Battery electric hybrid rail for the UK

Arriva invests £300m in next-generation Hitachi tri-mode trains.

What was Arriva's challenge?

Arriva's Grand Central train operating company achieved extended track access rights through to 2038 which led to a significant investment in fleet to future proof its operations, meet rising demand and significantly reduce emissions.

The fleet needed to be able to operate on both electrified and non-electrified tracks between the North East, Yorkshire and London, so a solution was needed that could deliver greater flexibility long into the future.

Investment

Arriva invested £300 million with Hitachi Rail and Angel Trains to replace the Grand Central fleet with nine state-of-the-art battery hybrid trains, including 45 tri-mode rail cars, plus a 10-year maintenance and leasing agreement.

The tri-mode technology enables electric, battery or diesel power operations for seamless journeys across mixed infrastructure.

Manufactured in the North East, the order secures skilled jobs and unlocks new advanced battery manufacturing capability within the UK supply chain.

Better passenger journeys

The new fleet will be delivered in 2028 and will provide and additional 20% of seating capacity, with around 400,000 extra seats available to passengers every year. Enhanced comfort, including more luggage space, in-seat power and an electronic reservation system, will help make sustainable rail travel the easy and best choice.

HITACHI

GRAND CENTRAL by arriva

Technology in action

The pioneering tri-mode technology has demonstrated its ability to cut emissions and fuel consumption by around 30%.
By entering and exiting stations in zero-emission battery mode, the trains will help improve air quality and reduce noise in urban centres.

This landmark £300 million investment strengthens Arriva's long-term commitment to UK rail, supports the Government's industrial and decarbonisation strategies, and reinforces the North East's role as a hub for advanced rail manufacturing.

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