

SPECIAL REPORT BY NICK GIBBS

Is there still a future for plug-in hybrid cars?

WE ALL KNOW plug-in hybrids (PHEVs) are a stop-gap solution, but what is their future in the medium term across Europe?

Recent sales figures say PHEVs are already on the slide as momentum from battery-electric vehicles takes over. Sales across Europe were down 12% in the first six months of 2022, according to figures from automotive pressure group ACEA, while EVs were up 30%. The strong boost in pure-electric sales this year flipped their positions compared to the same period last year, with PHEVs now in second place with sales of 461,484, vs 629,747 for EVs. Plug-in hybrids, led by the Ford Kuga, did manage to slightly boost their share to 9% of the total car sales across Europe, but only because their decline was fractionally slower than the rest of the market.

So is that it? Are plug-in hybrids doomed to follow diesel on a steep downward drop? There are competing forces at work here that complicate the answer.

The PHEV drivetrain has risen in popularity partly because it offers the flexibility of running on electric or petrol but mainly because it's heavily incentivised. The way tailpipe CO2 is calculated right now greatly favours plug-in hybrids against standard combustion-engined cars, or even hybrids, because it makes them appear incredibly climate-friendly in comparison. That unlocks incentives for the car maker, which lowers its average CO2 output across its annual sales, thereby helping it hit European Union and UK targets.

The buyer meanwhile also benefits from



CO2-linked bonus-malus taxation such as company car tax. In the UK, 65% of all plug-in hybrids went to company car drivers in the first eight months of this year, according to SMMT figures.

What's becoming clear however is that PHEVs are nowhere near as fuel-efficient as the official WLTP tests claim. A study by the International Council on Clean Transportation (ICCT) in June found that the real-world fuel consumption of PHEVs in Europe is on average three to five times higher than WLTP test figures. The ICCT found that while the test assumed a share of electric driving to be between 70-85%, in the real world that fell to 45-49% for private drivers and to just 11-15% for company car drivers.

The ICCT study isn't the first to conclude

that 'fake electric cars' (as the green pressure group Transport & Environment dubs PHEVs) aren't the planet cleansers claimed in the tests, but increasingly these findings are reaching the ears of legislators.

The good news for plug-in hybrids in the short- and medium-term is that the EU can't react immediately, so the unrealistic CO2 test figures will remain probably until 2026/27 at the earliest, when legislators will be able to adjust the so-called "utility factor" in the WLTP emissions test by assuming less electric-only driving. So they will remain useful to car makers looking to reduce their official CO2 figure.

Most at risk are the local market incentives, which can be changed at much shorter notice. Examples of countries revoking support include Norway, which saw PHEV sales drop 78% in the first quarter this year after key incentives ended at the beginning

of the year. Company car drivers in the UK, meanwhile, will be anxiously awaiting the next announcement of changes to the company car tax bands, which currently only go up to April 2025.

Not everyone is pessimistic, however. BMW, the biggest-seller of PHEVs in the UK, reckons its global sales of such vehicles will continue at around 200,000 units a year for the next three to four years. Toyota is another cheerleader: "Toyota can produce eight 40-mile plug-in hybrids for every one 320-mile battery electric vehicle and save up to eight times the carbon emitted into the atmosphere", company head Akio Toyoda recently told US dealers. That's assuming buyers stick to the test cycle figures of course.

It's an expensive business to marry an EV drivetrain with a combustion engine, but it has been a lifeline to many premium makers as diesel falls out of favour with buyers. In the UK, four out of the top five

meaning the death of the PHEV could be exaggerated by the raw sales figures.

Other possible short-term boosts to PHEVs include the fact that electric cars themselves aren't easy to get hold of, forcing companies looking to green their fleet to turn to PHEVs instead, according to anecdotal evidence from auto analyst Matthias Schmidt. "The BEV inventory simply isn't there for now," he said.

Those car makers who do like plug-in hybrids continue to fill in gaps in their ranges. Stellantis, for example, has launched the new Peugeot 308

and Vauxhall Astra with PHEV options.

Meanwhile China's Lynk&Co is busy growing market share with its subscription-only 01 PHEV, registering over 12,000 across Europe in the first eight months this year. Also from China is the MG HS SUV, following just behind the 01 with sales of over 11,000 in the region over the same time period.

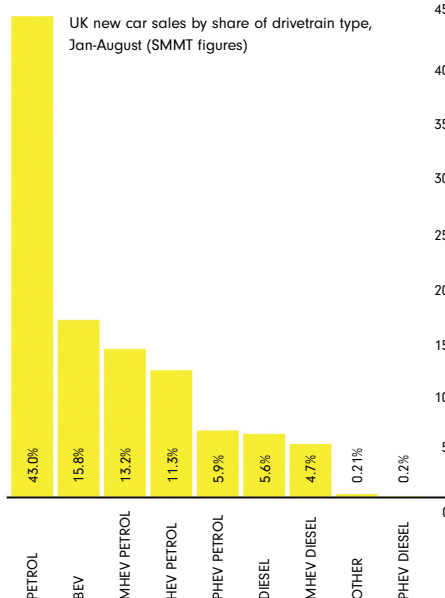
Car companies are mindful of the precariousness of the position of PHEVs with legislators, and are anticipating test changes by increasing battery sizes to boost electric-only range. So for example the new plug-in hybrid Range Rover claims a 70-mile EV range.

The concept of the plug-in hybrid could morph as we get close to the 2035 target when the sale of CO2-emitting cars is banned in the UK and EU. Car makers could swap the combustion engine out for a fuel-cell stack, with early concepts already using a battery and electric motor to give the acceleration boost that fuel-cells can't deliver.

What happens in between is in the hands of the legislators, but there will be plenty of pressure from the industry to overlook the plug-in hybrid's less-than-perfect real-world environmental performance and instead focus on their ability to smooth out the path to electric so it doesn't come as too much of a shock when we are finally booted out of combustion-engined cars.



Lynk&Co registered 12,000 PHEVs from Jan-Aug



plug-in hybrid brands were premiums in the first eight months of 2022, rising to five out of five for company car sales.

There's also the possibility that the dip in plug-in hybrid demand at the moment is temporary, as car makers redirect precious batteries and chips to electric cars or to PHEVs in higher-margin premium brands within a large group. Some of the biggest drop-offs in PHEV sales across Europe this year have occurred within mainstream brands. For example, sales of plug-in hybrid models at the VW Group's Seat brand have more than halved in the first eight months across Europe. Other PHEV models recording drops of 50% or more include the VW Golf, Skoda Octavia, Opel Grandland X and Mercedes A-Class.

Much of that however will be down to tight supplies rather than a drop in demand,



BMW is the biggest seller of PHEVs in the UK market