

ANMD-MRS32-311 · Sustainable Aviation & Maritime

Sustainable Aviation Fuel

A Global Sustainability Due Diligence & Market Research Study

History 2020–2024 · Base Year 2025 · Forecast 2025–2032 · Outlooks 2035 / 2040 / 2050 · Currency US\$

WHY THIS REPORT

Sustainable aviation fuel (SAF) decarbonises flight by replacing fossil jet fuel with low-carbon pathways — HEFA / Bio-SAF, Alcohol-to-Jet (AtJ) and Power-to-Liquid (e-SAF). Drop-in compatible with existing engines and infrastructure, SAF is aviation's primary near-term lever to cut lifecycle emissions. This decision-grade study sizes the global market three ways — value, litres produced and tonnes CO₂ avoided — across production pathway, sub-type, component and application, across seven regions and four scenarios to 2032, with outlooks to 2050.

SUSTAINABILITY & SDG IMPACT — THE ANMD LENS

Sustainability is this report's backbone, not an afterthought. Beyond fuel performance, SAF delivers measurable lifecycle-emissions reduction, fossil-fuel displacement and aviation decarbonisation, while feedstock sourcing and land-use shape the natural-capital story.

Mapped Sustainable Development Goals:

SDG 7	SDG 9	SDG 12	SDG 13	SDG 15
Affordable Clean Energy	Industry & Infrastructure	Responsible Consumption	Climate Action	Life on Land

Measurable sustainability outcomes assessed:

- Lifecycle CO₂ avoided versus fossil jet fuel
- Fossil-fuel displacement and aviation decarbonisation
- Feedstock sustainability, land-use and ILUC as material risks
- Pathway energy intensity and water footprint

Framework alignment: Double materiality mapped to GRI, SASB, ISSB, TCFD, TNFD, CSRD and the EU Taxonomy, with greenwashing and SDG-washing screens applied throughout.

WHAT'S INSIDE AT A GLANCE

53 Chapters	9 Report Parts	7 Regions Covered	40+ Country Markets
2025–32 Forecast Horizon	4 Forward Scenarios	25+ Companies Profiled	5 SDGs Mapped

REPORT COVERAGE

Geographic scope: North America, Europe, Asia Pacific, Latin America, Africa, Middle East and Rest of World — with named country intelligence. Europe leads on mandates and e-SAF; North America scales on HEFA and incentives; Asia Pacific expands on feedstock and refining capacity.

MARKET OVERVIEW

From pilot volumes to mandated scale — where a drop-in molecule decarbonises a hard-to-abate sector.

The sustainable aviation fuel market is moving from pilot volumes to mandated commercial scale. Demand is driven by aviation-decarbonisation targets, blending mandates and corporate offtake, supported by maturing HEFA, AtJ and Power-to-Liquid pathways. The market is read three ways — value, litres produced and tonnes CO2 avoided — and forecast under four scenarios, each region reported separately.

- Europe leads on mandates, with the EU ReFuelEU blending trajectory and e-SAF ambition driving offtake
- North America scales on HEFA, with United States incentives and feedstock access anchoring supply
- Asia Pacific expands on feedstock and refining — China, Singapore and India building production capacity
- Production pathway and sub-type segment the value — across HEFA / Bio-SAF, AtJ and Power-to-Liquid e-SAF

REGIONAL OUTLOOK

Across seven reporting regions, the report separates early commercialisation leaders from high-growth and emerging markets — each profiled in full rather than aggregated into Rest of World.

Region	Stage	Lead Markets & Drivers
Europe	Mandate leader	Germany, UK, France, Netherlands — ReFuelEU, e-SAF, corporate offtake
North America	Scaling	United States, Canada — HEFA capacity, tax incentives, feedstock access
Asia Pacific	Build & scale	China, Singapore, India, Japan — refining, feedstock, airline demand
Middle East	High-growth	UAE, Saudi Arabia — e-SAF, sovereign capital, energy diversification
Latin America	Emerging	Brazil, Panama — ethanol-to-jet, biofuel feedstock
Africa	Frontier	South Africa, Egypt, Morocco — feedstock, refining, export routes

KEY MARKET DRIVERS & RESTRAINTS

Drivers	Restraints
• Aviation-decarbonisation & net-zero targets • Blending mandates (ReFuelEU, national schemes) • Corporate & airline offtake commitments • Feedstock & refining capacity build-out • HEFA, AtJ & Power-to-Liquid technology gains	• Production cost vs fossil jet fuel • Feedstock availability & sustainability limits • Certification & blending-wall constraints • Green-hydrogen & e-SAF cost • Policy & incentive uncertainty

SEGMENTATION SNAPSHOT

By Production Pathway	HEFA / Bio-SAF · Alcohol-to-Jet (AtJ) · Power-to-Liquid (e-SAF)
By Application	Low-blend · high-blend · 100% (future)
By End User	Airlines · airports · fuel suppliers · corporate / SAF buyers
By Component	Feedstocks · catalysts · reactors · hydroprocessing · blending · logistics
By Deployment Scale	Pilot · distributed · utility-scale
By Business Model	Fuel supply · offtake contract · service · as-a-service

TABLE OF CONTENTS — PARTS & CHAPTERS

The full report is organised into nine parts across 53 chapters, listed below. Detailed sub-headings, country tables and directories are provided in the full report.

Part I — Report Foundation, Discovery and Strategic Intelligence

- › Chapter 1. Scope, Methodology and Report Architecture
- › Chapter 2. Industry Discovery Summary — Sustainable Aviation Fuel
- › Chapter 3. Executive Intelligence and Decision Dashboard
- › Chapter 4. Strategic Findings, Materiality and Investment Verdict Preview

Part II — Market Intelligence, Sizing, Forecasting and Segmentation

- › Chapter 5. Industry Overview and Market Evolution
- › Chapter 6. Market Dynamics
- › Chapter 7. Global Market Size and Forecast, 2020–2032
- › Chapter 8. Market Segmentation Analysis
- › Chapter 9. End-User and Demand-Side Intelligence
- › Chapter 10. Pricing, Cost and Commercial Model Intelligence

Part III — Regional and Country Intelligence

- › Chapter 11. Global Regional Intelligence Framework
- › Chapter 12. North America Market Intelligence
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Part IV — Technology, Innovation and Category-Specific Intelligence

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- › Chapter 20. Emerging and Next-Generation Technology Intelligence
- › Chapter 21. Category-Specific Intelligence Module
- › Chapter 22. Research, Innovation and Funding Landscape

Part V — Company, Competition, Patent and Project Intelligence

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- › Chapter 25. Mergers, Acquisitions, Partnerships and Ecosystem Intelligence
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- › Chapter 41. Investment, Sustainable Finance and Bankability Intelligence

Part VIII — Scenario, Future Intelligence and Final Due Diligence Verdict

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- › Chapter 43. Sustainability Due Diligence Framework and Data-Room Index
- › Chapter 44. Risk Register, RAG Rating and Anti-Greenwashing Screen
- › Chapter 45. Bottom-Line Verdict and Strategic Recommendations
- › Chapter 46. Implementation Roadmap and Stakeholder Playbooks

Part IX — Annexes, Directories and Reference Material

- › Chapter 47. Methodology Annex
- › Chapter 48. Corporate Directory and Company Intelligence Annex
- › Chapter 49. Patent Directory and Patent Intelligence Annex
- › Chapter 50. Project Intelligence Annex
- › Chapter 51. Forecast Annex
- › Chapter 52. Sustainability KPI Annex
- › Chapter 53. Reference Annexes

COMPETITIVE & INVESTMENT SNAPSHOT

The competitive field spans integrated energy majors, specialist biofuel and e-fuel producers and technology licensors. Deal activity — offtake agreements, capacity expansions and pathway-licensing deals — signals a market consolidating around bankable, certified production.

Representative players profiled in the full report:

Neste Oyj · World Energy, LLC · Gevo, Inc. · LanzaJet, Inc. · TotalEnergies SE · and 20+ further profiled players across feedstocks, pathways and refining.

Investment intelligence: venture, infrastructure, development, climate and blended finance, green bonds and sustainability-linked loans — culminating in a bankability assessment and a clear, evidence-based investment recommendation.

KEY QUESTIONS THIS REPORT ANSWERS

- ? How large is the global sustainable aviation fuel market, and how fast will it grow to 2032?
- ? Which regions, countries and pathways offer the strongest risk-adjusted opportunity?
- ? How do production economics change returns across HEFA, AtJ and e-SAF?
- ? Who leads, and where is the competitive and patent white space?
- ? Is the investment case bankable — and under what conditions?
- ? How does the fuel align with the SDGs and emerging disclosure regulation?

WHY ANMD — THE DIFFERENCE

Most market studies stop at units and revenue. This report is built as a sustainability due diligence instrument — fusing market sizing with ESG, SDG, climate, water and natural-capital intelligence and a decision-ready bankability verdict in a single architecture.

- › Triangulated sizing — every market read three ways so value, volume and adoption views reconcile rather than conflict.
- › Region-honest forecasting — Latin America, Africa and the Middle East reported in full, never hidden inside Rest of World, every forecast resolved to the 2025 base year.
- › Integrated evidence base — company, patent and project databases linked to the analysis, with published-filing patents and FTO treated as an indicator, not a legal conclusion.
- › No-fabrication discipline — every estimate carries a data-confidence rating and disclosed sources; gaps are flagged for further diligence, never filled with invented numbers.
- › Anti-greenwashing rigour — SDG-washing and greenwashing screens plus claim-substantiation checks built into the ESG and project analysis.
- › Decision-first structure — 9 Parts and 53 Chapters culminating in stakeholder playbooks and a clear, evidence-based investment recommendation.

WHO SHOULD BUY THIS REPORT

Investors and infrastructure / PE funds, airlines and airports, fuel suppliers and energy majors, corporate SAF buyers, policymakers and lenders, and corporate strategy and ESG teams, alongside strategic corporate planners and decision-makers.

Access the Full Report

The complete report delivers all 53 chapters in full, with every sub-heading, country table, company and patent directory, forecast model and due diligence checklist.

Purchase at www.anewmarketdynamics.com · Standard & Premium licences · Single-Site (SSL) and Global-Site (GSL) options at checkout.

Want the Complete Detailed Table of Contents?

This prospectus lists the nine parts and 53 chapters. The complete detailed table of contents — every sub-heading, country table, exhibit, company and patent directory and annex — is available on request to registered users. To receive it, register with your official company email at www.anewmarketdynamics.com. The full detailed table of contents will be sent directly to your registered company email address.