Rolls-Royce and EasyJet complete world-first hydrogen engine test

Rolls-Royce and EasyJet have teamed up to complete the world's first test of a hydrogen-powered modern engine.

The engineering giant and low cost operator carried out the test at the MoD's Boscombe Down facility in Wiltshire, using a converted Rolls-Royce AE 2100-A turboprop aircraft engine.

The hydrogen used was created using 100 per cent wind and tidal power at the European Marine Energy Centre (EMEC) on Eday in the Orkney Islands.

Derby-headquartered Rolls-Royce is on a mission to clean up its act with investment in green initiatives such as nuclear power plants and aero engines running on sustainable fuel.

It is the UK's biggest civil aerospace company with around 13,000 of its engines powering aircraft around the globe. Its own figures for 2019 show Rolls-Royce engines – and to a far lesser extent its general operations – contributed 0.6 per cent of all global man-made CO2 emissions. It wants to be net zero by 2050.

Total aviation around the world makes up around 2.6 per cent of greenhouse gas emissions.

Rolls-Royce said the ground test was a big step towards proving that hydrogen could be used as a zero carbon aviation fuel, and is now planning a second set of tests with Easyjet, with a longer-term ambition to carry out flight tests.

There are also plans to carry out a ground test using a Rolls-Royce Pearl 15 jet engine.

Rolls-Royce chief technology officer Grazia Vittadini said: “The success of this hydrogen test is an exciting milestone.

“We only announced our partnership with EasyJet in July and we are already off to an incredible start with this landmark achievement.

“We are pushing the boundaries to discover the zero carbon possibilities of hydrogen, which could help reshape the future of flight.”

EasyJet chief executive Johan Lundgren said: “This is a real success for our partnership team.

“We are committed to continuing to support this ground-breaking research because hydrogen offers great possibilities for a range of aircraft, including EasyJet-sized aircraft.

“That will be a huge step forward in meeting the challenge of net zero by 2050.”

Secretary of State for Business, Energy and Industrial Strategy, Grant Shapps, said: “This is a true British success story, with the hydrogen being used to power the jet engine today produced using tidal and wind energy from the Orkney Islands of Scotland – and is a prime example of how we can work together to make aviation cleaner while driving jobs across the country.”

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