

Renewable Natural Gas Market Size, Share & Trends Analysis Report By Source (Landfills, Agricultural Residue, Livestock Manure), By Application, By Region, And Segment Forecasts, 2025 - 2033

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Abstracts

The global renewable natural gas market size was estimated at USD 15.17 billion in 2024 and is projected to reach USD 30.13 billion by 2033, growing at a CAGR of 8.0% from 2025 to 2033. An increasing global emphasis on decarbonization drives the market growth, supported by policy frameworks that encourage the adoption of low-carbon fuels and rising investments in sustainable energy infrastructure.

The expanding applications of RNG across the transportation, industrial, and utility sectors, along with advancements in biogas upgrading technologies, are further accelerating market adoption. In addition, growing focus on circular economy models and waste-to-energy initiatives is boosting RNG production from agricultural residues, landfills, and wastewater treatment facilities, positioning the sector for sustained long-term expansion.

In North America, the Renewable Natural Gas market is supported by strong climate policies, expanding gas utility procurement programs, and accelerated development of anaerobic digestion and landfill gas upgrading facilities. The U.S. leads regional deployment, driven by federal incentives and state-level programs, such as California's Low Carbon Fuel Standard (LCFS) and Renewable Fuel Standard (RFS) credits, which encourage the integration of RNG in transportation and industrial energy systems. Corporate decarbonization targets and the push to replace fossil natural gas in manufacturing, power generation, and waste management sectors further support growth. Canada is experiencing a similar momentum, with provincial clean-energy mandates and utility-led RNG injection programs driving increased adoption across

residential, commercial, and municipal applications.

Europe represents another prominent market, fueled by ambitious net-zero targets and robust renewable gas strategies. Countries such as Germany, France, the United Kingdom, and Italy are advancing large-scale RNG production through agricultural biogas plants, wastewater treatment facilities, and food-waste digestion projects. The European Union's renewable energy directives, carbon pricing mechanisms, and biomethane integration targets within gas distribution networks are key enablers of market expansion. Strong infrastructure development, coupled with increasing collaboration between energy utilities, technology providers, and agricultural cooperatives, is enhancing RNG supply capacity. Pilot projects for hydrogen-RNG blends and cross-border biomethane trade platforms further position Europe as a critical growth engine for the global RNG market.

Global Renewable Natural Gas (RNG) Market Report Segmentation

This report forecasts revenue growth at global, regional, and country levels and provides an analysis of the latest industry trends in each of the sub-segments from 2021 to 2033. For this study, Grand View Research has segmented the global Renewable Natural Gas (RNG) market report based on source, application, and region.

Source Outlook (Revenue, USD Million, 2021-2033)

Landfills

Agricultural Residue

Livestock Manure

Others

Application Outlook (Revenue, USD Million, 2021-2033)

Transportation Fuel

Electricity Generation

Utility Distribution

Others

Regional Outlook (Revenue, USD Million, 2021-2033)

North America

U.S.

Canada

Mexico

Europe

Germany

UK

France

Asia Pacific

China

India

Japan

South Korea

Latin America

Brazil

Middle East & Africa

Saudi Arabia

UAE

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