

Biomass Power Generation Market by Technology (Combustion, Gasification, Anaerobic Digestion, Pyrolysis), Feedstock (Agricultural Waste, Forest Waste, Animal Waste, Municipal Waste), Fuel (Solid, Liquid, Gaseous) and Region - Global Forecast to 2028

<https://marketpublishers.com/r/B21F7810BADBEN.html>

Date: March 2023

Pages: 190

Price: US\$ 4,950.00 (Single User License)

ID: B21F7810BADBEN

Abstracts

The global biomass power generation market is estimated to grow from USD 91.3 Billion in 2023 to USD 105.7 Billion by 2028; it is expected to record a CAGR of 3.0% during the forecast period. Increase in the energy demand for in-house electricity generation from industrial sector which drives the biomass power generation market.

“Forest Waste: The largest segment of the biomass power generation market, by feedstock “

Based on feedstock, the biomass power generation market has been split into four types: Agriculture Waste, Forest Waste, Animal Waste and Municipal Waste. The forest waste were estimated to have the largest share of the biomass power generation market in 2022. Forest biomass waste is the by-product of forest harvesting, which includes wood chips, bark, sawdust, mill scrap, and timber slash. Forest waste has been used largely for power generation. As per estimates, China uses 50% of the forest biomass among the available energy resources to generate power and biofuel.

“Gasification segment is expected to emerge as the second-largest segment based on technology”

By technology, the biomass power generation market has been segmented into

combustion, pyrolysis, gasification and anaerobic digestion. Gasification are expected to be the second largest share of the biomass power generation market in 2022. Gasification is becoming increasingly competitive in terms of cost, with the price of combustion and pyrolysis dropping significantly in recent years. They offer an opportunity for countries to reduce their reliance on improve energy security.

“By fuel, the Solid Fuel segment is expected to be the fastest growing market during the forecast period.”

Based on Solid fuel, the biomass power generation market is segmented into solid fuel, liquid fuel and gaseous fuel. The Solid fuel segment is expected to be the fastest-growing segment during the forecast period. Woody biomass is mostly the preferred solid fuel for power generation. The US Department of Energy studied the impact of both fossil fuels and biomass solid fuels on global warming during the life cycle of a power generation facility.

Europe is expected to be the second largest growing region in the biomass power generation market

Europe is expected to be the second fastest biomass power generation market during the forecast period. The European Union implemented the European Green Deal to efficiently use clean energy sources for applications across industries, especially transportation and power. The initiative was implemented to reduce carbon emissions as a part of European net zero goals for waste, energy, and fuel by 2050.

Breakdown of Primaries:

In-depth interviews have been conducted with various key industry participants, subject-matter experts, C-level executives of key market players, and industry consultants, among other experts, to obtain and verify critical qualitative and quantitative information, as well as to assess future market prospects. The distribution of primary interviews is as follows:

By Company Type: Tier 1- 65%, Tier 2- 24%, and Tier 3- 11%

By Designation: C-Level- 30%, Director Levels- 25%, and Others- 45%

By Region: North America- 35%, Asia Pacific- 25%, Europe- 15%, the Middle East & Africa- 15%, and South America- 10%

Note: Others include product engineers, product specialists, and engineering leads.

Note: The tiers of the companies are defined on the basis of their total revenues as of 2021. Tier 1: > USD 1 billion, Tier 2: From USD 500 million to USD 1 billion, and Tier 3: The biomass power generation market is dominated by a few major players that have a wide regional presence. The leading players in the biomass power generation market are ENGIE (France), Babcock & Wilcox Enterprises, Inc. (US), Xcel Energy Inc. (US), EPH (Czechia) and Ørsted A/S (Denmark).

Research Coverage:

The report defines, describes, and forecasts the global biomass power generation market, by component, power source, application, and region. It also offers a detailed qualitative and quantitative analysis of the market. The report provides a comprehensive review of the major market drivers, restraints, opportunities, and challenges. It also covers various important aspects of the market. These include an analysis of the competitive landscape, market dynamics, market estimates, in terms of value, and future trends in the biomass power generation market.

Key Benefits of Buying the Report

Electrification of rural areas and Investments in upgrading and expanding transmission and distribution infrastructure are some of the main factors driving the biomass power generation market. Factors such as high installation costs and lack of common standards for electrification in some countries still restrain the market. Increased government mandates for upgrading electrical infrastructure and reducing power losses provide opportunities for the biomass power generation market to grow. Even though delays in electrical transmission projects are major challenges faced by countries under biomass power plant development.

Product Development/ Innovation: The future of the biomass power generation market looks bright for renewable energy or bioenergy to reduce the carbon footprints. As investments are increasing in renewable energy sector, technology become less expensive due to improvements in modules and the ability to connect directly to higher voltage systems.

Market Development: Renewable energy sources are becoming increasingly

important in the grid infrastructure for power generation. Renewables include sources such as solar, wind, hydro, geothermal, and biomass, among others. Asia Pacific biomass power generation market is expected to experience significant growth in the coming years, driven by increasing demand for electricity in rural areas.

Market Diversification: ENGIE signed an agreement with Alier, a paper recycle specialist, to build and commission a new thermal energy generation plant from sustainable forest management in Rosell's factory, specializing in manufacturing paper for the construction and packaging industries (Lleida)

Competitive Assessment: In-depth assessment of market shares, growth strategies, and service offerings of leading players like ENGIE (France), Babcock & Wilcox Enterprises, Inc. (US), Xcel Energy Inc. (US), EPH (Czechia) and Ørsted A/S (Denmark) among others in the biomass power generation market

Contents

1 INTRODUCTION

1.1 STUDY OBJECTIVES

1.2 MARKET DEFINITION

1.3 INCLUSIONS AND EXCLUSIONS

1.4 STUDY SCOPE

FIGURE 1 BIOMASS POWER GENERATION MARKET: SEGMENTATION

1.4.1 BIOMASS POWER GENERATION MARKET: REGIONAL SCOPE

1.4.2 YEARS CONSIDERED

1.5 CURRENCY CONSIDERED

1.6 LIMITATIONS

1.7 STAKEHOLDERS

1.8 RECESSION IMPACT

2 RESEARCH METHODOLOGY

2.1 RESEARCH DATA

FIGURE 2 BIOMASS POWER GENERATION MARKET: RESEARCH DESIGN

2.2 MARKET BREAKDOWN AND DATA TRIANGULATION

FIGURE 3 DATA TRIANGULATION

2.2.1 SECONDARY DATA

2.2.1.1 Key data from secondary sources

2.2.2 PRIMARY DATA

2.2.2.1 Key data from primary sources

2.2.2.2 Breakdown of primaries

FIGURE 4 BREAKDOWN OF PRIMARIES

2.3 MARKET SIZE ESTIMATION

2.3.1 BOTTOM-UP APPROACH

FIGURE 5 BIOMASS POWER GENERATION MARKET: BOTTOM-UP APPROACH

2.3.2 TOP-DOWN APPROACH

FIGURE 6 BIOMASS POWER GENERATION MARKET: TOP-DOWN APPROACH

2.3.3 DEMAND-SIDE ANALYSIS

FIGURE 7 BIOMASS POWER GENERATION MARKET: DEMAND-SIDE ANALYSIS

FIGURE 8 METRICS CONSIDERED TO ANALYZE AND ASSESS DEMAND FOR BIOMASS POWER GENERATION SYSTEMS

2.3.3.1 Assumptions for demand-side analysis

2.3.3.2 Calculations to derive market size using demand-side analysis

2.3.4 SUPPLY-SIDE ANALYSIS

FIGURE 9 KEY METRICS CONSIDERED TO ASSESS SUPPLY OF BIOMASS
POWER GENERATION SYSTEMS

FIGURE 10 BIOMASS POWER GENERATION MARKET: SUPPLY-SIDE ANALYSIS

2.3.4.1 Assumptions for supply-side analysis

FIGURE 11 COMPANY ANALYSIS, 2022

2.4 FORECAST

2.5 RISK ASSESSMENT

3 EXECUTIVE SUMMARY

TABLE 1 BIOMASS POWER GENERATION MARKET: SNAPSHOT

FIGURE 12 ASIA PACIFIC DOMINATED BIOMASS POWER GENERATION MARKET
IN 2022

FIGURE 13 FOREST WASTE SEGMENT TO LEAD BIOMASS POWER GENERATION
MARKET DURING FORECAST PERIOD

FIGURE 14 COMBUSTION SEGMENT TO HOLD LARGEST MARKET SHARE
DURING FORECAST PERIOD

FIGURE 15 SOLID FUEL SEGMENT TO DOMINATE BIOMASS POWER
GENERATION MARKET DURING FORECAST PERIOD

4 PREMIUM INSIGHTS

4.1 ATTRACTIVE OPPORTUNITIES FOR PLAYERS IN BIOMASS POWER
GENERATION MARKET

FIGURE 16 GROWING NEED TO DECARBONIZE INDUSTRIAL SECTOR

4.2 BIOMASS POWER GENERATION MARKET, BY REGION

FIGURE 17 ASIA PACIFIC TO WITNESS HIGHEST GROWTH IN BIOMASS POWER
GENERATION MARKET DURING FORECAST PERIOD

4.3 ASIA PACIFIC BIOMASS POWER GENERATION MARKET, BY FEEDSTOCK
AND COUNTRY

FIGURE 18 FOREST WASTE SEGMENT AND CHINA DOMINATED ASIA PACIFIC
BIOMASS POWER GENERATION MARKET IN 2022

4.4 BIOMASS POWER GENERATION MARKET, BY FEEDSTOCK

FIGURE 19 FOREST WASTE SEGMENT TO WITNESS SIGNIFICANT GROWTH
DURING FORECAST PERIOD

4.5 BIOMASS POWER GENERATION MARKET, BY TECHNOLOGY

FIGURE 20 COMBUSTION SEGMENT DOMINATED BIOMASS POWER
GENERATION MARKET IN 2022

4.6 BIOMASS POWER GENERATION MARKET, BY FUEL

FIGURE 21 SOLID FUEL SEGMENT ACCOUNTED FOR LARGEST MARKET SHARE IN 2022

5 MARKET OVERVIEW

5.1 INTRODUCTION

5.2 MARKET DYNAMICS

FIGURE 22 BIOMASS POWER GENERATION MARKET: DRIVERS, RESTRAINTS, OPPORTUNITIES, AND CHALLENGES

5.2.1 DRIVERS

5.2.1.1 Abundant availability of biomass feedstocks

FIGURE 23 CUMULATIVE AGRICULTURAL RESIDUE GENERATION IN SELECTED COUNTRIES

FIGURE 24 MAJOR FOREST RESIDUE-PRODUCING COUNTRIES

5.2.1.2 Government-led initiatives to boost bioenergy production

FIGURE 25 NUMBER OF POLICIES ISSUED IN CHINA RELATED TO BIOMASS POWER GENERATION, 2006–2021

5.2.1.3 Increasing employment in agriculture industry and growing rural development

FIGURE 26 EMPLOYMENT RATE IN BIOENERGY INDUSTRY

5.2.1.4 Rising need to control greenhouse gas (GHG) emissions

5.2.1.5 Growing use of biomass for power generation by co-firing in coal-based power plants

5.2.2 RESTRAINTS

5.2.2.1 Improper supply chain management of biomass

TABLE 2 CROPS AND THEIR HARVESTING IN INDIA

5.2.2.2 Fluctuating and high costs of feedstocks

TABLE 3 BIOMASS COLLECTION SYSTEMS AND THEIR COSTS IN DIFFERENT COUNTRIES

5.2.3 OPPORTUNITIES

5.2.3.1 High depletion rate of fossil fuels

5.2.3.2 Advancements in biomass power generation techniques

5.2.4 CHALLENGES

5.2.4.1 Requirement for high initial investments

5.2.4.2 Variability in biomass properties

TABLE 4 PROXIMATE ANALYSIS OF BIOMASS MATERIALS

5.3 TRENDS/DISRUPTIONS IMPACTING CUSTOMERS' BUSINESSES

5.3.1 REVENUE SHIFT AND NEW REVENUE POCKETS FOR BIOMASS POWER GENERATION COMPANIES

FIGURE 27 REVENUE SHIFT FOR BIOMASS POWER BIOMASS POWER
GENERATION COMPANIES

5.4 VALUE/SUPPLY CHAIN ANALYSIS

FIGURE 28 BIOMASS POWER GENERATION MARKET: SUPPLY CHAIN ANALYSIS

5.4.1 BIOMASS FEEDSTOCK PROVIDERS

5.4.2 BIOMASS TRANSPORTATION PROVIDERS

5.4.3 ENGINEERING PROCUREMENT AND CONSTRUCTION (EPC)

CONTRACTORS

5.4.4 BIOMASS POWER PLANT OWNERS

TABLE 5 COMPANIES AND THEIR ROLE IN BIOMASS POWER GENERATION
ECOSYSTEM

5.5 ECOSYSTEM ANALYSIS

FIGURE 29 BIOMASS POWER GENERATION MARKET MAP

5.6 TECHNOLOGY ANALYSIS

5.6.1 BIOMASS CO-FIRING

5.6.2 PYRO GASIFICATION

5.7 PRICING ANALYSIS

5.7.1 LEVELIZED COST OF BIOMASS POWER GENERATION, BY TECHNOLOGY

TABLE 6 LEVELIZED COST OF BIOMASS POWER GENERATION

5.8 PATENT ANALYSIS

5.8.1 LIST OF MAJOR PATENTS

TABLE 7 BIOMASS POWER GENERATION MARKET: INNOVATIONS AND PATENT
REGISTRATIONS, JUNE 2016–FEBRUARY 2023

5.9 TARIFF AND REGULATORY FRAMEWORK

5.9.1 REGULATORY BODIES, GOVERNMENT AGENCIES, AND OTHER
ORGANIZATIONS

TABLE 8 NORTH AMERICA: LIST OF REGULATORY BODIES, GOVERNMENT
AGENCIES, AND OTHER ORGANIZATIONS

TABLE 9 EUROPE: LIST OF REGULATORY BODIES, GOVERNMENT AGENCIES,
AND OTHER ORGANIZATIONS

TABLE 10 ASIA PACIFIC: LIST OF REGULATORY BODIES, GOVERNMENT
AGENCIES, AND OTHER ORGANIZATIONS

TABLE 11 SOUTH AMERICA: LIST OF REGULATORY BODIES, GOVERNMENT
AGENCIES, AND OTHER ORGANIZATIONS

TABLE 12 MIDDLE EAST & AFRICA: LIST OF REGULATORY BODIES,
GOVERNMENT AGENCIES, AND OTHER ORGANIZATIONS

5.9.2 REGULATORY FRAMEWORK

TABLE 13 BIOMASS POWER GENERATION MARKET: REGULATORY
FRAMEWORK, BY REGION

5.10 KEY CONFERENCES AND EVENTS, 2023

TABLE 14 BIOMASS POWER GENERATION MARKET: DETAILED LIST OF CONFERENCES AND EVENTS

5.11 TRADE ANALYSIS

5.11.1 HS CODE 2303

5.11.1.1 Export scenario

TABLE 15 EXPORT SCENARIO FOR HS CODE 2303, BY COUNTRY, 2019–2021 (USD)

FIGURE 30 EXPORT DATA FOR HS CODE 2303 OF TOP FIVE COUNTRIES, 2019–2021 (USD)

5.11.1.2 Import scenario

TABLE 16 IMPORT SCENARIO FOR HS CODE 2303, BY COUNTRY, 2019–2021 (USD)

FIGURE 31 IMPORT DATA FOR HS CODE 2303 OF TOP FIVE COUNTRIES, 2019–2021 (USD)

5.11.2 HS CODE 382510

5.11.2.1 Export scenario

TABLE 17 EXPORT SCENARIO FOR HS CODE: 382510, BY COUNTRY, 2019–2021 (USD)

FIGURE 32 EXPORT DATA FOR HS CODE 382510 OF TOP FIVE COUNTRIES, 2019–2021 (USD)

5.11.2.2 Import scenario

TABLE 18 IMPORT SCENARIO FOR HS CODE: 382510, BY COUNTRY, 2019–2021 (USD)

FIGURE 33 IMPORT DATA FOR HS CODE 382510 OF TOP FIVE COUNTRIES, 2019–2021 (USD)

5.11.3 HS CODE 382520

5.11.3.1 Export scenario

TABLE 19 EXPORT SCENARIO FOR HS CODE: 382520, BY COUNTRY, 2019–2021 (USD)

FIGURE 34 EXPORT DATA FOR HS CODE 382520 OF TOP FIVE COUNTRIES, 2019–2021 (USD)

5.11.3.2 Import scenario

TABLE 20 IMPORT SCENARIO FOR HS CODE: 382520, BY COUNTRY, 2019–2021 (USD)

FIGURE 35 IMPORT DATA FOR HS CODE 382520 OF TOP FIVE COUNTRIES, 2019–2021 (USD)

5.12 CASE STUDY ANALYSIS

5.12.1 DECENTRALIZED ENERGY SYSTEMS OF INDIA (DESI POWER) HELPED

COMMUNITIES IN RURAL AREAS HARNESS POWER FOR ECONOMIC PURPOSES

5.12.1.1 Problem statement

5.12.1.2 Solution

5.12.2 VALMET PROVIDED TURNKEY BIOPOWER PLANT TO SALZBURG AG TO GENERATE GREEN ELECTRICITY AND HEAT

5.12.2.1 Problem statement

5.12.2.2 Solution

5.13 PORTER'S FIVE FORCES ANALYSIS

FIGURE 36 BIOMASS POWER GENERATION MARKET: PORTER'S FIVE FORCES ANALYSIS

TABLE 21 BIOMASS POWER GENERATION MARKET: PORTER'S FIVE FORCES ANALYSIS

5.13.1 BARGAINING POWER OF BUYERS

5.13.2 BARGAINING POWER OF SUPPLIERS

5.13.3 THREAT OF SUBSTITUTES

5.13.4 INTENSITY OF COMPETITIVE RIVALRY

5.13.5 THREAT OF NEW ENTRANTS

5.14 KEY STAKEHOLDERS AND BUYING CRITERIA

5.14.1 KEY STAKEHOLDERS IN BUYING PROCESS

FIGURE 37 INFLUENCE OF STAKEHOLDERS ON BUYING PROCESS, BY TECHNOLOGY

TABLE 22 INFLUENCE OF STAKEHOLDERS ON BUYING PROCESS OF TOP TECHNOLOGIES (%)

5.14.2 BUYING CRITERIA

FIGURE 38 KEY BUYING CRITERIA FOR TOP TECHNOLOGY-BASED BIOMASS POWER GENERATION SYSTEMS

TABLE 23 KEY BUYING CRITERIA, BY TECHNOLOGY

5.15 SUPPLY AND DEMAND ANALYSIS OF BIOMASS FEEDSTOCK

6 BIOMASS POWER GENERATION MARKET, BY FEEDSTOCK

6.1 INTRODUCTION

FIGURE 39 FOREST WASTE SEGMENT DOMINATED BIOMASS POWER GENERATION MARKET IN 2022

TABLE 24 BIOMASS POWER GENERATION MARKET, BY FEEDSTOCK, 2021–2028 (USD MILLION)

6.2 AGRICULTURAL WASTE

6.2.1 GROWING NEED TO MEET ENERGY DEMANDS IN RURAL AREAS

TABLE 25 AGRICULTURAL WASTE: BIOMASS POWER GENERATION MARKET, BY

REGION, 2021–2028 (USD MILLION)

6.3 FOREST WASTE

6.3.1 RISING DEMAND FOR WOOD BIOMASS

TABLE 26 FOREST WASTE: BIOMASS POWER GENERATION MARKET, BY REGION, 2021–2028 (USD MILLION)

6.4 ANIMAL WASTE

6.4.1 GROWING USE OF ANIMAL WASTE TO PRODUCE BIOGAS

TABLE 27 ANIMAL WASTE: BIOMASS POWER GENERATION MARKET, BY REGION, 2021–2028 (USD MILLION)

6.5 MUNICIPAL WASTE

6.5.1 STRINGENT GOVERNMENT POLICIES RELATED TO DISPOSAL OF MUNICIPAL WASTE

TABLE 28 MUNICIPAL WASTE: BIOMASS POWER GENERATION MARKET, BY REGION, 2021–2028 (USD MILLION)

7 BIOMASS POWER GENERATION MARKET, BY TECHNOLOGY

7.1 INTRODUCTION

FIGURE 40 COMBUSTION SEGMENT LED BIOMASS POWER GENERATION MARKET IN 2022

TABLE 29 BIOMASS POWER GENERATION MARKET, BY TECHNOLOGY, 2021–2028 (TWH)

TABLE 30 BIOMASS POWER GENERATION MARKET, BY TECHNOLOGY, 2021–2028 (USD MILLION)

7.2 COMBUSTION

7.2.1 PRESENCE OF FAVORABLE GOVERNMENT POLICIES REGARDING USING BIOMASS BLENDS AND REDUCING COAL USE

TABLE 31 COMBUSTION: BIOMASS POWER GENERATION MARKET, BY REGION, 2021–2028 (TWH)

TABLE 32 COMBUSTION: BIOMASS POWER GENERATION MARKET, BY REGION, 2021–2028 (USD MILLION)

7.3 GASIFICATION

7.3.1 INCREASING NUMBER OF GASIFICATION PROJECTS

TABLE 33 GASIFICATION: BIOMASS POWER GENERATION MARKET, BY REGION, 2021–2028 (TWH)

TABLE 34 GASIFICATION: BIOMASS POWER GENERATION MARKET, BY REGION, 2021–2028 (USD MILLION)

7.4 ANAEROBIC DIGESTION

7.4.1 EXCELLENT PROPERTIES OF ANAEROBIC DIGESTION TECHNOLOGY

TABLE 35 ANAEROBIC DIGESTION: BIOMASS POWER GENERATION MARKET, BY REGION, 2021–2028 (TWH)

TABLE 36 ANAEROBIC DIGESTION: BIOMASS POWER GENERATION MARKET, BY REGION, 2021–2028 (USD MILLION)

7.5 PYROLYSIS

7.5.1 HIGH EFFICIENCY OF PYROLYSIS TECHNOLOGY IN ELECTRICITY GENERATION

TABLE 37 PYROLYSIS: BIOMASS POWER GENERATION MARKET, BY REGION, 2021–2028 (TWH)

TABLE 38 PYROLYSIS: BIOMASS POWER GENERATION MARKET, BY REGION, 2021–2028 (USD MILLION)

8 BIOMASS POWER GENERATION MARKET, BY FUEL

8.1 INTRODUCTION

FIGURE 41 SOLID FUEL SEGMENT HELD LARGEST SHARE OF BIOMASS POWER GENERATION MARKET IN 2022

TABLE 39 BIOMASS POWER GENERATION MARKET, BY FUEL, 2021–2028 (USD MILLION)

8.2 SOLID FUEL

8.2.1 RISING PREFERENCE FOR WOOD BIOMASS AS SOLID FUEL FOR POWER GENERATION

TABLE 40 SOLID FUEL: BIOMASS POWER GENERATION MARKET, BY REGION, 2021–2028 (USD MILLION)

8.3 LIQUID FUEL

8.3.1 ADVANCEMENTS IN TECHNOLOGIES USED TO PRODUCE LIQUID FUEL

TABLE 41 LIQUID FUEL: BIOMASS POWER GENERATION MARKET, BY REGION, 2021–2028 (USD MILLION)

8.4 GASEOUS FUEL

8.4.1 PRESENCE OF STRINGENT REGULATIONS RELATED TO LANDFILLS

TABLE 42 GASEOUS FUEL: BIOMASS POWER GENERATION MARKET, BY REGION, 2021–2028 (USD MILLION)

9 BIOMASS POWER GENERATION MARKET, BY REGION

9.1 INTRODUCTION

FIGURE 42 ASIA PACIFIC HELD LARGEST SHARE OF BIOMASS POWER GENERATION MARKET IN 2022

FIGURE 43 ASIA PACIFIC BIOMASS POWER GENERATION MARKET TO

REGISTER HIGHEST GROWTH DURING FORECAST PERIOD

TABLE 43 BIOMASS POWER GENERATION MARKET, BY REGION, 2021–2028
(TWH)

TABLE 44 BIOMASS POWER GENERATION MARKET, BY REGION, 2021–2028
(USD MILLION)

9.2 EUROPE

FIGURE 44 EUROPE: SNAPSHOT OF BIOMASS POWER GENERATION MARKET

9.2.1 EUROPE: RECESSION IMPACT

TABLE 45 EUROPE: BIOMASS POWER GENERATION MARKET, BY FEEDSTOCK,
2021–2028 (USD MILLION)

TABLE 46 EUROPE: BIOMASS POWER GENERATION MARKET, BY FUEL,
2021–2028 (USD MILLION)

TABLE 47 EUROPE: BIOMASS POWER GENERATION MARKET, BY
TECHNOLOGY, 2021–2028 (TWH)

TABLE 48 EUROPE: BIOMASS POWER GENERATION MARKET, BY
TECHNOLOGY, 2021–2028 (USD MILLION)

TABLE 49 EUROPE: BIOMASS POWER GENERATION MARKET, BY COUNTRY,
2021–2028 (TWH)

TABLE 50 EUROPE: BIOMASS POWER GENERATION MARKET, BY COUNTRY,
2021–2028 (USD MILLION)

9.2.2 GERMANY

9.2.2.1 Government-led initiatives for energy transition

TABLE 51 GERMANY: BIOMASS POWER GENERATION MARKET, BY FEEDSTOCK,
2021–2028 (USD MILLION)

9.2.3 UK

9.2.3.1 Advancements in green hydrogen technologies

TABLE 52 UK: BIOMASS POWER GENERATION MARKET, BY FEEDSTOCK,
2021–2028 (USD MILLION)

9.2.4 FINLAND

9.2.4.1 Increasing renewable electricity generation through forest waste

TABLE 53 FINLAND: BIOMASS POWER GENERATION MARKET, BY FEEDSTOCK,
2021–2028 (USD MILLION)

9.2.5 SWEDEN

9.2.5.1 Increasing investments in biomass power plants

TABLE 54 SWEDEN: BIOMASS POWER GENERATION MARKET, BY FEEDSTOCK,
2021–2028 (USD MILLION)

9.2.6 ITALY

9.2.6.1 Government efforts to decarbonize transportation sector

TABLE 55 ITALY: BIOMASS POWER GENERATION MARKET, BY FEEDSTOCK,

2021–2028 (USD MILLION)

9.2.7 FRANCE

9.2.7.1 Rising use of biofuels for power generation

TABLE 56 FRANCE: BIOMASS POWER GENERATION MARKET, BY FEEDSTOCK, 2021–2028 (USD MILLION)

9.2.8 NETHERLANDS

9.2.8.1 Government-led incentives for electricity production

TABLE 57 NETHERLANDS: BIOMASS POWER GENERATION MARKET, BY FEEDSTOCK, 2021–2028 (USD MILLION)

9.2.9 REST OF EUROPE

TABLE 58 REST OF EUROPE: BIOMASS POWER GENERATION MARKET, BY FEEDSTOCK, 2021–2028 (USD MILLION)

9.3 ASIA PACIFIC

FIGURE 45 ASIA PACIFIC: SNAPSHOT OF BIOMASS POWER GENERATION MARKET

9.3.1 ASIA PACIFIC: RECESSION IMPACT

TABLE 59 ASIA PACIFIC: BIOMASS POWER GENERATION MARKET, BY FEEDSTOCK, 2021–2028 (USD MILLION)

TABLE 60 ASIA PACIFIC: BIOMASS POWER GENERATION MARKET, BY FUEL, 2021–2028 (USD MILLION)

TABLE 61 ASIA PACIFIC: BIOMASS POWER GENERATION MARKET, BY TECHNOLOGY, 2021–2028 (TWH)

TABLE 62 ASIA PACIFIC: BIOMASS POWER GENERATION MARKET, BY TECHNOLOGY, 2021–2028 (USD MILLION)

TABLE 63 ASIA PACIFIC: BIOMASS POWER GENERATION MARKET, BY COUNTRY, 2021–2028 (TWH)

TABLE 64 ASIA PACIFIC: BIOMASS POWER GENERATION MARKET, BY COUNTRY, 2021–2028 (USD MILLION)

9.3.2 CHINA

9.3.2.1 Rising private investments to decarbonize industrial sector

TABLE 65 CHINA: BIOMASS POWER GENERATION MARKET, BY FEEDSTOCK, 2021–2028 (USD MILLION)

9.3.3 JAPAN

9.3.3.1 Rising number of waste-to-energy projects

TABLE 66 JAPAN: BIOMASS POWER GENERATION MARKET, BY FEEDSTOCK, 2021–2028 (USD MILLION)

9.3.4 INDIA

9.3.4.1 Increasing financial assistance from government and rising rural electrification and captive power requirements

TABLE 67 INDIA: BIOMASS POWER GENERATION MARKET, BY FEEDSTOCK, 2021–2028 (USD MILLION)

9.3.5 INDONESIA

9.3.5.1 Rising investments in setting up waste-to-energy projects

TABLE 68 INDONESIA: BIOMASS POWER GENERATION MARKET, BY FEEDSTOCK, 2021–2028 (USD MILLION)

9.3.6 THAILAND

9.3.6.1 Increasing foreign investments and ability to transition to clean energy

TABLE 69 THAILAND: BIOMASS POWER GENERATION MARKET, BY FEEDSTOCK, 2021–2028 (USD MILLION)

9.3.7 REST OF ASIA PACIFIC

TABLE 70 REST OF ASIA PACIFIC: BIOMASS POWER GENERATION MARKET, BY FEEDSTOCK, 2021–2028 (USD MILLION)

9.4 NORTH AMERICA

9.4.1 NORTH AMERICA: RECESSION IMPACT

TABLE 71 NORTH AMERICA: BIOMASS POWER GENERATION MARKET, BY FEEDSTOCK, 2021–2028 (USD MILLION)

TABLE 72 NORTH AMERICA: BIOMASS POWER GENERATION MARKET, BY FUEL, 2021–2028 (USD MILLION)

TABLE 73 NORTH AMERICA: BIOMASS POWER GENERATION MARKET, BY TECHNOLOGY, 2021–2028 (TWH)

TABLE 74 NORTH AMERICA: BIOMASS POWER GENERATION MARKET, BY TECHNOLOGY, 2021–2028 (USD MILLION)

TABLE 75 NORTH AMERICA: BIOMASS POWER GENERATION MARKET, BY COUNTRY, 2021–2028 (TWH)

TABLE 76 NORTH AMERICA: BIOMASS POWER GENERATION MARKET, BY COUNTRY, 2021–2028 (USD MILLION)

9.4.2 US

9.4.2.1 Increasing in-house electricity production

TABLE 77 US: BIOMASS POWER GENERATION MARKET, BY FEEDSTOCK, 2021–2028 (USD MILLION)

9.4.3 CANADA

9.4.3.1 Favorable policies promoting installation of power plants

TABLE 78 CANADA: BIOMASS POWER GENERATION MARKET, BY FEEDSTOCK, 2021–2028 (USD MILLION)

9.4.4 MEXICO

9.4.4.1 Increasing renewable electricity generation using agricultural residue

TABLE 79 MEXICO: BIOMASS POWER GENERATION MARKET, BY FEEDSTOCK, 2021–2028 (USD MILLION)

9.5 SOUTH AMERICA

9.5.1 SOUTH AMERICA: RECESSION IMPACT

TABLE 80 SOUTH AMERICA: BIOMASS POWER GENERATION MARKET, BY FEEDSTOCK, 2021–2028 (USD MILLION)

TABLE 81 SOUTH AMERICA: BIOMASS POWER GENERATION MARKET, BY FUEL, 2021–2028 (USD MILLION)

TABLE 82 SOUTH AMERICA: BIOMASS POWER GENERATION MARKET, BY TECHNOLOGY, 2021–2028 (TWH)

TABLE 83 SOUTH AMERICA: BIOMASS POWER GENERATION MARKET, BY TECHNOLOGY, 2021–2028 (USD MILLION)

TABLE 84 SOUTH AMERICA: BIOMASS POWER GENERATION MARKET, BY COUNTRY, 2021–2028 (TWH)

TABLE 85 SOUTH AMERICA: BIOMASS POWER GENERATION MARKET, BY COUNTRY, 2021–2028 (USD MILLION)

9.5.2 BRAZIL

9.5.2.1 Increasing investments in power plants to decarbonize industrial sector

TABLE 86 BRAZIL: BIOMASS POWER GENERATION MARKET, BY FEEDSTOCK, 2021–2028 (USD MILLION)

9.5.3 ARGENTINA

9.5.3.1 Growing demand for biofuels

TABLE 87 ARGENTINA: BIOMASS POWER GENERATION MARKET, BY FEEDSTOCK, 2021–2028 (USD MILLION)

9.5.4 COLOMBIA

9.5.4.1 Increasing investments in waste-to-energy projects to generate green energy

TABLE 88 COLOMBIA: BIOMASS POWER GENERATION MARKET, BY FEEDSTOCK, 2021–2028 (USD MILLION)

9.5.5 REST OF SOUTH AMERICA

TABLE 89 REST OF SOUTH AMERICA: BIOMASS POWER GENERATION MARKET, BY FEEDSTOCK, 2021–2028 (USD MILLION)

9.6 MIDDLE EAST & AFRICA

9.6.1 MIDDLE EAST & AFRICA: RECESSION IMPACT

TABLE 90 MIDDLE EAST & AFRICA: BIOMASS POWER GENERATION MARKET, BY FEEDSTOCK, 2021–2028 (USD MILLION)

TABLE 91 MIDDLE EAST & AFRICA: BIOMASS POWER GENERATION MARKET, BY FUEL, 2021–2028 (USD MILLION)

TABLE 92 MIDDLE EAST & AFRICA: BIOMASS POWER GENERATION MARKET, BY TECHNOLOGY, 2021–2028 (TWH)

TABLE 93 MIDDLE EAST & AFRICA: BIOMASS POWER GENERATION MARKET, BY TECHNOLOGY, 2021–2028 (USD MILLION)

TABLE 94 MIDDLE EAST & AFRICA: BIOMASS POWER GENERATION MARKET, BY COUNTRY, 2021–2028 (TWH)

TABLE 95 MIDDLE EAST & AFRICA: BIOMASS POWER GENERATION MARKET, BY COUNTRY, 2021–2028 (USD MILLION)

9.6.2 SOUTH AFRICA

9.6.2.1 Rising number of public–private partnerships (PPPs)

TABLE 96 SOUTH AFRICA: BIOMASS POWER GENERATION MARKET, BY FEEDSTOCK, 2021–2028 (USD MILLION)

9.6.3 TURKEY

9.6.3.1 Increasing use of forest waste to produce sustainable fuel and electricity

TABLE 97 TURKEY: BIOMASS POWER GENERATION MARKET, BY FEEDSTOCK, 2021–2028 (USD MILLION)

9.6.4 EGYPT

9.6.4.1 Government-led initiatives to increase investments in construction of biomass power plants

TABLE 98 EGYPT: BIOMASS POWER GENERATION MARKET, BY FEEDSTOCK, 2021–2028 (USD MILLION)

9.6.5 ISRAEL

9.6.5.1 Establishment of new greenhouse gas (GHG) emission target

TABLE 99 ISRAEL: BIOMASS POWER GENERATION MARKET, BY FEEDSTOCK, 2021–2028 (USD MILLION)

9.6.6 REST OF MIDDLE EAST & AFRICA

TABLE 100 REST OF MIDDLE EAST & AFRICA: BIOMASS POWER GENERATION MARKET, BY FEEDSTOCK, 2021–2028 (USD MILLION)

10 COMPETITIVE LANDSCAPE

10.1 OVERVIEW

FIGURE 46 KEY DEVELOPMENTS IN BIOMASS POWER GENERATION MARKET, 2018–2022

10.2 MARKET SHARE ANALYSIS, 2022

TABLE 101 BIOMASS POWER GENERATION MARKET: DEGREE OF COMPETITION

FIGURE 47 INDUSTRY CONCENTRATION OF TOP PLAYERS IN BIOMASS POWER GENERATION MARKET, 2022

10.3 MARKET EVALUATION FRAMEWORK, 2018–2021

TABLE 102 MARKET EVALUATION FRAMEWORK, 2018–2021

10.4 SEGMENTAL REVENUE ANALYSIS OF TOP MARKET PLAYERS

FIGURE 48 SEGMENTAL REVENUE ANALYSIS, 2018–2021

10.5 RECENT DEVELOPMENTS

10.5.1 DEALS

TABLE 103 BIOMASS POWER GENERATION: DEALS, 2018–2022

10.5.2 OTHERS

TABLE 104 BIOMASS POWER GENERATION MARKET: OTHERS, 2018–2022

10.6 COMPETITIVE LEADERSHIP MAPPING

10.6.1 STARS

10.6.2 EMERGING LEADERS

10.6.3 PERVASIVE PLAYERS

10.6.4 PARTICIPANTS

FIGURE 49 BIOMASS POWER GENERATION MARKET: COMPETITIVE LEADERSHIP MAPPING, 2022

TABLE 105 FEEDSTOCK: COMPANY FOOTPRINT

TABLE 106 FUEL: COMPANY FOOTPRINT

TABLE 107 TECHNOLOGY: COMPANY FOOTPRINT

TABLE 108 REGION: COMPANY FOOTPRINT

10.7 START-UP/SME EVALUATION QUADRANT, 2021

10.7.1 PROGRESSIVE COMPANIES

10.7.2 RESPONSIVE COMPANIES

10.7.3 DYNAMIC COMPANIES

10.7.4 STARTING BLOCKS

FIGURE 50 BIOMASS POWER GENERATION MARKET: START-UP/SME EVALUATION QUADRANT, 2022

10.8 COMPETITIVE BENCHMARKING

TABLE 109 BIOMASS POWER GENERATION MARKET: DETAILED LIST OF KEY STARTUPS/SMES

TABLE 110 FEEDSTOCK: COMPANY FOOTPRINT (STARTUPS/SMES)

TABLE 111 FUEL: COMPANY FOOTPRINT (STARTUPS/SMES)

TABLE 112 TECHNOLOGY: COMPANY FOOTPRINT (STARTUPS/SMES)

TABLE 113 REGION: COMPANY FOOTPRINT (STARTUPS/SMES)

11 COMPANY PROFILES

11.1 KEY PLAYERS

(Business Overview, Products/Services/Solutions Offered, MnM View, Key Strengths and Right to Win, Strategic Choices Made, Weaknesses and Competitive Threats, Recent Developments)*

11.1.1 ENGIE

TABLE 114 ENGIE: COMPANY OVERVIEW

FIGURE 51 ENGIE: COMPANY SNAPSHOT

TABLE 115 ENGIE: DEALS

11.1.2 XCEL ENERGY INC.

TABLE 116 XCEL ENERGY INC.: COMPANY OVERVIEW

FIGURE 52 XCEL ENERGY INC.: COMPANY SNAPSHOT

TABLE 117 XCEL ENERGY INC.: DEALS

11.1.3 BABCOCK & WILCOX ENTERPRISES, INC.

TABLE 118 BABCOCK & WILCOX ENTERPRISES, INC.: COMPANY OVERVIEW

11.1.4 ØRSTED A/S

TABLE 119 ØRSTED A/S: COMPANY OVERVIEW

TABLE 120 ØRSTED A/S: DEALS

11.1.5 EPH

TABLE 121 EPH: COMPANY OVERVIEW

FIGURE 55 EPH: COMPANY SNAPSHOT

11.1.6 RWE

TABLE 122 RWE: COMPANY OVERVIEW

11.1.7 RENOVA INC.

TABLE 123 RENOVA INC.: COMPANY OVERVIEW

11.1.8 VEOLIA ENERGY HUNGARY CO. LTD.

TABLE 124 VEOLIA ENERGY HUNGARY CO. LTD.: COMPANY OVERVIEW

11.1.9 ACCIONA

TABLE 125 ACCIONA: COMPANY OVERVIEW

FIGURE 58 ACCIONA: COMPANY SNAPSHOT

11.1.10 EDF RENEWABLE ENERGY

TABLE 126 EDF RENEWABLE ENERGY: COMPANY OVERVIEW

11.1.11 DRAX GROUP

TABLE 127 DRAX GROUP: COMPANY OVERVIEW

FIGURE 59 DRAX GROUP: COMPANY SNAPSHOT

11.1.12 SALZBURG AG

TABLE 128 SALZBURG AG: COMPANY OVERVIEW

TABLE 129 SALZBURG AG: DEALS

11.1.13 LAHTI ENERGIA OY

TABLE 130 LAHTI ENERGIA OY: COMPANY OVERVIEW

11.1.14 VATTENFALL

TABLE 131 VATTENFALL: COMPANY OVERVIEW

11.1.15 STATKRAFT

TABLE 132 STATKRAFT: COMPANY OVERVIEW

TABLE 133 STATKRAFT: DEALS

*Business Overview, Products/Services/Solutions Offered, MnM View, Key Strengths

and Right to Win, Strategic Choices Made, Weaknesses and Competitive Threats, Recent Developments might not be captured in case of unlisted companies.

11.2 OTHER PLAYERS

11.2.1 GRETA ENERGY LIMITED

11.2.2 YONAGO BIOMASS POWER GENERATION LLC

11.2.3 BELGIAN ECO ENERGY (BEE)

11.2.4 D.E.S.I. POWER

11.2.5 ENEXOR ENERGY LLC

12 APPENDIX

12.1 INSIGHTS FROM INDUSTRY EXPERTS

12.2 DISCUSSION GUIDE

12.3 KNOWLEDGESTORE: MARKETSANDMARKETS' SUBSCRIPTION PORTAL

12.4 CUSTOMIZATION OPTIONS

12.5 RELATED REPORTS

12.6 AUTHOR DETAILS

I would like to order

Product name: Biomass Power Generation Market by Technology (Combustion, Gasification, Anaerobic Digestion, Pyrolysis), Feedstock (Agricultural Waste, Forest Waste, Animal Waste, Municipal Waste), Fuel (Solid, Liquid, Gaseous) and Region - Global Forecast to 2028

Product link: <https://marketpublishers.com/r/B21F7810BADBEN.html>

Price: US\$ 4,950.00 (Single User License / Electronic Delivery)

If you want to order Corporate License or Hard Copy, please, contact our Customer Service:

info@marketpublishers.com

Payment

To pay by Credit Card (Visa, MasterCard, American Express, PayPal), please, click button on product page <https://marketpublishers.com/r/B21F7810BADBEN.html>

To pay by Wire Transfer, please, fill in your contact details in the form below:

First name:

Last name:

Email:

Company:

Address:

City:

Zip code:

Country:

Tel:

Fax:

Your message:

****All fields are required**

Customer signature _____

Please, note that by ordering from marketpublishers.com you are agreeing to our Terms & Conditions at <https://marketpublishers.com/docs/terms.html>

To place an order via fax simply print this form, fill in the information below

and fax the completed form to +44 20 7900 3970