

The Global Market for Biofuels and EFuels 2025-2035

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Abstracts

Biofuels, derived from renewable biomass sources, have established a significant presence in the market, with ethanol and biodiesel leading the way. These conventional biofuels have benefited from supportive government policies and mandates, particularly in the United States, Brazil, and the European Union. However, concerns about food security and land use have prompted a shift towards advanced biofuels produced from non-food feedstocks and waste materials. Emerging as a promising complement to biofuels, e-fuels (also known as synthetic fuels or power-to-X fuels) are gaining attention for their potential to provide carbon-neutral liquid fuels. Produced by combining green hydrogen with captured carbon dioxide, e-fuels offer a way to store renewable electricity in a form compatible with existing infrastructure and engines.

The market for both biofuels and e-fuels is being shaped by a complex interplay of factors including technological advancements, policy support, and shifting consumer preferences. The aviation sector, in particular, is emerging as a key driver for sustainable fuel adoption, with sustainable aviation fuel (SAF) becoming a focus for airlines and fuel producers alike. As production scales up and costs decrease, these sustainable fuels are expected to play an increasingly important role in decarbonizing hard-to-abate sectors like long-distance transport and heavy industry.

This comprehensive market report provides an in-depth analysis of the global biofuels and e-fuels markets, covering the crucial period from 2025 to 2035. As the world seeks to decarbonize the transportation sector and reduce dependence on fossil fuels, biofuels and e-fuels are emerging as key players in the transition to sustainable energy. Report contents include:

Role of biofuels and e-fuels in decarbonization efforts, their comparison to fossil fuels, and their place in the circular economy. Analysis of government policies, market drivers, and challenges shaping the industry.

Comprehensive market forecasts for liquid biofuels from 2020 to 2035, broken down by type and production.

Sustainability aspects of biofuels, addressing concerns about land use, food security, and lifecycle emissions.

Key industry developments from 2022 to 2024, providing insight into recent technological advancements, policy changes, and market trends.

Biofuel Types and Technologies: Detailed analysis of various biofuel types, including solid, liquid, and gaseous biofuels, as well as conventional and advanced biofuels. The report covers production processes, feedstocks, and emerging technologies.

Feedstock Analysis: biofuel feedstocks, from first-generation crops to advanced feedstocks like algae and waste materials. The report includes SWOT analyses for different feedstock categories.

Hydrocarbon Biofuels: biodiesel, renewable diesel, sustainable aviation fuel (SAF), and bio-naphtha, including production processes, market trends, and key players.

Alcohol Fuels: biomethanol, bioethanol, and biobutanol markets, including production pathways, applications, and market forecasts.

Biomass-Based Gas: biogas, biomethane, biosyngas, and biohydrogen, including feedstocks, production processes, and market applications.

Chemical Recycling for Biofuels: emerging technologies for converting plastic waste and used tires into biofuels, including pyrolysis and gasification processes.

E-Fuels: electrofuels (e-fuels), covering production pathways, market challenges, and key players in this emerging sector.

Algae-Derived Biofuels: potential for algae-based biofuels, including production pathways, market challenges, and key players.

Green Ammonia: green ammonia as a potential energy carrier and fuel, including production methods, applications, and market projections.

Carbon Capture for Biofuels: technologies and market potential for producing biofuels from captured carbon dioxide, including direct air capture (DAC) processes.

Company Profiles: Over 230 detailed company profiles covering key players across the biofuels and e-fuels value chain, from feedstock providers to technology developers and fuel producers. Companies profiled include Aduro Clean Technologies, Aemetis, Agra Energy, Agilyx, Air Company, Aircela, Algenol, Alpha Biofuels, AM Green, Andritz, APChemi, Apeiron Bioenergy, Aperam BioEnergia, Applied Research Associates (ARA), Arcadia eFuels, ASB Biodiesel, Atmonia, Avalon BioEnergy, Avantium, Avioxx, BASF, BBKA Biochemical & GALACTIC Lactic Acid, BDI-BioEnergy International, BEE Biofuel, Benefuel, Bio2Oil, Bio-Oils, BIOD Energy, Biofy, Biofine Technology, BiogasClean, Biojet, Bloom Biorenewables, BlueAlp Technology, Blue BioFuels, Braven Environmental, Brightmark Energy, bse Methanol, BTG Bioliquids, Byogy Renewables, C1 Green Chemicals, Caphenia, Carbonade, CarbonBridge, Carbon Collect, Carbon Engineering, Carbon Infinity, Carbon Neutral Fuels, Carbon Recycling International, Carbon Sink, Carbyon, Cargill, Cassandra Oil, Casterra Ag, Celtic Renewables, Cereal Process Technologies (CPT), CERT Systems, CF Industries Holdings, Chitose Bio Evolution, Circla Nordic, CleanJoule, Climeworks, CNF Biofuel, Concord Blue Engineering, Cool Planet Energy Systems, Corsair Group International, Coval Energy, Crimson Renewable Energy, C-Zero, D-CRBN, Diamond Green Diesel, Dimensional Energy, Dioxide Materials, Dioxycle, Domsjö Fabriker, DuPont, EcoCeres, Eco Environmental, Eco Fuel Technology, Electro-Active Technologies, Emerging Fuels Technology (EFT), Encina Development Group, Enerkem, Eneus Energy, Enexor BioEnergy, Eni Sustainable Mobility, Ensyn, EnviTec Biogas, Euglena, Firefly Green Fuels, Forge Hydrocarbons, FuelPositive, Fuenix Ecology, Fulcrum BioEnergy, Galp Energia, GenCell Energy, Genecis Bioindustries, Gevo, GIDARA Energy, Graforce Hydro, Granbio Technologies, Greenenergy, Green COP, Green Earth Institute, Green Fuel, Hago Energetics, Haldor Topsoe, Handerek Technologies, Hero BX, Honeywell, HutanBio, Hyundai Oilbank, Hy2Gen, Hydrogenious LOHC, HYCO1, HydGene Renewables, Ineratec, Infinitree, Infinium Electrofuels, Innoltek, Jet Zero Australia, Jilin COFCO Biomaterial, Jupiter Ionics, Kaidi, Kanteleen Voima, Khepra, Klean Industries, Krajete, Kvasir Technologies, LanzaJet, Lanzatech, Lectrolyst, Licella, Liquid

Wind, Lootah Biofuels, Lummus Technology, LXP Group, Manta Biofuel, Mash Energy, Mercurius Biorefining, MOFWORX, Mote, Neogen, NeoZeo, Neste, New Hope Energy, NewEnergyBlue, NextChem, Nexus Fuels, Nordic ElectroFuel, Nordsol, Norsk e-Fuel, Nova Pangaea Technologies, Novozymes, Obeo Biogas, Oberon Fuels, Obrist Group, Oceania Biofuels, O.C.O, OMV, Opus 12 and many more.

Key Topics Covered:

Biodiesel and Renewable Diesel

Sustainable Aviation Fuel (SAF)

Bio-naphtha

Biomethanol and Bioethanol

Biogas and Biomethane

E-fuels and Power-to-X Technologies

Algae-based Biofuels

Green Ammonia

Carbon Capture and Utilization in Fuel Production

Chemical Recycling of Waste to Biofuels

Pyrolysis Oil and Bio-oils

Refuse-Derived Fuels (RDF)

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