

Biomass Power Generation Market By Feedstock (Forest Waste, Agriculture Waste, Animal Waste, Municipal Waste) , By Fuel (Solid, Liquid, Gaseous) By Technonolgy (Gasification, Combustion, Anaerobic Digestion, Pyrolysis) : Global Opportunity Analysis and Industry Forecast, 2024-2033

Market Report | 2024-08-01 | 300 pages | Allied Market Research

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Report description:

Biomass Power Generation Market□

The biomass power generation market was valued at \$91.3 billion in 2023 and is projected to reach \$124.5 billion by 2033, growing at a CAGR of 3.2% from 2024 to 2033.□

Biomass power generation is the process in which organic materials are used for the generation of electricity and heat. The materials utilized in this process include renewable materials such as agricultural residues, plant matter, and animal waste. Various technologies are used for the conversion of waste into energy, including gasification, direct combustion, pyrolysis, and anaerobic digestion. Power generation from biomass offers diverse benefits such as waste reduction, availability of carbon neutral energy, and development of local economies.□

Increase in global awareness regarding the negative impact of fossil fuels and rise in demand for renewable energy resources to mitigate the effects of climate change are the key drivers of the biomass power generation market. Moreover, government support in the form of incentives and subsidies to fuel the adoption of biomass energy propels the market development. To enhance the carbon emission reduction capabilities of the biomass power generation process, the assimilation of carbon capture techniques is trending in recent times. This assimilation captures the carbon produced during the conversion process and stores it underground, effectively making the entire process carbon negative. □

However, maintaining a constant supply chain of biomass for the power generation process is a challenging task that hampers the growth of the market. In addition, the installation of infrastructure for biomass power generation requires a significant portion of land, which limits the expansion of the market in areas with limited land availability. On the contrary, as governments of various countries incline toward decentralization of energy to achieve net zero emissions, the biomass power generation market is

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anticipated to witness several remunerative opportunities across the globe. According to an article by New Statesman-a British political magazine-the U.S. government targets to generate electricity completely through clean resources by 2035. Furthermore, the proportion of electricity generation through renewables in the first quarter of 2023 was approximately 47.8% in the country. Such net zero emission targets have been implemented in various nations across the globe, indicating a promising future for the biomass power generation market. □

Segment Review□

The biomass power generation market is segmented into feedstock, fuel, technology, and region. On the basis of feedstock, the market is divided into forest waste, agriculture waste, animal waste, and municipal waste. As per fuel, it is classified into solid, liquid, and gaseous. By technology, it is categorized into gasification, combustion, anaerobic digestion, and pyrolysis. Region wise, it is analyzed across North America, Europe, Asia-Pacific, and LAMEA.□

Key Findings□

On the basis of feedstock, the agriculture waste segment is expected to dominate the market throughout the forecast period.□

As per fuel, the□solid segment is projected to acquire a high stake in the market by 2033.□

By technology, the combustion segment is expected to garner a high market share during the forecast period.□

Region wise, Asia-Pacific is predicted to be the highest revenue generator by 2033.□

Competition Analysis□

The major players of the global biomass power generation market include Drax Global, ENGIE, Babcock & Wilcox Enterprises, Inc, Xcel Energy Inc., Orsted A/S, Ameresco, Vattenfall AB, MITSUBISHI HEAVY INDUSTRIES, LTD., Sumitomo Corporation, and Hurst Boiler & Welding Co, Inc. These major players have adopted various key development strategies such as business expansion, new product launches, and partnerships, to strengthen their foothold in the competitive market.□

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- List of customers/consumers/raw material suppliers- value chain analysis
- Product Consumption Analysis
- Reimbursement Scenario

Key Market Segments

By Feedstock

- Forest Waste
- Agriculture Waste
- Animal Waste
- Municipal Waste

By Fuel

- Solid
- Liquid
- Gaseous

By Technology

- Gasification
- Combustion
- Anaerobic Digestion
- Pyrolysis

By Region

- North America
- U.S.
- Canada
- Mexico
- Europe
- France
- Germany
- Italy
- Spain
- UK
- Rest of Europe
- Asia-Pacific
- China
- Japan
- India
- South Korea
- Australia
- Rest of Asia-Pacific
- LAMEA
- Brazil
- South Africa

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- Saudi Arabia
- Rest of LAMEA
- Key Market Players
- Drax Global
- ENGIE
- Babcock & Wilcox Enterprises, Inc
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- Orsted A/S
- Ameresco
- Vattenfall AB
- MITSUBISHI HEAVY INDUSTRIES, LTD.
- Sumitomo Corporation
- Hurst Boiler & Welding Co, Inc

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