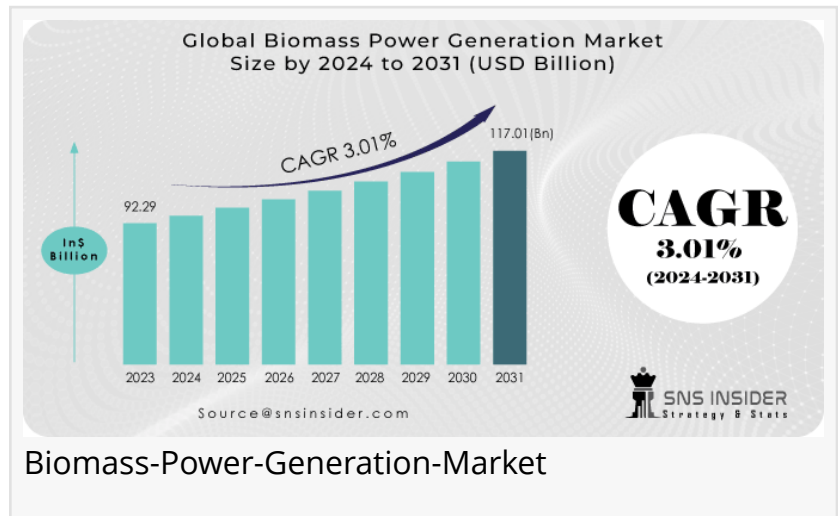


# Biomass Power Generation Market to Surpass USD 117.01 Billion by 2031 Fueled by Environmental Concerns & Policy Support

*The Future of Sustainable Energy:  
Exploring the Biomass Power Generation Market*

TEXES, AUSTIN, UNITED STATES, June 7, 2024 /EINPresswire.com/ -- The [Biomass Power Generation Market Size](#) was worth USD 92.29 billion in 2023, and it's expected to be worth over USD 117.01 billion in 2031 and will grow by CAGR 3.01% over the forecast period 2024-2031. This growth signifies a rising demand for clean energy solutions, with biomass offering a reliable and sustainable alternative to traditional fossil fuels.



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Top Key Players:

- Babcock & Wilcox Enterprises Inc.
- General Electric Co.
- John Wood Group Plc
- Thermax Ltd.
- Valmet Oyj
- Acciona SA
- Ameresco Inc
- Andritz AG
- Vattenfall AB

The increasing focus on mitigating climate change and achieving energy independence is driving a surge in demand for biomass power generation.

Biomass power generation offers several advantages over traditional methods. It utilizes readily available organic materials, including wood waste, agricultural residues, and dedicated energy crops, making it a renewable and sustainable source of energy. Additionally, biomass power

plants can provide baseload power, ensuring a consistent and reliable supply of electricity. This demand is further fuelled by supportive government policies, such as feed-in tariffs and tax incentives, that encourage investment in renewable energy projects.

Example: In May 2021, India announced a national mission to use biomass in coal-based thermal power plants to increase co-firing to 5-10 % in coal-fired power plants, using mainly agricultural residues. If implemented effectively, the new policy could significantly increase biomass power generation.

The National Mission on Biomass has the potential to be a game changer for India's energy landscape. By promoting cleaner energy generation, reducing air pollution, and utilizing waste resources, this policy aligns with India's growing commitment to sustainability. However, successful implementation hinges on addressing logistical challenges, ensuring sustainable biomass management, and maintaining economic viability.

### Recent Innovations in Biomass Power Generation Market

□ In May 2024: Drax Group, a leading renewable energy company in the UK, announced a £2 billion investment in building the world's first carbon capture and storage facility integrated with a biomass power plant. This project aims to further reduce the environmental impact of biomass power generation.

□ In April 2024: The European Union unveiled a revised renewable energy directive that emphasizes the importance of sustainable biomass sourcing. This regulation aims to ensure that biomass power generation contributes to genuine environmental benefits.

### Segmentation Analysis of the Biomass Power Generation Market

**By Technology:** Direct combustion currently dominates the market due to its established technology and relatively lower investment costs. However, gasification technology is projected to gain traction in the coming years due to its higher efficiency and lower emissions.

**By Feedstock:** Wood waste holds the largest market share due to its abundant availability and established collection infrastructure. However, dedicated energy crops, such as miscanthus and switchgrass, are expected to witness significant growth as governments promote sustainable biomass production practices.

**By Fuel:** Wood pellets are the dominant fuel source due to their high energy density and ease of transportation. However, advancements in biomass densification technologies are expected to increase the utilization of other biomass fuels, like agricultural residues.

### Potential Impact of Global Disruptions

The conflict between Russia and Ukraine war has disrupted global trade routes and logistics networks, making it more difficult and expensive to source certain types of biomass feedstock. A report by the International Energy Agency (IEA) found that wood pellet imports in Europe, a key source of biomass fuel, fell by 15% in 2023 compared to the previous year. This disruption can lead to shortages and price hikes for biomass feedstock, impacting the economic viability of power generation.

The war has also contributed to a global economic slowdown, with rising inflation and interest rates. This can lead to a decrease in capital expenditure by energy companies, potentially hindering investments in new biomass power projects. According to a recent survey by DNV, a sustainability advisory firm, nearly 20% of global energy companies are delaying or cancelling planned investments in renewable energy projects due to economic uncertainty. This trend could also impact the biomass power sector, despite the potential boost in competitiveness from high fossil fuel prices.

#### Asia Pacific: A dominant player in Biomass Power Generation Market

The Asia Pacific region currently holds the largest market share in biomass power generation, accounting for over 50% of the global market in 2023. This dominance is primarily driven by the high demand for energy in developing countries like China and India, coupled with supportive government policies promoting renewable energy sources.

Europe is expected to be the second-highest market due to its stringent environmental regulations and ambitious renewable energy targets.

For Instance: The European Union's revised Renewable Energy Directive (RED) with its extended sustainability requirements for bioenergy presents a complex situation for biomass power generation in Europe. While the policy raises a valid concern about ensuring bioenergy's positive climate impact and attracting investors, the implementation details can have both positive and negative consequences for the sector's growth.

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North America is anticipated to maintain steady growth due to technological advancements and a focus on energy security.

This Report Gives You the Key Information on Biomass Power Generation Market:

- Find out how this market is expected to grow in the coming years.
- Supportive government policies, such as feed-in tariffs and tax incentives, are encouraging investment in biomass power generation projects.
- Biomass can help countries diversify their energy mix and reduce dependence on imported fossil fuels.
- Technological advancements in combustion, gasification, and biomass pretreatment technologies are expected to enhance efficiency and reduce emissions from biomass power plants.

Akash Anand

SNS Insider | Strategy and Stats

+1 415-230-0044

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