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# Latest Raft of BMW Plug-in Hybrids – First Impressions

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The figures speak for themselves with the latest line-up of new BMW PHEV plug-in hybrid electric vehicles on offer, and with more models to come.



To get to grips with what latest models are available in the UK and their fuel economy and CO2 emissions they are listed below.

BMW 225xe Active Tourer: Fuel consumption combined: 66.2 – 141.2 mpg; CO2 emissions combined: 42 g/km.

BMW 330e Saloon: Fuel consumption combined: 201.8 – 188.3 mpg; CO2 emissions combined: 37 g/km.

BMW 530e Saloon: Fuel consumption combined: 156.9 – 141.2 mpg; CO2 emissions combined: 36 g/km.

BMW 530e xDrive Saloon: Fuel consumption combined: 141.2 – 122.8 mpg; CO2 emissions combined: 49 g/km.

BMW X3 xDrive30e: Fuel consumption combined: 128.4 – 117.7 mpg; CO2 emissions combined: 49 g/km.

BMW X5 xDrive45e: Fuel consumption combined: 235.4 – 188.3 mpg; CO2 emissions combined: 28 g/km.

BMW X1 xDrive 25e joins the line-up early next year.

In addition there is the longer serving BMW i3 Electric small hatchback with a range of 185 miles with zero emissions and of course BMW's MINI brand offers PHEV versions as well, with the MINIE electric model due next year.





330e being recharged...

This week BMW UK held a media test driving event with most of their PHEV models available for test driving. This coincided with this week's United Nations Climate Change Conference being held in Madrid and runs to 13 December. At this conference BMW, to further reduce carbon emissions, announced their plans to use zero emission cargo vessels from 2030 as maritime transport currently accounts for 50% of the BMW Group's transport chain.



For their global markets BMW has offered their i3 model since 2013 and now they have a global portfolio of 12 electrified models which they claim to be the widest range of PHEV through to all-electric vehicles on the market. By 2021 one million electrified vehicles from the BMW Group will be on our global roads and by 2023 the company will offer 25 electrified models.

The latest sales figures of PHEV vehicles in Europe show an increase of 79% for PHEVs, 32% for pure electric cars and 29% for hybrid cars, overall an increase of 41% for electrified cars. By type the PHEV sector is led for sales by the Mitsubishi Outlander SUV followed by the new BMW 330e Saloon. Pure electric sales leaders are the Renault Zoe followed by the VW Golf and for hybrid cars it's the Toyota Corolla followed by the Toyota Yaris.

In the UK PHEV sales for the first 11 months of this year have fallen by 21.5%, pure electric car sales are up by 135.6% and hybrid sales are up by 16.4%. The reason for the fall in PHEV type vehicles sales in the UK is partly put-down to the Government stopping the £3,500 Plug-in Vehicle Grant and the proposed reduction in company car Benefit-in-Kind tax rates being applied to PHEVs bought from next April. So customers are holding off until then and of course there are the political uncertainties of Brexit and a General Election, which also had an effect on customer confidence.

At the BMW UK motoring media event this week the company said that 18% of their total UK sales are for electrified vehicles such as the i3 pure battery powered model and the various PHEV plug-in hybrids. They expect this share to grow in 2020 with their additional PHEV models which are coming to market.

As examples of this growing PHEV demand the BMW's high selling 3 Series Saloon range has totalled over 24,000 sales until the end of October this year with 20% of those being the 330e PHEV version. The 5 Series Saloon has recorded over 18,000 UK sales so far with 30% being the 530e PHEV version. The new X5 SUV has sold over 9,000 units so far but as it's only recently been launched they do not have accurate sales data but they expect the 45e PHEV version to account for 25% of total X5 sales.



Sukh Bhamra, BMW UK's product manager for large cars, said their PHEVs now use the fourth generation lithium-ion battery technology which offers a performance improvement ranging from 30 to 50% depending on the model. Other improvements include a new user interface within the digital cockpit system and their Connect Drive function. There is also the new eDrive Anticipatory Hybrid Drive function which determines via the sat-nav system the most efficient route the driver can use from the start to finish of any journey. In addition there's the new XtraBoost function which at the push of a button provides 10 seconds of extra 30 kW/41 hp power for immediate acceleration to overtake slower traffic.

He added that with the new lower Benefit-in-Kind company car user tax structure proposed to come into force from April 2020, lower rates will vary from 6 to 12%. The rate will depend upon the official WLTP tested driving range of the vehicle using only electric power. With a current 16% BiK tax levy the lower rates should give a significant boost in demand for PHEV models.

As examples of the new lower BiK rates he said the 330e PHEV Saloon is currently rated at 16% but this would drop to 10% and the X5 xDrive 45e SUV with its extended 54 miles electric power only driving range, due to its larger 24kW battery, would only incur BiK tax of 6%.





At the media day I chose to get behind the wheel of the new 330e PHEV Saloon. The 3 Series range is the cornerstone of the brand's UK sales, especially in the fleet and business car sector. The addition of the new generation 330e Saloon with its low tax costs should be a tempting proposition unless we get a change of plan by whatever Government we end up with.

In its latest new form the BMW 330e Saloon, priced from £37,875, delivers up to 50% increase in electric-only range and a reduction in CO2 emissions of more than 10%. The updated plug-in hybrid 330e can cover a distance of up to 37 miles using electric power alone while the official average combined fuel consumption is now up to 201.8 mpg with Combined CO2 emissions of just 37g/km.





A new feature for the latest 330e is the standard-fit XtraBoost technology that increases the standard 252 hp power output by a further 41 hp at the touch of a button. Petrol power comes from a 2.0 litre, four cylinder unit with an overall 420 Nm (310 lb.ft) peak torque output from the engine and electric motor. Top speed is 143 mph and 0-62 mph takes 6.0 seconds.

In order to save space, the BMW 330e's electric motor is now integrated into the eight-speed Steptronic transmission, it is no longer a separate unit. This means the hybrid-specific transmission is only 15 mm (just over half an inch) longer than the corresponding versions for conventionally powered BMW 3 Series saloons.



The BMW 330e also offers a model-specific sound design which delivers a suitably throaty





engine noise when the car is driven enthusiastically. BMW say their aim is to offer the emotional impact of sports-car performance together with the proven qualities of a plug-in hybrid model. The hybrid-specific optional equipment list also includes an acoustic pedestrian protection function so that those about to cross the road can hear the car approaching when it is in electric-only mode at low speeds.

The 12.0 kWh lithium-ion high-voltage battery is positioned underneath the rear seats, while the fuel tank is located above the rear axle to provide optimal luggage capacity. The total boot volume is 375 litres (13.24 cu.ft) but that can be increased by folding down the rear-seat backrests, which are configured in a 40:20:40 split (standard on all models apart from 330e SE where optionally available). A non-hybrid 3 Series Saloon has a boot capacity of 480 litres (16.95 cu.ft).





## 330e boot space...

Almost the entire range of optional equipment features for the new BMW 3 Series Saloon are also available for the plug-in hybrid models. The new 330e comes in four different models: 330e SE Pro, 330e Sport Pro, the best selling 330e M Sport and 330e M Sport Plus Edition. The simplified options and packages structure that has been seen across all 3 Series models has also been carried over to the plug-in hybrid versions.

The full range of BMW driver assistance systems to optimise comfort and safety are also available, ranging from the Park Assistant including reverse assistant (standard on all 330e models) to the optional Driving Assistant Professional with steering and lane guidance system. Pre-heating and pre-conditioning of the interior, which uses the energy of the high-voltage battery to power the auxiliary heating, is standard on all models. At low outdoor temperatures, the interior can be heated prior to setting off even if the battery charge status is low.





New digital services will also be on offer to make it more attractive and convenient to charge the battery while out and about. When selecting a public charging station, the navigation system also provides the driver with a list of recommended nearby hotels, restaurants, cafés, tourist attractions and cultural institutions. The driver receives this information together with a forecast of the occupancy status of the public charging station at the time of arrival.





The 330e has an official battery only driving range of 37 miles, reasonable enough given that the average UK driving commute distance is 26 miles per day say BMW. But we know PHEVs do have their limitations to be at their most efficient. They must-be plugged in to recharge the battery on a regular basis and that might not be possible if you don't have a driveway for charging at home or accessibility to one at work or, like many company car drivers, you travel long journeys. The good news is there is no range anxiety because when the battery power runs out the petrol engine runs onwards and will also provide some battery recharging power through the adjustable rate regenerative braking.

My brief 30 mile test drive on the busy Oxon/Berks roads returned an overall 50.1 mpg driven in its auto Hybrid mode with the battery showing around 70% full at start off. With



the petrol engine and electric motor working in harmony as driving conditions dictated, after 30 miles of driving it showed there was 25% battery power availability. As with all PHEVs of course the 50.1 mpg real-life figure is a far cry from the official WLTP test figures which for the 330e are upwards of 188 mpg. However with a full battery and a 30 mile or so trip between charging, then petrol consumption could be zero if Electric power mode was selected all the time.

These PHEV vehicles are best used for shorter local journeys with plenty of stop-start driving which creates more regenerative braking. For longer open road or motorway cruising then diesel powered models are still best for fuel economy if not so kind for tax charges.

As for performance top speed is 143 mph, the zero to 62 mph acceleration time is 6.0 seconds and the petrol/electric/auto power train is seamless to use, very smooth, very quiet and easy to drive once the many driving options and other controls and information displays are mastered. It will be a case of living with this vehicle to fully understand its obvious good points and living with its quirks - like having to charge-it regularly.

As for handling it is perhaps not quite as agile as a less weighty petrol or diesel version but the 330e still feels well-balanced with the rear wheel drive layout giving plenty of predictable acceleration and cornering grip and the front end cornering adhesion remains class-leading. Ride comfort with the M Sport (best selling spec) is compliant and apart from the PHEV drivetrain and a little smaller boot, the 330e differs little from the class-leading qualities of the latest BMW 3 Series range. Even the £1,250 to £2,410 price hikes over the conventional 320i petrol and 320d diesel M sport Saloons is not too hard to stomach given the lower tax costs.

## VERDICT

Depending on the type of motoring you do, if you are thinking of a BMW as your next car, then the latest PHEV versions are worth serious consideration...





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For: Big technical and driving support systems for this latest generation model, low tax costs, good fuel economy potential if the plug-in hybrid function is used regularly, same high quality and exterior styling as conventional class-leader 3 Series petrol/diesel models.

Against: Smaller capacity boot than petrol/diesel versions, plug-in usability will not suit some users, not a viable model for regular high mileage/long distance company car drivers other than for personal tax savings.







## Milestones and Wheels-Alive Tech. Spec. in Brief:

### New BMW 330e Saloon.

Prices: Start from £37,875 (M Sport model £39,860 but as tested with numerous showcase options £47,100).

Drivetrain: 2.0 litre four cylinder petrol 252 hp (292 hp with XtraBoost mode), 420 Nm (310 lb.ft) of torque, plus electric motor and 12.0 kWh lithium-ion high voltage battery, eight speed Steptronic auto gearbox and rear wheel drive.

Performance: 143 mph, 0-62 mph 6.0 seconds, WLTP Combined Cycle 188.3 to 201.8 mpg (50.1 mpg real-life Hybrid petrol/electric mode driving on test), electric power only driving range 37 miles.

Emissions and fuel consumption: CO2 37 g/km, current VED First Year road tax £0 then Standard Alternatively Fuel rate £135, BiK company car tax 16% (will be 10% from April next year).

Insurance Group: 32.

Warranty: Three years/unlimited miles.

Dimensions/capacities: L 4,709 mm (15.45 ft), W 1,827 mm (5.99 ft), H 1,444 mm (4.74 ft), wheelbase 2,851 mm (9.35 ft), boot space 375 litres (13.24 ft), four doors/five seats.

**Additional note:** At the media test day BMW UK also showcased the new second generation X5 SUV xDrive 45e PHEV with an electrically powered driving range of 54 miles, more than three times as far as its predecessor.



This means from April next year this model will only incur 6% Benefit-in-Kind tax, a winner for SUV company car users. Prices from £63,165.

Also available is the new third generation X6 large coupe styled muscular SUV. It has enhanced aggressive 'bullish' exterior styling, all the latest technology inside but with no PHEV powertrain options. This muscle-car SUV has engine options of a 30d, 3.0 litre V6 turbodiesel 265 hp, 40i 3.0 V6 340 hp petrol, 50d 3.0 V6 400 hp turbodiesel and the flagship M50i 4.4 litre V8 530 hp petrol. Prices range from £59,340 to £76,870. Its image will not be to everybody's choice.

Also making its UK media debut was the eye-catching flagship four-door 8 Series Gran Coupé. It has a longer wheelbase by 201 mm (7.91 in) over its Coupé/Convertible versions so its seating configuration is now 4+1 instead of 2+2. Powertrain options are 840i 3.0 litre six cylinder 340 hp petrol, 840d xDrive 3.0 litre six cylinder turbodiesel and the flagship M850i with the new 4.4 litre V8 petrol engine with 530 hp. Spec levels are M Sport and the M850i. Prices are £69,340 to £97,720. Stunning.



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