

# **Biomass Pellets Market Forecasts to 2034 – Global Analysis By Source (Wood Sawdust, Virgin Lumber and Other Sources), Application (Power Generation, Industrial Heating and Other Applications), and By Geography**

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## **Abstracts**

According to Statistics MRC, the Global Biomass Pellets Market is accounted for \$8.68 billion in 2026 and is expected to reach \$15.48 billion by 2034 growing at a CAGR of 7.50% during the forecast period. Biomass pellets are a form of renewable energy derived from organic materials such as wood, agricultural residues, and other plant-based sources. These materials are compressed into small, dense pellets, typically with diameters ranging from 6 to 10 millimeters. Biomass pellets serve as a sustainable alternative to traditional fossil fuels, offering a cleaner and more environmentally friendly energy option.

According to the India Brand Equity Foundation (IBEF), India is expected to invest worth US\$ 500 billion in the renewable energy sector by 2028. In addition, according to the International Energy Agency (IEA), the global solar photovoltaics development is forecast to reach 162 GW by 2022.

### **Market Dynamics:**

#### **Driver:**

Energy security

The energy security driver of the biomass pellet market stems from the desire to reduce dependence on finite and geopolitically sensitive fossil fuel sources. Biomass pellets,

derived from organic materials like wood or agricultural residues, offer a sustainable and renewable energy alternative. By utilizing biomass pellets, countries aim to enhance their energy security by diversifying their energy mix, mitigating supply risks, and promoting a more resilient and decentralized energy infrastructure. This shift towards biomass pellets helps ensure a reliable and locally sourced energy supply, reducing vulnerability to external disruptions and fostering long-term energy independence.

**Restraint:****Feedstock availability and cost**

Feedstock availability and cost are critical factors influencing the biomass pellet market. The accessibility of raw materials such as agricultural residues, wood waste, and energy crops, directly impact production volumes. Limited feedstock availability can lead to supply chain disruptions, affecting pellet manufacturers. Additionally, fluctuations in feedstock costs, influenced by seasonal variations, transportation expenses, and competition for resources, contribute to market uncertainties. Balancing the demand for biomass pellets with sustainable feedstock sourcing practices is essential for market stability.

**Opportunity:****Integration with existing infrastructure**

Integration with existing infrastructure presents a significant opportunity in the market. As biomass pellets can be used as a direct substitute for traditional fossil fuels in existing power plants, industrial facilities, and residential heating systems, the transition is relatively seamless. This compatibility allows businesses to leverage their current infrastructure, minimizing the need for costly modifications. Additionally, biomass pellets can be co-fired with coal in existing power plants, offering a flexible and transitional approach toward renewable energy adoption.

**Threat:****Weather and climate conditions**

Fluctuations in temperature, precipitation patterns, and extreme weather events can impact the availability and quality of biomass feedstocks such as wood and agricultural

residues. Unpredictable weather can disrupt the production, leading to fluctuations in biomass pellet prices. Climate change may alter the geographical distribution of biomass resources, affecting the overall sustainability and reliability of the industry. Additionally, adverse weather conditions can also impact transportation and logistics, further challenging the biomass pellet market's resilience.

### **Covid-19 Impact:**

The COVID-19 pandemic has had a mixed impact on the market. On one hand, increased focus on renewable energy sources has driven demand for biomass pellets as a sustainable alternative to traditional fuels. However, supply chain disruptions, labor shortages, and economic uncertainties during the pandemic have hampered production and distribution. Additionally, fluctuating energy prices and government priorities in response to the pandemic have influenced investment patterns in the biomass sector. Overall, while the market shows resilience due to the growing emphasis on clean energy.

The agriculture residue segment is expected to be the largest during the forecast period

The agriculture residue segment is experiencing significant growth in the market due to its dual advantage of sustainable waste utilization and renewable energy production. As awareness of environmental issues and the need for cleaner energy sources rises, the demand for biomass pellets derived from agricultural residues such as crop residues, straw, and husks has surged. This growth is further propelled by government initiatives promoting the use of biomass as a renewable energy source and providing incentives for farmers to manage agricultural waste sustainably.

The power generation segment is expected to have the highest CAGR during the forecast period

The power generation segment in the market is experiencing robust growth due to the increasing recognition of biomass as a sustainable and renewable energy source. Biomass pellets, derived from organic materials such as wood, agricultural residues, and waste, offer a cleaner alternative to traditional fossil fuels. Government incentives and environmental regulations promoting green energy solutions have further fuelled the demand for biomass pellets in power generation. The pellets' high energy density, ease of transport, and efficient combustion contribute to their popularity among power producers.

**Region with largest share:**

The North American region has witnessed substantial growth in the market due to a rising awareness of sustainable energy sources and a commitment to reducing carbon emissions. Increased demand for renewable energy alternatives has driven investments in biomass pellet production, supported by government initiatives promoting cleaner energy solutions. The abundant availability of biomass feedstock, such as wood residues and agricultural by-products, has further propelled market expansion.

**Region with highest CAGR:**

The Asia-Pacific region has experienced significant growth in the market, driven by the increasing emphasis on renewable energy sources and sustainable practices. Governments across the region have implemented supportive policies and incentives to promote biomass energy, fostering a favorable environment for market expansion. Rising awareness about the environmental benefits of biomass pellets, such as reduced carbon emissions and dependence on fossil fuels, has fueled demand.

**Key players in the market**

Some of the key players in Biomass Pellets market include ANVIETPHAT, Buhler AG, Drax Group Plc, Energex Corporation, Enviva, Forest Energy Corporation, International Wood Fuels LLC, New England Wood Pellet, Pinnacle Renewable Energy Inc. and Sumitomo Corporation

**Key Developments:**

In November 2023, Swiss technology group B?hler has unveiled its new food innovation hub in Uzwil, Switzerland, opening up four new Application & Training Centers (ATCs). The company's existing ATCs, such as its Extrusion Application Center, will complement the new facilities, which aim to connect the entire value chain and enable a circular economy approach to food production.

In November 2023, Drax Group, has partnered with Patch, a climate technology company that is building digital infrastructure for the carbon market of the future. Patch's software helps voluntary carbon market participants buy, sell, and manage credits. With the Patch Radius software solution, Drax customers will be able to seamlessly purchase from a number of portfolios of carbon credits, including those from BECCS by Drax.

**Sources Covered:**

Wood Sawdust

Virgin Lumber

Industrial Waste & Co-product

Agriculture Residue

Food Waste

Other Sources

**Applications Covered:**

Power Generation

Industrial Heating

Commercial and Domestic Heating

Pellet Stove

Free-Standing Stoves

Pellet Boilers

Animal Bedding

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 2023, 2024, 2025, 2026, 2027, 2028, 2030, 3032 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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