

# **Biomass Electricity Market Outlook 2025-2034: Market Share, and Growth Analysis By Feedstock (Solid Biomass, Biogas, Municipal Solid Waste, Liquid Biomass), By Technology (Anaerobic Digestion, Combustion, Co-Firing, Gasification, Landfill Gas), By End-User**

<https://marketpublishers.com/r/B40ABAF9980BEN.html>

Date: October 2025

Pages: 160

Price: US\$ 3,950.00 (Single User License)

ID: B40ABAF9980BEN

## **Abstracts**

The Biomass Electricity Market is valued at USD 45.7 billion in 2025 and is projected to grow at a CAGR of 7.1% to reach USD 84.4 billion by 2034. The biomass electricity market represents the commercial aspect of generating and distributing electricity derived from biomass sources. It encompasses the entire value chain, from feedstock sourcing to power generation and grid integration. This market is crucial for transitioning to a sustainable energy future, reducing reliance on fossil fuels. The market's growth is closely linked to government policies, technological advancements, and the availability of sustainable biomass resources.

The market is witnessing a shift towards advanced biomass power plants with improved efficiency and reduced emissions. The integration of smart grid technologies is enhancing the reliability and flexibility of biomass electricity supply. The development of sustainable biomass supply chains, including dedicated energy crops and agricultural residues, is also a key trend. The market is expanding globally, with significant growth potential in emerging economies.

The biomass electricity market is poised for continued growth, driven by the increasing demand for renewable energy and the need to mitigate climate change. However, challenges related to cost competitiveness, feedstock sustainability, and grid integration need to be addressed. The market's future success depends on the development of

innovative technologies and supportive regulatory frameworks that promote sustainable biomass utilization.

## Key Insights Biomass Electricity Market

Increased adoption of advanced biomass power plant technologies.

Integration of smart grid technologies for efficient distribution.

Development of sustainable biomass supply chains.

Growing focus on decentralized biomass electricity generation.

Rising investment in research and development for improved efficiency.

Government policies and renewable energy targets.

Increasing demand for clean and sustainable energy.

Growing awareness of climate change and environmental concerns.

Availability of diverse biomass resources.

Energy security and diversification goals.

High capital and operational costs.

Sustainability concerns related to biomass sourcing.

Grid integration challenges for intermittent renewable energy.

Competition from other renewable energy sources.

Variability in biomass feedstock availability.

## Biomass Electricity Market Segmentation

### By Feedstock

Solid Biomass

Biogas

Municipal Solid Waste

Liquid Biomass

### By Technology

Anaerobic Digestion

Combustion

Co-Firing

Gasification

Landfill Gas

### By End-User

Households

Industrial Sector

Government Sector

Other End Users

### Key Companies Analysed

Drax Group

EPH

Engie

EDF

Iberdrola

Acciona SA

RWE

Ørsted A/S

CEZ

Babcock and Wilcox

GGE Power

EnviTec Biogas AG

First Biogas International AG

Shenzhen Puxin Science & Technology Co. LTD

Mingshuo Environment Technology Group Co. Ltd.

Clarke Energy

Seko Industries Srl

HC Energy

Agraferm Technologies AG

LMS Energy

Drax Power Limited

EDF Energy

E. ON UK

Centria Reti Gas

GASAG

Enag?s

Italgas

Eni Gas & Power

Cadent Gas Ltd

Enercon

Nordez

Repower

Siemens

Wartsila Corporation

Suez Water

ACCIONA S.A.

Ramboll

Graanul Invest Group

NaftoGaz Group

logen Corporation

Renewable Energy Group

Pond Technologies

Bio-Enpower Inc

Ag-West Bio

Airscience Technologies Inc. (Biogas)

Ameresco Inc.

Enviva Partners LP

N-Viro International Corporation

SolaGen Incorporated

FSE Energy Inc.

BioDrill

Biomass Thermal Energy Council (BTEC)

Taylor Biomass Energy LLC (TBE)

American Biocarbon LLC.

W2E

Carbon Green

Geradora de Energia Eletrica Alegrete

Liberty Green Renewables LLC

Usina Mandu

Brasil Biomassa e Energia Renovavel

Bem Brasil Alimentos Ltda.

Ali Yaqoob Trading Co. L.L.C

Al Rahib Trading Co. LLC

Siemens LLC

Areva T & D

City Power Johannesburg (Pty) Ltd

Vuselela Energy (Pty) Ltd

Sonangol Group

## Biomass Electricity Market Analytics

The report employs rigorous tools, including Porter's Five Forces, value chain mapping, and scenario-based modeling, to assess supply–demand dynamics. Cross-sector influences from parent, derived, and substitute markets are evaluated to identify risks and opportunities. Trade and pricing analytics provide an up-to-date view of international flows, including leading exporters, importers, and regional price trends.

Macroeconomic indicators, policy frameworks such as carbon pricing and energy security strategies, and evolving consumer behavior are considered in forecasting scenarios. Recent deal flows, partnerships, and technology innovations are incorporated to assess their impact on future market performance.

## Biomass Electricity Market Competitive Intelligence

The competitive landscape is mapped through OG Analysis' proprietary frameworks, profiling leading companies with details on business models, product portfolios, financial performance, and strategic initiatives. Key developments such as mergers & acquisitions, technology collaborations, investment inflows, and regional expansions are analyzed for their competitive impact. The report also identifies emerging players and innovative startups contributing to market disruption.

Regional insights highlight the most promising investment destinations, regulatory

landscapes, and evolving partnerships across energy and industrial corridors.

## Countries Covered

North America — Biomass Electricity market data and outlook to 2034

United States

Canada

Mexico

Europe — Biomass Electricity market data and outlook to 2034

Germany

United Kingdom

France

Italy

Spain

BeNeLux

Russia

Sweden

Asia-Pacific — Biomass Electricity market data and outlook to 2034

China

Japan

India

South Korea

Australia

Indonesia

Malaysia

Vietnam

Middle East and Africa — Biomass Electricity market data and outlook to 2034

Saudi Arabia

South Africa

Iran

UAE

Egypt

South and Central America — Biomass Electricity market data and outlook to 2034

Brazil

Argentina

Chile

Peru

*\* We can include data and analysis of additional countries on demand.*

## Research Methodology

This study combines primary inputs from industry experts across the Biomass Electricity value chain with secondary data from associations, government publications, trade

databases, and company disclosures. Proprietary modeling techniques, including data triangulation, statistical correlation, and scenario planning, are applied to deliver reliable market sizing and forecasting.

### Key Questions Addressed

What is the current and forecast market size of the Biomass Electricity industry at global, regional, and country levels?

Which types, applications, and technologies present the highest growth potential?

How are supply chains adapting to geopolitical and economic shocks?

What role do policy frameworks, trade flows, and sustainability targets play in shaping demand?

Who are the leading players, and how are their strategies evolving in the face of global uncertainty?

Which regional “hotspots” and customer segments will outpace the market, and what go-to-market and partnership models best support entry and expansion?

Where are the most investable opportunities—across technology roadmaps, sustainability-linked innovation, and M&A—and what is the best segment to invest over the next 3–5 years?

### Your Key Takeaways from the Biomass Electricity Market Report

Global Biomass Electricity market size and growth projections (CAGR), 2024-2034

Impact of Russia-Ukraine, Israel-Palestine, and Hamas conflicts on Biomass Electricity trade, costs, and supply chains

Biomass Electricity market size, share, and outlook across 5 regions and 27 countries, 2023-2034

Biomass Electricity market size, CAGR, and market share of key products, applications, and end-user verticals, 2023-2034

Short- and long-term Biomass Electricity market trends, drivers, restraints, and opportunities

Porter's Five Forces analysis, technological developments, and Biomass Electricity supply chain analysis

Biomass Electricity trade analysis, Biomass Electricity market price analysis, and Biomass Electricity supply/demand dynamics

Profiles of 5 leading companies—overview, key strategies, financials, and products

Latest Biomass Electricity market news and developments

### Additional Support

With the purchase of this report, you will receive

An updated PDF report and an MS Excel data workbook containing all market tables and figures for easy analysis.

7-day post-sale analyst support for clarifications and in-scope supplementary data, ensuring the deliverable aligns precisely with your requirements.

Complimentary report update to incorporate the latest available data and the impact of recent market developments.

*\* The updated report will be delivered within 3 working days*

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