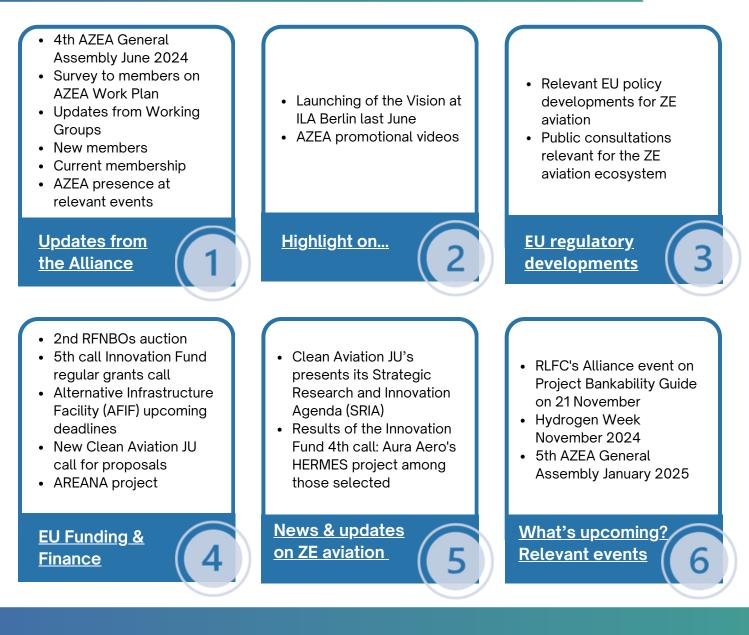
PREPARING EUROPE FOR HYDROGEN & ELECTRIC FLIGHT

Dear readers,

Welcome to the first issue of the AZEA newsletter! In the following pages, you will discover the most recent news and updates concerning the Alliance for Zero-Emission Aviation, including the launching of our Vision Report at ILA Berlin Last June and our ongoing work on the preparation of a Roadmap. We hope that you find the below sections inspiring and informative.

NEWSLETTER OCTOBER 2024



PREPARING EUROPE FOR HYDROGEN & ELECTRIC FLIGHT

Updates from the Alliance

Fourth General Assembly of the Alliance for Zero-Emission Aviation

The **4th General Assembly of the Alliance for Zero-Emission Aviation (AZEA) took place last 7 June 2024 at ILA Berlin Airshow**, following the publication of the Alliance's Vision Report "Flying on electricity and hydrogen in Europe" the previous day (<u>see a summary of</u> <u>the report under the section Highlight on...)</u>.



Organized in a hybrid format, the meeting gathered **60 AZEA members 'representatives in person and another 40 online.** Chaired by the **Director for Defence Industry in DG DEFIS François Arbault,** the event served as an opportunity to present to the totality of the AZEA members the final version of the Vision report and to discuss the progress of the Alliance's activities carried out by the different Working Groups (WGs). The **publication of the Vision report** also paves the way for the **Alliance's work on a detailed Roadmap** on the deployment of electric and hydrogen flights in Europe to be published in 2025.

The meeting also included the projection of **short video message sent by former Commissioner Thierry Breton** to all AZEA members at the occasion of the issue of the Vision Report, which highlighted the importance for the Alliance to have defined a concrete and measurable **common objective to have by 2050 up to 2/3 of all intra-EU flights powered by hydrogen or electricity propulsion technologies.**

PREPARING EUROPE FOR HYDROGEN & ELECTRIC FLIGHT

2025-2026 AZEA Work Plan survey for members

As announced during the General Assembly, AZEA members had the opportunity to participate in a **consultation on the future Work Plan for the Alliance** through EU survey, which was open between 18 June and 31st July. Members were invited to provide feedback on readjusting and updating the existing WGs mandates, while also proposing new activities to be pursued by AZEA. 28 AZEA members submitted a response to this survey.

The Work Plan will aim to provide an overview of the work to be carried out by the Alliance for the period 2025-2026. The Work Plan is expected to be published by January 2025 and presented at the occasion of the next fifth General Assembly.

Updates from Working Groups (WGs)

The six Working Groups of the Alliance have continued progressing in their activities over the last months:

• WG1 "Roll-out scenario and figures of reference" finalized its internal report on the Roll-out scenario for electric and hydrogen-powered aircraft last June. Under the framework of WG1, a Task Force has now been established with the objective of developing a description of the deployment of the future network of electric and hydrogen-powered destinations in Europe.

This Flight Network analysis aims to translate the high-levels objectives of the Vision Report into more detailed deployment objectives for 2030, 2040 and 2050 in the different market segments, while also contributing to identify the related energy and airport requirements per type of operations and Member States or regions.

• WG2 "Green electricity and hydrogen supply" completed in January 2024 an internal report providing a set of recommendations on policies and regulations on hydrogen infrastructure for aviation. WG 2 is currently drafting a regulatory report on electricity and hydrogen supply for sustainable aviation at EU airports. Based on the ongoing work under the Flight Network Task Force under WG1, WG2 is developing future distribution CAPEX estimates for hydrogen deployment at airports, as well as estimations on the future electricity and hydrogen demand at airport level.

PREPARING EUROPE FOR HYDROGEN & ELECTRIC FLIGHT

- WG3 "Aerodromes" is currently working on the finalization of a set of infrastructure factsheets covering requirements to enable the effective supply of electricity and hydrogen to airports. These factsheets cover electricity supply for 100% electric aircraft powered, electricity supply for hybrid-electric powered aircraft, supply of gaseous and liquid hydrogen by truck, supply of gaseous hydrogen by pipeline, supply of liquid hydrogen by tank swapping, gaseous hydrogen storage and compression, hydrogen liquefaction and liquid hydrogen storage and liquid hydrogen refuelling by truck, liquid hydrogen refuelling by pipeline and gaseous hydrogen refuelling by fixed or mobile stations.
- WG4 "Aviation regulation, certification and standards" is currently finalizing a standardization gap analysis report. This report aims to complement and update the first analysis of the <u>existing standardization landscape</u>, published in June 2023. This new analysis proposes a structure to guide the industry-wide standardization efforts that are required to support the certification of newly electric, hybrid-electric, and hydrogen-powered aircraft. It gives for each main technology a clear mapping of the ongoing standardization activities or the ones to be planned to support regulations at two levels: the aircraft and the system (including sub-system and components).
- WG5 "Integration into the European network" published in January 2024 its <u>Concept</u> of <u>Operations (CONOPS)</u> for the Introduction of <u>Electric</u>, <u>Hybrid-Electric</u> and <u>Hydrogen-powered Zero Emissions Aircraft</u> at the occasion of the 3rd AZEA General Assembly. The CONOPs provides a basis for the identification of ATM/ATS (Air Traffic System) operational roles, responsibilities, procedures, infrastructure, and regulations to support the deployment of electric, hybrid-electric and hydrogen-powered flights. As a next step, WG5 has initiated work on modelling and simulation activities regarding network performance assessments.
- W6 "Incentives" is currently finalizing two issue notes on the environmental modulation for zero-emissions aircraft at airports and on internal market rules for airlines. The issue note on environmental modulation at airports aims to analyse current airport charges model and the revenue-neutral modulations explored by airports to incentivize sustainability. The issue note on internal market rules for airlines analyses the Public Service Obligations for zero-emissions aircraft.

PREPARING EUROPE FOR HYDROGEN & ELECTRIC FLIGHT

New members

The Alliance is currently composed by **185 members. Since last June, 15 new members have joined**. Below you can find an overview of these new members.

Member	Description
<u>Aer Arann Islands</u>	Since 1970, Aer Arann Islands has connected the Aran Islands to the mainland with reliable daily flights, while advancing sustainability through the Irish Hydrogen Valley initiative
Aircraft Electronics Association	International aerospace industry association with member companies specializing in the design, manufacturing, maintenance, repair, and installation of aircraft avionics and electrical systems The association supports its members in the electrification of aircraft activities, including regulatory and standards development
<u>Air Products</u>	Air Products is a global leader in providing industrial gases With 65 years of expertise in hydrogen production, storage and distribution, the company accelerates the energy transition with clean hydrogen mega-projects to decarbonize hard-to-abate industries and transportation Within mobility, Air Products offers refuelling solutions covering the entire value chain.
Avinor	Norwegian state-owned operator of 43 airports and the ANSP in Norway. Avinor has entered into a cooperation agreement with the Norwegian Aviation Authority to develop the country into an international test-arena for zero and low- emission aircraft

PREPARING EUROPE FOR HYDROGEN & ELECTRIC FLIGHT

Member	Description
<u>Bosch General Aviation Technology</u> <u>GmbH</u>	Austrian manufacturer of aeronautical components, which is currently developing powertrain technologies (hybrid, hydrogen, electric) for general aviation applications
EDEIS	French company managing 17 regional airports in France Currently planning to install several electric charging stations at its airports
<u>Electro.Aero</u>	Australian manufacturer of charging infrastructure for aircraft, including aircraft chargers, battery energy storage systems and on-aircraft charging components
<u>Flyvbird</u>	German startup airline providing on-demand air mobility services Currently working in the research, development, and deployment of electric and hydrogen-powered aircraft
<u>Grasshopper Air Mobility</u>	Spanish manufacturer of autonomous robotic cargo drones Currently working on the design and prototyping of fully electric drones and on the incorporation of hydrogen fuel cells
Intelligent Energy	UK hydrogen fuel cell manufacturer Currently developing fuel cell system products for hydrogen-powered aircraft targeting general aviation
<u>LYNEPorts</u>	Romanian technology software organization that develops digital solutions & tools supporting the design and planning of vertiports for zero-emission eVTOLs

PREPARING EUROPE FOR HYDROGEN & ELECTRIC FLIGHT

Member	Description
<u>Ministerium für Umwelt, Naturschutz und</u> <u>Verkehr des Landes Nordrhein-Westfalen</u>	North Rhine-Westphalia promotes research and development of innovative and sustainable technologies in aviation The federal state offers funding for the roll-out of a network of electric aircrafts at regional airports, as well as R&D for the use of green electricity and hydrogen in aviation The federal state also supports the market uptake and provision of sustainable aviation fuels including carbon neutral Power-to-Liquid fuels The federal state is aiming, in line with EU and national policies, to realise climate-neutral aviation
<u>Norwegian University of Sciency and</u> <u>Technology (NTNU)</u>	Norwegian university and research institution Associated member of the Clean Aviation JU and participant in a number of EU funded projects on electric and hydrogen-powered aircraft
Odys Aviation	German aircraft manufacturer active in the development of hybrid-electric propulsion systems, as well as unmanned and piloted VTOL aircraft
<u>UL Power Aero Engines</u>	Belgian manufacturer of aeronautical components for general aviation and rotorcraft Active in several projects regarding hybrid installations

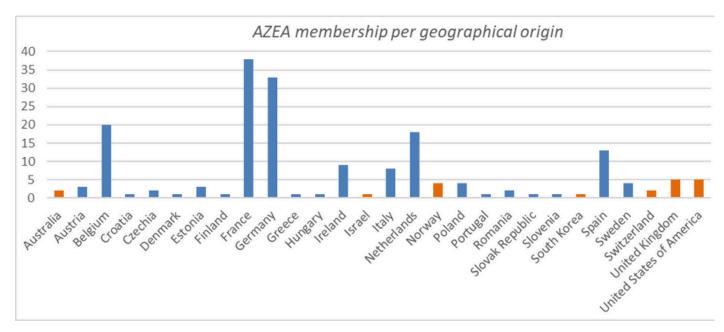
Current members

AZEA is open to all actors (including non-EU organizations) willing to work together to prepare the market for commercial operations of electric and hydrogen-powered aircraft.

PREPARING EUROPE

& ELECTRIC FLIGHT

FOR HYDROGEN

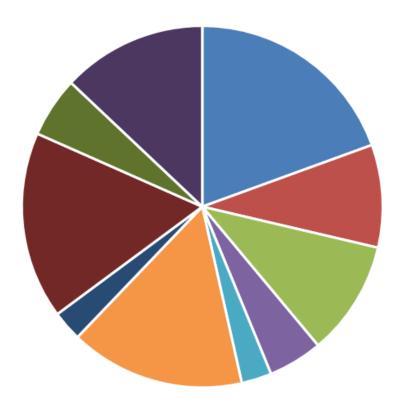


Currently, **165 of AZEA members (out of 185) are from EU Member States.** A strong interest is shown by organizations in France (38), Germany (31), Belgium (20) and the Netherlands (19). At the present moment, 20 organizations are from non-EU Member States.

AZEA aims to gather the entire zero-emission aviation ecosystem. Its membership covers aircraft manufacturers (19%); manufacturers of engines and aeronautical components (17%); industry associations representing the whole ecosystem (16%); research institutes (13%); airports and regional airports (10%); airlines and lessors (12%); public administrations (5%); civil society organizations (5%); and electricity and hydrogen producers and suppliers (3%).

PREPARING EUROPE FOR HYDROGEN & ELECTRIC FLIGHT

Repartition of AZEA membership per category of stakeholders



- Aircraft manufacturer
- Airline
- Airport
- Civil society organisation
- Energy producer/supplier
- Industry association
- Lessor
- Manufacturer of aeronautic components
- Public administration
- Research institute

AZEA presence at relevant events

Representing AZEA, DG DEFIS Project Officer Sebastian Placzek participated on the **2nd Hydrogen Airports Conference that took place last 11 October at Torino Airport in Italy.** Co-organized by AZEA members ACI Europe, To70 and Torino Airport-SAGAT, the conference was an opportunity to discuss the vital role of hydrogen technologies in the decarbonisation of airports and of the aviation sector, as well as to share the different long-term hydrogen strategies and real-world applications that are currently being pursued by airports, airlines and other relevant stakeholders.

DG DEFIS presented the currently ongoing work of the Alliance and shared the main highlights of the AZEA Vision published last June, showcasing the plan to build a hydrogen ecosystem that not only cuts CO2 emissions but fosters competitiveness and innovation in aviation.

PREPARING EUROPE FOR HYDROGEN & ELECTRIC FLIGHT



AZEA members Airlines for Europe (A4E) and Clean Aviation Joint Undertaking (JU) participated in the **Politico Live event The uptake of technologies to fly net-zero by 2050**, which took place last 16 October in Brussels and was sponsored by GE Aerospace (the mother company of AZEA member GE Avio). The European Commission was represented by DG MOVE's Director for Aviation Filip Cornelis.

The event was opened by an interview to Allen Paxson, Vice President of commercial strategy and, future of flight at GE Aerospace. While elaborating on the ongoing work of GE Aerospace to make aircraft ready for the use of SAFs, Paxson also referred to the importance of hydrogen and battery solutions for aviation.

The event was followed by a panel discussion, which included as participants Filip Cornelis (SG MOVE, European Commission), Ourania Georgoutsakou (Managing Director at Airlines for Europe) and Axel Krein (Executive Director at Clean Aviation Joint Undertaking). Axel Krein introduced the work of AZEA as a broad industrial alliance focusing on electric, hybrid electric and hydrogen-powered propulsion technologies for aviation. Krein also referred to the ongoing work on the Roadmap, which will provide concrete timelines for the deployment of hydrogen, hybrid and electric propulsion technologies in aviation.



PREPARING EUROPE FOR HYDROGEN & ELECTRIC FLIGHT

Highlight on...



Launching of the AZEA Vision Report at ILA Berlin last June

Last 6 June at the ILA Berlin Air Show, AZEA published its Vision Report on "<u>Flying on</u> <u>electricity and hydrogen in Europe</u>", which outlines ways for Europe to reduce aviation's climate impact and create the aircraft for the future. The Report proposes to the entire ecosystem a common Vision on how electric and hydrogen flights could be deployed in Europe.



The report outlines two scenarios for estimating CO2 emission savings from electric and hydrogen aviation: a baseline scenario and an ambitious scenario. The baseline scenario predicts a 12% reduction in CO2 emissions by 2050, while the ambitious scenario could achieve up to a 31% reduction supported by accelerated technological development and policy support. These advancements position Europe to lead in the emerging zero-emission flight market, securing a sustainable future for aviation.

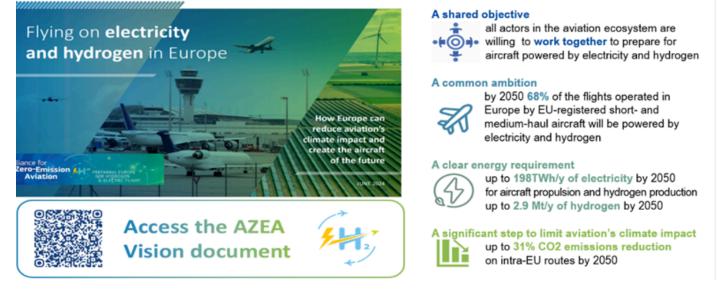
The report defines a common ambition based on the ambitious scenario: by 2050, 68% of the flights operated in Europe by EU-registered short and medium-haul aircraft will be powered by electricity and hydrogen.

PREPARING EUROPE FOR HYDROGEN & ELECTRIC FLIGHT

Considering both scenarios, the report also identifies the **electricity and hydrogen supply requirements** for electric (including hybrid) and hydrogen aircraft in 2050. According to the ambitious scenario, up to 198 TWh of electricity per year will be required by 2050 for electric (including hybrid electric aircraft) and for the production of both renewable and low-carbon hydrogen. This translates into a demand of 2.9 Mt of hydrogen per year to be used for direct propulsion in 2050.

Setting a Vision for the entire ecosystem





The shift towards zero-emission aircraft will have far-reaching effects, not just on the aircraft themselves, but also on the broader aviation ecosystem. From redesigning airport infrastructures to adapting operational procedures and updating airline business models, the transition to zero-emission flights will require a comprehensive approach. In this regard, the report identifies a set of ecosystem requirements, in terms of energy generation and transmission; transformations to be implemented at aerodromes; certification; regulation and industry standards and airspace readiness.

The Vision report paves the way to a detailed Roadmap to be published in 2025. The Roadmap will describe the major steps for the deployment of the flight network and the related actions and milestones in order to foster a coherent implementation of those actions by public and private stakeholders. This Roadmap will help all the different stakeholders from the ecosystem to work together in a common way along common objectives.

PREPARING EUROPE FOR HYDROGEN & ELECTRIC FLIGHT

AZEA Promotional Videos

Following the issue of the Vision report, AZEA has recently published **two promotional videos on the benefits of joining the Alliance and on the AZEA' Vision for the ecosystem.** AZEA members were invited to participate in both videos at the occasion of the 4th General Assembly at ILA Berlin last June.

Both videos can be now found at the <u>AZEA website</u> and in DG DEFIS Youtube channel (see Video on AZEA <u>here</u> and the on the Vision <u>here</u>).



Thank you to all our members for the good collaboration on making these videos a reality!

PREPARING EUROPE FOR HYDROGEN & ELECTRIC FLIGHT

EU regulatory developments

EASA and the US Federal Aviation Administration achieve significant progress on eVTOL aircraft certification

On 10 June, EASA and the US Federal Aviation Administration (FAA) showed an important progress on their collaboration to streamline and standardize the certification of electrical vertical take-off and landing (eVTOL) aircraft with the publication of two notices outlining the new harmonized guidance for this type of aircraft (see EASA <u>press</u> <u>release</u> and <u>information on new guidance</u> and FAA notice <u>here</u>). The EASA guidance represents a second issue of its special condition for eVTOL, which updates the existing regulatory guidance.

Amendment of the EU ETS Monitoring and Reporting Regulation

On 23 September, the European Commission **adopted an** <u>**amendment to the EU ETS**</u> <u>**Monitoring and Reporting Regulation**</u>, as a response to the overall revision of the EU ETS Directive under the Fit for 55 package. This revision introduces an exemption from mandatory reporting in the first two years for international flights between the European Economic Area (EU, Norway, Iceland, and Lichtenstein) and non-EEA destinations.

European Commission publishes draft Delegated Act on low-carbon hydrogen

On 27 September, the European Commission (DG ENER) published <u>a draft Delegated Act</u> clarifying the EU rules for defining low-carbon hydrogen and derived fuels under the Gas & Hydrogen Decarbonisation package, accompanied by an Annex (see press release <u>here</u>).

This secondary legislation establishes a methodology for evaluating the emission savings of low-carbon hydrogen within the certification framework established by the Gas & Hydrogen Decarbonisation package, which entered into force last summer. The proposed methodology is aligned with the already adopted rules for renewable hydrogen and RFNBOs, including the methodology for the life-cycle assessment of their total GHG emissions.

The publication of this draft Delegated Act is a strong signal of the European Commission's efforts to ramp-up the EU hydrogen market in Europe and accelerate the

PREPARING EUROPE FOR HYDROGEN & ELECTRIC FLIGHT

production of renewable and low-carbon hydrogen, providing the zero-emission aviation ecosystem with the required volumes to make hydrogen-powered flights a reality.

A <u>public consultation</u> period was opened for 4 weeks and closed last 25 October, providing stakeholders with the opportunity to express their views in the draft Delegated Act. The European Commission will take into account the stakeholders' feedback in the finalisation of the legal text, and the European Parliament and the Council will have a 2-month period to object the text. If there are no objections, the Delegated Act will be formally adopted.

Public consultation on Airports and Airlines State Aid Guidelines

On 27 August, the European Commission (DG COMP) opened a <u>public consultation</u> calling relevant stakeholders to provide feedback on the current needs of the aviation sector, which could be addressed in a potential revision of the <u>2014 Guidelines on State</u> <u>Aid to Airports and Airlines</u>. The public consultation closed last 8 October.

This revision will be aimed to align the Guidelines with the objectives of the Green Deal, while it is ensured that the connectivity and competition of the aviation sector are preserved. The revision will be aimed to improve services and offer better prices for EU consumers, reduce the administrative burden for EU Member States, airports and airlines and reduce emissions in the aviation sector.

DG COMP will conduct a study to be completed by Summer 2025 to assess further the characteristics and needs of the aviation sector. As part of this study, another public consultation will be open, while a separate consultation will be also open for 12 weeks to gather views from stakeholders on specific questions. An impact assessment will be also completed to support the review of the Guidelines. The revision should be tentatively completed before the expiry date of the extended transitional period for operating aid to regional airports, due in the second quarter of 2027.

Upcoming adoption of the rules for the ReFuelEU Flight Emission Label

On 24 September, the European Commission (DG MOVE) opened <u>a public consultation</u> on the draft ReFuelEU Aviation Implementing Regulation establishing the rules for the <u>Flight Emissions Label.</u> The Flights Emissions Label is a voluntary labelling scheme for flights based on a standardised and publicly accessible methodology to calculate flight emissions. The Implementing Regulation establishes the methodology for the creation of such labels, building on the EASA work. The public consultation closed on 22 October and the adoption of the rules is expected by the end of the year.

PREPARING EUROPE FOR HYDROGEN & ELECTRIC FLIGHT

Upcoming public consultation on EU airport legislation fitness check

Following the public consultation on the call for evidence for an evaluation closed on 6 June, the European Commission (DG MOVE) <u>will open a 12-week public consultation in</u> <u>the last quarter of this year</u> with the objective to gather views from the general public and affected stakeholders on high-levels aspects related to the ongoing fitness check of three pieces of EU airport legislation (the Slot Regulation, the Airport Charges Directive and the Groundhandling Directive).

PREPARING EUROPE FOR HYDROGEN & ELECTRIC FLIGHT

EU Funding and Finance



2nd Hydrogen Bank RFNBOs auction under the Innovation Fund

The **IF24 2nd Renewable Hydrogen auction** to be launched under the framework of the Hydrogen Bank and the Innovation is expected to be launched on **3rd November**, with a **tentative deadline at the end of February 2025**. The final version of the <u>Terms and</u> <u>Conditions</u> for this 2nd auction were published on 27 September (see press release <u>here</u>).

This auction will award up to **1.2 billion euros to renewable hydrogen producers located in the European Economic Area (EEA).** The successful projects will receive a fixed premium in €/kg of renewable hydrogen produced, over a maximum of 10 years of operation. A dedicated budget of 200 million euros has been reserved for projects supplying the renewable hydrogen produced to offtakers in the maritime sector.

Compared with the first auction, this second auctions includes a revised price ceiling (4 euros/ kg) and higher maturity level requirements per application (projects need to reach Final Investment Decision in 2.5 years and have 5 years to start operations). Projects will be also evaluated on the basis of a new criterion"Achieving security of supply of essential goods and contribution to Europe's industrial leadership and competitiveness".

5th call Innovation Fund regular grants call

The **IF24 5th regular grants** call is expected to **open on 3rd December and have a deadline in April 2025.** Considered as one of the world's largest funding programmes for the demonstration of innovative low-carbon and renewable technologies, the Innovation Fund is financed by the EU ETS and it has an estimated budget of 40 million euros for the period 2020-2030, based on a carbon price of €75/tCO2.

Both calls for proposals (regular grants) and auctions (competitive bidding) are organized under the framework of the Innovation Fund. The Fund is open to a wide range of innovative technologies and sectors, including energy intensive industries, renewable energy, energy storage, CCUS, net-zero mobility and buildings. Projects are assessed based on the effectiveness of their GHG emissions avoidance, degree of innovation, project maturity, replicability, and cost-efficiency. To succeed, projects need to demonstrate a balance between a sufficient degree of innovation and high-level of maturity, in terms of planning, business model and both financial and legal structure.

PREPARING EUROPE FOR HYDROGEN & ELECTRIC FLIGHT

The 2023 regular grants call disbursed 4.8 billion euros and was divided 5 topics (General Large-scale projects, General medium-scale projects, General small-scale projects, Clean tech manufacturing and Pilots). Due to the revision of the EU ETS Directive, since the last call breakthrough innovative technologies in the aviation and maritime sectors can now be supported.

Alternative Fuels Infrastructure Facility (AFIF) Upcoming deadlines

Under CEF Transport, the Alternative Fuels Infrastructure Facility (AFIF) has two upcoming deadlines for the <u>General</u> and <u>Cohesion</u> envelopes rolling call, which are set on 11 June and 17 December 2025 at 17:00 CET Brussels (the 1st cut-off date was 24 September).

Under the General and Cohesion envelopes (co-funding rate), the **2024 AFIF rolling call provides support to the deployment of infrastructure to supply liquid or gaseous hydrogen to aircraft and to ground handling operations.** In the case of electricity, AFIF supports the **electrification of airport ground operations (including supply of electricity to stationary aircraft) and the deployment of electricity grid connections at airports.**

While all EU Member States are eligible for support under the General envelope, only projects located in countries eligible under the Cohesion Fund are eligible for the AFIF Cohesion Envelope (Bulgaria, Czechia, Estonia, Greece, Croatia, Cyprus, Latvia, Lithuania, Hungary, Malta, Poland, Portugal, Romania, Slovakia, and Slovenia).

AFIF supports projects with blended finance, combining grants with InvestEU blending operations and other sources of funding. The indicative total budget for the 2024 General Envelope rolling is 780 million euros (see here the <u>call document</u>). Under the Cohesion Envelope, the indicative total budget for the 2024 call is 220 million euros (<u>see here the call document</u>).

Clean Aviation JU new call for proposals to be launched in early 2025

On 16 October, **Clean Aviation Joint Undertaking (JU)** announced the <u>launching of a new</u> <u>Call for proposals (Call 3) to open in mid-February or early March 2025</u>. The funded projects are expected to start in early 2026 and close by December 2030. This call will be launched under the framework of Clean Aviation Phase 2, which is expected to include three calls for proposals with a total budget of 900 million euros. As a result, further calls for proposals will be open during the 2025-2027 period. The activities of Phase 2 will focus on ultra-efficient regional, hydrogen-powered, and ultra-efficient shortand medium-range aircraft.

Project AREANA



PREPARING EUROPE

& ELECTRIC FLIGHT

FOR HYDROGEN

The Project AREANA was awarded funding under the call "Aviation research synergies between Horizon Europe, AZEA and National programs". The project will provide advanced novel approaches to foster the European aviation research ecosystem aims to create solutions for a strong and green European aviation industry, allowing all stakeholders to work together.

The main goals of the project are the improvement the efficiency of European aviation research and creating a path towards a more sustainable aviation future lead to enable the compliance with the ambitious goals of the Green Deal and the Fit for 55 program and to strengthen the competitiveness of European aviation. These are not just goals but a vision that will shape the future of aviation in Europe.

Structured into three interconnected parts:

- creating synergies and improving on the coordination of aviation funding programs
- AERODAYS 2025 Organisation, which coincide with the Polish presidency of the Council of the European Union.
- Support AZEA's focus on hydrogen technology and its readiness in the aviation sector.

Strong consortium:

- 15 partners on the board
- from 14 countries
- working together for 2 years (1. 1. 2024 – 31. 12. 2025)

CEIJA CERTANA CEIJA CEIJA CEITANA CEIJA CEITANA CEIJA CEITANA CEIJA CEITANA CEIJA CEIJA CEITANA CEITANA CEIJA CEITANA CEIJA CEIT

Projektträger

The project is supported by CINEA— European Climate, Infrastructure, and Environment Executive Agency—and funded by the European Union and received funding from the European Union's Horizon Europe Coordination and Support action under Grant agreement No.101137574.

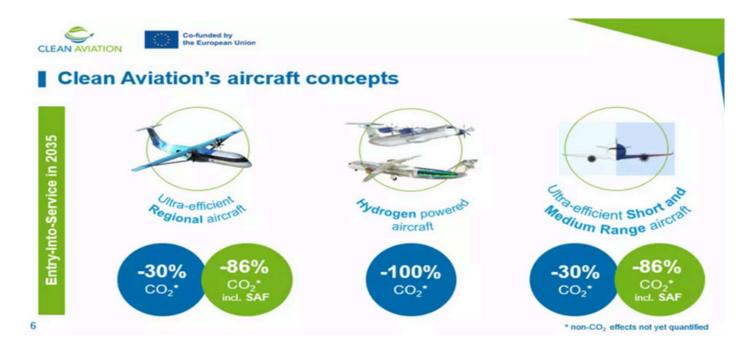
PREPARING EUROPE FOR HYDROGEN & ELECTRIC FLIGHT

News and Updates on ZE Aviation

Clean Aviation JU's presents its Strategic Research and Innovation Agenda

As part of the second phase of the **Clean Aviation programme**, the Joint Undertaking (JU) presented its vision for the <u>Strategic Research and Innovation Agenda (SRIA)</u> "Towards <u>disruptive technologies for new generation aircraft by 2035</u>" in October (see press release <u>here</u>). This new SRIA focuses on four candidates' aircraft concepts for integration and demonstration, which address the Short and Medium-Ranged (SMR) and regional segments. These four concepts focus on ultra-efficient regional aircraft, hydrogen-powered aircraft and ultra-efficient short and medium-range aircraft.

The SRIA is aimed to ensure that the technological industrial readiness of innovations can support the launch of disruptive new products and services for an entry into service by 2035.



PREPARING EUROPE FOR HYDROGEN & ELECTRIC FLIGHT

Results of the Innovation Fund 4th call Aura Aero's HERMES project among those selected

On 22 October, the European Commission (DG CLIMA) announced the results of the 4th call of the Innovation Fund regular grants, selecting 85 innovative net-zero projects to receive 4.8 bn euros in grants (see press release <u>here</u>). The selected projects are expected to enter into operation before 2030 and to lead to a reduction of emissions by approximately 476 million tonnes of CO2 equivalent.

Among the selected projects, we are pleased to announce that AZEA member Aura Aero has been invited for grant preparation in this last Innovation Fund round its project HERMES under the topic General Decarbonisation Large-scale projects. To be based in France, the project is aiming to manufacture hybrid electric regional aircraft for sustainable aviation under Aura Aero's ERA model. This project is expected to lead to a CO2 emissions avoidance of 10 million tons during the first ten years of operation, as it will replace thermal fleet. Upon signature of the grant, the project will have access to a 95 million euros grant (see <u>Aura Aero press release</u>).

Two large-scale hydrogen production projects in Belgium, led by AZEA members Engie and Air Liquide, have been also successful in this Innovation Fund round. This is the case of the low-carbon hydrogen production project H2BE, led by Engie's subsidiary Electrabel, and of Air Liquide's renewable hydrogen and ammonia project ENHANCE (European Network for Hydrogen and Ammonia Carbon-Neutral Energy).

Congratulations to Aura Aero, Engie and Air Liquide for these achievements!

PREPARING EUROPE FOR HYDROGEN & ELECTRIC FLIGHT

What's upcoming? Relevant events. (

European Hydrogen Week, 18-22 November in Brussels

Organized annually by Hydrogen Europe together with the European Commission and the Clean Hydrogen Joint Undertaking (JU), the Hydrogen Week gathers key stakeholders in the European hydrogen ecosystem. On Wednesday 20 November, a dedicated session on hydrogen for mobility and synergies with end sectors will be organized between 12:00 and 13:00, having speakers from DG MOVE, Clean Aviation JU and the German Aerospace Center (DLR).

RLFC's Alliance event on Project Bankability Guide on 21 November

The Renewable and Low-Carbon Fuels Value Chain Industrial (RLFC) Alliance is organizing this webinar on 21 November at 14:00 in order to present its new RLCF Project Bankability Guide. Registration is possible <u>here.</u>

5th AZEA General Assembly in January 2025 in Brussels

The 5th General Assembly of AZEA is expected to take place at the end of January 2025 in Brussels. Date and venue to be confirmed, as well as agenda.



REGISTER HERE

Aviation fairs and conferences end of 2024 and 2025

SESAR Innovation Days 2024 12 - 15 November 2024, Rome, Italy

Description:

The SESAR Innovation Days are the important event for SESAR Joint Undertaking to share progress and disseminate ATM (Air Traffic Management) research results. Speakers from Thales, Deep Blue, TU Delft, EUROCONTROL, DLR, Lilium etc. Posters from Deep Blue, Leonardo, CIRA.

Lectures and topic on Sustainable and clean aviation:

Reducing the climate impact of flight trajectories considering network effects

14th Aviation Forum November 26-27 2024, Messe Munich, Germany

Description:

Meeting of decision-makers and top managers from the aviation industry to maintain and expand their networks, and to discuss the latest industry trends in keynotes, panel discussions and workshops, on two conference days.

Important participants: Airbus, Boeing, Collins Aerospace, Deutsche Aircraft, Diehl Aviation, Embraer, FACC, GE Aerospace, Lilium, MTU Aero Engines, Schaeffler Aerospace, Siemens, thyssenkrupp Aerospace, Volocopter.

Lectures and topic on Sustainable and clean aviation:

- Navigating the future: Sustainability, innovation, collaboration.
- Keynote: Green horizons: Challenges and opportunities on the path to net zero aviation

AEROMART 3-4 December 2024 Toulouse, France

Description:

In its 15th edition, the Aeromart offers a very interesting platform for the international aeronautical community to dive into the latest advances and discoveries. Strongly focused on innovation and decarbonization.





PREPARING EUROPE

& ELECTRIC FLIGHT

FOR HYDROGEN

Lectures and topic on Sustainable and clean aviation:

- Occitanie & Clean Aviation Joint Venture Innovative SMEs from Occitanie
- Wings project-Feedback and future vision from A 21-patner Walloon project focusing on technologies to decarbonize aviation by 2050.

PREPARING EUROPE

& ELECTRIC FLIGHT

READ MORE

READ MORE

FOR HYDROGEN

- Airbus sustainability roadmap
- Decarbonizing Business Air Travel: On the Path to Zero Emissions?

Important participants:

Airbus, ATR, Beyond Aero, Collins aerospace, Daher aerospace, Flying whales, Leonardo, Safran, Thales, Volocopter, Boeing, Blue Origin.

AERODAYS 2025 May 7-9, 2025 Warsaw, Poland

Description:

A 3-day scientific and business conference for approximately 1,000 participants commissioned by European Commission. The conference is organized as part of the Polish Presidency of the Council of the European Union and is intended to:

No info about agenda.

France Air Expo June 5-7 2025 Lyon, France

Description:

The exhibition covers a broad spectrum of the aviation industry and brings the latest in aircraft, helicopters, ultralights, sustainable aviation, avionics, equipment, accessories, flight schools, drones, insurance, financing and maintenance. For three days, at the Lyon-Bron airport, the main innovations in general and business aviation are presented through demonstrations of the different companies that gather there.

Important participants:

Airbus, Beechcraft, Pilatus, Pipper, Pipistrel, Daher aerospace, Thales, Robinson



Paris Air Show 16-22 June 2025, Le Bourget France

Description:

2498 exhibitors 300 startups and almost 2000 journalists. That's the Paris air show taking place in Le Bourget, France. Presenting the latest technologies aeronautics and aviation. The start is reserved for the professional community then the event opens to the public for the weekend. Visitors can see more than 150 aircraft in flight exhibitions. The Paris Air Show is the international fair organized every two years.

Aero-Engines Europe September 2025 9-10 Hamburg Germany

Description:

This conference is dedicated to the aero engine sector and focuses on the latest trends in this field.

The 2025 agenda is currently being researched.

World Aviation Festival 7 - 9 October 2025 Lisbon, Portugal

Description:

A meeting of the most influential personalities in the aviation industry. This event is intended primarily for representatives of airlines, airport operators who want to learn about the latest trends in aviation.

Speakers from KLM, Breeze Airways, Greater Toronto Airports, Dubai Airports Company, IATA, Wizz Air etc.

The 2025 agenda is currently being researched.





PREPARING EUROPE

& ELECTRIC FLIGHT

FOR HYDROGEN

