

# **Gasification Market by Gasifier Type (Moving/Fixed Bed, Fluidized Bed, Entrained & Others), by Feedstock (Biomass/Waste, Coal, Natural Gas & Petroleum), by Application (Chemicals, Liquid Fuels, Power & Gas Fuels) and Geography - Global Trends and Forecasts (2014 - 2019)**

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## **Abstracts**

Gasification has reliably gained a good market in the past few decades, as there is a rise in chemical, energy, and natural gas demand all over the world. Gasification is a thermochemical process, thus there is a considerable interest in routes to liquid biofuels involving gasification as a result of the potential for routes to have low costs, high efficiency, and high well-to-wheel greenhouse savings. The improvement in characteristics of current fuels has taken the production of fuels upwards compared to traditional biofuels. This has become a substitute for clean energy supply with increased acceptance.

### **Important key components of gasification are as follows:**

Abundant resources and deposits of coal

Demand for clean energy

Wide range of biomass/waste feedstock

Recover energy locked in biomass and municipal solid waste, eliminating incineration of landfilling

Produces electricity with significantly reduced environmental impact compared to conventional technologies

The increase in urbanization and the population living in cities and towns, and the rise in the price of oil, has put pressure on traditional energy supplies, and has helped drive the gasification market dramatically over the years. The failure to acquire current energy and power resources, lack of alternatives to gasification, increasing industrialization by exploiting natural resources, and acceptance of governments to invest in R&D of gasifier plants, has increased the gasification demand.

**FIGURE 1 GASIFICATION MARKET SIZE (MW), BY REGION** Source: Secondary Sources and Markets and Markets Analysis

The above figure shows the gasification market size (in MW) for various geographies for 2013 and 2019. Asia-Pacific market is the most dominant with the largest market share at present. The growth of the gasification market would be the highest for the Asia-Pacific region. The developed markets will show a comparatively low growth rate.

**Scope of the report:** This study estimates the global market for gasification by the end of 2019. This market research also provides a detailed qualitative and quantitative analysis of the global gasification market. The report provides a comprehensive review of major market drivers, restraints, opportunities, winning imperatives, and key issues in the market.

On the basis of feedstock:

Biomass/Waste

Coal

Natural Gas

Petroleum

On the basis of application:

Chemicals

Liquid Fuels

Power

Gas Fuels

On the basis of gasifier type:

Moving/Fixed bed,

Fluidized bed

Entrained

Others (Plasma, FCC-Fluid Catalytic Cracking)

On the basis of geography:

Asia-Pacific

Europe

Middle East& Africa

North America

South America

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## About

This research study involved the usage of extensive secondary sources: press releases, investment reports, industry white papers, presentations, and other publicly available sources to identify and collect information that was useful for this extensive technical, market-oriented, and commercial study of the global gasification market. The primary sources are mainly several industry experts from core and related industries and preferred suppliers, manufacturers, technology developers, administrators, solution providers, alliances, standards and certification organizations from companies, and organizations related to all segments of this industry's value chain. All primary sources were interviewed to obtain and verify critical qualitative and quantitative information, as well as to assess the prospects of the future.

Gasification is a process which converts organic or carbonaceous material into carbon monoxide, hydrogen, and carbon dioxide. It is a time-tested, reliable, and flexible technology that converts feedstock into electricity and other valuable products, such as chemicals, fuels, natural gas, solvents, and fertilizers. This does not involve combustion, but instead uses little or no oxygen or air in a closed reactor to convert carbon-based materials directly into a synthetic gas (syngas). It breaks down these materials into molecular level, and removes impurities easily, which are sold as valuable industrial commodities.

Generic types of gasifiers, which are used for gasification, are moving/fixed bed, fluidized bed, entrained flow, and others such as plasma or Fluid Catalytic Cracking (FCC). These are selected on the basis of the use of wet or dry feed, the use of air or oxygen, the reactor's flow direction (up, down, or circulating), and the process of gas cooling. There are many routes to gasification output, which is one of the decisive factor to select gasifier such as biomass to liquid, biomass to energy, coal to energy, coal to liquid, direct reduction, industrial waste gasification, waste to energy, petcoke gasifier, and plasma gasifier.

The material fed to the gasifier is the feedstock which can be in the form of solid, liquid, or gas. The feedstock for gasification is coal, petroleum coke, biomass/waste, or natural gas. These produce chemicals, transportation fuels, gaseous fuels, fertilizers, and electricity which are used in a variety of industries.

Gasification is geographically distributed in regions such as Asia-Pacific, Europe, the Middle East, North America, and South America. Asia-Pacific is the dominant region

among other parts of the world. The major portion is covered by China where large numbers of gasification plants are setup. As coal reserves are abundantly present, it captures the largest volume of the market.

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