

E-bikes on the rise: how charging station technology is supporting e-bike growth in the UK

The e-bike is making cycling more accessible for all, so it's not surprise that the volume of e-bike sales is on the rise. Contributing to a reduction in carbon emissions, as well as lower travel costs, e-bikes are increasingly used for commuting as well as recreation. Much as we've seen with the rise of the Electric Vehicle, for e-bikes and e-scooters to truly gain traction we first need an infrastructure in place of innovative and accessible charging solutions.

[Watch Spelsberg UK - E-Bike Zero-Carbon Charging Pod YouTube video here.](#)

Simon Watson-Burge, e-mobility expert at Spelsberg, discusses the infrastructure requirements to support the increase in e-bikes and e-scooters.

Cycling is on the rise in the UK and as a result of their advantages, e-bikes in particular continue to see sharp growth in use. Research firm Mintel reported this summer that nearly 10% of UK consumers now own a bike of some kind, and e-bike ownership in 2020 increased by 70% compared to the year before. According to a recent survey by bicycle component manufacturer, Shimano, one in four Europeans say they are more likely to use an e-bike compared to a year ago.

The e-bike phenomenon, which enables much easier cycling in terms of cycling faster and for longer, has unsurprisingly caused a spike in people newly adopting, or returning to, cycling as an alternative means of transport. The Mintel report puts this group at 25% of those who now cycle. The expansion of cycling over the past two years has also spanned all age groups.

Of the advantages in e-mobility take up, the environmental benefit is one of the strongest. This is epitomised through Spelsberg's recent development of a zero-carbon e-mobility charging pod. The pod is energised by solar power, providing up to 200 W, and wind power, providing up to 400 W. Through a bank of four batteries and an inverter, this powers a Spelsberg BCS charging station and can charge up to four Light Electric Vehicles (eBikes or eScooters) at a time, completely carbon free. From flat to full charge, this would take three to four hours with the zero-carbon station.

Spelsberg's BCS unit, already available for public, commercial and residential use, can also be powered by mains electricity and includes a Shimano and a Bosch charging socket, as well as two standard UK 13 amp sockets. The BCS units will charge e-bikes and e-scooters and can include features such as smartphone connectivity to show users the location of the closest charging station.

While the zero-carbon charging station is currently a conceptual project to showcase Spelsberg's engineering capabilities, the environmental advantages of e-bikes and e-scooters are already clear. For example, if a typical company has 100 employees all driving cars, with an average cost of fuel, average fuel consumption and a short commute to work of just six miles, 1.8T of CO₂ is produced per week. But, if 20 employees instead cycle to work for only for two days per week, it's possible to cut 140kg of CO₂. With greater focus on the environmental responsibility of retailers, especially large organisations such as the major supermarket chains, they can also make significant savings by encouraging e-mobility among shoppers.

The other significant advantage of using an e-bike or e-scooter over a car is the cost saving. Taking the previous company commuter example, on the same basis, a collective cost saving of over £84/week can be achieved. At the same time, the price of e-bikes and e-scooters continues to reduce and it's now possible to purchase an e-bike for less than £1,000. In support, the government's cycle to work scheme no longer has a spend limit, making the proliferation of e-bikes more likely with the involvement of employer and employee.

Depending on the power requirements of the cyclist, an average e-bike can retain its charge for anything between 20 and 70 miles, but the spread of e-mobility charging stations is set to contribute to their continuing rise in use. This will grow in recreational areas, such as dedicated mountain biking parks, where charging points are already common in Europe. However, the largest increase in e-mobility charging points will come from commuter demand.

From the Shimano study, up to half of those interested in e-bikes said they intended to use it for journeys instead of a car. In crowded cities and towns, especially where home storage space is limited, e-scooters are already relied on for commuting, from London offices through to the large warehouses of towns in the Midlands.

E-cycling is easier than normal cycling but can still require some effort, which provides the benefit of exercise for the commuter. This doesn't just increase physical health as Public Health England has also reported that cycling and walking present mental health and neurological benefits including improved sleep quality and a greater sense of wellbeing. These are all factors that create a more positive, more productive workforce, incentivising the employer to get behind the push for more exercise.

Measures such as the expansion of London's Low Emission Zone and Birmingham's Clean Air Zone are likely to be implemented in wider areas to improve environmental quality. Encouragement is also needed in the form of improved infrastructure to support commuters in their take up of e-mobility options. Better charging facilities will help achieve this.

Spelsberg UK encourages free use of its e-mobility fleet among employees, with keen take up. As well as reducing the company's carbon footprint, e-bike provision is providing an enjoyable and gentle introduction to cycling for employees who wouldn't have otherwise tried this alternative means of commuting.

Meanwhile the zero-carbon charging pod is serving as an example of how Spelsberg is able to apply its engineering know-how to offer solutions led services to its customers. Spelsberg's expertise extends into design, manufacture, customisation and assembly. Working with Spelsberg as a provider of turnkey solutions helps end-users manage costs and reduce time to market for products.

About Spelsberg

Spelsberg is one of the largest manufacturers of electrical enclosures in the world. With over 4,000 enclosures available as standard and further customisation possible, it offers solutions for almost any application.

With the largest supply of non-metallic enclosures, ex-stock in the UK, its products are often available for delivery within 24 hours; customisation is possible on any product, including bespoke entries, engraved corporate logos or fitted terminals, within 48 hours. Products can be ordered direct from Spelsberg or from most leading supply specialists including RS, Rapid, Farnell and CPC.

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