# Zero-Emission Aircraft Market Updates : Projected to Exhibit USD 191.97 Billion Revenue by 2040, Claims AMR

*By application, the cargo aircraft segment is projected to lead the global zero-emission aircraft market, owing to higher its CAGR*

WILMINGTON, DE, UNITED STATES, October 18, 2024 /EINPresswire.com/ -- According to the report, the global zero-emission aircraft industry is estimated at $29.24 billion in 2030, and is anticipated to hit $191.97 billion by 2040, registering a CAGR of 20.7% from 2030 to 2040.Surge in air passenger traffic and reduced GHG emissions across the globe drive the growth of the global zero-emission aircraft market. On the other hand, technological challenges and high costs associated with solar, electric, and hydrogen-powered aircrafts restrain the growth to some extent. However, proactive government initiatives toward zero-emission powered aircrafts and advancements in zero-emission aircraft technologies are expected to create multiple opportunities in the industry.

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> *Allied Market Research*

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By Propulsion Type:

Hydrogen Fuel Cell Aircraft: These aircraft use hydrogen as a primary fuel source, converting it into electricity to power the propulsion system. They produce only water as a by-product.
Battery-Electric Aircraft: These planes are powered by electricity stored in batteries, similar to electric vehicles, with no emissions during flight.
Hybrid-Electric Aircraft: Combines electric propulsion with conventional engines, reducing emissions significantly compared to traditional aircraft.
By Aircraft Type:

Fixed-Wing Aircraft: Includes commercial, regional, and private jets that use zero-emission

technologies for medium- to long-distance travel.
Rotorcraft: Helicopters and similar aircraft that utilize electric or hydrogen fuel cell propulsion systems.
Urban Air Mobility (UAM) Vehicles: Electric vertical takeoff and landing (eVTOL) aircraft designed for short-distance urban transportation.
By Range:

Short-Haul: Aircraft designed for short-range flights (less than 500 km), suitable for regional travel.
Medium-Haul: Aircraft with a range between 500 to 1,500 km, catering to domestic flights.
Long-Haul: Future developments in long-range zero-emission aircraft, aimed at intercontinental travel.

Market Drivers
Environmental Regulations: Governments and regulatory bodies are imposing strict emissions standards on the aviation industry, encouraging the development of zero-emission solutions.
Rising Fuel Costs: Fluctuating fossil fuel prices drive airlines to seek alternative, more stable energy sources like electricity or hydrogen.
Technological Advancements: Innovations in battery technology, fuel cells, and lightweight materials are making zero-emission aircraft more viable.
Public and Industry Support: Increasing consumer awareness and demand for sustainable travel options are pushing airlines and manufacturers to invest in green technologies.



Leading Companies in the Market
Airbus
ZeroAvia
Wright Electric
Rolls-Royce Holdings
MagniX
Universal Hydrogen

Trends
Hydrogen-Powered Aircraft Development: Major aerospace companies like Airbus are exploring hydrogen as a sustainable fuel alternative due to its potential to power long-haul flights with zero emissions.
eVTOL and Urban Air Mobility Growth: The rise of eVTOL aircraft is driving investment in urban air mobility, providing a green solution for urban transportation needs.
Government Initiatives and Funding: Governments worldwide are supporting the transition to zero-emission aircraft through funding, tax incentives, and research grants.
Partnerships and Collaborations: Increased collaboration among aviation companies, technology

firms, and research institutions to accelerate the development and commercialization of zero-emission technologies.

Challenges
Infrastructure Requirements: The lack of hydrogen refueling stations and electric charging infrastructure at airports poses a significant barrier to widespread adoption.
Energy Density Limitations: Current battery technology has limitations in terms of weight and energy capacity, which restricts the range and payload of electric aircraft.
Regulatory and Certification Hurdles: Certification processes for new aircraft technologies are complex and time-consuming, slowing down market entry.

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