

# SWITCHING ON

**A**mong the fresh faces is US start-up Rivian. Last autumn it announced an eye-popping order for 100,000 parcel vans placed by Amazon – a substantial investor in the company – for delivery between now and 2030. The first examples should be in service next year. Other investors include Soros Fund Management, Cox Automotive and – intriguingly – Ford. Rivian says that it will be cooperating with the latter on future electric vehicle programmes.

Rivian has already unveiled its mid-range R1T pick-up **1** with a claimed range of from 230 to 400 miles depending on the size of the lithium-ion battery selected; 105kWh, 135kWh, or 180kWh. It powers 147kW (197bhp) motors; one for each wheel.

Another start-up to have already

**While the major van brands ready the deployment of electric models, some new players with unfamiliar names look set to carve out a major slice of the expanding global electric van market, reports Steve Banner**

attracted substantial financial backing along with massive fleet orders is UK-based Arrival, which has received an order for 10,000 of its Generation 2 electric parcel vans **2** from UPS for delivery in Britain, Europe and North America by 2024. UPS has invested in Arrival, as have Hyundai and Kia.

Neither Rivian nor Arrival have as yet publicised the driving range of their vans or how long it will take to recharge their batteries. Both companies employ skateboard platforms, however, which should allow them to scale their vehicles up, or scale them down, in line with

customer preference.

More-familiar automotive brands are branching out into new areas. Renault, for example, has become the first mainstream manufacturer to launch a battery-powered light commercial in the UK derived from a small hatchback **3** electric car. Zoe Van comes with a 1m<sup>3</sup> cargo area and a payload capacity of up to 387kg. UK deliveries of Zoe Van look set to begin in November.

Power comes courtesy of a 52kWh lithium-ion battery driving a 80kW electric motor. At up to 245 miles, the quoted maximum range between recharges is impressive. Charging time is from 70 minutes to take the battery from



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3



4



2



5



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0% to 80% of its capacity, says Renault. Renault's Chameleon charger is fitted as standard, which covers AC applications. That gives the vehicle a charging capability of up to 22kW, allowing the battery to be completely recharged from zero in three hours. Plug it into a 7kW wall-box, however, and it will take almost nine-and-a-half hours before the battery is fully-replenished.

Scheduled for the end of the year are the first deliveries of the new 3.5-tonne version of the electric **4** Renault Master Z.E. It will be marketed alongside the existing 3.1-tonner in van, platform cab and chassis cab guise, offering up to 375kg more payload capacity. Renault has clearly designed it with short-haul last-mile urban delivery work in mind, and for operators who are content to charge it up overnight. Its 33kWh battery delivers a modest 75-mile range, with a recharge time of six hours if it is plugged into a 7kW wall-box.

Its arrival will be welcome. Despite all their talk, precious few light commercial manufacturers have as yet managed to

launch a battery-powered 3.5-tonner on this side of the Channel. An electric Ford Transit will not appear here until 2022.

Mobile engineers cannot end up in a position where they are unable to respond to an emergency because their van's battery needs recharging. That should not be a problem for British Gas engineers due to be issued with one of the 1,000 Vauxhall Vivaro-e vans **5** scheduled for delivery to the utility over the next 12 months. The newly-launched Vivaro-e can travel up to 144 miles when fitted with a 50kWh battery, rising to 205 miles if the 75kWh battery is specified, says the manufacturer.

A 100kW DC charging capability allows the smaller of the two batteries to be replenished from 0% to 80% in 32 minutes. Its bigger stable-mate can reach the same level in 48 minutes.

Electric van builders do not usually allow their products to tow trailers. However Vivaro-e is permitted to pull one grossing at up to 1000kg. The new Vauxhall can handle a gross payload of up to 1,226kg depending on the model

selected – a respectable figure for a van of its size, but still 130kg less than the equivalent diesel.

Vauxhall is part of the PSA Group, and Vivaro shares the same basic design as Citroen's Dispatch and Peugeot's Expert; e-Dispatch and e-Expert are being rolled out too.

A Vauxhall Combo-e should arrive next summer along with battery versions of Citroen's Berlingo and Peugeot's Partner; all three are well-nigh identical. Moving up the weight scale, electric Citroen Relays and Peugeot Boxers **6** will be available in 2021 as well.

Toyota too is tackling the electric van sector thanks to a joint venture with PSA. A battery-powered Proace City (close cousin to Combo-e/Berlingo/Partner) will appear in 2022, while a battery Proace (close cousin to Vivaro-e/e-Dispatch/e-Expert) should be on sale next year.

The market is becoming increasingly competitive. Volkswagen aims to launch the ID. Buzz Cargo **7** in 2021, which will be about the same size as its Caddy



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Maxi. Produced in conjunction with specialist engineers ABT, the VW eTransporter **8** has already gone on sale in the UK, as has Mercedes-Benz's eVito **9**, with quoted ranges of 82 and 92 miles respectively. It is worth noting that Mercedes has also come up with the passenger-carrying eVito Tourer with a 90kWh lithium-ion battery and a 263-mile range.

Mercedes-Benz's e-Sprinter should be on UK highways in September, while VW's eCrafter is booked to appear in the second half of 2021.

MAN is aiming to nip in ahead of its sister company, with an order for 100 right-hand-drive 3.5-tonne **10** eTGEs scheduled for delivery to DPD later this year; eCrafter and eTGE are identical aside from their badges.

Along with all the other 3.5-tonne-and-above models they will face stiff competition from Fiat Professional's E-Ducato **11**, due here in the final quarter of this year and with a claimed range of from 125 to 206 miles, depending on the battery option

selected. Another corporate cousin on the way is a new electric IVECO Daily, slated to break cover in 2022. The existing version has a 125-mile range, thanks to specification of up to three batteries.

Specialist conversions still have a role to play in the electric light commercial sector. Voltia of Slovakia for example has come up with an 8m<sup>3</sup> capacity van that uses Nissan's e-NV200 **12** as a platform. It is being assembled in the UK by Bevan Group subsidiary En-Veco under licence and marketed through Nissan dealers throughout Europe. Top payload is 580kg says Voltia, which claims a 125-mile range.

The prize for the most unusual battery-powered van has to go to the Morris JE **13**. A reimagining of the long-gone Morris J-type van, complete with a vertically-split windscreen, it comes with a carbon fibre body, 5.5m<sup>3</sup> load area, 1,000kg payload capacity and a predicted 200-mile range. It is set to be

produced by a resurrected Morris Commercial in late 2021.

Launched in lockdown was the eDeliver 3 **14**, an electric-only model from SAIC Group (formerly LDV), via Irish distributor Harris. It clocks up to 198 miles (NEDC) on a single charge (52.5kWh battery). There are three variants with two wheelbase options: a short wheelbase panel van, a long wheelbase panel van and a long wheelbase platform chassis. See also corporate profile, p15.

Not everybody is convinced that the pure battery-electric route is the way to go. For example, Geely-owned London Electric Vehicle Company **15** has developed the VN5 van, a 2.9-tonner fitted with range-extender technology. That gives it a 58-mile range solely on battery power, says LEVC, increasing to 301 miles when its 60kW 1.5-litre petrol generator kicks in.

Not truly zero-emission, agreed; but some operators may feel that the range it offers makes it a sensible compromise. **1E**



**11**



**12**



**13**



**14**



**15**