

Powering the UK's battery supply chain



Battery and Energy Management Innovation

Accelerated technologies for future battery electric vehicles

@FutureBEV was a direct result of a previous APC-supported programme and its aim was to deliver mainstream, competitive EV powertrains, both in function and cost, simultaneously fostering a new domestic supply chain for subcomponents and system capability, enabling the UK's transition to future electromobility.

The resulting powertrain incorporates an innovative 400V/800V inverter, and delivers improved efficiency, lower vehicle level CO₂, weight savings, faster charging times and better use of storage, providing value-add and competitive customer value to the end user. The project marked BMW's transition to SiC-based power electronics in its future generations of Battery Electric Vehicle (BEV) and laid the foundation for 100kW/l inverters, significantly exceeding industry targets. It also helped to anchor BMW activity in electrification in Oxford, safeguarding UK jobs and technology.



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Positioning the UK as a centre of battery pack engineering and manufacturing excellence

Battery capabilities are essential to the growth of the UK's automotive industry. The H1perChain programme was introduced to address the need for a step-change reduction in battery pack costs through the development of domestic component and sub-system supply chain capabilities.

Led by Hyperbat, a joint venture operation between WAE Technologies and Unipart Manufacturing Group, the funding also helped to establish robust and high-speed laser welding processes to produce safe and efficient battery packs to meet the mid-volume manufacturers demands. Together with its innovative Industry 4.0 digitalisation strategy, the H1perChain programme has enriched the supply chain and enabled reduced lead-times with optimised productivity and overall competitiveness. The innovative battery pack is now powering the Lotus Evija.



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Ford Halewood's purpose-built EDU production facility completes the circle

The first mass-deployment of our funded technology was Ford's EcoBoost programme in 2017. E:PrIME followed shortly afterwards, establishing a product development centre of excellence for the manufacture of EV powertrains in Dunton.

Dunton developed a pilot line for Electric Drive Unit (EDU) production, which resulted in a further £380 million investment in the manufacture of electric powertrains at Ford's Halewood facility in Merseyside, repurposing the existing internal combustion production line.

This investment will provide Ford UK with the capacity to produce up to 420,000 EDUs annually, which will power the E-Transit, Tourneo Courier, Puma and other future models.

By 2026, 70% of the 600,000 EVs Ford plans to sell in Europe will be powered by Halewood-produced technology, positioning the UK as a global leader for EV technology and safeguarding over 500 skilled jobs.

