All power to the battery

Energy storage, where electricity is stored in batteries and replaces the generation of electricity, will substitute other modes of power, according to international battery company, Leoch. It is a booming technology in the UK and is set to get even bigger over the coming years.

Fred Hapiak, President of Leoch International Holding, spends much of his time travelling around the world visiting other Leoch Battery sites and actively growing the company outside of China, where it was first established. His role offers him the ideal opportunity to observe worldwide trends in renewable energy, and how each country plays its part.

'The UK is at the forefront of some new, exciting technologies,' said Fred.

'Energy storage is a booming technology in the UK and, in my opinion, this type of technology, where electricity is stored in batteries and replaces the generation of electricity, will replace other modes of power.

'By 2035 all cars will be electric and batteries will be critical to this.'

As part of its commitment to offering a viable green solution to energy storage, Leoch UK offers safe, clean and high-powered batteries.

Being able to harness power from the Photovoltaic (PV) systems, whether rooftop-mounted, building-integrated, grid-connected or off-grid, demands heavy-duty batteries capable of delivering high amounts of usable energy alongside coping with the rigours of daily, demanding use.

Leoch's selected range has been designed to develop and produce clean energy, eco-friendly power solutions, using various battery technologies.

'Replacing fossil fuels is also a huge trend right now. It started being developed in around 2015 in places like California, Australia and Germany but was very experimental then,' Fred explained. 'Now they have set the trend and more work is going on around the world to develop new technologies that will work well and also fight climate change.

'This is a huge area of development and we're

Fred Hapiak

really enthusiastic about this. This could see the integration of solar farms and battery farms in the future, where power is generated by batteries when the weather fails.'

A solar farm provides green, renewable and locally sourced power by harvesting energy from the sun to create electricity. A battery facility stores energy during off-peak times and releases it back into the grid during peak times.

In the USA, there is already a huge demand for battery facilities during heatwaves. Anytime the weather becomes particularly hot, people turn up their air conditioners, which are among the most energy-intensive appliances on the market.

That creates an over-demand on the grid, and to compensate, electrical suppliers often plan rolling blackouts to ensure the deprivation of services is, at least, uniform. This is where a battery backup comes in.

The 'peak hours' for power usage in the

summer coincide with the hottest, most dangerous part of days that have already been record high temperatures. A battery facility stores energy during off-peak times and releases it back into the grid during peak times.

Some solar customers already have their own small version of this, where their panels 'sell' energy back into the grid at peak times in order to offset their energy bills. In California, so many people and facilities use solar power that the peak hours don't start until the sun goes down, because that's when demand shifts back to the state's traditional power plants.

Most places have a fallback plan in the form of a backup power plant, the same way hospitals keep diesel generators.

But there's a gap between when the grid gives out and when the backup facility can be kicked into gear, and even a small battery facility can help ease this gap time and make a huge difference.

It's easy to see, then, why Fred predicts the integration of solar and battery farms will become so prevalent in the future.

But what does that mean for the UK market?

Phil Hardy, Sales Director at Leoch UK, commented: 'We are absolutely seeing growth in the UK market for solar power, particularly in residential units.

'As the cost of energy has gone up, many people are doing more research to find out how exactly they can be more self-sufficient and save on monthly bills. For most people, that doesn't mean living completely off-grid, but subsidising their energy usage with more renewable sources.

'There is definitely a better understanding of solar power and how it can work for a market like the UK. In years gone by, many people thought that if it wasn't sunny outside, your solar energy units wouldn't be charging.

'In fact, the best time for solar energy is early in the year when the skies tend to be clear, but the temperature is low. When we experienced really high temperatures this summer, the efficiency of these solar systems dropped off slightly. Like us, these systems don't work so well in the extreme heat.

'We've also seen more people looking for ways to store energy locally.

'The demand for our lithium batteries has risen over the last year, as they give so much information and are modular, meaning that the system can be built on to meet changing requirements.

'The inherent safety of these batteries is one of the reasons they're proving so popular. Take an average 12V battery. If you experienced an accidental short circuit across the battery terminals for example, you'd experience very high current supplied from the battery in an instant, causing damage possibly not only to the battery.

'With a lithium battery, the Battery Management System (BMS) means that, in the same scenario, the battery would shut down in microseconds. It simply cannot work outside of its set parameters, meaning it's a much more stable and safe way to provide energy.'

In other environmental news, the UK subsidiary of Leoch International is helping those responsible for industrial plants and equipment in their organisations to be greener.

As a battery manufacturer, Leoch Battery UK understands its environmental impact and has established a waste classification system to ensure that hazardous and non-hazardous wastes are disposed of safely and recycled where possible.

Now, Leoch Battery UK is extending that service to its clients, which includes distributors and Original Equipment Manufacturers (OEMs), by providing a collection service. Lead acid batteries can either be collected by the pallet, in smaller parcel quantities, or via one-tonne scrap bins.

This service can either be provided free of charge or clients can benefit from a monetary incentive based on the volume of waste collected. Customers who use the service are provided with a Hazardous Waste Consignment note to prove their scrap batteries are disposed of via a legally compliant process.

Leoch batteries have also been manufactured to have a range that will last longer and need replacing less often to further help the planet.

'Leoch Battery UK is 100% committed to its environmental responsibilities as a battery producer. Companies throughout our supply chain follow stringent Environment Agency procedures to minimise the potentially harmful effects of waste batteries on the environment and we do everything we can to aid our customers in this process', underlined Phil Hardy, Sales Director at Leoch Battery UK. 'Sustainability is an integral part of our vision and values and our practices reflect that.'

Leoch International boasts 10 manufacturing plants across the globe and operates in the Network Power, Motive Power and Transportation markets.

www.leochbattery.co.uk