

A SPECIAL REPORT BROUGHT TO YOU BY **FleetNews**

# PETROL. ELECTRIC. WHY CHOOSE?

Investment in electrification strategy reaps rewards  
with a range of models for all drivers

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# How WLTP has reshaped the fleet market

**T**he introduction of the Worldwide Harmonised Light Vehicle Testing Procedure (WLTP) has changed the way in which fuel consumption and CO<sub>2</sub> emissions from new cars are measured, to better reflect the way they perform in the real world.

WLTP was introduced in September 2017, but was phased in gradually. Initially it applied only to new model types, but since September 2019 cars without WLTP-derived fuel consumption and CO<sub>2</sub> data cannot be sold in Europe.

It is vital that businesses understand how these changes affect a vehicle fleet as from April 2020, vehicle excise duty (VED) and benefit-in-kind (BIK) tax will be derived from the new figures.

Testing encompasses four cycles, each with unique acceleration and braking intensities to simulate different road conditions. Manufacturers also have to produce figures recognising the weight, aerodynamic and rolling resistance effects of optional equipment – such as bigger wheels, bodykits and panoramic sunroofs.

It means that the reported CO<sub>2</sub> emissions, and therefore the BIK, for new cars can be higher when compared like-for-like (see table).

Rob East, General Manager, Corporate Sales for BMW UK, says: “While WLTP testing generally leads to a higher CO<sub>2</sub> figure than the outgoing NEDC-correlated measure for any given car, we are continuing to improve the efficiency of all our vehicles which counteract or reduce this effect. Our cars are all improving in efficiency with each technical update, although the change in the test procedure is making it hard for customers to always see that.”

BMW has been proactive in making WLTP data available for all its models ahead of the April switchover, giving business customers the reassurance of knowing what their tax liability would be moving forward.

In order to mitigate the impact of the new WLTP figures, the UK Government has revised the BIK bands for the 2020/21 tax year, as well as confirming the rates for a further four years. This gives company car drivers and businesses much-needed clarity.

There are now two BIK tables: one for cars registered before the April 6 switchover date and one for cars registered after.

The rates for older cars are fixed for the next five years, rising slightly from 2019/20.

The rates for new cars (registered from April 6) have been reduced by 2%, on average, to account for the increased CO<sub>2</sub> figure and minimise the tax liability that drivers face.

## PUSH TOWARDS PLUG-IN

The UK Government has been clear in its strategy to promote low or zero-emission cars. For plug-in hybrid and electric cars, the BIK rates have been reduced more dramatically. Zero-emission cars will attract no BIK in 2020/21



## BMW's electrification strategy

“There has been significant investment in our upcoming BEV models, and all these models will come with our fifth-generation battery cells developed in house. The fully-electric iX3 will be revealed later this year and BMW i4 and BMW iNEXT are set to enter production in 2021. We expect to deliver class-leading range, quality and driving characteristics, complemented by a well-prepared dealer network who will be available to support customers to use and maintain their cars day-to-day. In the meantime, the BMW i3 continues to go from strength to strength and we are breaking sales records year on year with a car which was one of the first into this marketplace.”

**Rob East, General Manager, Corporate Sales, BMW UK**

and cars that emit less than 50g/km will be charged between 0% and 12%, depending on their electric-only range.

The BMW 330e plug-in hybrid emits 31-37g/km of CO<sub>2</sub> under the new test and has an electric-only range of 34-37 miles, so it attracts just 10% BIK.

East says: “For BMW, the year 2020 is predominately about the plug-in hybrid. We have one of the widest ranges of PHEV models on sale today, with more models we have yet to launch. It's clear from the high demand for models like the 330e and X5 45e that we will continue to be one of, if not the, leading supplier of PHEV vehicles in the UK.

“The commitment to our customers is that our PHEV range will retain the driving experience they should expect from a BMW and the numerous awards we have already collected this year are testament to having achieved this objective.”

## RDE2 AND THE FUTURE OF DIESEL

Phased in alongside WLTP, the Real Driving Emissions (RDE) test introduces the first on-road test element for vehicle homologations, proving emission

control systems are as effective in use as they are under laboratory conditions.

All new cars must meet RDE1 limits, while RDE2 compliance becomes mandatory from January 2021. Incentives in place to encourage fleets to opt for RDE2-compliant diesel vehicles include exemption from the 4% company car tax charge and a one-band reduction in first-year vehicle excise duty.

BMW has already achieved RDE2 compliance for a large proportion of its models, including those most popular with corporate customers, and plans to further increase its availability of compliant models this year.

“There will continue to be some customers – typically those driving long distances in one go on a frequent basis – for whom diesel will remain a more efficient solution. We have recently upgraded models such as the 320d and 520d saloon and touring to a mild hybrid system, often called 48-volt.

“Where certain customers continue to select these models, they will find the cars increasingly efficient and even better to drive. They are not being left behind. This type of technology will be quite normal on any combustion engines remaining in our product portfolio, and we expect there to be a continued demand for such cars well into this decade,” East says.

# Petrol. Electric. Why choose?

## The BMW plug-in hybrid model range

### 225xe

Despite its compact exterior dimensions, the BMW 225xe Active Tourer offers plenty of space for five passengers with an elevated seating position and commanding view of the road.

Its boot capacity of 400 litres can be expanded to a maximum of 1,350 litres by sliding the rear seat unit forward and folding down the 40:20:40 split backrests.

The BMW 225xe offers a combination of sportiness, economy and everyday usability that is unmatched in its segment.

Its 1.5-litre three-cylinder petrol engine is paired with an electric motor to give a total output of 224hp, meaning the BMW 225xe can accelerate from zero to 62mph in just 6.7 seconds.

Such strong performance is enhanced by a zero emissions range of 25 miles and average fuel consumption of up to 166mpg.

The petrol engine feeds power to the front wheels, while the electric motor drives the rear – providing all-wheel-drive when needed.

### 530e saloon

With an unrivalled balance of technology and dynamic ability, the BMW 5 Series continues its reign as the world's most popular business saloon.

The BMW 530e is the most efficient 5 Series ever made, emitting from 32g/km of CO<sub>2</sub> and achieving up to 201mpg.

A zero-emissions capability of up to 36 miles on a single charge makes the BMW 530e ideal for the daily commute. Its 2.0-litre TwinPower Turbo petrol engine can then be called into life whenever extra power or range is required – providing a total system output of 252PS.

A high-voltage battery pack is installed in a space-saving location under the rear seat, meaning the BMW 530e still offers 410 litres of boot capacity and a flat load compartment floor.

Charging the battery takes less than three hours when using a designated high-speed charger. The BMW 530e can also be charged from a conventional three-pin domestic plug in under five hours.

### 745e

As the flagship saloon of the BMW range, the 7 Series offers the highest levels of refinement, dynamic ability and style. Equally, it is available with the latest plug-in hybrid powertrain technology – bringing exceptional efficiency and long-distance comfort for both driver and passenger.

The flexible unit combines a six-cylinder petrol engine with an electric motor. The result is a total output of 394hp – enough to accelerate the BMW 745e from zero to 62mph in 5.2 seconds.

A high voltage battery provides up to 31 miles of emissions-free running and can assist the engine to achieve an average fuel consumption of up to 141mpg with CO<sub>2</sub> emissions as low as 46g/km. In the long-wheelbase BMW 745Le xDrive, the powertrain provides xDrive all-wheel-drive.

Technological highlights include remote controlled parking, which enables the driver to trigger the process of entering and exiting parking spaces from outside the car using the BMW Display Key.

### X1 xDrive25e

Plug-in hybrid technology is now available on the X1 for the first time, offering a highly efficient powertrain without compromising the compact SUV's sporty and practical nature.

The X1 xDrive25e makes use of a 1.5-litre three-cylinder turbocharged petrol engine and a specially developed electric motor. The latter drives the rear wheels, while power from the combustion engine is sent to the front.

The battery can provide up to 32 miles of zero-emission range, helping the car achieve a combined fuel consumption of up to 166mpg.

Combined, the engine and electric motor can deliver 220hp and accelerate the X1 xDrive25e from zero to 62mph in 6.9 seconds.

The positioning of the high-voltage battery underneath the rear seats gives the car a very low centre of gravity, optimising agility, and maximises cargo space.

### 330e saloon and touring

The BMW 3 Series introduced a new level of connectivity, drivability and aerodynamics when it was introduced last year. The 330e takes things a step further, providing significant efficiency benefits thanks to its plug-in hybrid powertrain.

Four versions are available including saloon and touring body styles, with the option of rear- or all-wheel drive (xDrive). The Touring and xDrive variants will be introduced from summer 2020

The powertrain of the new BMW 330e range comprises a 2.0-litre four-cylinder petrol engine with BMW TwinPower Turbo Technology and an output of 184hp, along with an electric motor integrated in the eight-speed Steptronic transmission.

Combined, the system has an output of 252hp while an XtraBoost function can increase output by an additional 40hp for up to 10 seconds to deliver a total of 292hp under especially high loads.

The instant response of the electric motor provides rapid acceleration. The 330e saloon can accelerate from 0–62mph in less than six seconds, while the car retains a chassis optimised to ensure the highest levels of driver engagement.

A zero-emission range of 31-37 miles is achievable, depending on model, at speeds up to 87mph. When combined with the petrol engine, the 330 can achieve 176-201mpg.

Recharging the battery takes less than four hours using a wallbox and waste energy is also captured during braking to maximise the available range.

All plug-in hybrid models in the new BMW 3 Series are fitted as standard with auxiliary air conditioning, which enables the car's interior to be conveniently heated or cooled prior to setting off, even if the battery charge status is low.

|                      | 225xe   | 330e saloon and touring | 530e saloon | 745e    | X1 xDrive 25e | X3 xDrive30e | X5 xDrive45e |
|----------------------|---------|-------------------------|-------------|---------|---------------|--------------|--------------|
| P11d from            | £35,245 | £37,820                 | £46,765     | £76,880 | £38,145       | £47,510      | £63,110      |
| CO <sub>2</sub> from | 39g/km  | 32g/km                  | 32g/km      | 46g/km  | 40g/km        | 49g/km       | 27g/km       |
| BIK from             | 12%     | 10%                     | 10%         | 10%     | 10%           | 12%          | 6%           |

### X3 xDrive30e

Using the same proven powertrain as the 330e, the X3 xDrive30e provides drivers with a balance of power and efficiency. Its plug-in hybrid drivetrain comprises a 2.0-litre four-cylinder petrol engine with BMW TwinPower Turbo Technology combined with an electric motor resulting in a total output of 252hp. An additional 41hp can be accessed via the XtraBoost on-demand performance system at the touch of a button. Drive is transmitted – in hybrid and electric modes – via an eight-speed Steptronic gearbox and xDrive intelligent all-wheel drive to enable it to accelerate from zero to 62mph in just 6.1 seconds. The lithium-ion battery is located under the rear seat to save space.

It provides an all-electric range of up to 28 miles with a combined economy of up to 128mpg.

### X5 xDrive45e

Offering the largest zero-emission range of any BMW plug-in hybrid model, the X5 xDrive45e can achieve up to 54 miles on a single charge.

Combined with its low CO<sub>2</sub> emissions from just 27g/km, the car is one of only a few that fall into the 6% BIK tax band.

It uses a 3.0-litre six-cylinder petrol engine and electric motor to deliver 394hp and 600Nm of torque. Power is delivered to all four wheels via an eight-speed Steptronic transmission. The luggage compartment volume is 500 litres – only 50 litres less than a conventionally powered BMW X5. If the rear seat backrests are folded down, luggage volume extends to 1,720 litres.

Official fuel consumption for the X5 xDrive45e is up to 235mpg, while the battery can be recharged in five hours using a wallbox.



# Plug-in hybrid – the right choice for right now

**B**usiness owners and fleet managers are facing increasing pressures to reduce vehicle emissions and improve air quality. At the same time, company car drivers are being penalised with higher taxes for conventional petrol and diesel models.

That is why BMW has expanded its range of plug-in hybrid models, to give drivers a broader range of choice without sacrificing practicality or drivability.

With low CO<sub>2</sub> emissions starting from just 27g/km (X5 xDrive45e), the BMW plug-in hybrid model range enables businesses to reduce their environmental impact, while drivers pay less tax.

The electric motor enables the car to operate with zero emissions, ideal for in the city where drivers can contribute to reducing noise and pollution. On longer journeys it assists the car's petrol engine, boosting performance and maximising fuel consumption.

Rob East, General Manager, Corporate Sales at BMW UK, says: "PHEV models can be among the most efficient choice, provided they are used in the right way. While they are capable of very low fuel consumption, customers must consider their likely usage of the car and the profile of their journeys as the extent to which the PHEV is more efficient will depend on these factors.

"Provided the driver regularly charges their car, and has the ability to do so at home and at their destination, then there is every reason to expect many customers will improve their fuel efficiency."

The latest-generation BMW eDrive technology offers considerable efficiencies. Under the new WLTP fuel consumption test, a number of BMW plug-in hybrid models can achieve more than 200mpg.

The hybrid powertrain not only increases efficiency, it also enhances driving

dynamics. The instant power delivery of the electric motor is immediately obvious and contributes to a highly evolving drive.

Drivers can use the eDrive button on the centre console to influence the drive system's operating mode. In the AUTO eDRIVE setting, the intelligent drive system ensures optimum interaction between the two power units in all driving situations.

Navigation data is also used to manage the plug-in hybrid system to increase the efficiency. When navigation guidance is activated, the anticipatory energy management can also take into account the route profile for controlling the drive system.

The MAX eDrive mode can be activated for maximum use of the electric drive, while there is also the SAVE BATTERY mode which enables the driver to maintain the charging state of the high-voltage battery while driving or to increase it by means of recuperation.

In SPORT mode, the drive system delivers maximum power for the most engaging driving experience.

Driver comfort is enhanced by the pre-conditioning system, a standard feature on all BMW plug-in hybrid models, which can be pre-programmed or activated via the BMW Connected app. It allows the vehicle to be heated or cooled prior to departure, even when the battery charge level is low.

To support drivers with charging en-route, the navigation system provides the driver with a list of recommended nearby hotels, restaurants, cafés, tourist attractions and cultural institutions.

Charging-station availability can also be checked using the vehicle display and operating system. The driver receives the information along with a forecast of the occupancy status of the public charging station at the time of arrival.

“PHEV MODELS  
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Search BMW Plug-in Hybrid Range, email [corporatesupport@bmwgroup.co.uk](mailto:corporatesupport@bmwgroup.co.uk) or call 01252 920800

