



NEW AIRBUS ZERO-EMISSION CONCEPT AIRCRAFT REVEALED

News / Manufacturer



Airbus has revealed three concepts for the world's first zero-emission commercial aircraft which could enter service by 2035. These concepts each represent a different approach to achieving zero-emission flight, exploring various technology pathways and aerodynamic configurations in order to support the Company's ambition of leading the way in the decarbonisation of the entire aviation industry.

All of these concepts rely on hydrogen as a primary power source - an option which Airbus believes holds exceptional promise as a clean aviation fuel and is likely to be a solution for aerospace and many other industries to meet their climate-neutral targets.

“This is a historic moment for the commercial aviation sector as a whole and we intend to play a leading role in the most important transition this industry has ever seen. The concepts we unveil today offer the world a glimpse of our ambition to drive a bold vision for the future of zero-emission flight,” said Guillaume Faury, Airbus CEO. “I strongly believe that the use of hydrogen - both in synthetic fuels and as a primary power source for commercial aircraft - has the potential to significantly reduce aviation's climate impact.”

The three concepts - all codenamed “ZEROe” - for a first climate neutral zero-emission commercial aircraft include:



A turbofan design (120-200 passengers) with a range of 2,000+ nautical miles, capable of operating transcontinentally and powered by a modified gas-turbine engine running on hydrogen, rather than jet fuel, through combustion. The liquid hydrogen will be stored and distributed via tanks located behind the rear pressure bulkhead.



A turboprop design (up to 100 passengers) using a turboprop engine instead of a turbofan and also powered by hydrogen combustion in modified gas-turbine engines, which would be capable of traveling more than 1,000 nautical miles, making it a perfect option for short-haul trips.



A “blended-wing body” design (up to 200 passengers) concept in which the wings merge with the main body of the aircraft with a range similar to that of the turbofan concept. The exceptionally wide fuselage opens up multiple options for hydrogen storage and distribution, and for cabin layout.

“These concepts will help us explore and mature the design and layout of the world’s first climate-neutral, zero-emission commercial aircraft, which we aim to put into service by 2035,” said Guillaume Faury. “The transition to hydrogen, as the primary power source for these concept planes, will require decisive action from the entire aviation ecosystem. Together with the support from government and industrial partners we can rise up to this challenge to scale-up renewable energy and hydrogen for the sustainable future of the aviation industry.”

In order to tackle these challenges, airports will require significant hydrogen transport and refueling infrastructure to meet the needs of day-to-day operations. Support from governments will be key to meet these ambitious objectives with increased funding for research & technology, digitalisation, and mechanisms that encourage the use of sustainable fuels and the renewal of aircraft fleets to allow airlines to retire older, less environmentally friendly aircraft earlier.

Note to editors: To evaluate and validate these new concept aircraft and assess whether they could be matured into viable future products, Airbus will be focusing its efforts on a number of technological pathways. Grazia Vittadini, Chief Technology Officer, Jean-Brice Dumont, EVP Engineering and Glenn Llewellyn, VP Head of Zero Emission Aircraft, will reveal Airbus' technology roadmap for 2020-2025 at 14:00 CEST, 21 September 2020 during a virtual event on Airbus social media channels.

21 SEPTEMBER 2020

ARTICLE LINK:

<https://50skyshades.com/index.php/news/manufacturer/new-airbus-zero-emission-concept-aircraft-revealed>