

Renewable Chemicals Market Forecasts to 2032 – Global Analysis By Product (Bio-Alcohols, Biopolymers, Platform Chemicals, Bio-Based Specialty Chemicals, and Other Products), Feedstock, Technology, Application and By Geography

<https://marketpublishers.com/r/RE52FDEFAB93EN.html>

Date: November 2025

Pages: 200

Price: US\$ 4,150.00 (Single User License)

ID: RE52FDEFAB93EN

Abstracts

According to Statistics MRC, the Global Renewable Chemicals Market is accounted for \$177.25 billion in 2025 and is expected to reach \$430.11 billion by 2032 growing at a CAGR of 13.5% during the forecast period. Renewable chemicals refer to environmentally friendly chemical substances produced from renewable raw materials like biomass, crop residues, plant-based oils, and biological processes. They replace conventional fossil-fuel-based chemicals while lowering greenhouse gas emissions and enhancing sustainability. Widely used in sectors such as packaging, farming, transportation, and building materials, these chemicals are created through innovative bioprocessing technologies. By relying on replenishable feedstocks, renewable chemicals contribute to circular economy principles and support long-term ecological balance and resource conservation.

Market Dynamics:

Driver:

Rising consumer & corporate demand for sustainability

Companies are increasingly adopting eco-friendly practices to reduce carbon footprints and align with green regulations. Consumers are showing preference for bio-based alternatives in packaging, fuels, and everyday products. Advances in biotechnology and green chemistry are enabling scalable production of renewable chemicals across

diverse applications. Corporate ESG commitments and government-backed sustainability initiatives are further accelerating adoption. This convergence of environmental responsibility and market innovation is driving strong momentum in renewable chemicals.

Restraint:

Competition with the food chain

Crops such as corn, sugarcane, and vegetable oils are often diverted toward chemical production, creating tension with food availability. This competition can lead to price volatility and ethical concerns around resource allocation. Efforts to mitigate this include developing second-generation feedstocks from agricultural waste and non-food biomass. However, scaling these alternatives requires significant investment and infrastructure upgrades. The ongoing balance between food security and industrial demand remains a critical restraint for market growth.

Opportunity:

Untapped markets in emerging economies

Countries in Asia, Africa, and Latin America are investing in bio-based industries to reduce dependence on fossil fuels. Expanding middle-class populations are driving demand for eco-friendly consumer goods and packaging. Governments in these regions are introducing supportive policies and incentives to attract renewable chemical investments. Local production capabilities are being enhanced through partnerships with global players and technology transfers. These untapped markets are expected to significantly contribute to future expansion of the sector.

Threat:

Adverse policy changes and regulatory uncertainty

The renewable chemicals industry faces risks from shifting regulatory landscapes and inconsistent policy enforcement. Sudden changes in subsidies, tariffs, or carbon credit frameworks can disrupt investment flows. Regulatory uncertainty across regions creates challenges for long-term planning and global supply chain stability. Companies must navigate diverse compliance requirements, ranging from environmental standards to labeling laws. Emerging debates around land use, biodiversity, and lifecycle emissions

add further complexity. Such policy volatility poses a threat to sustained growth and investor confidence in renewable chemicals.

Covid-19 Impact:

The pandemic reshaped the renewable chemicals market by disrupting supply chains and delaying project timelines. Lockdowns caused shortages in feedstock availability and hindered logistics for bio-based production. At the same time, demand for sustainable packaging and hygiene-related products surged as consumers prioritized health and safety. Companies accelerated digitalization and remote monitoring to maintain operations during restrictions. Investment in resilient and decentralized production models gained traction to reduce future vulnerabilities. Overall, Covid-19 highlighted both the fragility and adaptability of the renewable chemicals sector.

The Bio-alcohols segment is expected to be the largest during the forecast period

The Bio-alcohols segment is expected to account for the largest market share during the forecast period, due to its wide application in fuels, solvents, and intermediates makes it a cornerstone of bio-based industries. Rising demand for ethanol and butanol in transportation and industrial processes is driving growth. Technological advancements in fermentation and biomass conversion are enhancing production efficiency. Bio-alcohols also benefit from strong government support for blending mandates and clean energy initiatives.

The cosmetics & personal care segment is expected to have the highest CAGR during the forecast period

Over the forecast period, the cosmetics & personal care segment is predicted to witness the highest growth rate, due to rising consumer preference for natural, bio-based ingredients is fueling demand for sustainable formulations. Companies are incorporating renewable polymers, bio-surfactants, and plant-derived actives into skincare and haircare products. Innovations in green chemistry are enabling high-performance alternatives without compromising safety or efficacy. Growing awareness of eco-conscious lifestyles and clean beauty trends is accelerating adoption.

Region with largest share:

During the forecast period, the Asia Pacific region is expected to hold the largest market share, due to strong manufacturing capabilities and abundant feedstock availability

support regional dominance. Countries like China, India, and Japan are investing heavily in bio-based industries and sustainable infrastructure. Government initiatives promoting green energy and circular economy practices are boosting adoption. Consumer demand for eco-friendly products is rising alongside rapid urbanization and industrial growth.

Region with highest CAGR:

Over the forecast period, the North America region is anticipated to exhibit the highest CAGR. Rising consumer awareness and corporate sustainability commitments are driving strong demand. The region benefits from advanced R&D capabilities and robust venture capital investment in bio-based technologies. Regulatory frameworks supporting clean energy and reduced emissions are further accelerating growth. Companies are leveraging innovations in biotechnology, waste valorization, and renewable polymers to expand applications.

Key players in the market

Some of the key players in Renewable Chemicals Market include BASF SE, Ra?zen Ene, Braskem S, Gevo, Inc., Cargill, Inc., TotalEnerg, Archer-Da, Neste Oyj, DuPont de, Solvay S.A, Corbion Ne, Genomati, Royal DSM, Amyris, In, and Evonik Ind.

Key Developments:

In November 2025, BASF India Limited has signed a Share Purchase Agreement with Clean Max Enviro Energy Solutions Limited for procuring renewable energy from the hybrid solar and wind farm in the district of Jamnagar, in the State of Gujarat, under the captive power generation mechanism. The company will also sign the Shareholders' Agreement, Energy Supply Agreement, and other ancillary agreements soon.

In October 2025, TotalEnergies and Veolia have signed a memorandum of understanding for further cooperation in several key areas of energy transition and circular economy, in line with their respective approaches to reduce their greenhouse gases emissions and water footprint. This cooperation will benefit the entire industry through the scaling up of innovative processes and the advancement of research into future-oriented challenges.

Products Covered:

Bio-Alcohols

Biopolymers

Platform Chemicals

Bio-Based Specialty Chemicals

Other Products

Feedstocks Covered:

Biomass

Jatropha

Corn

Vegetable Oils

Sugarcane

Algae

Starch Crops

Forestry Residues

Agricultural Waste

Technologies Covered:

Biochemical Processing

Pyrolysis

Thermochemical Processing

Enzymatic Conversion

Fermentation

Gasification

Applications Covered:

Packaging

Food & Beverage

Industrial Chemicals

Agriculture

Cosmetics & Personal Care

Pharmaceuticals

Construction

Automotive

Textile

Other Applications

Regions Covered:

North America

US

Canada

Mexico

Europe

Germany

UK

Italy

France

Spain

Rest of Europe

Asia Pacific

Japan

China

India

Australia

New Zealand

South Korea

Rest of Asia Pacific

South America

Argentina

Brazil

Chile

Rest of South America

Middle East & Africa

Saudi Arabia

UAE

Qatar

South Africa

Rest of Middle East & Africa

What our report offers:

- Market share assessments for the regional and country-level segments
- Strategic recommendations for the new entrants
- Covers Market data for the years 2024, 2025, 2026, 2028, and 2032
- Market Trends (Drivers, Constraints, Opportunities, Threats, Challenges, Investment Opportunities, and recommendations)
- Strategic recommendations in key business segments based on the market estimations
- Competitive landscaping mapping the key common trends
- Company profiling with detailed strategies, financials, and recent developments
- Supply chain trends mapping the latest technological advancements

Free Customization Offerings:

All the customers of this report will be entitled to receive one of the following free customization options:

Company Profiling

Comprehensive profiling of additional market players (up to 3)

SWOT Analysis of key players (up to 3)

Regional Segmentation

Market estimations, Forecasts and CAGR of any prominent country as per the client's interest (Note: Depends on feasibility check)

Competitive Benchmarking

Benchmarking of key players based on product portfolio, geographical presence, and strategic alliances

Contents

1 EXECUTIVE SUMMARY

2 PREFACE

- 2.1 Abstract
- 2.2 Stake Holders
- 2.3 Research Scope
- 2.4 Research Methodology
 - 2.4.1 Data Mining
 - 2.4.2 Data Analysis
 - 2.4.3 Data Validation
 - 2.4.4 Research Approach
- 2.5 Research Sources
 - 2.5.1 Primary Research Sources
 - 2.5.2 Secondary Research Sources
 - 2.5.3 Assumptions

3 MARKET TREND ANALYSIS

- 3.1 Introduction
- 3.2 Drivers
- 3.3 Restraints
- 3.4 Opportunities
- 3.5 Threats
- 3.6 Product Analysis
- 3.7 Technology Analysis
- 3.8 Application Analysis
- 3.9 Emerging Markets
- 3.10 Impact of Covid-19

4 PORTERS FIVE FORCE ANALYSIS

- 4.1 Bargaining power of suppliers
- 4.2 Bargaining power of buyers
- 4.3 Threat of substitutes
- 4.4 Threat of new entrants
- 4.5 Competitive rivalry

5 GLOBAL RENEWABLE CHEMICALS MARKET, BY PRODUCT

- 5.1 Introduction
- 5.2 Bio-Alcohols
 - 5.2.1 Ethanol
 - 5.2.2 Propanol
 - 5.2.3 Butanol
 - 5.2.4 Methanol
- 5.3 Biopolymers
 - 5.3.1 Polylactic Acid (PLA)
 - 5.3.2 Polyhydroxyalkanoates (PHA)
 - 5.3.3 Starch Blends
 - 5.3.4 Bio-PET
 - 5.3.5 Bio-PE
- 5.4 Platform Chemicals
 - 5.4.1 Succinic Acid
 - 5.4.2 Acetic Acid
 - 5.4.3 Lactic Acid
 - 5.4.4 Acrylic Acid
 - 5.4.5 Itaconic Acid
- 5.5 Bio-Based Specialty Chemicals
 - 5.5.1 Bio-Surfactants
 - 5.5.2 Bio-Plasticizers
 - 5.5.3 Bio-Solvents
 - 5.5.4 Bio-Adhesives
 - 5.5.5 Bio-Lubricants
- 5.6 Other Products

6 GLOBAL RENEWABLE CHEMICALS MARKET, BY FEEDSTOCK

- 6.1 Introduction
- 6.2 Biomass
- 6.3 Jatropha
- 6.4 Corn
- 6.5 Vegetable Oils
- 6.6 Sugarcane
- 6.7 Algae
- 6.8 Starch Crops

6.9 Forestry Residues

6.10 Agricultural Waste

7 GLOBAL RENEWABLE CHEMICALS MARKET, BY TECHNOLOGY

7.1 Introduction

7.2 Biochemical Processing

7.3 Pyrolysis

7.4 Thermochemical Processing

7.5 Enzymatic Conversion

7.6 Fermentation

7.7 Gasification

8 GLOBAL RENEWABLE CHEMICALS MARKET, BY APPLICATION

8.1 Introduction

8.2 Packaging

8.3 Food & Beverage

8.4 Industrial Chemicals

8.5 Agriculture

8.6 Cosmetics & Personal Care

8.7 Pharmaceuticals

8.8 Construction

8.9 Automotive

8.10 Textile

8.11 Other Applications

9 GLOBAL RENEWABLE CHEMICALS MARKET, BY GEOGRAPHY

9.1 Introduction

9.2 North America

9.2.1 US

9.2.2 Canada

9.2.3 Mexico

9.3 Europe

9.3.1 Germany

9.3.2 UK

9.3.3 Italy

9.3.4 France

- 9.3.5 Spain
- 9.3.6 Rest of Europe
- 9.4 Asia Pacific
 - 9.4.1 Japan
 - 9.4.2 China
 - 9.4.3 India
 - 9.4.4 Australia
 - 9.4.5 New Zealand
 - 9.4.6 South Korea
 - 9.4.7 Rest of Asia Pacific
- 9.5 South America
 - 9.5.1 Argentina
 - 9.5.2 Brazil
 - 9.5.3 Chile
 - 9.5.4 Rest of South America
- 9.6 Middle East & Africa
 - 9.6.1 Saudi Arabia
 - 9.6.2 UAE
 - 9.6.3 Qatar
 - 9.6.4 South Africa
 - 9.6.5 Rest of Middle East & Africa

10 KEY DEVELOPMENTS

- 10.1 Agreements, Partnerships, Collaborations and Joint Ventures
- 10.2 Acquisitions & Mergers
- 10.3 New Product Launch
- 10.4 Expansions
- 10.5 Other Key Strategies

11 COMPANY PROFILING

- 11.1 BASF SE
- 11.2 Ra?zen Energia S.A.
- 11.3 Braskem S.A.
- 11.4 Gevo, Inc.
- 11.5 Cargill, Incorporated
- 11.6 TotalEnergies SE
- 11.7 Archer-Daniels-Midland Company (ADM)

- 11.8 Neste Oyj
- 11.9 DuPont de Nemours, Inc.
- 11.10 Solvay S.A.
- 11.11 Corbion N.V.
- 11.12 Genomatica, Inc.
- 11.13 Royal DSM
- 11.14 Amyris, Inc.
- 11.15 Evonik Industries AG

List Of Tables

LIST OF TABLES

- Table 1 Global Renewable Chemicals Market Outlook, By Region (2024-2032) (\$MN)
- Table 2 Global Renewable Chemicals Market Outlook, By Product (2024-2032) (\$MN)
- Table 3 Global Renewable Chemicals Market Outlook, By Bio-Alcohols (2024-2032) (\$MN)
- Table 4 Global Renewable Chemicals Market Outlook, By Ethanol (2024-2032) (\$MN)
- Table 5 Global Renewable Chemicals Market Outlook, By Propanol (2024-2032) (\$MN)
- Table 6 Global Renewable Chemicals Market Outlook, By Butanol (2024-2032) (\$MN)
- Table 7 Global Renewable Chemicals Market Outlook, By Methanol (2024-2032) (\$MN)
- Table 8 Global Renewable Chemicals Market Outlook, By Biopolymers (2024-2032) (\$MN)
- Table 9 Global Renewable Chemicals Market Outlook, By Polylactic Acid (PLA) (2024-2032) (\$MN)
- Table 10 Global Renewable Chemicals Market Outlook, By Polyhydroxyalkanoates (PHA) (2024-2032) (\$MN)
- Table 11 Global Renewable Chemicals Market Outlook, By Starch Blends (2024-2032) (\$MN)
- Table 12 Global Renewable Chemicals Market Outlook, By Bio-PET (2024-2032) (\$MN)
- Table 13 Global Renewable Chemicals Market Outlook, By Bio-PE (2024-2032) (\$MN)
- Table 14 Global Renewable Chemicals Market Outlook, By Platform Chemicals (2024-2032) (\$MN)
- Table 15 Global Renewable Chemicals Market Outlook, By Succinic Acid (2024-2032) (\$MN)
- Table 16 Global Renewable Chemicals Market Outlook, By Acetic Acid (2024-2032) (\$MN)
- Table 17 Global Renewable Chemicals Market Outlook, By Lactic Acid (2024-2032) (\$MN)
- Table 18 Global Renewable Chemicals Market Outlook, By Acrylic Acid (2024-2032) (\$MN)
- Table 19 Global Renewable Chemicals Market Outlook, By Itaconic Acid (2024-2032) (\$MN)
- Table 20 Global Renewable Chemicals Market Outlook, By Bio-Based Specialty Chemicals (2024-2032) (\$MN)
- Table 21 Global Renewable Chemicals Market Outlook, By Bio-Surfactants (2024-2032) (\$MN)
- Table 22 Global Renewable Chemicals Market Outlook, By Bio-Plasticizers (2024-2032)

(\$MN)

Table 23 Global Renewable Chemicals Market Outlook, By Bio-Solvents (2024-2032)

(\$MN)

Table 24 Global Renewable Chemicals Market Outlook, By Bio-Adhesives (2024-2032)

(\$MN)

Table 25 Global Renewable Chemicals Market Outlook, By Bio-Lubricants (2024-2032)

(\$MN)

Table 26 Global Renewable Chemicals Market Outlook, By Other Products (2024-2032)

(\$MN)

Table 27 Global Renewable Chemicals Market Outlook, By Feedstock (2024-2032)

(\$MN)

Table 28 Global Renewable Chemicals Market Outlook, By Biomass (2024-2032) (\$MN)

Table 29 Global Renewable Chemicals Market Outlook, By Jatropha (2024-2032)

(\$MN)

Table 30 Global Renewable Chemicals Market Outlook, By Corn (2024-2032) (\$MN)

Table 31 Global Renewable Chemicals Market Outlook, By Vegetable Oils (2024-2032)

(\$MN)

Table 32 Global Renewable Chemicals Market Outlook, By Sugarcane (2024-2032)

(\$MN)

Table 33 Global Renewable Chemicals Market Outlook, By Algae (2024-2032) (\$MN)

Table 34 Global Renewable Chemicals Market Outlook, By Starch Crops (2024-2032)

(\$MN)

Table 35 Global Renewable Chemicals Market Outlook, By Forestry Residues
(2024-2032) (\$MN)

Table 36 Global Renewable Chemicals Market Outlook, By Agricultural Waste
(2024-2032) (\$MN)

Table 37 Global Renewable Chemicals Market Outlook, By Technology (2024-2032)
(\$MN)

Table 38 Global Renewable Chemicals Market Outlook, By Biochemical Processing
(2024-2032) (\$MN)

Table 39 Global Renewable Chemicals Market Outlook, By Pyrolysis (2024-2032)
(\$MN)

Table 40 Global Renewable Chemicals Market Outlook, By Thermochemical Processing
(2024-2032) (\$MN)

Table 41 Global Renewable Chemicals Market Outlook, By Enzymatic Conversion
(2024-2032) (\$MN)

Table 42 Global Renewable Chemicals Market Outlook, By Fermentation (2024-2032)
(\$MN)

Table 43 Global Renewable Chemicals Market Outlook, By Gasification (2024-2032)

(\$MN)

Table 44 Global Renewable Chemicals Market Outlook, By Application (2024-2032)

(\$MN)

Table 45 Global Renewable Chemicals Market Outlook, By Packaging (2024-2032)

(\$MN)

Table 46 Global Renewable Chemicals Market Outlook, By Food & Beverage
(2024-2032) (\$MN)

Table 47 Global Renewable Chemicals Market Outlook, By Industrial Chemicals
(2024-2032) (\$MN)

Table 48 Global Renewable Chemicals Market Outlook, By Agriculture (2024-2032)
(\$MN)

Table 49 Global Renewable Chemicals Market Outlook, By Cosmetics & Personal Care
(2024-2032) (\$MN)

Table 50 Global Renewable Chemicals Market Outlook, By Pharmaceuticals
(2024-2032) (\$MN)

Table 51 Global Renewable Chemicals Market Outlook, By Construction (2024-2032)
(\$MN)

Table 52 Global Renewable Chemicals Market Outlook, By Automotive (2024-2032)
(\$MN)

Table 53 Global Renewable Chemicals Market Outlook, By Textile (2024-2032) (\$MN)

Table 54 Global Renewable Chemicals Market Outlook, By Other Applications
(2024-2032) (\$MN)

Note: Tables for North America, Europe, APAC, South America, and Middle East & Africa Regions are also represented in the same manner as above.

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