

# **Green Methanol Market Forecasts to 2034 – Global Analysis By Feedstock (Biomass, Carbon Capture (CO<sub>2</sub>-based), Municipal Solid Waste, Renewable Energy-Based Feedstock, and Other Feedstock), Methanol Type, Production Technology, Derivatives, Application, End User, and By Geography**

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## **Abstracts**

According to Statistics MRC, the Global Green Methanol Market is accounted for \$3.3 billion in 2026 and is expected to reach \$27.9 billion by 2034 growing at a CAGR of 30.2% during the forecast period. Green methanol refers to methanol produced from renewable sources such as biomass, captured carbon dioxide, and renewable electricity. It serves as a versatile fuel, chemical feedstock, and hydrogen carrier, playing a critical role in decarbonizing shipping, chemical manufacturing, and transportation. The market is expanding rapidly as industries seek sustainable alternatives to fossil-based methanol amid tightening environmental regulations and corporate net-zero commitments.

### **Market Dynamics:**

#### **Driver:**

Maritime industry decarbonization mandates

Stringent emissions regulations from the International Maritime Organization and regional authorities are compelling shipping companies to adopt low-carbon fuels. Green methanol is emerging as a leading alternative due to its liquid nature, compatibility with existing infrastructure, and significant well-to-wake emission

reductions. Major container lines have already ordered dual-fuel vessels capable of operating on methanol. This regulatory pressure, combined with first-mover investments, is creating sustained demand and scaling production capacities globally.

**Restraint:**

High production costs and limited availability

Green methanol production currently costs two to three times more than conventional grey methanol, primarily due to expensive feedstocks and nascent production technologies. Limited commercial-scale facilities restrict supply, creating uncertainty for industrial buyers and fuel consumers. Without substantial cost reductions and capacity expansions, adoption will remain concentrated among early adopters. This economic barrier slows market growth, particularly in price-sensitive sectors where green premiums are difficult to pass through to end customers.

**Opportunity:**

Expansion of carbon capture utilization infrastructure

Growing investments in carbon capture technologies are creating reliable CO<sub>2</sub> feedstocks for e-methanol production. Industrial clusters and energy hubs are integrating carbon capture with renewable hydrogen production, enabling cost-efficient, large-scale green methanol synthesis. Government subsidies and tax incentives in Europe, North America, and Asia are accelerating project development. This infrastructure buildout reduces feedstock costs and location constraints, making green methanol increasingly competitive with fossil alternatives in multiple applications.

**Threat:**

Competition from alternative low-carbon fuels

Green methanol faces intensifying competition from ammonia, hydrogen, and advanced biofuels, each targeting similar decarbonization markets. Shipping companies are pursuing diversified fuel strategies, leaving methanol's long-term market share uncertain. Rapid advancements in fuel cell technologies and bunkering infrastructure for alternative fuels could shift investment away from methanol. This competitive landscape creates risk for producers and investors, potentially delaying the large-scale capital commitments necessary to drive down production costs.

**Covid-19 Impact:**

The COVID-19 pandemic initially disrupted green methanol projects through supply chain delays and postponed capital investments. However, the subsequent focus on green recovery packages accelerated funding for low-carbon technologies. Government stimulus programs in Europe and Asia allocated substantial resources to renewable hydrogen and synthetic fuel initiatives, many supporting green methanol demonstration plants. The pandemic also highlighted energy security concerns, strengthening policy commitments to domestic renewable fuel production, ultimately benefiting the market.

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

The Bio-Methanol segment is expected to account for the largest market share during the forecast period. Bio-methanol produced from biomass via gasification offers a more mature technology with existing commercial facilities and established supply chains. It benefits from waste feedstock availability and favorable carbon intensity scores across regulatory frameworks. Industries seeking immediate decarbonization solutions often prefer bio-methanol due to lower technological risk. As capacity expands and costs decline, bio-methanol will maintain dominance throughout the forecast period.

The Catalytic Hydrogenation segment is expected to have the highest CAGR during the forecast period

Over the forecast period, the Catalytic Hydrogenation segment is predicted to witness the highest growth rate. This process combines green hydrogen with captured carbon dioxide to produce e-methanol, directly utilizing renewable hydrogen and carbon capture infrastructure. Massive investments in electrolyzer capacity and industrial carbon capture projects are creating favorable conditions for catalytic hydrogenation scale-up. As renewable electricity prices fall and hydrogen costs decline, e-methanol production becomes increasingly cost-competitive, driving exceptionally high growth rate.

**Region with largest share:**

During the forecast period, the Asia Pacific region is expected to hold the largest market share. Massive investments in renewable hydrogen, biomass utilization, and industrial carbon capture across China, Japan, and South Korea have created the region's production scale advantages. Strong government backing for green shipping fuels and

early-stage commercial projects support market leadership. Asia Pacific's position as a global manufacturing hub further drives demand, ensuring it remains the dominant region throughout the forecast period.

### **Region with highest CAGR:**

Over the forecast period, the North America region is anticipated to exhibit the highest CAGR. The United States and Canada are rapidly scaling green methanol capacity through the Inflation Reduction Act and other clean fuel incentives. Abundant bio-waste feedstocks, extensive renewable energy resources, and emerging carbon capture hubs create favorable conditions for both bio-methanol and e-methanol production. Growing interest from the maritime sector on the West Coast and Gulf Coast further accelerates the region's exceptionally high growth trajectory.

### **Key players in the market**

Some of the key players in Green Methanol Market include OCI Global, Methanex Corporation, Proman, Carbon Recycling International, European Energy, Ørsted, Maersk, HIF Global, Liquid Wind, Enerkem, Sædra, Statkraft, TotalEnergies, Shell, and ExxonMobil.

### **Key Developments:**

In March 2026, OCI sold 3.3 million shares of Methanex in an accelerated block sale for approximately \$172.6 million, following the earlier divestment of its methanol business to focus on its remaining nitrogen and ammonia assets.

In March 2026, HIF Global submitted its Prior Environmental Authorization application for a \$5.3 billion e-Fuels project in Paysandó, Uruguay, expected to be a major hub for regional green methanol exports.

In October 2025, CRI signed a technology licensing agreement with Jilin Huajin Energy for a new project in China, expanding its footprint in the Asian e-methanol market.

### **Feedstock Covered:**

Biomass

Carbon Capture (CO<sub>2</sub>-based)

Municipal Solid Waste

Renewable Energy-Based Feedstock

Other Feedstock

#### Methanol Types Covered:

Bio-Methanol

E-Methanol

#### Production Technologies Covered:

Gasification

Catalytic Hydrogenation

Electrochemical Reduction

Biochemical Conversion

Other Emerging Technologies

#### Derivatives Covered:

Formaldehyde

Dimethyl Ether (DME) & MTBE

Methanol-to-Olefins (MTO)

Gasoline Blending

Solvents

## Other Derivatives

### Applications Covered:

Chemical Feedstock

Fuel

Energy Storage

Industrial Applications

Other Applications

### End Users Covered:

Chemical Industry

Transportation & Shipping

Power Generation

Oil & Gas Industry

Other Industrial Sectors

### Regions Covered:

North America

United States

Canada

Mexico

## Europe

United Kingdom

Germany

France

Italy

Spain

Netherlands

Belgium

Sweden

Switzerland

Poland

Rest of Europe

## Asia Pacific

China

Japan

India

South Korea

Australia

Indonesia

Thailand

Malaysia

Singapore

Vietnam

Rest of Asia Pacific

South America

Brazil

Argentina

Colombia

Chile

Peru

Rest of South America

Rest of the World (RoW)

Middle East

Saudi Arabia

United Arab Emirates

Qatar

Israel

Rest of Middle East

Africa

South Africa

Egypt

Morocco

Rest of 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 2023, 2024, 2025, 2026, 2027, 2028, 2030, 2032 and 2034

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

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