

Biomass Market Research Report by Feedstock (Food Crop, Non-Food Crop, Wood, Agricultural Residue, Municipal Solid Waste, Microalgae, Others), by Technology [Combined Heat and Power (CHP), Anaerobic Digestion, and Gasification, Co-Firing, Landfill Gas], by Product (Biodiesel, Biomethanol, Biogas, Others), by End-Use (Industrial, Commercial, Residential), and by Region (North America, Europe, Asia Pacific, Middle East & Africa, Latin America) Forecast till 2050

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Market Overview

The global biomass market was valued at USD 56,886.3 million in 2021 and is projected to grow to USD 423,061.9 million by 2050. Biomass is matter that comes from plant and animal waste, which is known as a source of fuel. It refers to the energy that is produced from organic materials like garbage, crop waste, and wood.

The need to cut carbon emissions has made biomass energy more important as a cleaner option than fossil fuels. It turns organic waste into useful energy, making it eco-friendly and useful. However, one cannot ignore the steep costs tied to setting up biomass facilities, along with the hurdles of managing feedstock logistics and ensuring a steady supply chain.

New government plans and support from companies are also helping to make it easier for people to join the biomass sector. These steps are creating room for growth and attracting new players into the biomass sector. Still, biomass competes with other green energy options like solar and wind, which are often cheaper and quicker to implement. This competition makes it essential for

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biomass stakeholders to innovate and reduce operational costs if they want to scale up and gain a stronger foothold in the global renewable energy market.

Market Segmentations

The global biomass market is segmented based on the feedstock, including food crop, non-food crop, wood, agricultural residue, municipal solid waste, microalgae, and others.

Depending on the technology, the global market is divided into combined heat and power (CHP), anaerobic digestion, gasification, co-firing, and landfill gas.

Biodiesel, biomethanol, biogas, and others are part of the products of the global biomass market.

In terms of end use, the global market is classified into industrial, commercial, and residential.

Regional Insights

North America is progressing in the biomass energy sector, mainly due to government support and private investments. The U.S. and Canada are investing in clean energy solutions such as biodiesel and combined heat and power systems to reduce reliance on fossil fuels.

Europe holds a prominent place in the biomass market, thanks to its strict climate policies and focus on renewables. Countries like Germany, France, and the UK are promoting advanced biomass technologies, which are helping the region move toward sustainability.

Asia Pacific is rapidly developing in this area, with countries like China and India using biomass to meet increasing energy demands. A rise in population and industrial growth has boosted the use of organic waste for power and fuel.

The Middle East & Africa are starting to adopt biomass as a supplementary energy source. Countries like South Africa and the UAE are exploring the biomass market to complement their existing energy mix and reduce grid pressure in rural regions.

Growth in the Latin America biomass market is encouraging, especially in Brazil and Mexico. The region is concentrating on converting the available crop waste into a clean and dependable energy source.

Major Players

Key players in the global biomass market are Babcock & Wilcox Enterprises, Inc., Dalkia, EnviTec Biogas AG, Ameresco Inc., Drax Group, Orsted A/S, MVV Energie AG, Mitsubishi Heavy Industries, Ltd., Vattenfall AB, and Statkraft AS.

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