

Sustainable Aviation Fuel Market Size to Skyrocket to USD 149.10 Billion by 2034, Growing at a Remarkable 57.50% CAGR

The global sustainable aviation fuel market size was worth around USD 3.94 billion in 2024 and is predicted to grow to around USD 149.10 billion by 2034

PUNE, MAHARASHTRA, INDIA,

September 19, 2025 /

EINPresswire.com/ -- The [global sustainable aviation fuel \(SAF\) market Size](https://www.zionmarketresearch.com/sample/sustainable-aviation-fuel-market-size) is entering a transformative

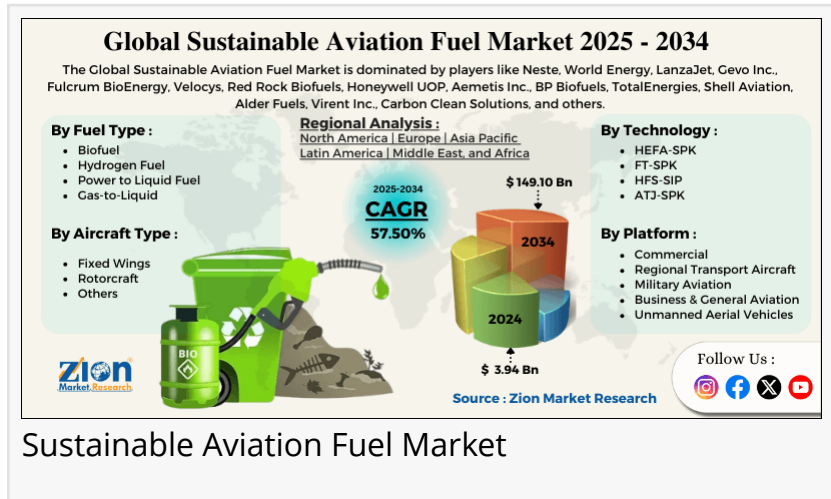
decade as airlines, airports, and governments unite to decarbonize air

travel. Valued at USD 3.94 billion in 2024, the market is projected to reach an impressive USD 149.10 billion by 2034, expanding at a compound annual growth rate (CAGR) of roughly 57.50% between 2025 and 2034.

“

The global sustainable aviation fuel market size was worth around USD 3.94 billion in 2024 and is predicted to grow to around USD 149.10 billion by 2034, (CAGR) of roughly 57.50% between 2025 and 2034.”

Deepak Rupnar



Access key findings and insights from our Report in this Free sample -

<https://www.zionmarketresearch.com/sample/sustainable-aviation-fuel-market-size>

Sustainable aviation fuels are advanced biofuels or synthetic fuels designed to replace conventional jet fuels while significantly reducing lifecycle carbon emissions. SAF is emerging as the most viable short- to medium-term solution to cut aviation's greenhouse gas (GHG) emissions.

Key Insights:

As per the analysis shared by our research analyst, the sustainable aviation fuel market is anticipated to grow at a CAGR of 57.50% during the forecast period (2024-2032).

The global sustainable aviation fuel market was estimated to be worth approximately USD 3.94

billion in 2023 and is projected to reach a value of USD 149.10 billion by 2032. The growth of the sustainable aviation fuel market is being driven by aviation industry's urgent need to reduce carbon emissions and meet global sustainability targets.

Based on the fuel type, the biofuel segment is growing at a high rate and is projected to dominate the market. On the basis of aircraft type, the fixed wings segment is projected to swipe the largest market share.

In terms of technology, the HEFA-SPK segment is expected to dominate the market.

Based on the platform, the commercial segment is expected to dominate the market.

By region, North America is expected to dominate the global market during the forecast period.

Key Market Drivers

Global Push for Decarbonization: International Air Transport Association (IATA) targets net-zero carbon emissions in aviation by 2050.

Government Incentives and Mandates: Policy support including tax credits, blending mandates, and research funding in the U.S., EU, and Asia.

Corporate Net-Zero Commitments: Airlines and corporate travelers prioritizing low-carbon flights.

Technological Advancements: New pathways for biofuel production including HEFA, Fischer-Tropsch, and Power-to-Liquid (PtL).

Airline Partnerships with SAF Producers: Long-term offtake agreements boosting supply and demand certainty.

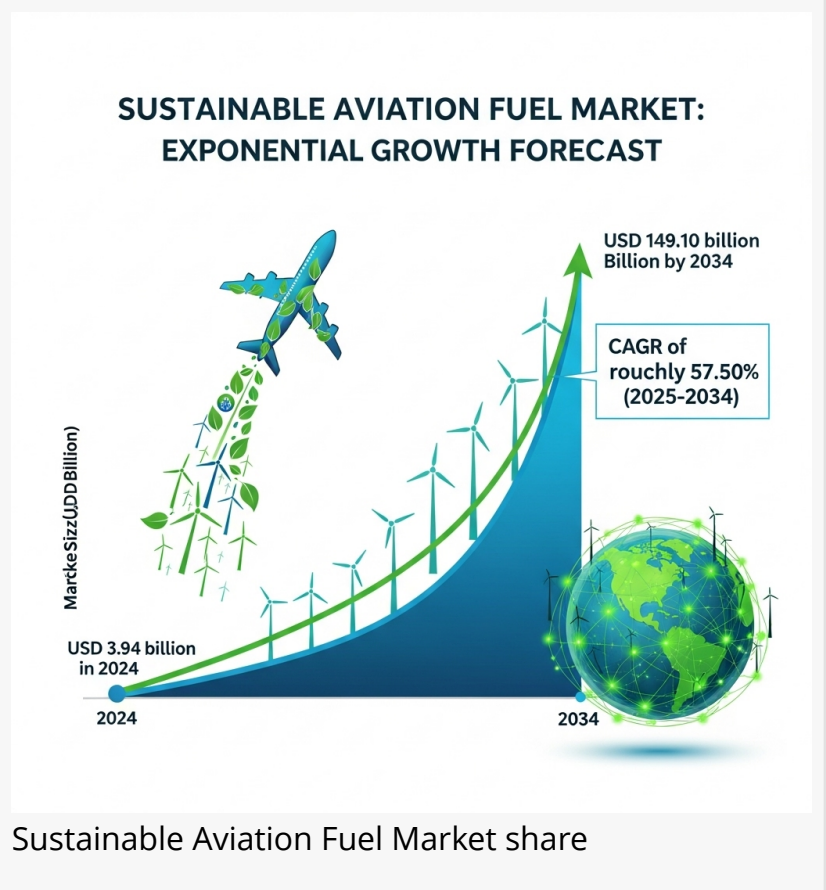
Consumer Awareness: Increasing public and investor pressure for greener aviation.

Do You Have Any Query Or Specific Requirement? Request Free Brochure:

<https://www.zionmarketresearch.com/requestbrochure/sustainable-aviation-fuel-market-size>



Sustainable Aviation Fuel Market size



Market Segmentation

By Fuel Type / Technology Pathway

HEFA (Hydroprocessed Esters and Fatty Acids): The most commercially mature SAF pathway using feedstocks like waste oils and animal fats.

FT-SPK (Fischer–Tropsch Synthetic Paraffinic Kerosene): Converts biomass or municipal waste into aviation-grade fuel.

Alcohol-to-Jet (ATJ): Uses alcohol intermediates such as ethanol or isobutanol.

Power-to-Liquid (PtL) / E-Fuels: Uses renewable electricity, water, and captured CO₂ to synthesize aviation fuels.

Co-processed SAF: Blends bio-feedstocks with fossil fuels at refineries.

By Feedstock

Used Cooking Oil & Waste Oils

Animal Fats

Municipal Solid Waste (MSW)

Algae & Other Non-Food Biomass

Renewable Electricity & CO₂ (for synthetic fuels)

By End User

Commercial Airlines: Main consumers of SAF.

Cargo & Freight Airlines: Increasing demand for sustainable logistics.

Business Jets / Private Aviation: Early adopters of premium-priced SAF.

Military & Government Aviation: Exploring SAF to meet energy security and environmental goals.

By Blending Capacity

Up to 10% SAF Blend

10%–50% SAF Blend

Above 50% SAF Blend / 100% SAF

Regional Analysis

North America

North America is currently the largest market for SAF, driven by strong policy support such as the U.S. Inflation Reduction Act's SAF tax credits and California's Low Carbon Fuel Standard. Airlines like United, Delta, and American have signed major offtake deals with SAF producers.

Europe

Europe is poised for significant growth thanks to EU-level mandates, such as the "ReFuelEU Aviation" initiative, requiring airlines to gradually increase SAF usage starting in 2025. Countries like the UK, Germany, and the Netherlands are investing in domestic SAF production facilities.

Asia-Pacific (APAC)

Asia-Pacific is an emerging leader in SAF production and consumption, with Japan and Singapore building large-scale refineries. China and India are developing policy frameworks to reduce aviation emissions, creating long-term market potential.

Latin America

Brazil and Argentina, with abundant bio-feedstocks, are expected to become major SAF exporters. Partnerships between local feedstock suppliers and global SAF producers are expanding.

Middle East & Africa (MEA)

MEA is investing in synthetic fuels and renewable energy infrastructure to produce SAF domestically, with the UAE and Saudi Arabia positioning themselves as key hubs for sustainable aviation initiatives.

Key Market Trends

Scaling Production Facilities: From pilot projects to multi-billion-dollar refineries.

Corporate SAF Purchase Agreements: Companies offsetting employee flight emissions through SAF credits.

Blended and Pure SAF Flights: Airlines increasingly conducting test flights using 100% SAF.

Vertical Integration: Oil majors, biofuel companies, and airlines investing in joint ventures.

Renewable Hydrogen Use: Supporting the production of Power-to-Liquid SAF.

Blockchain for Traceability: Ensuring transparency in SAF feedstock sourcing and lifecycle emissions.

Inquiry For Buying <https://www.zionmarketresearch.com/inquiry/sustainable-aviation-fuel-market-size>

Competitive Landscape & Major Key Players

The global sustainable aviation fuel market is rapidly evolving with oil companies, biofuel producers, and technology startups competing to secure long-term contracts with airlines.

Major Key Players Include:

Neste Oyj – Global leader in renewable fuels with large-scale SAF production capacity.

World Energy LLC – U.S.-based pioneer in commercial SAF production.

Gevo Inc. – Developing Alcohol-to-Jet SAF pathways.

LanzaJet Inc. – Specializes in ATJ technology with support from major airlines.

Velocys Plc – Fischer-Tropsch SAF producer using municipal waste.

SkyNRG – Dutch SAF supplier with long-term airline partnerships.

BP Plc & Shell Plc – Oil majors investing heavily in SAF refineries.

TotalEnergies SE – Expanding SAF capacity across Europe.

Aemetis Inc. – Renewable fuels company developing SAF from agricultural residues.

Honeywell UOP – Technology provider for refining SAF pathways.

Other notable players include Fulcrum BioEnergy, Red Rock Biofuels, and emerging e-fuel

companies in Europe.

Future Outlook (2025–2034)

Exponential Capacity Growth: Dozens of new facilities coming online globally.

Cost Reduction: Economies of scale and new technologies lowering SAF production costs.

Policy Harmonization: Standardized global mandates and incentives boosting confidence.

Airports Becoming SAF Hubs: Dedicated infrastructure for storage and blending.

Synthetic Fuels (E-Fuels): Growing share of SAF production post-2030.

Carbon Accounting Standards: Clear frameworks for SAF emissions credits and reporting.

Challenges

High Production Costs: SAF remains more expensive than conventional jet fuel.

Feedstock Constraints: Competition for bio-feedstocks with other renewable fuel sectors.

Infrastructure Gaps: Limited blending, storage, and distribution capacity at airports.

Policy Uncertainty: Inconsistent incentives and regulations across regions.

Conclusion

The global sustainable aviation fuel market is poised for explosive growth, increasing from USD 3.94 billion in 2024 to USD 149.10 billion by 2034 at a CAGR of approximately 57.50% between 2025 and 2034. With strong policy backing, technological innovation, and increasing airline commitments, SAF represents the most immediate path to decarbonizing air travel. Companies that secure reliable feedstocks, scale production rapidly, and form strategic alliances with airlines will dominate this market.

More Trending Reports by [Zion Market Research](https://www.zionmarketresearch.com/) -

Intelligent and Cognitive Radio Market by Component (Antennas, RF Electronics, Wireless Cognitive Radio System, and Network Control and Management) and by Application (Public Sector, Mobile/Wireless Network Operators, and Other End-Users): Global Industry Perspective, Comprehensive Analysis, and Forecast, 2024—2032-

<https://www.zionmarketresearch.com/report/intelligent-and-cognitive-radio-market>

Point of Sale Software Market by Software Setup (Cloud-Based and Native), by Product (Mobile POS and Terminal POS), and by End-User (Retail, Government Sector, Healthcare, Hospitality, Media & Entertainment, Warehouses, and Others): Global Industry Perspective, Comprehensive Analysis, and Forecast, 2024 - 2032-<https://www.zionmarketresearch.com/report/point-of-sale-software-market>

Blockchain Identity Management Market by Deployment (Public, Private, and Hybrid Cloud), by Application (Multi-Factor Authentication, Password Management, Access Management, Directory Services, and Others), and by Vertical (BFSI, Retail, Logistics, Healthcare, Government, IT and Telecom, Media and Entertainment, Travel and Hospitality, and Others): Global Industry

Perspective, Comprehensive Analysis, and Forecast, 2017-2024-

<https://www.zionmarketresearch.com/report/blockchain-identity-management-market>

Mobile Artificial Intelligence (AI) Market by Technology Node (5nm-10nm, 11nm-20nm, and Above 20nm), by Application (Cameras, Smartphones, Vehicles, Robots, AR/VR Devices, and Others), and by End-Use Industry (Consumer Electronics, Automotive, Robotics, and Others): Global Industry Perspective, Comprehensive Analysis, and Forecast, 2017 - 2024-

<https://www.zionmarketresearch.com/report/mobile-artificial-intelligence-market>

Service Analytics Market By Business Application (Customer Service Analytics, Field Service Analytics, and IT Service Analytics), By Component (Solution and Services), By Deployment Mode (On-Premises and Cloud), and By Vertical (Banking, Financial Services, and Insurance (BFSI), Energy and Utility, Government, Healthcare and Life Sciences, Retail and Wholesale, Manufacturing, Media and Entertainment, Transportation and Logistics, Travel and Hospitality, and Others): Global Industry Perspective, Comprehensive Analysis, And Forecast 2024-2032-

<https://www.zionmarketresearch.com/report/service-analytics-market>

Certificate Authority Market by Component (Certificate (SSL Certificate, Secure Email Certificates, Code Signing Certificates, and Authentication Certificate) and Services (Support Services, Managed PKI Services, and Others)), by Validation (Extended Validation Certificates, Organization Validated Certificates, and Domain Validated Certificates), and by End-User (Banking, Financial Services, and Insurance (BFSI), Retail, Government, Aerospace and Defense, Healthcare, IT and Telecom, Education, and Others), and By Region: Global Industry Perspective, Comprehensive Analysis, and Forecast 2024-2032-<https://www.zionmarketresearch.com/report/certificate-authority-market>

Online Travel Booking Market By Service Type (Transportation Booking, Accommodation Booking, And Others), By Mode Of Booking (Online And Direct Agency), By Platform (Desktop And Mobile), And By Region - Global And Regional Industry Overview, Market Intelligence, Comprehensive Analysis, Historical Data, And Forecasts 2024-2032-

<https://www.zionmarketresearch.com/report/online-travel-booking-market>

Cloud Gaming Market By Cloud Type (Public, Private, And Hybrid), By Streaming Type (Video And File), And By Device (Smart Phones, Tablets, Gaming Consoles, And PCs), And By Region - Global And Regional Industry Overview, Market Intelligence, Comprehensive Analysis, Historical Data, And Forecasts 2024-2032-<https://www.zionmarketresearch.com/report/cloud-gaming-market>

Industrial Control Systems Market By Solution (Encryption, Security And Vulnerability Management, Security Configuration Management, Intrusion Detection System/Intrusion Prevention System, Antimalware/Antivirus, Firewall, Distributed Denial Of Service Mitigation, Security Information And Event Management, And Identity And Access Management), By Service (Consulting And Integration, Managed Security, Incident Response, Support And Maintenance, And Training And Development), By Security Type (Network, Endpoint, Vertical, And Database),

Vertical (Power, Energy And Utilities, Transportation Systems, Manufacturing, And Others), And By Region - Global And Regional Industry Overview, Market Intelligence, Comprehensive Analysis, Historical Data, And Forecasts 2024-2032-

<https://www.zionmarketresearch.com/report/industrial-control-systems-market>

HVAC Controls Market by Application (Industrial, Commercial, and Residential), by System (Humidity Control, Temperature Control, Integrated Control, and Ventilation Control), and by Component (Sensors and Controllers & Controlled Devices): Global Industry Perspective, Comprehensive Analysis, and Forecast, 2024 - 2032-

<https://www.zionmarketresearch.com/report/hvac-controls-market>

Deepak Rupnar

Zion Market Research

+1 855-465-4651

richard@zionmarketresearch.com

Visit us on social media:

[LinkedIn](#)

[Instagram](#)

[Facebook](#)

[YouTube](#)

[X](#)

This press release can be viewed online at: <https://www.einpresswire.com/article/850584484>

EIN Presswire's priority is source transparency. We do not allow opaque clients, and our editors try to be careful about weeding out false and misleading content. As a user, if you see something we have missed, please do bring it to our attention. Your help is welcome. EIN Presswire, Everyone's Internet News Presswire™, tries to define some of the boundaries that are reasonable in today's world. Please see our Editorial Guidelines for more information.

© 1995-2025 Newsmatics Inc. All Right Reserved.