

## Germany Combined Heat and Power Market Report and Forecast 2024-2032

Market Report | 2024-07-18 | 211 pages | EMR Inc.

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#### Report description:

Germany Combined Heat and Power Market Report and Forecast 2024-2032 Market Outlook

According to the report by Expert Market Research (EMR), Germany combined heat and power market size, aided by the increasing application in the telecommunications sector, is projected to grow at a CAGR of 4.50% between 2024 and 2032. Combined heat and power (CHP), also known as cogeneration, is a highly efficient energy solution that simultaneously generates electricity and thermal energy from a single fuel source. This process captures heat that would otherwise be wasted during the production of electrical power. The CHP system utilises this captured heat for heating purposes in residential, commercial, or industrial applications, which significantly enhances the overall efficiency of the energy system.

In Germany, the combined heat and power market has been shaped by a strong policy framework aimed at enhancing energy efficiency and reducing carbon dioxide emissions. The German government has been a proponent of CHP under its cogeneration law (KWKG), which provides financial incentives for the installation and operation of CHP plants. This law, revised periodically, aims to increase the electricity generated from CHP systems as part of Germany's ambitious energy transition (Energiewende), which seeks a sustainable, secure, and affordable energy supply.

Major Germany combined heat and power market trends reflect a dynamic shift towards more sustainable and efficient energy solutions. One of the prominent trends is the increasing adoption of smaller, decentralised CHP units. These units are particularly popular in residential and commercial buildings because they provide a reliable source of heat and power while reducing energy costs and carbon footprints. The decentralisation trend is supported by technological advancements that have made these systems more compact, efficient, and adaptable to various energy needs.

Another significant trend aiding the Germany combined heat and power market growth is the integration of renewable energy sources with CHP systems. Biomass CHP, in particular, has gained traction due to its potential to provide stable energy production with a lower environmental impact. Biomass, as a renewable source, aligns well with the goals of the Energiewende, making it an attractive option for both new installations and the retrofitting of existing CHP systems.

Additionally, the Germany combined heat and power market is witnessing a growing interest in the use of advanced digital technologies and smart controls in CHP systems. These technologies enable real-time monitoring and optimisation of operations, thus enhancing efficiency and flexibility. The integration of smart systems into CHP technology allows for better integration into

local and national grids, adapting quickly to changes in energy demand or supply conditions.

Thermal storage technologies are also becoming an integral part of the Germany combined heat and power market. By incorporating thermal storage, CHP systems can operate more flexibly, storing excess heat produced during low-demand periods and releasing it when demand peaks. This not only improves the economic viability of CHP systems but also enhances their capability to balance the grid, especially important as Germany continues to integrate more intermittent renewable energy sources like wind and solar power.

Moreover, the regulatory environment in Germany continues to evolve to support the Germany combined heat and power market expansion. The government's commitment to reducing greenhouse gas emissions and phasing out nuclear power by 2022 underscores the potential for expanded CHP deployment as a critical component of the country's energy strategy. The updated CHP laws and various incentives, such as feed-in tariffs and tax benefits, are pivotal in promoting CHP installations.

In the wake of the European Union's Green Deal and Germany's own climate targets for 2030 and beyond, the Germany combined heat and power market is expected to play a crucial role. There is an increased emphasis on sector coupling, where CHP's ability to provide quick and efficient heating solutions could be combined with the electrification of other sectors such as transportation and industry.

**Market Segmentation** 

The Germany combined heat and power market can be divided based on type, fuel type, capacity, and end use.

Market Breakup by Type

- -∏Gas Turbine
- -□Steam Turbine
- -∏Reciprocating Engine
- -∏Others

Market Breakup by Fuel Type

- -∏Coal
- -□Renewables
- Others

Market Breakup by Capacity

- -□Up to 10 MW
- □ 10 to 150 MW
- -∏151 to 300 MW
- -□Above 300 MW

Market Breakup by End Use

- -□Industrial Sector
- Commercial and Transportation Sector
- Others

Competitive Landscape

The EMR report looks into the market shares, plant turnarounds, capacities, investments, and mergers and acquisitions, among other major developments, of the leading companies operating in the Germany combined heat and power market. Some of the major players explored in the report by Expert Market Research are as follows:

- -□General Electric Company
- -□Caterpillar Inc.
- -∏Siemens AG
- -∏Mitsubishi Heavy Industries, Ltd.
- -∏Robert Bosch GmbH
- Capstone Green Energy Corporation
- Wartsila Corporation
- -[2G Energy AG

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- FuelCell Energy, Inc.
- -□TEDOM A.S.
- Others

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\*We at Expert Market Research always strive to provide you with the latest information. The numbers in the article are only indicative and may be different from the actual report.

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