

United Kingdom Combined Heat and Power (Chp) Market - Growth, Trends, Covid-19 Impact, and Forecasts (2023 - 2028)

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Report description:

The United Kingdom Combined Heat and Power market is expected to reach USD 63.3 billion by the end of the year and is projected to register a CAGR of over 6.13% 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 medium term, growing emphasis on energy-efficient technology that generates electricity and increasing investments in CHP-based power projects are also expected to drive the growth of the market studied.

On the other hand, geopolitical tensions and increasing natural gas prices are expected to impose challenges on the combined heat and power market in the United Kingdom and may negatively impact the market's growth and are one of the major restraints for the market.

Nevertheless, increasing demand for distributed power generation and space heating coupled with technological advancements are expected to drive and create significant amount of opportunities for the market players.

UK Combined Heat & Power Market Trends

Industrial Segment Expected to Dominate the Market

The industrial end-user segment is expected to be one of the largest markets for the combined heat and power (CHP) in the

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United Kingdom. The industrial sectors, including oil and gas terminals, refineries, chemical industries, food, beverage, and tobacco, paper publishing, printing, sewage treatments, and iron and steel industries, are some of the significant potential industries for the application of CHP system in the country. In the United Kingdom, the total industrial CHP electricity capacity was around 4.70 GWe, and the heat capacity was 16.32 GW in 2020.

The benefits and potential of cogeneration or combined heat and power (CHP) technology are increasingly recognized by the industries in the United Kingdom. The CHP system provides a range of potential benefits for industry and manufacturers. It is a highly efficient process that captures and uses the heat by-product created when generating electricity. Additionally, the simultaneous process may reduce carbon emissions by up to 30% compared to the conventional generation that takes electricity from the grid to power separate on-site furnaces or boilers. Furthermore, the gas engine industrial CHP or combined cooling heat and power (CCHP) plants may provide significant financial savings on fuel costs used to provide electricity, heat, and in some instances, cooling.

However, despite its considerable benefits, CHP has seen slower uptake in the United Kingdom compared to mainland Europe, possibly resulting from the belief that CHP is difficult to fund as a permanent solution. This misconception is addressed in the growing concerns for energy security in the manufacturing sector and how CHP could ease these issues and make manufacturing processes more efficient.

Moreover, the government provides tax benefits to the owner of CHP plants. For instance, the Enhanced Capital Allowances (ECA) in the United Kingdom allows businesses to write off 100% of their investment in energy-saving technologies, including combined heat and power (CHP), against the taxable profits of the period during which they invest. ECAs are claimed the same way as other capital allowances on the corporation tax return for companies and the income tax return for partnerships.

Furthermore, in March 2021, the government announced two new temporary first-year allowances, the super deduction and the special rate first year (SR) allowance. The allowances are only available to those companies that are subject to the corporation tax, not individuals, partnerships, or LLPs, and only where the contract for the plant and machinery (including fixtures installed under a construction contract) was entered into after 3 March 2021 and expenditure is incurred after 1 April 2021. Such benefits are expected to support the growth of the industrial CHP market during the forecast period.

Therefore, owing to the above-mentioned points, industrial segment is expected to dominate the United Kingdom's combined heat and power (CHP) market during the forecast period.

Increasing Investments in CHP-based Power Projects Driving the Market Demand

Combined heat and power (CHP) systems are known as cogeneration and are characterized by the simultaneous production of electricity and useful heat from one input, often natural gas and renewable fuels. These CHP systems are usually very efficient, and sometimes their efficiency is over 80% on an energy basis, as the waste heat is delivered as a product.

The United Kingdom had around 2,659 CHP sites in 2020, witnessing an increase of 81 new combined heat and power (CHP) sites as compared to 2019. This increase in CHP sites represented an additional 50 MW of electrical capacity, witnessing an increase of about 0.8% as compared to 2019. This increasing electricity capacity was primarily driven by the increasing investments in CHP-based power generation systems.

The increasing demand for Energy in the United Kingdom coupled with the negative impact of fossil fuel-based CHP systems have driven the demand for renewable fuel-based CHP Power projects, as renewable fuel combined heat and power (CHP) systems primarily use solid biomass, liquid biofuel, and gaseous biofuel as the fuel source.

For instance, in December 2021, Iona Capital financed the construction and operation of a new renewable CHP plant in Loughborough, the United Kingdom. The plant is built on GLW Feeds Limited site, a feedstock, and livestock company that is likely to have a capacity of 1.5 MW and is likely to help to reduce GLW carbon emissions by 1,485 tons per year. Thus, such investments in CHP-based power projects are likely to drive the studied market during the forecast period.

Similarly, in November 2021, Black and Veatch secured a contract for an engineering, procurement, and construction management project from Sembcorp Energy UK for the renewable combined heat and power plant with 75 MW combined cycle

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gas turbine (CCGT) and 30 MW wood-fired biomass power generation asset. The plant is located in Guildford, the United Kingdom, and it is an effort to decarbonize energy generation by Sembcorp Energy UK.

Thus, such increasing investments in the CHP-Based Power projects are likely to drive the combined heat and power (CHP) market in the United Kingdom during the forecast period.

UK Combined Heat & Power Market Competitor Analysis

The UK combined heat and power (CHP) market is moderately fragmented. The key players in the market (in no particular order) include General Electric Company, Siemens Energy AG, Ramboll Group, Centrica PLC, and Caterpillar Inc.

Additional Benefits:

The market estimate (ME) sheet in Excel format

3 months of analyst support

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