Rail Minister visits zero-emission technology driving the future of railways

- Minister Andrew Jones visits Steamology, which received £350,000 as part of government's £3.5 million 'First of a Kind' competition
- government funding is being used to develop cutting-edge technology which will decarbonise the railways, including hydrogen-powered trains with zero emissions
- visit coincides with report by the Rail Industry Decarbonisation Taskforce, setting out strategy for removing diesel-only trains from the network by 2040

Rail Minister Andrew Jones reiterated the Department for Transport's commitment to cleaner and greener rail journeys today (22 July 2019), as he visited a pioneering government-backed project which will develop a modern, zero-emission steam-powered system onboard a train.

Steamology, based in New Forest, Hampshire, received £350,000 earlier this year as part of the government's £3.5 million 'First of a Kind' competition. The firm is using the investment to develop its Water to Water (W2W) system – a zero-emission compact steam generator that runs on oxygen and hydrogen to drive a turbine, which will charge battery packs onboard trains. They believe that the W2W system could be used as an environmentally friendly way to power trains in the future.

The First of a Kind competition has been set up to support world-leading innovation projects that can improve the railways, deliver low-carbon train journeys across the UK rail network and ensure Britain is at the heart of a low-carbon economy.

Other government-funded projects include drones capable of inspecting railway infrastructure for damage, a sound-bending wall to cut noise pollution and using artificial intelligence to predict where lineside vegetation could cause delays on the tracks.

Rail Minister Andrew Jones said:

> We are committed to decarbonising our rail network, ensuring our trains are cleaner and greener for passengers. As a part of this we are funding innovation grants to help cutting edge businesses develop high tech solutions.
>
> Steamology is a fantastic example of this, and it has been great to see how our funding has made a difference in helping them develop their ideas.

> We are ambitious for our rail network and for the role it can play in improving our environment for the country.

Matt Candy, Steamology said:

> We are delighted to have received a share of £3.5 million to support decarbonising our railway system.
>
> Steamology is an innovative and transformative project which uses steam from hydrogen to power our trains, making the network more efficient and cleaner.

Simon Edmonds, Chief Business Officer at Innovate UK said:

> Under the First of a Kind competition, we have backed pioneering projects such as Steamology's hydrogen technology which can deliver real benefits to passenger and freight operators and for the environment. The programme can also help innovative companies succeed, both at home and in export markets.
>
> The UK's rail network is a vital economic asset to the nation, providing an environmentally sustainable system for the movement of both passengers and freight. By supporting new projects we can do more to boost the reliability of the network and to make it even greener.

Launched in 2017, the first round of the First of a Kind competition saw ten projects win a share of £3.5 million to develop ideas to improve passenger experience and demonstrate tomorrow's trains.

The second round focused on schemes aimed at cutting the carbon footprint on the UK's railways, and enhancing stations for passengers. These also saw another ten projects offered a share of £3.5 million.

Last month the third round of the competition saw 24 winners win a share of £7.8 million to strengthen the resilience of railway infrastructure and operations. Winners included 4Silence's plan to develop a noise-reducing wall that works by diffracting sound waves from passing trains upwards and Amey VTOL's development of a drone system that could carry out track inspections from the skies avoiding the need for people to set foot on railway infrastructure.

The visit coincides with the department welcoming the work of the Rail Industry Decarbonisation Taskforce, who today published their report into how the industry can decarbonise the railways by 2040.