

# ATI unveils concept for zero-carbon aircraft



The Aerospace Technology Institute's concept could one day fly up to 279 passengers anywhere in the world with no carbon emissions

The Aerospace Technology Institute ([ATI](#)) unveiled a concept aircraft in December that could one day fly up to 279 passengers anywhere in the world with no carbon emissions and just one stop.

"Up to 279 passengers could fly between London and San Francisco, USA direct or Auckland, New Zealand with just one stop with the same speed and comfort as today's aircraft, revolutionizing the future of air travel," said the [December 6 release](#).

Developed by a team of aerospace and aviation experts from across the UK collaborating on the [FlyZero project](#), the concept highlights the potential of green liquid hydrogen for air travel not just regionally or in short-haul flight but for global connectivity.

ATI said liquid hydrogen is a lightweight fuel, which has three times the energy of kerosene and 60 times the energy of batteries per kilogram and emits no CO2 when burned.



ATI said detailed findings from the FlyZero project will be published in early 2022

“At a time of global focus on tackling climate change our midsize concept sets out a truly revolutionary vision for the future of global air travel keeping families, businesses and nations connected without the carbon footprint,” said FlyZero Project Director Chris Gear. “This new dawn for aviation brings with it real opportunities for the UK aerospace sector to secure market share, highly skilled jobs and inward investment while helping to meet the UK’s commitments to fight climate change.”

ATI said detailed findings from the FlyZero project will be published in early 2022, including three final aircraft concepts (regional, narrow-body and midsize), technology roadmaps, market and economic reports and a sustainability assessment.

“These designs could define the future of aerospace and aviation. By working with industry, we are showing that truly carbon free flight could be possible, with hydrogen a front runner to replace conventional fossil fuels,” said Business Secretary Kwasi Kwarteng. “Fueling planes sustainably will enable the public to travel as we do now, but in a way that doesn’t damage the planet. It will not only help us to end our contribution to climate change but also represents a huge industrial opportunity for the UK.”

Transport Secretary Grant Shapps explained it is crucial for sustainability to remain at the heart of the aviation industry’s recovery from COVID-19.

“This pioneering design for a liquid hydrogen-powered aircraft, led by a British organization, brings us one step closer to a future where people can continue to travel and connect, but without the carbon footprint,” said Shapps. “I look forward to continuing to work closely with the Jet Zero Council to support the UK’s world-leading research in this sector, which will create green jobs, help us meet our

ambitious net-zero targets and lead the global transition to net-zero aviation.”