

Sustainability specialist wins funding for leading freight decarbonisation project

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A specialist sustainability business has been awarded a major government-backed grant to cut rail freight diesel usage.

Clean Air Power, from Melton Mowbray in Leicestershire, was one of the winners of the latest First of a Kind (FOAK) competition, which is funded by the Department for Transport in partnership with Innovate UK. Clean Air Power has secured £398,000, which it will use to finance part of a Class 66 locomotive decarbonisation initiative.

The company will demonstrate the ability to substitute diesel with both hydrogen and biogas on the Class 66, which carries over 80% of the freight on the rail network – and in doing so reduce carbon emissions on one of the industry's most challenging applications. It will achieve this by retrofitting the Class 66 with Clean Air Power's precision injection technology, creating a Class 66 that can run on a combination of diesel, biogas and hydrogen.

The initiative marks the first time that this technology, which is widely used in the on-road industry, will be applied to the rail freight sector in such an important class of locomotive. The work will take place over a

nine-month period.

The project's main partner is leading rail freight operator, Freightliner, which operates over 100 Class 66s in the UK. The project is also supported by Network Rail, Tarmac, RSSB, Flogas, Carrickarory, and the Birmingham Centre for Railway Research and Education at the University of Birmingham.

All physical works will be carried out at Freightliner's vehicle maintenance centre in Leeds. Emissions testing will be conducted in consultation with RSSB and Carrickarory.

Dan Skelton, Managing Director of Clean Air Power, said: "We're delighted to be awarded this financial backing and are now focussed on delivering a fully functioning low-carbon, low-emission, hydrogen-friendly Class 66 locomotive.

"Our solution offers a route to viable, long-term decarbonisation and its associated cost benefits, which will be practical to implement and scale. We have successfully worked alongside the likes of Volvo, Mercedes, DHL, Caterpillar and Perkins previously, and are looking forward to transferring our know-how and expertise to this new and exciting market."

"Freightliner is excited to be a key partner in this pioneering decarbonisation project," said Freightliner UK Rail Managing Director Tim Shakerley. "As the largest freight operator of electric traction, we already have a number of environmentally motivated initiatives underway and are delighted to be working with Clean Air Power and other partners on this additional government-funded project. With decarbonisation high on the agenda, these initiatives will further support the government's pledge to achieve net zero greenhouse gas emissions by 2050."

Transport Secretary, Grant Shapps, said: "I am delighted to announce the winners of the 2021 First of a Kind competition. These winners will hopefully play a role putting passengers at the centre of our railways as we build back better from Covid-19. The competition always throws up surprises and the ideas shown today could transform how we travel in future."

Simon Edmonds, Deputy Executive Chair and Chief Business Officer, Innovate UK, said: "As we move ever closer to getting past the pandemic, passengers are returning to the railway. To give them ever greater confidence that rail is safe and sustainable we called upon UK innovators to come up with fresh ideas. Not only will passengers benefit from these great innovations but business prospects are bright in this sector too."

This year the FOAK competition has been aimed at making the railways cleaner, greener and more passenger friendly. 30 ground-breaking projects were awarded a share of £9 million. The competition is focused on developing pioneering technology and exceptional ideas that can improve journeys for travellers, encourage passengers back onto the network and reduce the environmental impacts of rail as we build back better from Covid-19.

Now in its fifth round, the competition was open to inventors from across the nation, regardless of the organisation's size or stature, which allows small companies with bright ideas to be recognised.

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