

Biogas Market - Growth, Trends, Covid-19 Impact, and Forecasts (2023 - 2028)

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Report description:

The global biogas market is expected to reach 22.71 GW by the end of this year and is projected to register a CAGR of over 4.5% during the forecast period.

The market was negatively impacted by COVID-19 in 2020. Presently the market has now reached pre-pandemic levels.

Key Highlights

Over the long term, supportive government policies and regulations are expected to drive the growth of the market studied. On the other hand, increasing competition from alternate renewable energy sources is expected to hamper the growth of biogas during the forecast period.

Nevertheless, the technological advancements and innovations in the biogas industry are likely to create lucrative growth opportunities for the biogas market in the forecast period.

The Europe region dominates the market and is also likely to witness the highest CAGR during the forecast period. This growth is attributed to the increasing investments, coupled with the adoption of power and heat generation in the countries of this region, including Germany, the United Kingdom and Italy.

Biogas Market Trends**Electricity Generation Expected to Dominate the Market**

The world in the past decade witnessed a constant increase in global electricity generation due to increasing energy demand from ever-increasing levels of population, industrialization, and urbanization. In 2021, global electricity generation amounted to 2752.52 Terawatt-hours (TWh), which rose from 21570.7 TWh in 2010. According to the International Energy Agency, the global

energy demand is expected to witness a year-on-year growth rate of 9% till 2030.?

Biogas is a crucial source of electricity generation in the power sector, thereby contributing to the global goals of the clean energy transition. The generation of electricity from Biogas is an established technology being widely implemented worldwide. CHP engines are often used for electricity generation, with heat recovery and use.?

According to the World Biogas Association (WBA), Biogas can reduce global GHG emissions by 10-13% and provide renewable energy from the world's food waste, industrial production wastes, feedstocks from agriculture, and sewage. The reduction in GHG and optimization of fuels are expected to impact electricity generation from Biogas positively.?

Moreover, developing regions, such as Asia-Pacific, South America, are developing several plans and strategies to increase the role of Biogas in their electricity generation mix. For instance, EnviTec Biogas AG is building eight biogas plants in China, and the company has already handed over the five biogas plants to the government of China. Furthermore, The company is ready for the handover of its 6th and 7th biogas plants. Both plants have a biogas generation capacity of around 37,000 Nm³ per day. Moreover, the last 8th plant is expected to be completed by June 2022.?

Furthermore, in 2021, GAIL Limited announced an investment of more than INR. 50 billion to build a portfolio of around 1 GW of renewable energy, including solar, wind biogas, and ethanol plants. The company will set up at least two compressed biogas plants, and an ethanol factory would entail an investment of about INR 8 to 10 billion. The company aims to achieve 1 GW in three to four years.?

Moreover, in May 2022, the Ghana government commissioned a new Hybrid-PV-Biogas-Pyrolysis-Plant with a capacity of 400kW at Ashanti, Ghana. The time required to complete this project was of the 48-month project. The plant can process 12 tons of waste into bio-fertilizer and energy daily. The project can generate power of 200KW from solar, 100KW from biogas, and an additional 100KW from the pyrolysis of plastic waste.?

Thus, such developments are expected to support the growing electricity demand worldwide during the forecast period.

Europe to Dominate the Market

According to the Europe Biogas Association (EBA), biogas production in Europe is expected to reach 98 billion cubic meters (bcm) of biomethane by 2050.?

In the recent years, Europe witnessed significant growth in the installation of a biogas plant. As of 2021, according to the European Biogas Association, about 18,977 biogas plants and 1,023 biomethane plants were installed, with a total installed capacity of 167TWh and 2.5 billion cubic meters (bcm).?

Germany has more than 9,692 biogas plants, as of 2021. Apart from biogas plants, Germany also has a small number of plants burning wood or generating heat from biogenic waste. From 1,050 plants in 2000, the number of biogas plants reached nearly 9,692 in 2021.?

Further, the country develops a new biogas infrastructure that can provide additional support to the growing biogas market. For instance, in April 2022, Wartsila announced the construction of a major bio-LNG facility in Germany. The facility is likely to be the second-largest facility in the world capable of liquefying biomethane and synthetic methane from renewable energy to produce REEFUEL - a carbon-neutral transportation fuel. The plant is expected to become fully operational by the first quarter of 2024.?

Similarly, in June 2020, a collaboration of industry partners in the biomethane industry and the Deutsche Energie-Agentur, built a new biogas pipeline that can bundle raw biogas supplies up to 48 biogas plants across Germany.?

As of 2021, the United Kingdom had around 1,841MW of biogas installed capacity. Most of the biogas (including sewage and landfill gases) produced in the United Kingdom (19TWh) is used for power generation.?

Moreover, According to the Renewable Energy Association, around 8PJ of biomethane is qualified for payments under the renewable heat incentive (RHI), and biomethane production likely to reach 110PJ in 2026 as new plants come online.?

For instance, in December 2021, AstraZeneca announced a partnership with Future Biogas, to support the development of a 125GWh biomethane production plant fitted with carbon capture technology. The construction of the plant is expected to begin in 2023 and is expected to commence commercial operations by 2025. Such projects are likely to lead to the growth of the biogas

market during the forecast period.?

Hence, the afore-mentioned points, Europe is likely to dominate the market during the forecast period.

Biogas Market Competitor Analysis

The biogas market is moderately consolidated. Some of the key players in the biogas market (in no particular order) include Engie SA, DMT International, IES Biogas, EnviTec Biogas AG, Weltec Biopower GmbH, Schmach Biogas GmbH, and AEV Energy GmbH.

Additional Benefits:

The market estimate (ME) sheet in Excel format

3 months of analyst support

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