufacturers test vehicles under WLTP rules. They then use a European Commission-developed mathematical tool – known as CO<sub>2</sub>mpas – that converts the WLTP-produced CO<sub>2</sub> figure back to a comparable NEDC value. This is known as an NEDC-correlated or converted figure. Additionally, the government has said that all vehicle manufacturers should change over to new WLTP fuel consumption figures in their promotional material and advertising for all vehicles on January 1, 2019.

#### **RDE**

- This is being introduced in two phases. Phase one reduces the discrepancy between the regulatory limit that is tested in laboratory conditions and the figure when a vehicle is driven by a driver on a road to a conformity factor of a maximum 2.1 (110%) for new models by September 2017 and new vehicles by September 2019
- RDE2 further reduces the discrepancy to a factor of 1.5 (50%) by January 2020 for all new models and by January 2021 for all new vehicles. The current discrepancy, according to the British Vehicle Rental and Leasing Association (BVRLA) is 400% on average, so RDE1 and RDE2 represents a significant reduction, which is particularly important given ongoing air quality concerns – the launch of the Ultra-Low Emission Zone in central London in April 2019 and potentially Clean Air Zones in towns and cities nationwide in the next two years or so – with diesel vehicles notably in the firing line.

The move to WLTP is huge for all vehicle manufacturers as all models, all engine configurations for all fuel types, all trim levels and all options must be tested. It is expected that the combination of WLTP and RDE means that the figures used by vehicle manufacturers in advertising and on their websites will be much closer to 'real-life' CO<sub>2</sub> emissions and fuel consumption. However, as always, there is likely to be some variance between the quoted figures and what individual drivers achieve, but the new test procedures aim to close the gap. Additionally, motor manufacturers are facing a race against time to have all vehicles WLTP tested to meet deadlines due to the volume of models requiring testing and a shortage of testing facilities. As a result, there could be an increase in lead times for vehicles caused by production delays as manufacturers strive to get models WLTP tested.

*Q: So during the transition period to April 2020 two sets of figures could be in use – one based on WLTP and a second NEDC converted figure?*

**A:** Yes, that is correct. However, during the period of transition from NEDC to WLTP that started in September 2017, cars type approved before then will continue to have CO<sub>2</sub> values as measured under the old NEDC test so actually in the short-term it is three sets of figures. That's because until August 31, 2018 manufacturers are able to continue selling those models.

Leaving that anomaly aside, when a new model is certified according to WLTP after September 2017, its official vehicle documents (the Certificate of Conformity) will have CO<sub>2</sub> emission values from both the new laboratory test (WLTP) as well as the NEDC-correlated figure. This means that since September 2017, when the switch from the old NEDC test to WLTP started to be made, one might come across two different values for the same car. That risks being quite confusing, making it difficult to compare vehicles. It has also been highlighted that the correlation tool has limitations that has resulted in significantly higher NEDC-correlated CO<sub>2</sub> values and reduced MPG figures compared to the old NEDC test (see next question).

*Q: However, I'm already noticing that CO<sub>2</sub> emissions for some company cars are rising, what's all that about?*

**A:** You are correct and this is the real crux of the matter from a practical fleet perspective. As mentioned all cars and vans on sale must be tested under WLTP rules from September 2018 so manufacturers are racing against time to put all models through the testing regime. Some motor manufacturers have started to publish the new WLTP-derived NEDC-converted figures, but it is currently impossible to tell at a glance how those figures compare with the 'old' NEDC figures. In fact, currently only by researching on a model-by-model basis is it possible to check (see next question). CAP HPI, which claims to be the UK's largest provider of vehicle data and is the source for large quantities of information used by contract hire and leasing companies, including Venson Automotive Solutions, has confirmed that it will integrate the additional information in its New Vehicle Data sets over the coming months so users will be able to identify which values are NEDC and which are NEDC-correlated following testing under WLTP. Similarly, rival Glass's has said that its databases are updated and ready to accept manufacturer WLTP and NEDC-correlated figures.

Meanwhile, JATO Dynamics is developing and testing for launch in July 2018 a global data solution that it says will enable the automotive industry to access WLTP data via one single solution, and with a standard data format access point. The actual performance of cars and vans are not affected: the increase in CO<sub>2</sub> and reduction in fuel economy is due only to the technical differences between WLTP and NEDC, and is a reflection that WLTP better represents driving reality.

It had been anticipated by the motor industry that NEDC-correlated figures would be tax neutral, but the reality has proved to be somewhat different. Figures from manufacturers that have published information to date suggest an average CO<sub>2</sub> increase of around 10% or 10-15g/km. Meanwhile, based on 1,000 registered units from six manufacturers Autovista Group, data providers to vehicle manufacturers, leasing companies and other organisations and publisher of Glass's in the UK, calculated increases in CO<sub>2</sub> from NEDC to WLTP of 25% with a range of 4%-34% depending on vehicle. JATO Dynamics

said: **“WLTP is a seismic change in the automotive industry. We have observed that NEDC-correlated CO<sub>2</sub> figures are higher than previous NEDC tested values, and the disparity could be greater than the industry expected. Furthermore, our initial findings suggest that the NEDC-correlated values are resulting in higher purchase and ownership taxes for the end user in some cases. This is something the industry needs to be aware of as the competitive landscape is changing.”**



*Q: Will manufacturers' model ranges remain unchanged with the introduction of WLTP?*

**A:** That will depend on individual marques, but there is no doubt that WLTP testing will negatively affect some manufacturers. It is almost certain that action by manufacturers to manage the negative impact of CO<sub>2</sub> emissions includes:

- **The withdrawal of specific engines or engine and option configurations**
- **The re-engineering of vehicles to improve emissions and MPG. Indeed, German newspapers have reported that BMW has said that WLTP means the interruption of production of models, including various versions of the 7 Series, the X1, X2, X5 and X6**
- **Simplification of complex ranges**
- **Individual options packaged to reduce option complexity.**

What's more some manufacturers have warned that they may be unable to meet current orders ahead of the September 2018 deadline for the sale of NEDC-tested cars if they do not have existing stock. Indeed Renault told Venson Automotive Solutions in relation to an order for Clios that there were two options:

- **To use existing orders already at 'confirm build' but alter the engine of those orders so they matched the customer's requirement and ensure that cars were registered before August 31 as the models were NEDC-compliant; or**
- **Order the all-new Clio tested under the WLTP regime, but delivery was unlikely before October 2018, pricing was not yet known and neither were lead times.**

*Q: So how do I know if a vehicle's CO<sub>2</sub> figure is the result of testing under NEDC or WLTP?*

**A:** As mentioned previously that is pretty difficult. However, some manufacturers are starting to publish NEDC-correlated figures on their websites and in sales brochures. Ford (see next page) has just published information on the all-new Focus and the small print of the price list makes clear that CO<sub>2</sub> emission and MPG figures were produced under the WLTP regime and then been correlated back to NEDC figures. Additionally, Volkswagen has launched the new Up!, but only one model is WLTP tested (see next page).

# *Emissions under WLTP testing on a car-by-car basis will increase by around 20%*

*Q: OK. But can you provide me with some practical examples of how cars' CO<sub>2</sub> figures under the 'old' NEDC regime compare with those under the new WLTP regime and subsequently NEDC-correlated?*

*A:* Experts have suggested that CO<sub>2</sub> emissions under WLTP testing on a car-by-car basis will increase by around 20% with MPG reducing by a similar amount. However, those figures are only 'guesstimates'. Therefore, it is important to remember that the NEDC-correlated figures are likely to be a 'halfway house' between the 'old' NEDC figures and the WLTP figures, which will not be used for tax purposes until April 2020. BMW has been at the forefront among manufacturers in publishing new figures using WLTP protocols – figures for other manufacturers' models are drip-feeding through. The figures below indicate how CO<sub>2</sub> – and where available MPG – have changed.

Model	CO <sub>2</sub> (g/km)		Fuel Economy (mpg)	
	New	Old	New	Old
BMW 116d SE Business 5dr (nav/servotronic)	111	94	67.3	78.5
BMW 320d SE 4dr	125	111		
BMW X3 xDrive20d SE 5dr step auto	140	132		
BMW X3 xDrive30d SE 5dr step auto	154	149		
BMW 520d SE 4dr auto	119	108	62.7	72.4
Citroen C4 Cactus 1.2 PureTech Flair 5dr	104	100		
Peugeot 308 1.2 PureTech 130 Allure 5dr	119	107		
Toyota Prius 1.8 VVTi Business Edition 5dr CVT	78	70		
Volvo XC60 2.0 D4 Momentum 5dr AWD geartronic	144	133		
Volvo S90 2.0 T4 Momentum 4dr Geartronic	155	153		



As can be seen, and perhaps not unexpectedly, CO<sub>2</sub> emission increases vary enormously across models and that will have a significant impact on vehicle taxation as company car drivers select their new vehicles. However, underlining the difficulties facing fleet operators in comparing vehicles is the all new Focus – the UK's most popular model. The new model has just gone on sale in readiness for September deliveries with Ford promising "fuel efficiency and CO<sub>2</sub> emission improvements of 10% across the range". The new model's CO<sub>2</sub> and MPG figures are NEDC-correlated. Selecting a petrol and a diesel model from the new range – and the two closest models from the outgoing Focus range – illustrate the changes and how vehicle manufacturers are working to keep CO<sub>2</sub> emissions and MPG as close as possible to 'old' NEDC figures.

**New 1.0 125PS EcoBoost Titanium 5dr**

108g/km; 58.9mpg

**Old 1.0 125PS EcoBoost Titanium Navigation 5dr**

108g/km; 60.1mpg

**New 1.5 120PS EcoBlue ST-Line X 5dr**

100g/km; 76.4mpg

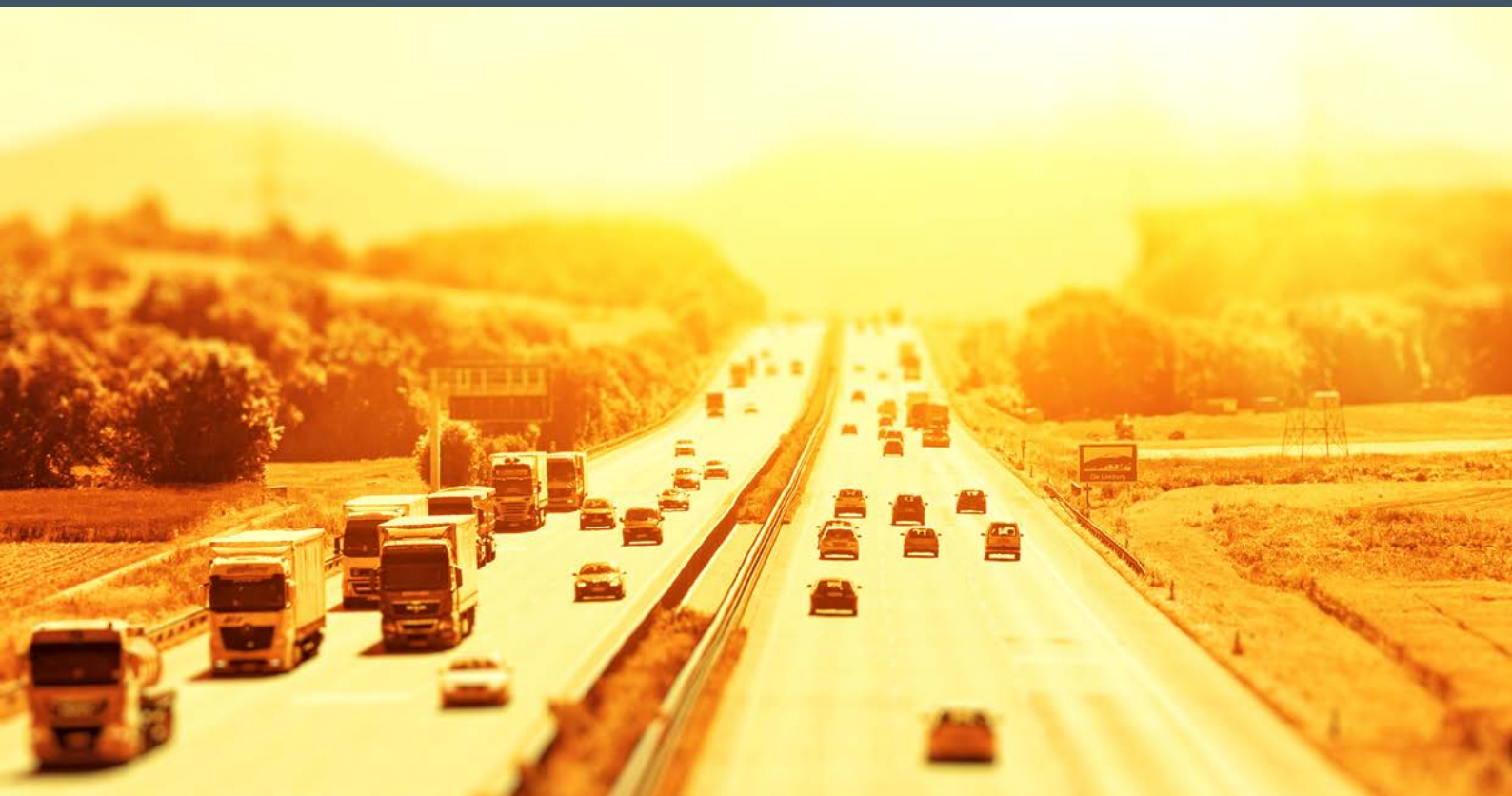
**Old 1.5 120PS TDCi ST-Line X 5dr**

99g/km/74.3mpg

- The most efficient petrol and diesel engines in the all-new Focus line-up are: 1.0-litre EcoBoost 100PS petrol engine 107g/km and 60.1mpg and the 1.5-litre EcoBlue 95PS diesel engine 91g/km and 80.7mpg.

The first Volkswagen vehicle to be tested under WLTP protocols is the Up! 1.0 TSI S/S GTI. The model, which recently went on UK sale, has WLTP figures of 127-129 g/km and 41-42mpg compared with NEDC figures of 110g/km and 49mpg.

Clearly, timing is everything. What the available CO<sub>2</sub> emission and MPG data shows is that where vehicle manufacturers – such as Ford – have a model change they are able to harness innovative technologies, new aerodynamic features and weight-reducing techniques to limit CO<sub>2</sub> emission rises and fuel economy reductions as a result of the introduction of WLTP. However, where manufacturers have been forced to homologate existing models to WLTP protocols a straightforward conversion from NEDC can dramatically impact on both CO<sub>2</sub> emissions – and thus the tax burden – and MPG.



# *Governments must ensure that the transition to WLTP will not negatively impact vehicle taxation*

**Q:** *As all motoring taxes are linked to a car's CO<sub>2</sub> figure does it follow that taxes will rise if a vehicle's NEDC-correlated CO<sub>2</sub> figure increases?*

.....

**A:** Yes, I'm afraid it does in the short-term. However, the big unknown is what will happen from April 2020, which is when the government has said it will use CO<sub>2</sub> figures derived under WLTP testing for tax purposes. HM Treasury has told fleet industry organisations, such as the BVRLA, that it does not see WLTP as a tax-raising development; it is viewed as a transition. As a result, there is some hope that changes in the way vehicles are tested should not be seen as a mechanism for raising more tax. However, the government has already published company car benefit-in-kind tax rates for 2020/21 and whether or not thresholds will be recalibrated – similarly with Vehicle Excise Duty and capital allowances – remains to be seen.

Glass's says while no one really knows what the impact of WLTP will be on both the new and used car market, it added that the 'real change' would be the fiscal impact in 2020 with the adoption of true WLTP CO<sub>2</sub> figures. Furthermore, it suggests that while WLTP or RDE was not expected to "force major changes in demand that undermines residual values", post 2020, said chief editor Jayson Whittington:

**“It is possible that models negatively impacted with the introduction of true WLTP CO<sub>2</sub> figures, could fall out of favour with consumers, which would likely impact residual values.”**

Additionally, the UK government has been told by the European Automobile Manufacturers' Association (ACEA) – as it has told other governments across the continent – to ensure that the transition to a motoring tax regime based on WLTP CO<sub>2</sub> figures does not negatively impact on taxation. If national governments simply applied the existing CO<sub>2</sub>-tax scheme to the new WLTP CO<sub>2</sub> emission

values, they could put a new car type introduced to the market after September 2017 in a higher tax band than a similar car with NEDC values which came on the market before that date. ACEA secretary general Erik Jonnaert said: **“Governments must ensure that the transition to WLTP will not negatively impact vehicle taxation. A failure to do so could increase the financial burden on consumers and lead to overall confusion.”**

In the meantime as new company cars are introduced to fleets the NEDC-correlated CO<sub>2</sub> figure, which will appear on the Certificate of Conformity, is the one that will be used for tax purposes. There is, simply no clarity from the UK government as to what will happen with vehicle-related taxes from April 2020. That is leaving fleet decision-makers completely in the dark and could potentially see:

- **Fleets extending current vehicle replacement cycles until the government confirms its taxation plans post-2020.**
- **Employees due to change their company car opting to take a cash alternative instead fearful of facing a significant tax rise. That has the further effect of employees moving into a largely unregulated 'grey fleet' environment, which adds its own complications to fleet management notably from a duty of care perspective.**
- **New employees to a business and entitled to a company car as part of their remuneration package opting for cash for similar reasons fearful that the benefit-in-kind tax burden will be too great.**

However, employees due to change their car before September 1, 2018 and new employees joining a business today and entitled to a company car as part of their remuneration package are probably best advised to select a vehicle that is available now and has been tested under NEDC protocols as the tax burden will almost certainly be lower than an NEDC-correlated car or one tested under WLTP rules.

Just to recap, in addition to individual vehicle CO<sub>2</sub> increases as a result of the new testing regime, vehicle-related taxes have increased as follows in 2018/19:

- A two percentage point rise in **company car benefit-in-kind tax** for models with CO<sub>2</sub> emissions above 75g/km – rates for cars with emissions of 0-50g/km increased by four percentage points and those with emissions of 51-75g/km by three percentage points. It means, for example, that an employee driving a 120g/km petrol engine model will see their tax bill increase from 23% of the P11D value in 2017/18 to 25% in 2018/19. What's more, the current **company car benefit-in-kind tax diesel supplement** has increased from 3% to 4% at the same time. The supplement increase applies to all diesel cars that are not certified to the RDE2 standard; there are none currently available. It should also be remembered that employers' pay Class 1A National Insurance Contributions on the company car benefit so any rise benefit-in-kind taxes will trigger a rise in that charge
- An **income tax rise in Scotland** from April 6, 2018 means that company car drivers resident in the country face larger increases in benefit-in-kind tax rates than those in the rest of the UK in 2018/19



- A new **Vehicle Excise Duty** supplement applies to all new diesel cars first registered from April 1. It means that the First Year Rate of Vehicle Excise Duty is calculated as if cars were in the band above. As with the company car benefit-in-kind tax diesel supplement, the change will not apply to the next-generation of clean diesel engines – those with RDE2 standard certification
- CO<sub>2</sub> emission thresholds for **capital allowances** on cars bought outright by companies have tightened. The new rates are:
  - Vehicles up to 50g/km (reduced from 75g/km): Companies can write down the full cost against their taxable profits
  - Vehicles emitting 51-110g/km (reduced from 130g/km): Companies can write down 18% of the cost of the car against their taxable profits each year, on a reducing balance basis
  - Vehicles above 110g/km: Companies can write down 8% of the cost of the car against their taxable profits each year, on a reducing balance basis.
- The **100% First Year Allowance** threshold is reduced to 50g/km from 75g/km.

As a result, it is clear that company car choice list compilation is critical to keeping tax rises to a minimum.

# Every company should undertake an annual root and branch review of their fleet funding strategy and company car choice lists

*Q: So, should I be reviewing my company car choice list?*

**A:** Every company should undertake an annual root and branch review of their fleet funding strategy and company car choice lists – and more frequently if corporate or legislative circumstances change. As already explained, the introduction of WLTP/NEDC-correlated figures means that vehicle CO<sub>2</sub> emissions will rise and MPG will reduce. Many fleets include a CO<sub>2</sub> cap on their company car choice lists – often linked to the 18% capital allowance rate, which has reduced over the years from 160g/km to more recently 130g/km and for 2018/19 has dropped further to 110g/km – additionally individual car grade levels may also have a CO<sub>2</sub> limit. There is no doubt that without a choice list review many company cars may ‘fall out’ of schemes due to increases in CO<sub>2</sub>.

Secondly, if fleets follow precedent and reduce the company car choice list cap in line with the tightening of capital allowances, they may well find vehicle options very limited. Therefore, it is essential to analyse the exact impact of new CO<sub>2</sub> values on choice lists on a car-by-car basis and potentially raise the limits, or keep the limits the same and use WLTP/NEDC-correlated figures as an opportunity to toughen the rules. As Autovista Group acknowledges:

**“This will be particularly complex in the transition period when some cars are NEDC-tested and other are WLTP-tested with NEDC-correlated figures. In those cases where calculated figures are higher than the true NEDC-tested figures for the same car, this could result in some cars that previously fitted within a policy being excluded. Ironically, this is despite the cars being more environmentally-friendly than their predecessors in some cases. If this is not accommodated, it could see some car policies force drivers to switch unnecessarily to a lower vehicle segment.”**

What’s more, further complicating matters is that many manufacturers have still to publish official data and vehicle taxation from 2020 is completely unknown. However, as Autovista Group highlights: **“Although the new WLTP regime will introduce additional transparency for fleet managers to make a more informed purchase decision based on the more accurate emissions and consumption figures, the performance of the cars themselves is not expected to change and so the actual consumption costs should remain the same.”**

JATO Dynamics’s conclusion is that: **“Changes to taxation at a national level, ‘real life’ CO<sub>2</sub> readings for vehicles and an increased volume of data configuration required for the industry, will immediately change the sector. In the longer term, it may impact the way cars are designed. Locking in CO<sub>2</sub> efficiency at the start of the manufacturing process will become critical to remaining competitive. WLTP and its impact on tax, may be the first step in making CO<sub>2</sub> a fundamental element in the decision-making process.”**

What does seem absolutely certain is that plug-in hybrid and zero emission cars will be least affected by the arrival of WLTP, while there have also been reports that the reassessment of CO<sub>2</sub> emissions will be greater for petrol-powered vehicles than those powered by diesel – although fleet decision-makers should look at that on an individual car-by-car basis. Similarly, it does not mean the end-of-the-road for diesel company cars, despite the tax burden rising until RDE2 models arrive. While there is no indication from manufacturers when their first RDE2-compliant diesel cars will be available, it will be undoubtedly true that work is being done to produce vehicles as quickly as possible and well ahead of deadline.

Furthermore, as Ford has shown with figures for its all-new Focus (page 9) technological advances mean that there is little difference between the CO<sub>2</sub> emissions of the old and new models despite the change in testing. Nevertheless, the days of businesses having an all-diesel policy are almost certainly over with a blended approach incorporating zero emission electric, plug-in hybrid, hybrid, petrol and diesel cars expected to be widely adopted – with the latter powertrain remaining the most efficient for high-mileage drivers.



*Q: I've heard that optional extras are fitted to vehicles for testing under the new WLTP regime. Is that right and can you explain what will happen in practice?*

.....

*A:* That is correct, vehicles will be tested under WLTP rules with optional equipment fitted. That is a huge change from the 'old' NEDC testing regime, which did not take account of extras fitted to vehicles in the calculation of CO<sub>2</sub> emission and MPG figures – only wheel size, number of seats and transmission type were accounted for. But, in the short-term the use of the NEDC-correlated figure strips out the impact of optional equipment. Nevertheless, when the UK moves to a tax regime in 2020 based wholly on WLTP test results optional equipment will be accounted for in published CO<sub>2</sub> emission and MPG figures.

*Q: So in terms of the fitting of optional equipment to company cars and vans how will that play out?*

.....

*A:* The manufacturers that developed the most sophisticated methods in order to optimise NEDC test results have the most to lose, according to Autovista Group. Furthermore, cars that were previously tested with limited equipment fitted as standard are also likely to see sharp rises in their CO<sub>2</sub> emission and fuel economy figures. For example, says Autovista Group in its paper 'WLTP: A Disruptive Influence': **“Premium brands tend to have substantially higher optional content than the volume manufacturers. This naturally made many test cars much lighter and, in turn, more fuel-efficient and less polluting than the cars that were actually registered and used on the road once common optional extras such as multi-zone air conditioning, larger wheels and electric seats were fitted.”**

Such options, as well as extras such as leather upholstery, alloy wheels, sport suspension, audio systems and sunroofs, all impact on a car's rolling resistance, weight and aerodynamics and thus will impact on a model's WLTP CO<sub>2</sub> emission and MPG performance. As a result, Autovista Group speculates that: **“Japanese and Korean manufacturers could stand to benefit as their strategy has typically been to compete by offering higher levels of specification as standard on their cars than their European peers, but at a similar price point.”**

Ultimately, those cars that have both been tested with limited standard equipment and have been optimised for the NEDC test will see the greatest difference in their CO<sub>2</sub> emission and fuel consumption figures. Consequently, it may mean that the fitting of optional equipment pushes vehicles into different tax bands.

# Company car drivers may look to save on tax by choosing a *lower option vehicle*

*Q: So company car drivers particularly will need to be aware that fitting extras to their new vehicles could have a major impact on their tax bills?*

.....

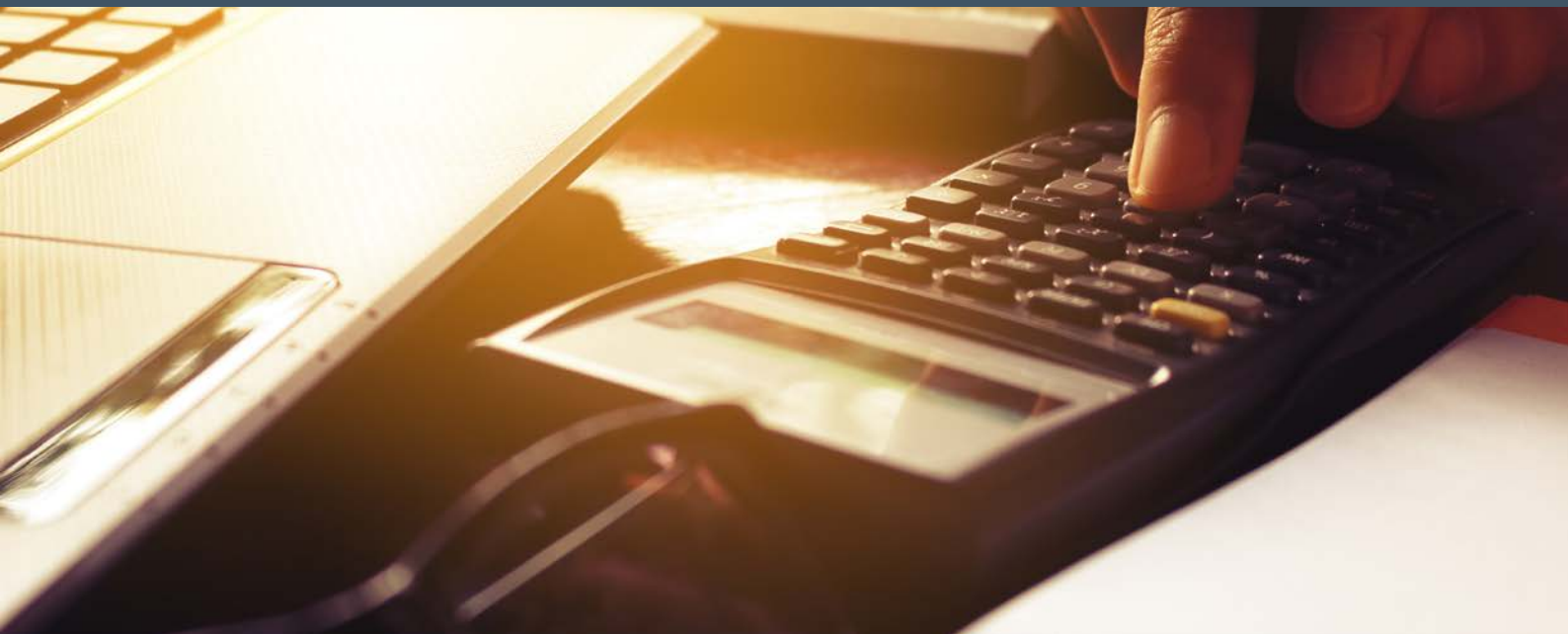
**A:** In theory that's correct. Indeed the BVRLA has said: **"Whilst optional extras do have an impact on CO<sub>2</sub> today, it is likely that this could be more significant under WLTP testing and therefore increase the cost and tax implications."** Consequently, company car drivers may look to save on tax by choosing a lower option vehicle. However, don't be too hasty as motor manufacturers are still planning their strategies as to how to potentially overcome the optional extras issue. For example, WLTP testing does not take account of dealer-fit accessories. As a result, speculates Autovista Group: **"This may incentivise manufacturers to move increasingly to dealer-fit only options – especially those which are easy to retrofit such as tow bars."** It continues: **"While this adds to logistics and manufacturing complexity, avoiding the CO<sub>2</sub> uplift from these options could save a significant amount in tax on an individual vehicle."**

At an ACFO seminar in 2017, Markus Oberfeld, an efficient dynamics and driving performance engineer in BMW's research and development centre in Munich,

told delegates the new emissions testing regime was **"a significant change for the industry which will affect all motor manufacturers"**. In a bid to help fleet operators and company car drivers, BMW, the seminar heard, was developing an 'individual CO<sub>2</sub> value per vehicle', which would be integrated into an online car configurator aimed at giving users transparency as they added options to their base vehicle of choice. Depending on each option chosen and its impact on emissions the CO<sub>2</sub> figure for the applicable car would change immediately in real-time.

During a lengthy seminar discussion around the impact of WLTP, the consensus was that motor manufacturers may increase their range of vehicle option packs making fewer single options available. There were also suggestions that depending on how vehicle options were packaged by manufacturers – there could be more bundling of options into special packages – as well as their impact on CO<sub>2</sub> emissions and therefore tax, company car drivers could select fewer options.

Automotive data analysts JATO Dynamics in a paper 'WLTP: The Impact on Tax and Car Design' said: **"In the future, all car configurators will specify and price vehicles via their real CO<sub>2</sub> footprint. As such adding optional extras will typically increase prices and also taxation levels if the vehicle moves from one CO<sub>2</sub> tax band to another."** As a result, JATO Dynamics suggests that drivers **"may choose simpler lower option vehicles"** as vehicle CO<sub>2</sub> is the tax driver.



Consequently, JATO Dynamics suggests that: **“Simpler vehicles with fewer options may become more popular as consumers seek more affordable models. The industry may see a decline in extras such as a memory function for seats, leather interior or ‘wooden’ accessories which raise weight and emissions without any corresponding improvement in performance. Indeed, few options improve CO<sub>2</sub> performance as most add weight or increase energy use. In addition, since features that reduce CO<sub>2</sub> emissions are made standard quickly, it’s possible that the automotive industry will move towards more simplified models as standard. Options that can positively impact CO<sub>2</sub> levels, such as new dual clutch automatic transmissions or intelligent electrical systems are likely to appeal more to consumers and become more widespread.”**

Furthermore, the white paper makes clear that it will be “increasingly important” to evaluate vehicle selection using whole life costs as MPG could change significantly with each model configuration. JATO Dynamics said: **“WLTP will impact many elements of the decision-making process for someone choosing a fleet vehicle – taxes will be applied based on the CO<sub>2</sub> emission level and whole life cost will be impacted by the real-life fuel consumption values.”**

*Q: The focus of this Q&A has been on emissions, but under WLTP testing vehicle MPG figures will be worse when compared with NEDC figures so will that mean higher fuel bills?*

.....

**A:** The accuracy of fuel economy figures published by motor manufacturers following the testing of cars under NEDC protocols has been called into question for many years. Although the published figures are technically achievable, the reality is that they are a long way from the MPG achieved by drivers in real-world motoring. As a result, the expectation is that WLTP testing will give fleets and drivers fuel economy information that is far closer to what is expected to be achieved in ‘normal’ driving. Therefore, fuel bills, taken at face value, are unlikely to be much, if any different, from today in the ‘real-world’. What will be different is that fleet managers should be able to make more accurate and cost-effective decisions in respect of the MPG of company cars and vans they introduce to their operations. Consequently whole life cost calculations should be more accurate – particularly once optional extras become part of the WLTP testing equation from April 2020 – as they will better reflect achievable fuel economy.

# CONCLUSION





# *Fleet decision-makers can be forgiven for being confused*

**On the face of it, the introduction of WLTP/RDE delivers increased transparency for fleet operators and company car drivers to make decisions as to which vehicles to include on choice lists and which to 'live with' for three or four years due to the publishing of more accurate 'real-world' emissions and fuel economy figures.**

However, the staggered timeline introduction of the new testing regime as a replacement for the previous NEDC procedure makes vehicle selection extremely complicated. What's more, with the government keeping the industry in the dark as to the structure of the CO<sub>2</sub>-based motoring tax regime from April 2020, decision-making is being made with a lack of clarity. Nevertheless, it should be noted that if taxation regimes are adjusted to take account of the increases in CO<sub>2</sub> emissions as a result of the introduction of WLTP testing then the status quo in terms of the tax burden may remain. But, while the government has reportedly confided in organisations such as the BVRLA that it does not see the introduction of WLTP as a tax-raising development, is that a comment that fleet operators can have confidence in? Probably not. Therefore, it is vital that fleet decision-makers do two things:

- **Keep company car drivers informed as to exactly what is happening with the introduction of WLTP/RDE**
- **Regularly review company car and van choice lists and keep firmly abreast of manufacturers' data and new model introduction timetables.**

Currently there are three scenarios playing out as the WLTP/RDE regime continues to be introduced:

- **Manufacturers can continue to sell NEDC-tested models up to and including August 31, 2018. However, it is likely that these vehicles will be in short supply and potentially only available from stock**
- **Since September 2017 for new models and from September 2018 for all newly registered cars WLTP test results apply. However, vehicle manufacturers will then NEDC-correlate the CO<sub>2</sub> and MPG figures. Those critical numbers will almost certainly be higher than under the 'old' NEDC regime, but are anticipated to be lower than the WLTP figures**
- **From April 2020 WLTP figures will be used as the basis for all motoring taxes. What's more that introduces a further issue as optional extras become part of the CO<sub>2</sub> and MPG calculation with, potentially, a significant impact on whole life costs.**

Nevertheless, as new models are produced it is clearly in the interest of motor manufacturers to ensure that CO<sub>2</sub> emissions are as low as possible and fuel economy is as good as possible. To that end, they will be using technological advances in terms of materials used, aerodynamics and engine/transmission configuration in a bid to achieve class-leading figures that are little different, or even better than under the NEDC regime for equivalent models. Is that possible? It is a case of wait and see and checking new model data as it is published. Against that background, fleet managers must make replacement vehicle decisions and advise company car drivers of what is happening.

# Sources and further information:

**Autovista Group** – ‘WLTP: A Disruptive Influence’

**British Vehicle Rental and Leasing Association** – ‘Emission Testing of Vehicles – RDE and WLTP’

**European Union** – <http://wlpfacts.eu/>

**JATO Dynamics** – ‘WLTP: The Impact on Tax and Car Design’

**JATO Dynamics WLTP Hub** – [www.jato.com](http://www.jato.com)

**Society of Motor Manufacturers and Traders** – ‘New Car CO2 Report 2018’

**Almost all motor manufacturers have dedicated WLTP-related websites.**

**For further information please contact:**

Venson Automotive Solutions on 08444 99 1402,  
email [sales@venson.com](mailto:sales@venson.com) or go to [www.venson.com](http://www.venson.com)

 [@venson\\_Fleet](https://twitter.com/venson_Fleet)





Venson Automotive Solutions Ltd  
Venson House  
1 A C Court  
High Street  
Thames Ditton  
Surrey KT7 0SR  
Tel: 08444 99 1402

[www.venson.com](http://www.venson.com)

email: [sales@venson.com](mailto:sales@venson.com)

 [@venson\\_Fleet](https://twitter.com/venson_Fleet)

Published May 2018