



European Commission

Alliance for Zero-Emission Aviation



PREPARING EUROPE FOR HYDROGEN & ELECTRIC FLIGHT

WHAT IS THE ALLIANCE?

The Alliance for Zero-Emission Aviation (AZEA) is a voluntary European initiative of private and public stakeholders initiated by the European Commission **to prepare the entry into commercial service of hydrogen-powered and electric aircraft.** The ambition of the Alliance is to provide **solutions to the challenges** of zero-emission aviation and pave the way for the next-generation of sustainable aircraft. Enabling the deployment of **cutting-edge technologies** in the field of zero-emission flight will **set standards** and make the European aeronautical industry more **resilient.**

WHY CREATE THE ALLIANCE?



REDUCING CARBON EMISSIONS OF AVIATION

Aviation's contribution to global warming currently lies at **3%,¹** and it is predicted to grow as travel by air increases. Aviation needs to **transition to green technologies** to eliminate the sector's climate impact.



COORDINATING EFFORTS ACROSS AVIATION

The introduction of hydrogen and battery-electric propulsion to combat CO₂ emissions requires **major changes throughout the air transport system,** starting with the aircraft themselves but also affecting airports, airlines, air traffic management and energy networks.



FACILITATING THE SUCCESSFUL COMMERCIALISATION OF GREEN AIRCRAFT

Environmentally sustainable aircraft are a huge business opportunity, and the Alliance wants to translate the technological achievements of European research efforts into **commercially successful products.** The Alliance can help by creating the conditions for the entry into service of hydrogen and battery-electric aircraft.

¹ Source: Commission Staff Working Document SWD(2020) 331 final accompanying the Sustainable and Smart Mobility Strategy (COM(2020) 789 final)

HOW WILL THE ALLIANCE WORK?



CONNECTING PARTNERS:

The Alliance will be **open to a wide range of actors** – aircraft manufacturers, airlines, airports, energy companies and fuel providers, standardisation and certification agencies, passenger and environmental interest groups and regulators.



ESTABLISH RECOMMENDATIONS:

Working groups will focus on such issues as infrastructure requirements, provision of **new energy sources**, operating requirements and regulatory issues.



ENCOURAGE INVESTMENTS:

The Alliance will establish a **pipeline of projects** on the basis of an agreed roll-out plan for hydrogen and electric aircraft and **help attract private and public financing**.

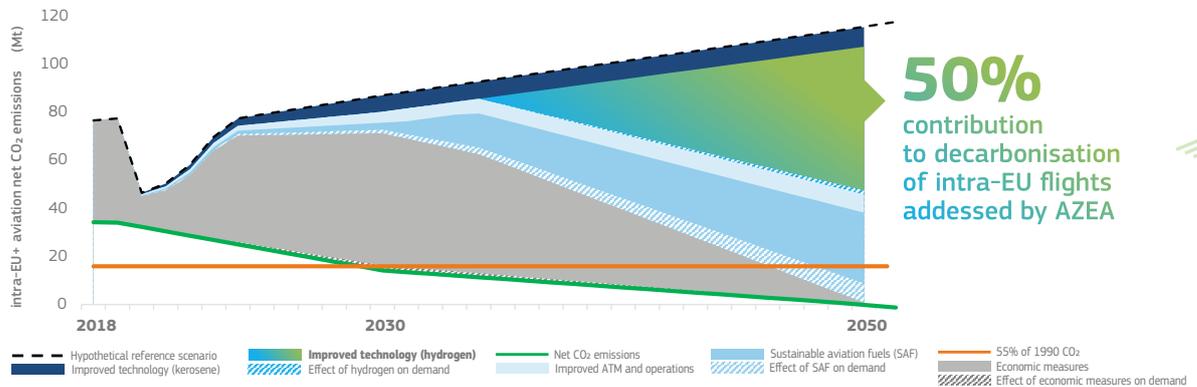
WHAT BENEFITS WILL THE ALLIANCE GENERATE?



FOR THE ENVIRONMENT

Hydrogen (whether used in combustion turbines or fuel cells) and battery electric propulsion **will completely eliminate** in-flight CO₂ emissions and significantly reduce other emissions.

Flights within the EU+ region



Intra-EU² only. Modelled for 2030 and 2050, the impacts are linearly interpolated. The base year for this study is 2018.

SOURCE: Destination 2050 report 2, industry identified routes toward decarbonisation of aviation.



FOR THE ECONOMY

Total sales of passenger aircraft are predicted by industry to surpass **40,000** in the **coming 20 years**, with an **estimated market-value of € 2.500 billion**.² With over half of the current global market share for commercial passenger aircraft, European manufacturers are well placed to lead the way in the zero emission aircraft market.



FOR THE PASSENGERS

Zero emission aircraft will create new perspectives for passengers. **Safe, swift and climate-neutral travel** by air will become possible not just between major airport hubs but also on regional connections not currently served by aircraft.

HOW TO JOIN THE ALLIANCE?

If you represent a **company or organisation** that wants to commit to preparing the aviation ecosystem for the entry-into-service of hydrogen and electric-powered aircraft and you would like to **become a member of the Alliance for Zero-Emission Aviation**, please follow the instructions on the Alliance's website [here](#) or **scan the QR code** on the right.



2. Source: Destination 2050 – A route to net zero European aviation; February 2021.

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