

Electric Vehicles (EVs) – Martin Rowley

Monday October 13th 2025

Reviewer: Janette Sykes

If electric vehicle expert Martin Rowley were a Formula One racing driver, he'd be world champion, no question. The breakneck pace at which the civil engineer cum motor sports, rallying and classic car enthusiast sped through his entertaining and informative presentation would surely have left the likes of Lewis Hamilton, Michael Schumacher and Max Verstappen trailing haplessly in his wake.

To be fair, Rowley did point out right at the start that it would be a controversial, political and futuristic journey through one of his favourite subjects - during which he aimed to outline the past, present and future of EVs while debunking a few myths along the way. Proud owner of a classic Porsche 109 junior tractor, he has links with the motor trade spanning 40 years and has driven around 128 cars. He has road tested almost 90 EVs, and the figure is constantly rising.

Rowley began by setting EVs in a historical context. Surprisingly, the first versions appeared in the 19th century – including the Electrobat (1894) and Porsche P1 (1898). When American President William McKinley was assassinated in 1901, he was conveyed to hospital in an electric ambulance and by 1904 there were 600 electric cabs operating on the streets of New York. American-built 'Moon Rovers' used in the space race in the 1970s were electric, as were the more mundane, but much-loved, 'milk floats' formerly used in the UK to deliver daily 'pintas' to our doorsteps.

In 1997, entrepreneur Elon Musk decided EVs were the future and launched his subsequently successful Tesla brand. One breathtaking statistic about his bestseller, Tesla Model 3, is that one comes off the assembly line somewhere in the world every 45.5 seconds – even faster than Rowley's delivery! At the moment, there are four main types of EV – hybrid self-charging, plug-in hybrid, fully electric and fuel cell hydrogen electric – though the market is constantly evolving and changing.

The battery-manufacturing market is huge – led by China (56 per cent), Korea (26 per cent), Japan (10 per cent), USA (6 per cent) and Europe (4 per cent). Types of batteries are solid state, blade and lithium ion phosphate, and there are 240 battery factories worldwide. One of the biggest is the Tesla Gigafactory in Texas, which covers 25 square miles and is operated using 445 robots. On a more local level, robots have been used for the past 11 years to assemble the Toyota Auris Hybrid at Burnaston in Derby. Costing an average of £357 per year to run, it is, understandably, one of the most sought-after models in the UK.

When it comes to manufacturing EVs, China is the top performer – and one of its most successful companies is BYD, which stands for Build Your Dreams. Founded in 1995, the company has so far built 30 million cars and employs 900,000 people. Its showpiece model is the Wang-Yang U9, retailing at £220,000. Boasting a carbon-fibre body and all-over cameras, it has broken the world speed record at 308 mph. The company also makes buses, and – in partnership with another leading bus

manufacturer Alexander Dennis – has already supplied more than two-thirds of all zero-emission buses on routes operated by Transport for London (TfL). TfL's target is to run a zero-emission bus fleet by 2030. In addition, BYD builds its own ships to transport its vehicles and has developed a huge energy storage facility in Saudi Arabia to harness solar power.

EVs account for 89 per cent of the car market in Norway, compared with 20 per cent in the UK and just eight per cent in the USA. In the year up to June 2025, UK consumers bought 20,000 EVs, 18,720 hybrids, 11,900 plug-in hybrids, 8,600 diesel and 81,000 petrol-driven cars. Government incentives have fallen from a £7,500 grant in 2011 to just £1,500 for specific vehicles. Van, truck and taxi drivers and disabled people qualify for a 35 per cent discount on an EV's market price.

Rowley also addressed the various myths surrounding EVs – including that they are too expensive, that their range is restricted, battery life is short, the length of time needed to recharge batteries, servicing costs, depreciation in value – and even fears that they can't be driven in rain! One way of avoiding the depreciation trap (in which value can fall by up to 67 per cent), suggested Rowley, is to lease, rather than buy, at an average cost of £80 to £195 per month.

Though the Chinese dominate the EV market, French company Citroen is a key European player. Its tiny EV Ami, with a top speed of 28 mph, range of 46 miles and 25,000 miles/five year warranty is selling well in France as a compact city car at £6,000 per model. A similar Chinese model, the Ora, costs just £6,100 – and buyers also benefit from a partnership with Octopus Energy that reduces general electricity bills.

While manufacturing EVs has a substantial carbon footprint, running them, suggested Rowley, costs less than a quarter of the outlay needed to run traditional petrol and diesel models. One of the major challenges in the UK is the lack of charging stations, especially in the Midlands, though the situation is improving. Free stations can be located on mobile phones, and 32 chargers are now available at the services at Junction 33 of the M1 near Rotherham, for example. However, street charging is normally six times more expensive than charging a battery at home using a properly fitted and powered charger. London is investing in kerbside chargers, while battery swaps are becoming more popular in countries such as China. Norway even has a charging lane which charges batteries – and also credit cards! – as motorists drive along.

Finally Rowley outlined developments in hydrogen technology that are now poised to broaden the motor market in the near future – including hydrogen-powered buses, trains, concrete mixers, diggers and even aircraft before concluding that 'New energy vehicles are going to change the world'. Questions ranged from EVs' handling performance in snow (no different to conventional vehicles) to the potential danger they pose to pedestrians (there is a legal requirement for EV engines to be able to be heard so accidents can be avoided). One member even revealed that EVs are commonly known as 'Granny bashers' in the USA, because their engines are so quiet. With so many facts, figures and the odd dash of fiction to consider, no wonder Buxton u3a Chair Jill Murphy confessed that, though she had been bamboozled by

the subject before the talk, she was even more so afterwards. As actress Bette Davis once said: 'Fasten your seatbelts, it's going to be a bumpy night!' But will we enjoy the ride? Only time will tell....